

*In the opinion of Edwards Angell Palmer & Dodge LLP, Bond Counsel, based upon an analysis of existing law and assuming, among other matters, compliance with certain covenants, interest on the Bonds is excluded from gross income for federal income tax purposes under the Internal Revenue Code of 1986. Interest on the Bonds is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, although such interest is included in adjusted current earnings when calculating corporate alternative minimum taxable income. Under existing law, interest on the Bonds and any profit on the sale of the Bonds are exempt from Massachusetts personal income taxes and the Bonds are exempt from Massachusetts personal property taxes. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the accrual or receipt of interest on, the Bonds. See Tax Exemption herein.*

**\$1,089,975,000**

**MASSACHUSETTS DEPARTMENT OF TRANSPORTATION**

**Metropolitan Highway System Revenue Bonds (Senior)**

**\$207,665,000 Variable Rate Demand Obligations 2010 Series A-1 and A-2**

**and**

**\$882,310,000 2010 Series B**



**Dated:** Date of Delivery

**Due:** January 1, as shown on the inside cover page

The Bonds are issuable only as fully-registered bonds, without coupons, initially in the case of the 2010 Series A Bonds, in denominations of \$100,000, or any integral multiple of \$5,000 in excess of \$100,000, and in the case of the 2010 Series B Bonds, in denominations of \$5,000 or any integral multiple thereof. The Bonds will be registered initially in book-entry form in the name of Cede & Co., as Bondowner and nominee for The Depository Trust Company (“DTC”), New York, New York. Purchasers will not receive certificates representing their interest in Bonds purchased. See *Appendix H – Book-Entry-Only System* herein. Details of payment of the Bonds are more fully described in this Official Statement. The 2010 Series A Bonds are variable rate bonds that initially will bear interest at Weekly Interest Rates determined by the Remarketing Agent, as described herein. 2010 Series A Bonds bearing interest at a Weekly Interest Rate may be purchased upon demand of the registered owners thereof provided in the manner described herein. The Bonds are subject to redemption prior to maturity and, in the case of the 2010 Series A Bonds, optional and mandatory tender for purchase prior to maturity and conversion to other interest rate modes, all as more fully described herein.

Principal of, and premium, if any, on the Bonds will be payable when due upon surrender thereof at the corporate trust office of The Bank of New York Mellon, as Trustee (the “Trustee”). So long as DTC or its nominee is the Bondowner, principal, premium, if any, and interest payments are to be made by the Trustee directly to DTC as Bondowner. Disbursement of such payments to the DTC Participants (as defined herein) is the responsibility of DTC and disbursement of such payments to the Beneficial Owners is the responsibility of DTC Participants and the Indirect Participants, as described herein.

The Bonds are being issued by the Massachusetts Department of Transportation (“MassDOT” or the “Issuer”), as successor to the Massachusetts Turnpike Authority (the “Authority”), for the purposes described herein under the Metropolitan Highway System Trust Agreement, dated as of September 1, 1997, as amended, including by an Eighth Supplemental Metropolitan Highway System Trust Agreement, dated as of May 1, 2010 (collectively, the “Trust Agreement”), each by and between MassDOT and the Trustee.

The Series A-1 Bonds are further secured by a direct pay letter of credit issued by Citibank, N.A. and the Series A-2 Bonds are further secured by a direct pay letter of credit issued by Wells Fargo Bank, National Association, as described herein.

**The Bonds will constitute special obligations of MassDOT payable solely from and secured solely by a pledge of certain Revenues and funds and accounts established under the Trust Agreement, including amounts payable by the Commonwealth and deposited in the Senior Debt Service Fund, all as described herein. The Issuer has no taxing power. Neither the Commonwealth nor any political subdivision thereof is or shall be obligated to pay the principal and redemption price of and interest on the Bonds and neither the faith and credit nor the taxing power of the Commonwealth or any political subdivision thereof is pledged to such payment.**

The Bonds are offered when, as and if issued and received by the applicable Underwriters<sup>†</sup>, subject to the unqualified approval of legality by Edwards Angell Palmer & Dodge LLP, Bond Counsel, Boston, Massachusetts and certain other conditions. Certain legal matters will be passed upon for MassDOT by Greenberg Traurig, LLP, Boston, Massachusetts, Disclosure Counsel to MassDOT, and for the Commonwealth and the Underwriters by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts, Disclosure Counsel to the Commonwealth and counsel to the Underwriters. Public Financial Management, Inc. has acted as Financial Advisor to MassDOT with respect to the Bonds. Delivery of the 2010 Series A Bonds is not contingent on delivery of the 2010 Series B Bonds and delivery of the 2010 Series B Bonds is not contingent on delivery of the 2010 Series A Bonds. It is expected that the Bonds will be available for delivery at or through DTC, New York, New York on or about May 27, 2010.

**Citi**

**BofA Merrill Lynch**

**Barclays Capital**

**J.P. Morgan<sup>†</sup>**

**Fidelity Capital Markets**

**Janney Montgomery Scott**

**Loop Capital Markets, LLC**

**Mesirow Financial, Inc.**

**Siebert Brandford Shank & Co., LLC**

**Wells Fargo Securities**

May 19, 2010

<sup>†</sup> The 2010 Series A Bonds will be underwritten by J.P. Morgan Securities, Inc., which also serves as sole Remarketing Agent. The 2010 Series B Bonds will be underwritten by all of the Underwriters.

**\$207,665,000**  
**Massachusetts Department of Transportation**  
**Metropolitan Highway System Revenue Bonds (Senior)**  
**Variable Rate Demand Obligations**  
**2010 Series A**

<b>Dated: Date of Delivery</b>	<b>Price: 100%</b>	<b>Due: January 1, 2037</b>
<b>Subseries:</b>	<b>2010 Series A-1</b>	<b>2010 Series A-2</b>
<b>Principal Amount:</b>	<b>\$100,000,000</b>	<b>\$107,665,000</b>
<b>Letter of Credit Provider:</b>	<b>Citibank, N.A.</b>	<b>Wells Fargo Bank, National Association</b>
<b>Initial Expiration Date of Letter of Credit:</b>	<b>May 27, 2013</b>	<b>May 27, 2013</b>
<b>Short-Term Ratings (Moody's/S&amp;P/Fitch):</b>	<b>VMIG1/A-1/F1+</b>	<b>VMIG1/A-1+/F1+</b>
<b>Long-Term Ratings (Moody's/S&amp;P/Fitch):</b>	<b>Aaa/AAA/AA</b>	<b>Aaa/AAA/AA+</b>
<b>Long-Term Underlying Ratings (Moody's/S&amp;P/Fitch):</b>	<b>A3/A/A+</b>	<b>A3/A/A+</b>
<b>CUSIP:</b>	<b>57563CBF8</b>	<b>57563CBG6</b>

**\$882,310,000**  
**Massachusetts Department of Transportation**  
**Metropolitan Highway System Revenue Bonds (Senior)**  
**2010 Series B**

**Ratings (Moody's/S&P/Fitch): A3/A/A+**

**Dated: Date of Delivery** **Due: January 1, as shown below**

<u>Maturity</u>	<u>Amount</u>	<u>Rate</u>	<u>Yield</u>	<u>CUSIP</u>
2011	\$ 420,000	2.000%	0.860%	57563CBH4
2012	4,195,000	3.000	1.280	57563CBJ0
2012	28,705,000	4.000	1.280	57563CBK7
2013	2,650,000	3.000	1.750	57563CBL5
2013	4,540,000	4.000	1.750	57563CBM3
2013	28,290,000	5.000	1.750	57563CBN1
2014	1,185,000	3.000	2.200	57563CBP6
2014	36,605,000	5.000	2.200	57563CBQ4
2015	59,590,000	5.000	2.610	57563CBR2
2016	1,630,000	4.000	3.000	57563CBS0
2016	25,805,000	5.000	3.000	57563CBT8
2017	1,195,000	4.000	3.270	57563CBU5
2017	26,840,000	5.000	3.270	57563CBV3
2018	835,000	4.000	3.460	57563CBW1
2018	27,765,000	5.000	3.460	57563CBX9
2019	660,000	4.000	3.650	57563CBY7
2019	28,190,000	5.000	3.650	57563CBZ4
2020	9,925,000	5.000	3.790	57563CCA8
2021	1,690,000	4.000	3.900*	57563CCB6
2021	15,385,000	5.000	3.900*	57563CCC4
2022	19,360,000	5.000	4.040*	57563CCD2
2023	26,250,000	5.000	4.140*	57563CCE0
2024	19,570,000	5.000	4.220*	57563CCF7
2025	21,690,000	5.000	4.300*	57563CCG5
2026	58,610,000	5.000	4.380*	57563CCH3
2027	4,355,000	4.375	4.460	57563CCJ9
2027	57,730,000	5.000	4.460*	57563CCK6
2029	4,000,000	4.500	4.600	57563CCL4
2029	9,510,000	5.000	4.600*	57563CCM2

\$167,235,000 5.000% Term Bonds Due January 1, 2032 to Yield 4.710%\* CUSIP 57563CCN0

\$173,440,000 5.000% Term Bonds Due January 1, 2037 to Yield 4.810%\* CUSIP 57563CCQ3

\$14,460,000 4.750% Term Bonds Due January 1, 2037 to Yield 4.810% CUSIP 57563CCP5

\* Yield to first call date of January 1, 2020.

IN CONNECTION WITH THE OFFERING OF THE BONDS, THE UNDERWRITERS MAY OVER ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF SUCH BONDS AT LEVELS ABOVE THOSE WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

The information set forth herein has been obtained from MassDOT, the Bank and other sources which are believed to be reliable, but, as to information from other than MassDOT, it is not to be construed as a representation by MassDOT or the Underwriters. The information and expressions of opinion herein are subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of MassDOT since the date hereof, except as expressly set forth herein. The various tables may not add due to rounding of figures.

The Underwriters have provided the following sentence for inclusion in this Official Statement. The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, their responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters does not guarantee the accuracy or completeness of such information.

No dealer, broker, salesperson or other person has been authorized to give any information or to make any representation other than those contained in this Official Statement, and, if given or made, such other information or representations must not be relied upon as having been authorized by MassDOT. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Bonds offered hereby by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale.

All quotations from and summaries and explanations of provisions of laws, resolutions, the Bonds and other documents herein do not purport to be complete; reference is made to said laws, resolutions, the Bonds and other documents for full and complete statements of their provisions. Copies of the above are available for inspection at the offices of the Issuer and the Trustee.

This Official Statement contains statements that, to the extent they are not recitations of historical fact, constitute “forward-looking statements.” In this respect, the words “estimate,” “project,” “anticipate,” “expect,” “intend,” “believe,” “forecast” and “outlook” and similar expressions are intended to identify forward-looking statements. A number of factors affecting MassDOT’s financial results could cause actual results to differ materially from those stated in the forward-looking statements.

The CUSIP (Committee on Uniform Securities Identification Procedures) numbers printed in this Official Statement have been assigned by an organization not affiliated with MassDOT, the Underwriters or the Trustee, and such parties are not responsible for the selection or use of the CUSIP numbers. The CUSIP numbers are included solely for the convenience of Bondowners and no representation is made as to the correctness of the CUSIP numbers printed herein. CUSIP numbers assigned to securities may be changed during the term of such securities based on a number of factors, including, but not limited to, the refunding or defeasance of such securities or the use of secondary market financial products. None of MassDOT, the Underwriters or the Trustee has agreed to, nor is there any duty or obligation to, update this Official Statement to reflect any change or correction in the CUSIP numbers printed therein.

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## OFFICIAL STATEMENT

*of the*

### MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

*relating to*

**\$1,089,975,000**

**Massachusetts Department of Transportation**

**Metropolitan Highway System Revenue Bonds (Senior)**

**\$207,665,000 Variable Rate Demand Obligations 2010 Series A-1 and A-2**

**and**

**\$882,310,000 2010 Series B**

## INTRODUCTION

The purpose of this Official Statement, which includes the cover page and the Appendices hereto, is to furnish information in connection with the sale by the Massachusetts Department of Transportation (“MassDOT” or the “Issuer”) of its Metropolitan Highway System Revenue Bonds (Senior), Variable Rate Demand Obligations, \$100,000,000 2010 Series A-1 (the “Series A-1 Bonds”) and \$107,665,000 2010 Series A-2 (the “Series A-2 Bonds,” and together with the Series A-1 Bonds, the “2010 Series A Bonds”), and \$882,310,000 2010 Series B (the “2010 Series B Bonds” and together with the 2010 Series A Bonds, the “Bonds”). Capitalized terms, if not defined herein, shall have the meanings set forth in *Appendix C – Summary of Certain Provisions of the Trust Agreement – Definitions* or, in the case of the 2010 Series A Bonds, *Appendix G – Definitions and Summary of Certain Provisions of the Bonds Relating to Variable Rate Demand Features, the Reimbursement Agreements and the Series A Letter of Credit*.

Chapter 25 of the Acts of 2009 of the Commonwealth of Massachusetts (as amended, the “Transportation Reform Act”), which was enacted and approved in June 2009, was designed to reform the transportation system of the Commonwealth of Massachusetts (the “Commonwealth”). The Transportation Reform Act created a new authority, the Massachusetts Department of Transportation, through enactment of Chapter 6C of the Massachusetts General Laws (the “Enabling Act”). MassDOT has a separate legal existence from the Commonwealth and is governed by a five-member board appointed by the Governor. The Governor has appointed a Secretary of MassDOT, who serves as MassDOT’s chief executive officer. The Board of Directors of MassDOT was authorized to begin exercising its powers on November 1, 2009. See *Massachusetts Department of Transportation*.

The Transportation Reform Act resulted, in part, from legislation enacted in 2004 which established a special Transportation Finance Commission (the “Transportation Commission”) to develop a comprehensive, multi-modal, long-range transportation finance plan for the Commonwealth. The Transportation Commission was charged with analyzing the Commonwealth’s long-term capital and operating needs for the state-wide transportation system and the funds expected to be available for such needs, as well as recommending how to close any perceived funding gap through potential cost savings, efficiencies and additional revenues. The Transportation Reform Act was in response to certain recommendations contained in the reports of the Transportation Commission. See *Massachusetts Department of Transportation*.

The Transportation Reform Act provided for the dissolution of the Massachusetts Turnpike Authority (the “Authority”) and the assumption by MassDOT of all of the Authority’s assets, liabilities, obligations and debt, including debt outstanding under the Trust Agreement. MassDOT assumed the rights, powers and duties of the Authority effective November 1, 2009 in accordance with the Transportation Reform Act. MassDOT’s power to issue debt for its corporate purposes related to the Metropolitan Highway System is limited to refunding obligations of the Authority that were issued by the Authority prior to July 1, 2009.

The Transportation Reform Act establishes a Massachusetts Transportation Trust Fund (the “Trust Fund”) within MassDOT, into which all bridge, tunnel and highway tolls, together with certain other funds of the Commonwealth, are deposited. Upon agreement of MassDOT and the Massachusetts Bay Transportation Authority (the “MBTA”), transit fares also may be deposited into the Trust Fund. Pursuant to the Transportation Reform Act, amounts remaining in the Trust Fund at the end of each fiscal year do not revert to the Commonwealth’s General Fund but remain in the Trust Fund subject to the control of MassDOT and not subject to appropriation by the Massachusetts Legislature. The Trust Fund is to be used for operations, maintenance and capital costs related to the transportation assets under MassDOT’s jurisdiction, including assets of the Authority transferred pursuant to the Transportation Reform Act, as well as debt service on Authority debt assumed by MassDOT, including the bonds issued under the Trust Agreement (as hereinafter defined). Amounts in the Trust Fund that constitute Pledged Revenues under the Trust Agreement remain subject to the lien of the Trust Agreement and are required to be used in accordance with the Trust Agreement. See *Security for the Bonds – Pledge Under the Trust Agreement* and – *Flow of Funds*.

The Trust Agreement requires that MassDOT maintain the Capital Reinvestment Fund and that Net Revenues in each Fiscal Year shall be at least equal to 1.20 times Senior Net Debt Service, 1.15 times Combined Net Debt Service (Senior plus Subordinated) and 1.00 times Combined Net Debt Service plus the Capital Reinvestment Requirement, which is to be established by MassDOT in its Annual Budget. See *Security for the Bonds – Toll Covenant*. Amounts deposited to the Capital Reinvestment Fund are available for capital improvements to the Accepted Metropolitan Highway System (as hereinafter defined). In addition, the Transportation Reform Act contemplates that the Commonwealth will fund future transportation improvements, including with respect to the Metropolitan Highway System, through appropriations to the Trust Fund and through the issuance by the State Treasurer of Commonwealth debt. See *Capital Investments*.

The Bonds constitute special obligations of MassDOT, secured as to the payment of principal and redemption price or purchase price, if any, of and interest thereon by a pledge of certain revenues and other moneys derived from the operation of the Accepted Metropolitan Highway System and certain funds and accounts established under the Trust Agreement, including the Senior Debt Service Fund and the Senior Debt Service Reserve Fund. See *Security for the Bonds* and *Appendix C – Summary of Certain Provisions of the Trust Agreement*.

The Bonds are authorized to be issued by MassDOT, as successor to the Authority pursuant to the Enabling Act, and are to be issued under the Metropolitan Highway System Trust Agreement, dated as of September 1, 1997, as amended (the “Metropolitan Highway System Trust Agreement”), including as amended and supplemented by an Eighth Supplemental Metropolitan Highway System Trust Agreement, dated as of May 1, 2010 (the “Eighth Supplemental Trust Agreement” and collectively with the Metropolitan Highway System Trust Agreement, the “Trust Agreement”), by and between MassDOT and The Bank of New York Mellon, as Trustee (the “Trustee”).

In October 1997, the Authority issued under the Metropolitan Highway System Trust Agreement the following Bonds (collectively, the “1997 Bonds”):

- \$1,183,046,617 Metropolitan Highway System Revenue Bonds, 1997 Series A (Senior) (the “1997 Series A Bonds”);
- \$194,680,000 Metropolitan Highway System Revenue Bonds, 1997 Series B (Subordinated); and
- \$89,136,005.95 Metropolitan Highway System Revenue Bonds, 1997 Series C (Senior) (the “1997 Series C Bonds”).

In March 1999, the Authority issued under the Metropolitan Highway System Trust Agreement \$808,975,000 Metropolitan Highway System Revenue Bonds, 1999 Series A (Subordinated) (the “1999 Bonds”).

In April 2010, MassDOT issued its \$592,335,000 Metropolitan Highway System Revenue Bonds (Subordinated), Commonwealth Contract Assistance Secured, Variable Rate Demand Obligations, 2010 Series A and \$261,220,000 Metropolitan Highway System Revenue Bonds (Subordinated), Commonwealth Contract Assistance Secured, 2010 Series B (collectively, the “2010 Subordinated Bonds”), which refunded all of the outstanding Subordinated Bonds previously issued by the Authority.

The Bonds are being issued to refund certain of the 1997 Series A Bonds currently outstanding under the Trust Agreement (the “Refunded Senior Bonds”). See *Appendix I – Table of Refunded Senior Bonds*. The 2010 Series A Bonds are, in part, being issued in connection with the exercise in 2008 of a swaption entered into by the Authority in 2001. See *Plan of Finance*.

The 2010 Series A Bonds are being issued as multi-modal bonds, initially bearing interest at a Weekly Interest Rate. This Official Statement includes information about the 2010 Series A Bonds while bearing interest at the Weekly Interest Rate only. In the event of any conversion of the 2010 Series A Bonds to bear interest other than at a Weekly Interest Rate, a new disclosure document would be prepared.

The Series A-1 Bonds are further secured by a letter of credit (the “Series A-1 Letter of Credit”) to be issued by Citibank, N.A. (“Citibank”). The Series A-2 Bonds are further secured by a letter of credit (the “Series A-2 Letter of Credit”) to be issued by Wells Fargo Bank, National Association (“Wells Fargo”). Citibank and Wells Fargo are referred to herein individually and collectively as the “Bank” or the “Credit Provider.” The Series A-1 Letter of Credit and the Series A-2 Letter of Credit are referred to herein individually and collectively as the “Series A Letter of Credit” or the “Credit Facility.” Each Series A Letter of Credit will entitle the Trustee to draw upon it to pay (i) the principal of the applicable subseries of 2010 Series A Bonds when due, whether upon maturity, redemption or acceleration, (ii) up to 198 days’ of interest on such subseries of 2010 Series A Bonds when due, at the maximum rate of 12% per annum, and (iii) the Purchase Price of 2010 Series A Bonds of such subseries tendered for purchase pursuant to the mandatory or optional tender provisions of the Trust Agreement. The initial expiration date of each Series A Letter of Credit is May 27, 2013. The term of each Series A Letter of Credit may be extended for additional periods solely in the applicable Bank’s discretion, upon request of MassDOT, as set forth in the applicable Reimbursement Agreement. The Trust Agreement provides that a substitute Credit Facility may be delivered to the Trustee under certain conditions. See *The Series A Letter of Credit and the Bank* and *Appendix F – Information Concerning the Bank*.

The Authority was originally created in 1952 to construct and operate the Massachusetts Turnpike, which extended approximately 135 miles from the New York border in the Town of West Stockbridge, Massachusetts to downtown Boston. The Massachusetts Turnpike initially opened to traffic in May 1957 and terminated west of Boston at Route 128 (the “Western Turnpike”). The extension of the Massachusetts Turnpike from Route 128 to downtown Boston (the “Boston Extension”) initially opened to traffic in September 1964.

In 1958, the Authority was authorized to construct the Callahan Tunnel in Boston, to acquire and repair the then existing Sumner Tunnel in Boston, and to operate and maintain both tunnels. Until 1995, these two tunnels served as the primary link between downtown Boston and Logan International Airport (“Logan Airport”) in East Boston. The twin tunnels began joint operation in 1962.

In March 1997 legislation (the “1997 Legislation”) repealed two special acts that previously had governed the Authority and established two separate systems to be owned and operated by the Authority, the Metropolitan Highway System (also referred to herein as the “MHS”) and the Western Turnpike. The Metropolitan Highway System, as now defined in the Enabling Act, comprises the Boston Extension, the Callahan Tunnel, the Central Artery (which is that part of Interstate 93 running through downtown Boston, a portion of which is underground), the Central Artery North Area (“CANA”) (which comprises a portion of state highway Route 1 beginning at, but not including, the southern boundary of the Tobin Memorial Bridge (the “Tobin Bridge”) and continuing to the interchange of Interstate 93), the Sumner Tunnel, the Ted Williams Tunnel (acquired by the Authority in 1995), the Tobin Bridge (transferred to MassDOT in January 2010, as described below) and any additional highway, tunnel and bridge components as the Legislature may from time to time determine. For purposes of the Trust Agreement, the term “Accepted Metropolitan Highway System” refers collectively to the Callahan Tunnel, the Sumner Tunnel and the Ted Williams Tunnel (collectively, the “Tunnels”), the Boston Extension, CANA, the Central Artery and any other property transferred to MassDOT upon satisfaction of certain other conditions specified in the Trust Agreement (and excludes the Tobin Bridge).

In 2009, the Transportation Reform Act established MassDOT, dissolved the Authority and provided for the transfer of the Authority’s assets, liabilities, obligations and debt to MassDOT. The Transportation Reform Act also provided for the transfer of the Tobin Bridge, which had been owned and operated by the Massachusetts Port Authority, to MassDOT effective January 1, 2010. Revenues generated by MassDOT from the Tobin Bridge are not currently pledged to bonds issued under the Trust Agreement, nor are any expenses associated with the Tobin

Bridge payable from Revenues under the Trust Agreement. See *Metropolitan Highway System – Description of Facilities*. Accordingly, in this Official Statement all references to and descriptions of the revenues, tolls, expenses and liabilities of the Metropolitan Highway System exclude any such revenues, tolls, expenses and liabilities derived from or allocable to the Tobin Bridge.

Pursuant to the 1997 Legislation, the Authority was required to contribute \$700 million toward the acquisition cost of the Ted Williams Tunnel and other components of the Metropolitan Highway System, which payment was made from proceeds of the 1997 Bonds. Prior to the issuance of the 1997 Bonds, the Authority had voluntarily agreed with the Commonwealth to contribute an additional \$400 million toward the capital cost of the Commonwealth’s Central Artery/Tunnel Project (the “CA/T Project”) in 2002, provided that certain annual payments were made available by the Commonwealth to defray a portion of the operating costs of the new Central Artery upon its transfer to the Authority, and that certain other conditions were satisfied. In July 1998, the Massachusetts Legislature enacted a law authorizing this annual operating assistance through a contract between the Commonwealth, acting through the Secretary of Administration and Finance, and the Authority (the “1999 Contract”). The annual operating assistance payments to be received from the Commonwealth pursuant to the 1999 Contract to defray a portion of the operating expenses of the Central Artery and CANA are capped at \$25 million annually and extend until the end of the 40<sup>th</sup> Fiscal Year following the transfer of the facilities to the Authority (which is not expected to be prior to 2047). Under the Trust Agreement, such payments constitute Dedicated Payments and are deposited annually upon receipt from the Commonwealth directly into the Senior Debt Service Fund. In the opinion of Bond Counsel, the obligation of the Commonwealth to make such payments to MassDOT constitutes a general obligation of the Commonwealth for which the full faith and credit of the Commonwealth are pledged. See *Security for the Bonds – Payments from the Commonwealth and Historical Operating Results – Dedicated Payments*. For a description of the MassDOT’s current obligations with respect to the CA/T Project, see *The Central Artery/Tunnel Project*.

The Commonwealth and the Authority, pursuant to Section 138 of Chapter 27 of the Acts of 2009, entered into a Contract for Financial Assistance, dated as of June 30, 2009 (as amended, the “2009 Contract”) providing for the payment by the Commonwealth to MassDOT of \$100,000,000 per Fiscal Year, commencing July 1, 2009 until June 30, 2039. In the opinion of Bond Counsel, the obligation of the Commonwealth to make such payments to MassDOT constitutes a general obligation of the Commonwealth for which the full faith and credit of the Commonwealth are pledged. See *Security for the Bonds – Payments from the Commonwealth and Historical Operating Results – Dedicated Payments*. Under the Trust Agreement, such payments constitute Dedicated Payments and are deposited monthly upon receipt from the Commonwealth first to the Subordinated Debt Service Fund and used first to pay debt service on the MHS Subordinated Bonds and other parity subordinated obligations payable therefrom in such amount as is necessary to cause the Subordinated Net Debt Service Requirement to be equal to zero. Dedicated Payments from the 2009 Contract are anticipated to exceed the total amount of such obligations payable from the Subordinated Debt Service Fund in each year that the Subordinated Bonds are Outstanding. The balance of these Dedicated Payments after satisfaction of all Subordinated Net Debt Service are deposited in the Senior Debt Service Fund and will be available to pay debt service on MHS Senior Bonds, including the Bonds. The Enabling Act currently prohibits the issuance of additional bonds under the Trust Agreement, other than to refund obligations issued by the Authority prior to July 1, 2009. The Trust Agreement prohibits the issuance of Additional Subordinated Bonds, other than Refunding Bonds. See *Security for the Bonds – Additional Indebtedness*.

There follows in this Official Statement a description of the Bonds, MassDOT, the Bank, the Series A Letter of Credit, the Reimbursement Agreement and the Metropolitan Highway System, together with summaries of the terms of the Bonds and certain provisions of the Enabling Act and the Trust Agreement. All references herein to the Enabling Act, the Trust Agreement, the Series A Letter of Credit and the Reimbursement Agreement are qualified in their entirety by reference to such law and documents, copies of which are available from MassDOT and the Trustee, and all references to the Bonds are qualified in their entirety by reference to the definitive forms thereof and the information with respect thereto contained in the Trust Agreement.

This Official Statement includes the following Appendices attached hereto:

- Appendix A – Financial Statements of the Authority for Fiscal Year 2009.
- Appendix B – Traffic and Revenue Study.
- Appendix C – Summary of Certain Provisions of the Trust Agreement.

- Appendix D – Proposed Form of Opinion of Bond Counsel.
- Appendix E – Summary of Continuing Disclosure Obligations.
- Appendix F – Information Concerning the Bank.
- Appendix G – Definitions and Summary of Certain Provisions of the Bonds Relating to Variable Rate Demand Features, the Reimbursement Agreements and the Series A Letter of Credit.
- Appendix H – Book-Entry-Only System.
- Appendix I – Table of Refunded Senior Bonds.

## **MASSACHUSETTS DEPARTMENT OF TRANSPORTATION**

MassDOT was created in 2009 by the Transportation Reform Act and is a body politic and corporate and a public instrumentality of the Commonwealth. The Transportation Reform Act provided for the dissolution of the Authority and the transfer of its assets, liabilities, obligations and debt, including debt outstanding under the Trust Agreement, to MassDOT. MassDOT assumed the rights, powers and duties of the Authority effective November 1, 2009 in accordance with the Transportation Reform Act.

The Transportation Reform Act followed legislation enacted in 2004 creating the Transportation Commission, which was tasked with developing a comprehensive, multi-modal, long-range transportation finance plan for the Commonwealth. The Transportation Commission was charged with analyzing the Commonwealth's long-term capital and operating needs for the state-wide transportation system and the funds expected to be available for such needs, as well as recommending how to close any perceived funding gap through potential cost savings, efficiencies and additional revenues. In March 2007, the Transportation Commission issued a report containing its analysis of the Commonwealth's ability to fund needed surface transportation improvements throughout the Commonwealth over the next 20 years, including for state-controlled roads and bridges and state environmental transit commitments related to the CA/T Project, as well as for the Massachusetts Turnpike system, local roads and bridges, MBTA operations and capital needs, and the Tobin Bridge (which was then owned and operated by the Massachusetts Port Authority). In September 2007, the Transportation Commission issued its second report, containing recommendations for closing the funding gap identified in its first report, which included recommended reform initiatives and proposals for transportation revitalization. The Transportation Reform Act responded, in part, to certain of these recommendations in creating MassDOT. The Metropolitan Highway System is a part of the assets now owned by MassDOT, and is housed within its Highways Division. Only revenues from the Accepted Metropolitan Highway System, and not other assets of MassDOT, are pledged under the Trust Agreement as security for the Bonds, as described herein, and accordingly this Official Statement sets forth a description of the operating results of the Metropolitan Highway System (excluding the Tobin Bridge) only, and not the operating results of MassDOT as a whole. See *Historical Operating Results, Fiscal Year 2010 Operating Budget and Projected Revenues, Expenses and Debt Service Coverage*.

While it has an appointed board and is independent of the Commonwealth as a separate body politic, MassDOT is governed by certain state laws, rules and policies applicable to other executive departments of the Commonwealth, including the use of the Commonwealth's central accounting system (MMARS), payroll system and adherence to state finance law. MassDOT has a central office, the Office of Planning and Programming, that houses the central administrative functions of the organization.

MassDOT comprises the following four divisions:

- The Highways Division includes the roadways, bridges, and tunnels of the former Massachusetts Highway Department (MHD) and the Authority, the Tobin Bridge and certain assets of the Massachusetts Department of Conservation and Recreation (DCR). The Highways Division is responsible for the design, construction and maintenance of the Commonwealth's state highways and bridges. The Division also is responsible for overseeing traffic safety, engineering activities and snow and ice removal to ensure safe road and travel conditions. The Division has six regional districts; the Metropolitan Highway System is now part of District 6.
- The Rail & Transit Division is responsible for all transit, freight and intercity rail initiatives and oversees the MBTA and all Regional Transit Authorities of the Commonwealth. The MBTA Board of Directors serves as the governing body of the MBTA, which itself remains a separate authority within

MassDOT. The five members of the MassDOT Board of Directors also serve as the MBTA Board of Directors.

- The Aeronautics Division has jurisdiction over the Commonwealth's public use airports, private use landing areas, and seaplane bases. It is responsible for airport development and improvements, aviation safety, aircraft accident investigation, navigational aids, and statewide aviation planning. The Division certifies airports and heliports, licenses airport managers, conducts annual airport inspections, and enforces safety and security regulations.
- The Registry of Motor Vehicles Division (the "RMV") is responsible for vehicle operator licensing and vehicle and aircraft registration available both online and at branch offices across the Commonwealth. The RMV oversees commercial and non-commercial vehicle inspection stations.

MassDOT is governed by a five-member board (the "Board of Directors" or the "Board") appointed by the Governor. Members of the Board serve four-year terms, initially staggered, and are eligible for reappointment. Of the appointees of the Governor, two shall be experts in the field of public or private transportation finance, two shall have practical experience in transportation planning and policy, and one shall be a registered civil engineer with at least 10 years experience. One of the directors shall be appointed by the Governor to serve as chair of the Board; provided, however, that said designee shall not be an employee of MassDOT or any division thereof. No more than three of the five directors shall be members of the same political party. The Enabling Act does not provide for MassDOT to be a debtor under the federal bankruptcy code.

The current members of the Board of Directors of MassDOT are:

JOHN R. JENKINS, *Board Chair, Natick, Massachusetts, term expires October 31, 2014.*

Chair of MassDOT Board and former Massachusetts Turnpike Authority Board member; President of West Insurance Agency, Inc.

FERDINAND ALVARO, JR., *Director, Marblehead, Massachusetts, term expires October 31, 2010.*

Practicing attorney, Adorno and Yoss; former Vice President, Commercial and General Counsel of BOC Process Systems; former Chief Executive Officer of the Cantarell Nitrogen Company; formerly has served on the boards of directors of U.S., Chilean, Columbian, Mexican, and Venezuelan companies.

ELIZABETH LEVIN, *Director, Boston, Massachusetts, term expires October 31, 2013.*

President of Liz Levin & Company, a management consulting company that serves the transportation, design and environment community.

JANICE LOUX, *Director, Boston, Massachusetts, term expires October 31, 2012.*

President of Greater Boston Hotel Employees Local 26 Union; Treasurer of the Local 26 Trust Funds; former Vice-President and Benefits Officer of Local 26.

ANDREW WHITTLE, *Director, Boxborough, Massachusetts, term expires October 31, 2011.*

A geotechnical engineer who currently serves as Department Head of the Massachusetts Institute for Technology's Department of Civil and Environmental Engineering.

Pursuant to the Enabling Act, the Governor has appointed a Secretary of MassDOT, who serves as its chief executive officer:

JEFFREY B. MULLAN, *Secretary and Chief Executive Officer.*

Held leadership positions at Massachusetts transportation agencies and authorities since 2007; key architect of the transportation reform; involved in Massachusetts transportation for more than 20 years;

served as the Executive Director during 2009 of the former Massachusetts Turnpike Authority; served as the Undersecretary and General Counsel of the Executive Office of Transportation (EOT) beginning in March 2007, and assumed the duties of Chief Operating Officer in October of 2008; previously a partner and co-chair of the administrative law practice at Foley Hoag LLP; former Massachusetts Department of Public Works Right of Way Manager for the Central Artery/Tunnel Project; graduate of the University of Massachusetts and Suffolk University School of Law.

## **Organization; Management and Personnel**

The senior management of MassDOT consists of the Chief Executive Officer as well as additional employees with professional qualifications in the fields outlined below.

*Chief Financial Officer*, Arthur Shea. Appointed Chief Financial Officer of MassDOT in March, 2010; previously Director of MassDOT's Capital Expenditure and Program Office; formerly served as Treasurer-Controller of the MBTA and Chief Financial Officer for the City of Boston Public Schools Department.

*Highways Division Administrator*, Luisa Paiewonsky. Appointed Highway Administrator of MassDOT in November, 2009; joined the former Massachusetts Department of Public Works in 1989, holding several management positions in the Department, culminating in the position of Commissioner of the former Massachusetts Highway Department.

*General Counsel*, Monica Conyngham. Appointed General Counsel of MassDOT in November, 2009; previously General Counsel for the Massachusetts Executive Office of Transportation and the Massachusetts Highway Department; also served as City Solicitor for Quincy, Massachusetts; formerly a member of the administrative law practice at Foley Hoag LLP.

*Chief Engineer*, Frank Tramontozzi, P.E. Appointed Chief Engineer of MassDOT in November 2009; previously Chief Engineer of the Massachusetts Highway Department; formerly Senior Vice President of the engineering firm Fay, Spofford and Thorndike, and Chief Engineer of the City of Boston Transportation Department.

*District Six Director*, Helmut Ernst. Appointed District Six Director of MassDOT (the District within MassDOT's Highways Division that encompasses the Metropolitan Highway System and surrounding communities) in November, 2009; previously Chief Engineer of the Authority where he served in different positions from 2003-2009, including as Deputy Chief of Operations for the Authority starting in May 2003; from 1987 to 2003, Deputy Chief Engineer of the former Massachusetts Highway Department.

## **Employee Relations**

On November 1, 2009, MassDOT integrated more than 4,000 employees previously employed by five overlapping and independent transportation agencies, including employees of the Authority, into the MassDOT organization created by the Transportation Reform Act. The process of integrating these employees into a single organization is ongoing, and several functions previously performed by employees of independent transportation agencies, including the Authority, have been or are expected to be consolidated into functional units that support multiple transportation facilities within MassDOT. For example, the employees of the Authority's Operations Control Center, the former MHD's Operations Control Center, and the personnel at monitoring stations for the Tobin Bridge traffic cameras have now been co-located in a combined facility in South Boston. Similarly, the money pick-up and counting operations associated with cash paying toll and transit fare payers of the Authority, the Tobin Bridge and the MBTA, respectively, have been integrated. Accordingly, the allocation of specific MassDOT personnel and their associated salary and benefit expense to the MHS operating expense budget will continue to be adjusted as the implementation of efficiencies and consolidations made possible by transportation reform continues within MassDOT.

In connection with implementing the Transportation Reform Act, MassDOT created a Human Resources Integration Team (the "HR team") that is working to address the various issues inherent in consolidating several operating entities into a single organization, including issues relating to collective bargaining and related matters. The HR team has reached agreement or is in negotiations with various labor unions regarding representation rights

of employees now within MassDOT, including those previously employed by the Authority that are now MassDOT employees working on the Metropolitan Highway System.

As of February 1, 2010, MassDOT had approximately 438.6 full time equivalent employees allocable to the Metropolitan Highway System.

Terms and conditions of employment are established by the Board for unaffiliated employees and are created and modified through collective bargaining with labor representatives for all other employees. Collective bargaining agreements are subject to Board approval. Massachusetts law prohibits strikes by MassDOT employees.

With the exception of 260 unaffiliated employees, all MassDOT employees are now represented by one of eleven existing collective bargaining units. Those MassDOT employees allocable to the Metropolitan Highway System that were formerly union members while at the Authority continue to work, for the most part, under the terms of the collective bargaining agreements that were in effect with the Authority and continue to be represented by the unions that represented them while at the Authority. MassDOT is negotiating the terms of union representation of the former Authority employees going forward. The former Authority employees are currently represented by the following unions.

Local 127 of the International Brotherhood of Teamsters (“Local 127”) represents 308 active maintenance and toll collection employees allocable to the Metropolitan Highway System pursuant to an agreement that expires in June 2010.

Clerical, Audit and Support Employees Teamsters’ Local 127 represents 1 clerical worker allocable to the Metropolitan Highway System pursuant to an agreement that expired in July 2008.

Local 103 of the International Brotherhood of Electrical Workers represents 42 electricians and communications workers allocable to the Metropolitan Highway System pursuant to an agreement that expired in October 2008.

Local 5696 (“Local 5696”) of the United Steelworkers of America (the “USW”) represents 47 MassDOT employees allocable to the Metropolitan Highway System pursuant to an agreement that expired in December 2008. Classifications represented by Local 5696 include but are not limited to Foremen, Inspectors, OCC Operators and Environmental Technicians. A separate bargaining unit represented by the USW, including 39 mid-level managers and professional employees allocable to the Metropolitan Highway System not covered by other existing bargaining units, had an agreement that expired in October 2009.

The employees working under expired contracts continue to work pursuant to the terms of those contracts during the consolidation, as MassDOT and the various labor unions continue to negotiate.

### **Retirement Plans and Other Employee Benefits**

Prior to November 1, 2009, the Authority maintained its own Employees’ Retirement System (the “Authority Retirement System”) established in 1968 as a contributory retirement system and subject to the provisions of Massachusetts General Laws, Chapter 32, Sections 1-28. The Authority Retirement System was overseen by a board of five members. The Transportation Reform Act continued the Authority Retirement System under the same statutory framework but moved the management of the Authority Retirement System to the Commonwealth of Massachusetts’ State Retirement System (the “State Retirement System”), where it is administered by the board of the State Retirement System. The board of the Authority Retirement System was abolished.

The accounting policies of the Authority Retirement System follow the principles and practices for public employee contributory retirement systems promulgated by the Commonwealth Public Employee Retirement Administration Commission (“PERAC”), pursuant to Chapter 32, Section 21 of the Massachusetts General Laws, as amended.

The Transportation Reform Act provided for the transfer of the funds of the Authority Retirement System to the State Treasurer who performs the duties of the treasurer-custodian of such funds. Pursuant to the Transportation Reform Act, such funds are held by the State Treasurer for the exclusive benefit and use of the members of the Authority Retirement System and their beneficiaries. Under the Transportation Reform Act, effective upon the date of dissolution of the Authority or a default in the obligations of the Authority Retirement System, the payment of all annuities, pensions, retirement allowances and of any other benefits payable by the Authority Retirement System were made obligations of the Commonwealth.

As of January 2008 (the most recent valuation), the value of the Authority Retirement System's actuarial liability exceeded the system's assets by approximately \$65.1 million, resulting in the Authority Retirement System being approximately 77.4% funded. Pursuant to the requirements of PERAC, the Authority Retirement System is to be fully funded by 2028. The Authority funded \$5.4 million, \$6.2 million and \$7.5 million in Authority Retirement System expenses in Fiscal Years 2007, 2008 and 2009, respectively. The amount funded for Fiscal Year 2008 reflects a full twelve-month contribution, although Fiscal Year 2008 consisted of only six months. See *Historical Operating Results*. Of these amounts, the Authority has allocated approximately \$1.9 million, \$2.2 million and \$2.6 million, respectively, to the Metropolitan Highway System.\* For Fiscal Year 2010, the Authority (before its dissolution) budgeted approximately \$7.5 million in gross costs for the Authority Retirement System, of which approximately \$2.6 million was allocated by the Authority to the Metropolitan Highway System. This budgeted amount covered the aggregate cost of the annual funding requirement for the Authority Retirement System for Fiscal Year 2010. The Transportation Reform Act is unclear as to the obligation for future funding of the Authority Retirement System; however, for purposes of this Official Statement only, it has been assumed that any future funding obligations will be expenses allocable to the Metropolitan Highway System.

MassDOT provides certain health care benefits for its retired employees. With respect to the Metropolitan Highway System, in Fiscal Year 2009 approximately 328 Authority retirees and retiree spouses met the eligibility requirements to receive these benefits. The cost of retiree health care benefits is currently recognized as an expense when paid on a modified accrual or Trust basis of accounting. The aggregate expense recognized by the Authority in Fiscal Years 2007, 2008 and 2009 was approximately \$4.5 million, \$2.6 million and \$5.3 million, respectively, of which approximately \$1.6 million, \$0.9 million and \$1.9 million, respectively, was allocated by the Authority to the Metropolitan Highway System. For Fiscal Year 2010, the Authority (before its dissolution) budgeted approximately \$5.6 million for these expenses, of which approximately \$2 million was allocated by the Authority to the Metropolitan Highway System.

MassDOT has been working with an actuarial firm to value other post-employment benefits ("OPEB") on a GAAP basis under GASB Statements Numbers 43 and 45. Based on data provided by the actuary, the Authority's actuarial accrued liability as of June 30, 2008 (the most recent valuation available), on a prefunded basis was \$179.5 million and the unfunded actuarial accrued liability was \$127.8 million. Currently, MassDOT has approximately \$51.7 million set aside in an irrevocable trust, in accordance with GASB standards. The Authority's net OPEB obligation for Fiscal Year 2009 was approximately \$6.2 million, of which \$2.1 million was allocated by the Authority to the Metropolitan Highway System. MassDOT is working closely with the actuaries and with its independent auditor to ensure that all the requirements of the GASB standards are properly adhered to in funding its liabilities.

## **Insurance**

The Trust Agreement requires that MassDOT maintain with responsible insurers all required and reasonably obtainable insurance in such amount or amounts, if any, as shall be recommended by the Insurance Consultant (as defined in the Trust Agreement) to protect, with respect to the Metropolitan Highway System, any extension and MassDOT's interest in any other projects, against (i) loss or damage and loss of revenues, and (ii) public liability to the extent necessary to protect the interest of MassDOT and the Bondowners.

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\* All amounts referred to in this Official Statement as being allocated by the Authority to the Metropolitan Highway System were allocated by the Authority based on a 35% allocation to the Metropolitan Highway System and a 65% allocation to the Western Turnpike, and have not been audited.

Under the Trust Agreement, MassDOT may self-insure against any risk at the recommendation or approval of the Insurance Consultant; provided, however, that MassDOT shall provide adequate funding of such self-insurance if and to the extent recommended by the Insurance Consultant.

Upon assumption of the Authority's obligations, MassDOT continued the same type of insurance coverages maintained by the Authority. As part of its comprehensive risk financing and insurance program, MassDOT currently maintains property damage and use and occupancy (time element) insurance with respect to its Metropolitan Highway System facilities in the following amounts:

- Bridges and tunnels, including overpasses and underpasses, are insured to \$500 million with a \$25 million self insured retention. The limit applies to each and every loss, with a \$250,000 deductible.
- Buildings and contents are insured to \$250 million per loss, with a deductible of \$250,000 per loss.
- Terrorism coverage of \$250 million for property damage and acts of domestic or foreign terrorism, subject to a \$1 million deductible per occurrence.

The above policies expire January 1, 2011. In keeping with industry practice, the use and occupancy (time element) insurance does not apply to loss arising out of damage to the non-bridge, overpass or underpass portions of the Boston Extension.

Upon consultation with its current Insurance Consultant, J. H. Albert International Insurance Advisors, Inc., Needham, Massachusetts, MassDOT also purchases additional insurance as is reasonably obtainable and deemed prudent. MassDOT currently maintains automobile liability, commercial general liability, and umbrella liability insurance coverages with combined annual aggregate limits of \$100 million, with a \$25 million deductible which expires in November 2010. In addition, insurance coverage is maintained for comprehensive crime and public officials' liability privacy/network liability, and aircraft liability. MassDOT currently expects to renew the purchased coverages described above on an annual basis, so long as such coverages remain reasonably obtainable.

## **Executive Offices**

MassDOT's executive offices are located in the State Transportation Building at 10 Park Plaza, Boston, Massachusetts, 02116. MassDOT's main telephone number is (617) 973-7000.

## **Fiscal Year**

MassDOT's Fiscal Year ends on June 30. The Authority previously changed its Fiscal Year end from December 31 to June 30, effective June 30, 2008.

## **Outstanding Indebtedness**

*Metropolitan Highway System.* In April 2010 MassDOT refunded all of its Outstanding MHS Subordinated Bonds through the issuance of its 2010 Subordinated Bonds. Upon the issuance of the Bonds, only the Bonds, the 1997 Series A Bonds that constitute Capital Appreciation Bonds (the "1997 Series A CABs"), the 1997 Series C Bonds, and the 2010 Subordinated Bonds will be outstanding under the Trust Agreement. See *Debt Service Requirements*.

*Western Turnpike Bonds.* MassDOT also has outstanding, as of April 1, 2010, \$127.4 million aggregate principal amount of its Western Turnpike Revenue Bonds, 1997 Series A, which are secured solely from revenues derived from the Western Turnpike and are not payable from revenues of the Metropolitan Highway System. The date of final maturity of the Western Turnpike Bonds is January 1, 2017.

*Swap Agreements.* In 2001 the Authority entered into certain contracts with UBS AG ("UBS"), giving UBS the right to enter into five separate interest rate swap agreements (the "UBS swaptions") with the Authority. The UBS swaptions were in an aggregate notional amount of \$800 million and pertained to an equal amount of the then outstanding Authority bonds. All five of the UBS swaptions were exercised by UBS (the "UBS Swaps"), with two becoming effective on January 1, 2008 in the aggregate notional amount of \$126,725,000, a third becoming

effective on July 1, 2008 in the notional amount of \$207,665,000, and the final two becoming effective on January 1, 2009 in the aggregate notional amount of \$465,610,000. The UBS Swaps provide for MassDOT to make fixed-rate payments to UBS and to receive variable-rate payments from UBS. MassDOT issued the 2010 Subordinated Bonds, in part, and is issuing the 2010 Series A Bonds as a result of the exercise of these swaptions. See *Plan of Finance – 2010 Series A Bonds*.

In 1999 the Authority entered into a basis swap with JPMorgan Chase Bank (the “Basis Swap”) in the notional amount of \$100 million. On October 2, 2008, Moody’s Investor’s Service, Inc. (“Moody’s”) announced a downgrade of its ratings of the Authority’s senior and subordinated Metropolitan Highway System Bonds to Baa2 from A3 and Baa3 from Baa1, respectively. As a result of this downgrade, the Authority had been required to post collateral with respect to the Basis Swap. The amount of posted collateral varied and had been as high as approximately \$19.6 million. Upon the upgrading of the then Outstanding Senior Bonds by Moody’s in March 2010, the collateral requirement was no longer applicable and the posted collateral has been returned to MassDOT.

As of April 2, 2010, the aggregate termination costs of the Authority’s swaps were estimated (based on mid-market valuations) to be approximately \$222.3 million for the UBS Swaps and \$8.1 million for the Basis Swap.

In December 2008, the Authority terminated five swaptions (the “Lehman swaptions”) and one basis swap with Lehman Brothers Special Financing Inc., as a result of the bankruptcy filing of Lehman Brothers Holdings Inc., at a net aggregate cost to the Authority of approximately \$3.2 million. The Authority received notice from Lehman Brothers Special Financing Inc. disputing the Authority’s calculation of the termination amounts relating to the swaptions and the basis swap but without stating an alternative amount.

## THE 2010 SERIES A BONDS

### General

The Series A-1 Bonds will be issued in the aggregate principal amount of \$100,000,000 and the Series A-2 Bonds will be issued in the aggregate principal amount of \$107,665,000. The 2010 Series A Bonds will be dated the date of delivery thereof and initially will bear interest from their date of delivery at the Weekly Interest Rate payable on each Interest Payment Date until maturity, earlier redemption or conversion to a different interest rate, all as described below under *Additional Information Related to Variable Rate Demand Bonds*. Interest on the 2010 Series A Bonds bearing interest at the Weekly Interest Rate will be calculated on the basis of a 365- or 366-day year, as applicable, for the actual number of days elapsed and will be payable on each Interest Payment Date to the registered owner as of the record date, which generally is the fifteenth day (whether or not a business day) of the calendar month next preceding the interest payment date.

*Book-Entry-Only System.* The 2010 Series A Bonds will be issued by means of a book-entry-only system, with bond certificates immobilized at The Depository Trust Company, New York, New York (“DTC”). See *Appendix H – Book-Entry-Only System*. 2010 Series A Bond certificates will not be available for distribution to the public and will evidence ownership of the 2010 Series A Bonds in principal amounts of \$100,000 and integral multiples of \$5,000 in excess of \$100,000 while bearing interest at the Weekly Interest Rate. Transfers of ownership will be effected on the records of DTC and its participants pursuant to rules and procedures established by DTC and its participants. Interest and principal due on the 2010 Series A Bonds will be paid to DTC or its nominee as registered owner of the 2010 Series A Bonds. As long as the book-entry-only system remains in effect, DTC or its nominee will be recognized as the owner of the 2010 Series A Bonds for all purposes, including notices and voting. The Issuer will not be responsible or liable for maintaining, supervising or reviewing the records maintained by DTC, its participants or persons acting through such participants.

### Additional Information Related to Variable Rate Demand Bonds

The 2010 Series A Bonds will bear interest at the Daily Interest Rate, the Weekly Interest Rate, the Bond Interest Term Rate or the Long Term Interest Rate. Depending on which interest rate is then in effect for the 2010 Series A Bonds, the Interest Payment Dates, the dates interest rates are effective, the dates on which notices of tender are required to be given, the dates on which 2010 Series A Bonds are to be tendered, the dates for notices of conversion to another interest rate and provisions for mandatory tender for purchase applicable to the 2010 Series A Bonds will vary. See the description below and *Appendix G* for further details. This Official Statement generally

provides detailed descriptions of these provisions of the 2010 Series A Bonds while bearing interest at the Weekly Interest Rate only.

The information regarding provisions for the tender and purchase of 2010 Series A Bonds should be used in conjunction with the information set forth in *Appendix H – Book-Entry-Only System*. As initially issued, the 2010 Series A Bonds will be issued in book-entry-only form through the facilities of DTC, and the procedures and practices of DTC will govern the tender and purchase procedures applicable to owners of beneficial interests in the 2010 Series A Bonds.

*Interest.* The 2010 Series A Bonds shall bear interest at a Daily Interest Rate, Weekly Interest Rate, Bond Interest Term Rate or Long Term Interest Rate. Initially the 2010 Series A Bonds will bear interest at the Weekly Interest Rate. At the option of the Issuer, 2010 Series A Bonds may be changed to any other interest rate, including a change from one Bond Interest Term Rate to another Bond Interest Term Rate of a different duration, as described below and in *Appendix G*.

So long as the 2010 Series A Bonds bear interest at the Weekly Interest Rate, interest will be payable each January 1 and July 1 (each, an “Interest Payment Date”), commencing July 1, 2010. Interest on 2010 Series A Bonds bearing interest at the Weekly Interest Rate will be computed on the basis of a 365- or 366-day year, as applicable, for the actual number of days elapsed and is payable to the registered owners who are such registered owners on the fifteenth day of the month immediately preceding an Interest Payment Date. As long as the 2010 Series A Bonds are registered in the name of Cede & Co., as nominee of DTC, such payments will be made directly to DTC. See *Appendix H – Book-Entry-Only System*. For a description of interest payments on 2010 Series A Bonds bearing interest at the Daily Interest Rate, the Bond Interest Term Rate and the Long Term Interest Rate, see *Appendix G*.

*Interest Rate Determination.* While the 2010 Series A Bonds bear interest at the Weekly Interest Rate, the Remarketing Agent shall determine such rate by 5:00 p.m. on the Tuesday of each week during the Weekly Interest Rate Period, or if such day is not a Business Day, then on the next succeeding Business Day. The first Weekly Interest Rate for each Weekly Interest Rate Period shall be determined on or prior to the first day of such Weekly Interest Rate Period and shall apply to the period commencing on the first day of such Weekly Interest Rate Period and ending on and including the next succeeding Tuesday. Thereafter, each Weekly Interest Rate shall apply to the period commencing on and including Wednesday and ending on and including the next succeeding Tuesday, unless such Weekly Interest Rate Period ends on a day other than Tuesday, in which event the last Weekly Interest Rate for such Weekly Interest Rate Period shall apply to the period commencing on and including the Wednesday preceding the last day of such Weekly Interest Rate Period and ending on and including the last day of such Weekly Interest Rate Period. The Weekly Interest Rate will be determined by the Remarketing Agent as the minimum interest rate which would cause such 2010 Series A Bonds to have a market value equal to 100% of the principal amount thereof (exclusive of accrued interest), taking into account then prevailing market conditions. Notice of the Weekly Interest Rate will be given by the Remarketing Agent to the Issuer and the Trustee by the close of business on the Business Day next succeeding the date of determination of such Weekly Interest Rate by telephone or telecopy, promptly confirmed in writing, or by readily accessible electronic means. If the Remarketing Agent fails to determine a Weekly Interest Rate then the Weekly Interest Rate shall be the Weekly Interest Rate last determined by such Remarketing Agent. After the second consecutive week that the Remarketing Agent fails to establish a Weekly Interest Rate with respect to the 2010 Series A Bonds bearing interest at such rate, then the Weekly Interest Rate shall equal the lesser of the Maximum Bond Interest Rate and the Bank Bond Rate until the Remarketing Agent determines a Weekly Interest Rate, or a successor Remarketing Agent has been appointed and the successor Remarketing Agent determines a Weekly Interest Rate. If any Weekly Interest Rate determined by such Remarketing Agent is held to be invalid or unenforceable by a court of law, then the Weekly Interest Rate for such week shall be equal to 110% of the SIFMA Index, or if such index is no longer available, 85% of the interest rate on 30 day high grade unsecured commercial paper notes sold through dealers by major corporations as reported in The Wall Street Journal on the day such Weekly Interest Rate would otherwise be determined as provided in the Eighth Supplemental Trust Agreement for such Weekly Interest Rate Period. For a description of the procedures for determining the Daily Interest Rate, Bond Interest Term Rate and Long Term Interest Rate, see *Appendix G*.

*Conversion from Weekly Interest Rate.* The Issuer may direct that the interest rate on the 2010 Series A Bonds be converted to a Daily Interest Rate, a Long-Term Interest Rate or Bond Interest Term Rates. For a description of the conditions required to be satisfied for such conversion, see *Appendix G – Definitions and Summary of Certain Provisions of the Bonds Relating to Variable Rate Demand Features, the Reimbursement Agreements and the Series A Letter of Credit*.

If the Interest Rate Period is to be converted from the Weekly Interest Rate to another Interest Rate Period, then the 2010 Series A Bonds will be subject to mandatory tender for purchase on the effective date of the conversion, at a purchase price equal to the principal amount thereof, without premium, plus accrued interest (if any) to the effective date of the conversion. The Trustee is required to give notice of any conversion to another Interest Rate Period to the Owners of the 2010 Series A Bonds not less than 10 days prior to the proposed effective date of such conversion.

The Issuer may rescind its election to convert the Interest Rate Period from a Weekly Interest Rate Period by delivering a rescission notice to the Trustee, the Remarketing Agent, the Tender Agent and the Credit Provider on or prior to 10:00 a.m. on the Business Day preceding the proposed effective date of the conversion. However, if a notice of the proposed conversion has been given to the Owners of the 2010 Series A Bonds, then the 2010 Series A Bonds nevertheless will still be subject to mandatory tender for purchase on the date which would have been the effective date of the conversion, regardless of the rescission.

*Optional Tender for Purchase.* During any Weekly Interest Rate Period, any 2010 Series A Bond (other than a Bank Bond or Borrower Bond) bearing interest at a Weekly Interest Rate will be purchased in whole (or in part if both the amount to be purchased and the amount remaining unpurchased will consist of Authorized Denominations) from a Bondowner, at the Bondowner's option, on any Business Day in accordance with an irrevocable written notice which states the series and principal amount of such 2010 Series A Bond to be purchased, the principal amount thereof to be purchased, and the date on which the same shall be purchased, which date must be a Business Day at least seven days after the date of the delivery of such notice to the Tender Agent and the Trustee and the Remarketing Agent. The Bondowner must deliver the notice to the Tender Agent and the Trustee, with a copy to the Remarketing Agent. Any notice delivered to the Tender Agent after 4:00 p.m., New York City time, will be deemed to have been received on the next succeeding Business Day. A 2010 Series A Bond so tendered will be purchased at a Tender Price equal to the principal amount thereof tendered for purchase, without premium, plus accrued interest to the Tender Date, payable in immediately available funds.

*Mandatory Tender for Purchase on First Day of Each Interest Rate Period.* The 2010 Series A Bonds shall be subject to mandatory tender for purchase on the first day of each Interest Rate Period at the Tender Price, payable in immediately available funds. For payment of the Tender Price on the Tender Date, a 2010 Series A Bond must be delivered at or prior to 10:00 a.m. on the Tender Date. If delivered after that time, the Tender Price shall be paid on the next succeeding Business Day. The Tender Price shall be payable only upon surrender of such 2010 Series A Bond to the Tender Agent.

*Mandatory Tender for Purchase upon Termination, Replacement or Expiration of Credit Facility.* If at any time the Trustee gives notice pursuant to the Trust Agreement that a subseries of 2010 Series A Bonds tendered for purchase will on the date specified in such notice cease to be subject to purchase pursuant to the Credit Facility then in effect (including the Series A Letter of Credit) as a result of the termination, replacement or expiration of the term, as extended, of such Credit Facility, including but not limited to termination at the option of the Issuer in accordance with the terms of such Credit Facility, then such subseries of 2010 Series A Bonds will be purchased or deemed purchased at a Tender Price equal to the principal amount thereof tendered for purchase, without premium, plus accrued interest to the Tender Date (if the Tender Date is not an Interest Accrual Date), payable in immediately available funds.

The mandatory purchase of a subseries of 2010 Series A Bonds under the circumstances described in the preceding paragraph will occur: (i) on the fifth Business Day preceding any such expiration or termination of the applicable Credit Facility without replacement by an Alternate Credit Facility, and (ii) on the proposed date of the replacement of the applicable Credit Facility, where an Alternate Credit Facility is to be delivered to the Trustee pursuant to the Trust Agreement. No mandatory tender under the circumstances described in the preceding paragraph will be effected upon the replacement of a Credit Facility in the event the respective Credit Provider has failed to honor a properly presented and conforming drawing or demand for purchase under the Credit Facility.

In the event that funds from the remarketing of a subseries of 2010 Series A Bonds are not sufficient to pay the purchase price of all 2010 Series A Bonds of such subseries subject to mandatory tender upon replacement of an existing Credit Facility, funds for such purchase will be drawn under the then-existing applicable Credit Facility, not the Alternate Credit Facility.

If sufficient funds are not available for the purchase of all 2010 Series A Bonds of a subseries tendered or deemed tendered and required to be purchased on any Tender Date, the failure to pay the Tender Price of all tendered 2010 Series A Bonds of such subseries when due and payable shall not constitute an Event of Default

(except to the extent the Provider of the Credit Facility fails to provide money to pay the Tender Price and the Tender Price of such subseries of 2010 Series A Bonds is not paid within 365 days after the Tender Date) and all tendered 2010 Series A Bonds of such subseries shall be returned to their respective Owners and all such 2010 Series A Bonds shall bear interest at the Maximum Bond Interest Rate from the date of such failed purchase until all such tendered 2010 Series A Bonds are purchased as required in accordance with the Eighth Supplemental Trust Agreement. Thereafter, the Trustee shall continue to take all such action available to it to obtain remarketing proceeds from the Remarketing Agent and sufficient other funds from the Credit Provider or the Issuer.

The Trustee is required to give notice by first class mail to the owners of a subseries of 2010 Series A Bonds secured by a Credit Facility on or before the 10th day preceding the expiration or termination of such Credit Facility in accordance with its terms (except if the Credit Provider has failed to transfer all or any portion of funds in accordance with the Credit Facility upon a properly presented and conforming drawing) or the proposed replacement of such Credit Facility. The notice must state, among other things, (i) the date of the expiration, termination or proposed replacement of such Credit Facility, (ii) that the 2010 Series A Bonds of such subseries are subject to mandatory tender for purchase as a result of such expiration, termination or proposed replacement, and (iii) the date on which such purchase will occur and the Tender Price and the place of delivery for the purchase of such 2010 Series A Bonds.

*Mandatory Tender for Purchase at the Direction of the Issuer or the Credit Provider.* During the Weekly Interest Rate Period, one or both subseries of 2010 Series A Bonds are subject to mandatory tender for purchase on any Business Day designated by the Issuer, with the written consent of the Remarketing Agent and the applicable Credit Providers, at the Tender Price, payable in immediately available funds. Such purchase date shall be a Business Day not earlier than the 10<sup>th</sup> day following the second Business Day after receipt by the Trustee of such designation.

The Trustee is required to give notice by first-class mail to the Owners of a mandatory tender for purchase not less than ten (10) days prior to a Tender Date occurring at the direction of the Issuer.

The 2010 Series A Bonds of a subseries are subject to mandatory tender for purchase at the Tender Price, payable in immediately available funds, on the fourth Business Day after receipt by the Trustee of a written notice from the applicable Credit Provider of a non-reinstatement of the related Credit Facility or that an “Event of Default” under the related Credit Provider Agreement has occurred and is continuing, and a written request from such Credit Provider that all 2010 Series A Bonds of such subseries be required to be tendered for purchase.

The Trustee is required to give notice by first-class mail to the Owners of a mandatory tender for purchase not less than three (3) days prior to a Tender Date occurring at the direction of the Credit Provider.

## **Redemption Provisions**

*Optional Redemption.* Provided there is no continuing Event of Default under the Trust Agreement, while bearing interest at the Weekly Interest Rate, the 2010 Series A Bonds shall be subject to redemption at the written direction of the Issuer (and with the written consent of the applicable Credit Providers if a Credit Facility is in effect with respect to any such 2010 Series A Bonds and a Credit Facility Failure shall not have occurred and be continuing), in whole or in part on any Business Day, at a redemption price of 100% of the principal amount thereof plus accrued interest to, but not including, the redemption date.

*Mandatory Sinking Fund Redemption.* The 2010 Series A Bonds are subject to mandatory sinking fund redemption and shall be redeemed prior to their stated maturity, from Sinking Fund Installments, on January 1 in the years set forth below by payment of 100% of the principal amount of such 2010 Series A Bonds called for redemption, plus interest accrued to but not including the date fixed for redemption according to the schedule set forth below:

### Series A-1 Bonds

<u>Year</u>	<u>Principal Amount</u>
2035	\$ 9,250,000
2036	44,345,000
2037 <sup>†</sup>	46,405,000

### Series A-2 Bonds

<u>Year</u>	<u>Principal Amount</u>
2035	\$ 9,955,000
2036	47,745,000
2037 <sup>†</sup>	49,965,000

<sup>†</sup> Stated maturity.

*Partial Redemption.* Any partial optional redemption of a subseries of 2010 Series A Bonds shall be credited by the Trustee at 100% of the principal amount thereof against future mandatory sinking fund redemption requirements as shall be specified by the Issuer in a certificate; provided, however, that until the Issuer delivers such certificate, the Trustee shall allocate the principal amount of 2010 Series A Bonds of a subseries so redeemed against future mandatory sinking fund redemption requirements for such subseries in chronological order.

*Notice of Redemption.* In the event any of the 2010 Series A Bonds are called for redemption, the Trustee shall give notice, in the name of the Issuer, of the redemption of such 2010 Series A Bonds, which notice shall (i) specify the subseries and principal amount of 2010 Series A Bonds to be redeemed, the redemption date, the redemption price, and the place or places where amounts due upon such redemption will be payable (which shall be the principal corporate trust office of the Trustee) and, if less than all of the 2010 Series A Bonds of a subseries are to be redeemed, the numbers of the 2010 Series A Bonds and the portions of the 2010 Series A Bonds of such subseries, so to be redeemed, (ii) state any condition to such redemption, and (iii) state that on the redemption date, and upon the satisfaction of any such condition, the 2010 Series A Bonds to be redeemed shall cease to bear interest. CUSIP number identification shall accompany all redemption notices. Such notice may set forth any additional information relating to such redemption. If, at the time of mailing the notice of optional redemption, moneys have not been deposited with the Trustee in an amount sufficient to redeem all of the 2010 Series A Bonds called for redemption, such notice may state that it is conditional, *i.e.*, subject to the deposit of sufficient moneys not later than the opening of business on the redemption date, and any such notice shall be of no effect unless such moneys are deposited.

Such notice shall be given by mail, postage prepaid, at least 30 days but not more than 60 days prior to the date fixed for redemption to each owner of 2010 Series A Bonds to be redeemed at its address shown on the registration books kept by the Trustee; provided, however, that failure to give such notice to any Bondowner or any defect in such notice shall not affect the validity of the proceedings for the redemption of any of the other 2010 Series A Bonds. The Trustee shall send a second notice of redemption by certified mail return receipt requested to any registered owner who has not submitted 2010 Series A Bonds called for redemption 30 days after the redemption date; provided, however, that the failure to give any second notice by mailing, or any defect in such notice, shall not affect the validity of any proceedings for the redemption of any of the 2010 Series A Bonds and the Trustee shall not be liable for any failure by the Trustee to send any second notice.

So long as DTC or its nominee is the Bondowner, the Issuer and Trustee will recognize DTC or its nominee as the Bondowner for all purposes, including notices and voting. Conveyance of notices and other communications by DTC to DTC Participants, by DTC Participants to Indirect Participants, and by DTC Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory and regulatory requirements which may be in effect from time to time. So long as DTC or its nominee is the Bondowner, any failure on the part of DTC or failure on the part of a nominee of a Beneficial Owner (having received notice from a DTC Participant or otherwise) to notify the Beneficial Owner so affected shall not affect the validity of the redemption.

*Effect of Redemption.* Any 2010 Series A Bonds and portions of 2010 Series A Bonds which have been duly selected for redemption and which are paid in accordance with the Trust Agreement shall cease to bear interest on the specified redemption date.

*Mandatory Redemption of Bank Bonds.* Notwithstanding anything to the contrary in the Eighth Supplemental Trust Agreement, Bank Bonds, if any, are required to be redeemed as set forth in the applicable Reimbursement Agreement. Each Reimbursement Agreement requires that any amounts applied to the redemption of 2010 Series A Bonds (whether optional, pursuant to sinking fund requirements or otherwise) shall be used first to redeem Bank Bonds.

### **Disclosure Regarding Sales of 2010 Series A Bonds by Remarketing Agent**

*Remarketing Agent is Paid by the Issuer.* The Remarketing Agent's responsibilities include determining the interest rate from time to time and remarketing of the 2010 Series A Bonds that are optionally or mandatorily tendered by the Owners thereof (subject, in each case, to the terms of the Remarketing Agreement), all as further described in this Official Statement. The Remarketing Agent is appointed by the Issuer and is paid by the Issuer for its services. As a result, the interests of the Remarketing Agent may differ from those of existing holders and potential purchasers of 2010 Series A Bonds.

*Remarketing Agent Routinely Purchases 2010 Series A Bonds for its Own Account.* The Remarketing Agent acts as remarketing agent for a variety of variable rate demand obligations and, in its sole discretion, routinely purchases such obligations for its own account. The Remarketing Agent is permitted, but not obligated, to purchase tendered 2010 Series A Bonds for its own account and, in its sole discretion, may routinely acquire such tendered 2010 Series A Bonds in order to achieve a successful remarketing of the 2010 Series A Bonds (*i.e.*, because there otherwise are not enough buyers to purchase the 2010 Series A Bonds) or for other reasons. However, the Remarketing Agent is not obligated to purchase 2010 Series A Bonds, and may cease doing so at any time without notice. The Remarketing Agent may also make a market in the 2010 Series A Bonds by routinely purchasing and selling the 2010 Series A Bonds other than in connection with an optional or mandatory tender and remarketing. Such purchases and sales may be at or below par. However, the Remarketing Agent is not required to make a market in the 2010 Series A Bonds. The Remarketing Agent also may sell any 2010 Series A Bonds it has purchased to one or more affiliated investment vehicles for collective ownership or enter into derivative arrangements with affiliates or others in order to reduce its exposure to the 2010 Series A Bonds. The purchase of 2010 Series A Bonds by the Remarketing Agent may create the appearance that there is greater third party demand for the 2010 Series A Bonds in the market than is actually the case. The practices described above also may result in fewer 2010 Series A Bonds being tendered in a remarketing.

*2010 Series A Bonds May be Offered at Different Prices on Any Date Including an Interest Rate Determination Date.* Pursuant to the Remarketing Agreement, the Remarketing Agent is required to determine the rate of interest that, in its judgment, is the lowest rate that would permit the sale of the 2010 Series A Bonds bearing interest at such interest rate at par plus accrued interest, if any, on and as of the applicable Rate Determination Date. The interest rate will reflect, among other factors, the level of market demand for the 2010 Series A Bonds (including whether the Remarketing Agent is willing to purchase the 2010 Series A Bonds for its own account). There may or may not be 2010 Series A Bonds tendered and remarketed on a Rate Determination Date, the Remarketing Agent may or may not be able to remarket any 2010 Series A Bonds tendered for purchase on such date at par, and the Remarketing Agent may sell 2010 Series A Bonds at varying prices to different investors on such date or any other date. The Remarketing Agent is not obligated to advise purchasers in a remarketing if it does not have third-party buyers for all of the 2010 Series A Bonds at the remarketing price. In the event the Remarketing Agent owns any 2010 Series A Bonds for its own account, it may, in its sole discretion in a secondary market transaction outside the tender process, offer such 2010 Series A Bonds on any date, including the Rate Determination Date, at a discount to par to some investors.

*The Ability to Sell the 2010 Series A Bonds other than through Tender Process May Be Limited.* The Remarketing Agent may buy and sell 2010 Series A Bonds other than through the tender process. However, it is not obligated to do so and may cease doing so at any time without notice and may require holders that wish to tender their 2010 Series A Bonds to do so through the Tender Agent with appropriate notice. Thus, investors who purchase the 2010 Series A Bonds, whether in a remarketing or otherwise, should not assume that they will be able to sell their 2010 Series A Bonds other than by tendering the 2010 Series A Bonds in accordance with the tender process.

*Under Certain Circumstances, the Remarketing Agent May Resign Without a Successor Being Named.*  
Under certain circumstances the Remarketing Agent may resign upon 60 days' prior written notice without a successor having been named, subject to the terms of the Trust Agreement.

### THE 2010 SERIES B BONDS

The 2010 Series B Bonds will be issued in the aggregate principal amount of \$882,310,000. The 2010 Series B Bonds will be dated the date of delivery, will mature (unless redeemed prior to maturity) on January 1 of each of the years and in the principal amounts and bear interest from their date at the per annum rate, all as set forth on the inside cover page hereof. Interest on the 2010 Series B Bonds will accrue on the basis of a 360-day year based on twelve 30-day months and will be payable on each January 1 and July 1, commencing July 1, 2010 to the registered owner as of the record date. The record date generally is the fifteenth day (whether or not a business day) of the calendar month next preceding the interest payment date.

*Book-Entry-Only System.* The 2010 Series B Bonds are being issued only as fully registered bonds and, when issued, will be registered in the name of Cede & Co., as nominee for DTC. DTC will act as securities depository for the 2010 Series B Bonds. Purchases of beneficial interests in the 2010 Series B Bonds will be made in book-entry form, in the denomination of \$5,000 or any integral multiple thereof. Purchasers will not receive certificates representing their interest in 2010 Series B Bonds purchased. So long as the 2010 Series B Bonds are registered in the name of Cede & Co., as nominee of DTC, payments of the principal of and interest on the 2010 Series B Bonds will be made directly to DTC. Disbursement of such payments to the DTC Participants (as defined in *Appendix H*) is the responsibility of DTC and disbursement of such payments to Beneficial Owners (as defined in *Appendix H*) is the responsibility of the DTC Participants and the Indirect Participants (as defined in *Appendix H*). See *Appendix H – Book-Entry-Only System*.

*Optional Redemption.* Provided there is no continuing Event of Default under the Trust Agreement, the 2010 Series B Bonds maturing after January 1, 2020 are subject to redemption at the written direction of the Issuer, in whole or in part on any date on or after January 1, 2020 from the maturities selected by the Issuer, in integral multiples of \$5,000, at a redemption price of 100% of the principal amount thereof plus accrued interest to the redemption date.

*Mandatory Sinking Fund Redemption.* The 2010 Series B Bonds maturing on January 1, 2032 and January 1, 2037 are subject to mandatory sinking fund redemption and shall be redeemed prior to their stated maturity, from Sinking Fund Installments, payable on January 1 of each of the years and in the amounts set forth below, at a price of 100% of the principal amount of such 2010 Series B Bonds called for redemption, plus interest accrued up to but not including the date of redemption as follows:

#### 2010 Series B Bonds Due January 1, 2032

<u>Year</u>	<u>Principal Amount</u>
2030	\$55,260,000
2031	54,960,000
2032 <sup>†</sup>	57,015,000

<sup>†</sup> Stated maturity.

**5.000% 2010 Series B Bonds Due January 1, 2037**

<u>Year</u>	<u>Principal Amount</u>
2033	\$58,060,000
2034	61,380,000
2035	45,005,000
2037 <sup>†</sup>	8,995,000

**4.750% 2010 Series B Bonds Due January 1, 2037**

<u>Year</u>	<u>Principal Amount</u>
2033	\$3,615,000
2034	3,615,000
2035	3,615,000
2037 <sup>†</sup>	3,615,000

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<sup>†</sup> Stated maturity.

*Partial Redemption.* Any partial optional redemption of 2010 Series B Bonds shall be credited by the Trustee at 100% of the principal amount thereof against future mandatory sinking fund redemption requirements as shall be specified by the Issuer in a certificate; provided, however, that until the Issuer delivers such certificate, the Trustee shall allocate the principal amount of 2010 Series B Bonds so redeemed against future mandatory sinking fund redemption requirements in chronological order.

*Notice of Redemption.* In the event any of the 2010 Series B Bonds are called for redemption, the Trustee shall give notice, in the name of the Issuer, of the redemption of such 2010 Series B Bonds, which notice shall (i) specify the 2010 Series B Bonds to be redeemed, the redemption date, the redemption price, and the place or places where amounts due upon such redemption will be payable (which shall be the principal corporate trust office of the Trustee) and, if less than all of the 2010 Series B Bonds are to be redeemed, the numbers of the 2010 Series B Bonds, and the portions of the 2010 Series B Bonds, so to be redeemed, (ii) state any condition to such redemption, and (iii) state that on the redemption date, and upon the satisfaction of any such condition, the 2010 Series B Bonds to be redeemed shall cease to bear interest. CUSIP number identification shall accompany all redemption notices. Such notice may set forth any additional information relating to such redemption. If, at the time of mailing of the notice of optional redemption, moneys have not been deposited with the Trustee in an amount sufficient to redeem all of the 2010 Series B Bonds called for redemption, such notice may state that it is conditional, *i.e.*, subject to the deposit of sufficient moneys not later than the opening of business on the redemption date, and any such notice shall be of no effect unless such moneys are deposited.

Such notice shall be given by mail, postage prepaid, at least 30 days but not more than 60 days prior to the date fixed for redemption to each owner of 2010 Series B Bonds to be redeemed at its address shown on the registration books kept by the Trustee; provided, however, that failure to give such notice to any Bondowner or any defect in such notice shall not affect the validity of the proceedings for the redemption of any of the other 2010 Series B Bonds. The Trustee shall send a second notice of redemption by certified mail return receipt requested to any registered owner who has not submitted 2010 Series B Bonds called for redemption 30 days after the redemption date, provided, however, that the failure to give any second notice by mailing, or any defect in such notice, shall not affect the validity of any proceedings for the redemption of any of the 2010 Series B Bonds and the Trustee shall not be liable for any failure by the Trustee to send any second notice.

So long as DTC or its nominee is the Bondowner, the Issuer and Trustee will recognize DTC or its nominee as the Bondowner for all purposes, including notices and voting. Conveyance of notices and other communications by DTC to DTC Participants, by DTC Participants to Indirect Participants, and by DTC Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory and regulatory requirements which may be in effect from time to time. So long as DTC or its nominee is the Bondowner, any failure on the part of DTC or failure on the part of a nominee of a Beneficial Owner (having received notice from a DTC Participant or otherwise) to notify the Beneficial Owner so affected shall not affect the validity of the redemption.

*Effect of Redemption.* Any 2010 Series B Bonds and portions of 2010 Series B Bonds which have been duly selected for redemption and which are paid in accordance with the Trust Agreement shall cease to bear interest on the specified redemption date.

## PLAN OF FINANCE

MassDOT is issuing the Bonds to currently refund a portion of the 1997 Series A Bonds. See *Appendix I – Table of Refunded Senior Bonds*. The proceeds from the sale of the Bonds and other available funds are expected to be applied as follows (rounded to the nearest dollar):

### Sources and Uses of Funds

<b>Sources of Funds:</b>	
Par Amount of the Bonds	\$1,089,975,000
Net Original Issue Premium	44,284,995
Transfer from Senior Debt Service Reserve Fund and Other Prior Bond Funds	<u>110,768,576</u>
<b>Total Sources of Funds:</b>	<b><u>\$1,245,028,571</u></b>
<b>Uses of Funds:</b>	
Redemption of the Refunded Senior Bonds	\$1,146,086,235
Deposit to Senior Debt Service Reserve Fund	92,339,577
Costs of Issuance (including Underwriters' discount and initial fee payable to the Bank for the Series A Letter of Credit and other uses)	<u>6,602,759</u>
<b>Total Uses of Funds:</b>	<b><u>\$1,245,028,571</u></b>

**2010 Series A Bonds.** MassDOT is issuing the 2010 Series A Bonds as variable rate bonds, initially bearing interest at the Weekly Interest Rate, in order to offset payments under the UBS Swap, which has an initial aggregate notional amount of \$207,665,000. Under the UBS Swap, MassDOT is obligated to make payments to UBS calculated on the basis of a fixed rate of 4.75% per annum and UBS is obligated to make reciprocal floating rate payments equal to 68% of one-month LIBOR. These payments are made on a semi-annual basis through January 1, 2037. The UBS Swap constitutes a Qualified Hedge Agreement under the Trust Agreement. Accordingly, payments (other than MassDOT termination payments or any payment made to UBS while UBS is in default) received and paid under the UBS Swap are directly deposited to and paid from the Senior Debt Service Fund.

**2010 Series B Bonds.** MassDOT is issuing the 2010 Series B Bonds as fixed rate bonds to currently refund for present value savings a portion of the 1997 Series A Bonds, other than the 1997 Series A Bonds being refunded by the 2010 Series A Bonds and the 1997 Series A CABs. See *Appendix I – Table of Refunded Senior Bonds*. The determination of the particular 1997 Series A Bonds to be refunded is subject to market conditions at the time of sale of the 2010 Series B Bonds.

**Refunding of Refunded Senior Bonds.** The proceeds of the Bonds and other available funds of MassDOT will be deposited in a fund held by the Trustee, and applied to the redemption of the Refunded Senior Bonds on June 28, 2010 (the "Redemption Date"). Upon the issuance of the Bonds, moneys shall be deposited with the Trustee sufficient to provide for the payment in full of the redemption price on the Refunded Senior Bonds, plus accrued interest to the Redemption Date, without regard to earnings. Prior to the Redemption Date, the Trustee will invest such funds in direct obligations of the United States of America. The refunding is contingent upon the delivery of the Bonds. Delivery of the 2010 Series A Bonds is not contingent on delivery of the 2010 Series B Bonds and delivery of the 2010 Series B Bonds is not contingent on delivery of the 2010 Series A Bonds.

### SENIOR DEBT SERVICE REQUIREMENTS

The following table sets forth Senior Debt Service on the Senior MHS Bonds to be outstanding following issuance of the Bonds for each Fiscal Year in which such Bonds will be outstanding. The only other Outstanding Bonds under the Trust Agreement are the 2010 Subordinated Bonds, the debt service on which is payable from Contract Assistance and is not included in the table. The table also does not include Western Turnpike Bonds, which are not secured by the Trust Agreement. Totals may not add due to rounding.

## SENIOR DEBT SERVICE REQUIREMENTS

Fiscal Year Ending June 30	1997 Series C Bonds	1997 Series A CABs	2010 Series A Bonds <sup>1</sup>	2010 Series B Bonds	Total Senior Debt Service	Dedicated Payments from the Commonwealth <sup>2</sup>	Additional Offsets to Senior Debt Service <sup>3</sup>	Senior Net Debt Service
2011			\$ 12,751,855	\$26,258,349	\$ 39,010,204	\$29,883,287	\$ 3,219,594	\$ 5,907,323
2012			12,774,337	76,357,981	89,132,318	78,344,241	5,130,445	5,657,632
2013			12,766,953	77,663,931	90,430,884	78,358,157	5,149,875	6,922,852
2014			12,766,953	78,298,331	91,065,284	78,358,157	5,164,597	7,542,530
2015			12,766,953	98,232,531	110,999,484	78,358,157	5,373,268	27,268,059
2016	\$35,180,000		12,774,337	63,098,031	111,052,368	78,344,241	5,036,820	27,671,306
2017	35,475,000		12,766,953	62,342,581	110,584,534	78,358,157	5,036,043	27,190,334
2018	35,825,000		12,766,953	61,517,781	110,109,734	78,358,157	5,034,744	26,716,833
2019	36,085,000		12,766,953	60,346,131	109,198,084	77,528,636	5,030,136	26,639,312
2020	36,300,000		12,774,337	39,985,231	89,059,568	56,876,834	4,833,706	27,349,028
2021	36,470,000		12,766,953	46,638,981	95,875,934	54,969,523	4,902,725	36,003,686
2022	36,625,000		12,766,953	48,087,131	97,479,084	57,028,673	4,921,391	35,529,021
2023	36,755,000		12,766,953	54,009,131	103,531,084	62,335,429	12,011,868	29,183,787
2024		\$36,865,000	12,774,337	46,016,631	95,655,968	54,876,822	4,631,031	36,148,115
2025		36,945,000	12,766,953	47,158,131	96,870,084	56,995,561	4,647,339	35,227,184
2026		-	12,766,953	82,993,631	95,760,584	56,969,366	5,011,116	33,780,101
2027		-	12,766,953	83,538,131	96,305,084	56,346,587	5,031,214	34,927,283
2028		69,745,000	12,774,337	18,376,100	100,895,437	59,982,596	4,394,979	36,517,862
2029		69,710,000	12,766,953	31,886,100	114,363,053	62,016,441	18,534,949	33,811,663
2030			12,766,953	72,980,600	85,747,553	57,263,369	4,384,107	24,100,077
2031			12,766,953	69,917,600	82,684,553	56,152,550	4,367,292	22,164,711
2032			12,774,337	69,224,600	81,998,937	56,135,527	4,374,102	21,489,309
2033			12,766,953	71,033,850	83,800,803	56,138,416	4,406,448	23,255,939
2034			12,766,953	71,279,138	84,046,090	55,158,108	4,424,274	24,463,708
2035			31,841,856	51,663,425	83,505,281	56,055,651	4,436,371	23,013,260
2036			103,055,780	621,463	103,677,242	49,587,660	40,448,888	13,640,694
2037			101,640,136	13,231,463	114,871,598	46,709,873	59,930,955	8,230,770

<sup>1</sup> Interest based upon fixed rate paid under the Swap Agreement. See *Plan of Finance*. The actual interest payable on the 2010 Series A Bonds, and the fees for any related Credit Facility that are payable on a parity basis with debt service, will vary.

<sup>2</sup> Includes Dedicated Payments under the 1999 Contract of \$25 million per year and under the 2009 Contract in excess of debt service on the 2010 Subordinated Bonds. Debt service on the 2010 Subordinated Bonds constituting variable rate demand bonds has been calculated inclusive of fees and using the fixed rate payable by MassDOT under existing interest rate swap agreements relating to such Subordinated Bonds. If the actual interest rates on such Subordinated Bonds differ from the assumed rates, Dedicated Amounts under the 2009 Contract available to be applied to debt service on the Senior Bonds will differ, and possibly substantially from what is indicated in the table above.

<sup>3</sup> Consists of estimated earnings on the Senior Debt Service Reserve Fund and Senior Debt Service Fund. See *Security for the Bonds*.

## SECURITY FOR THE BONDS

The principal and premium, if any, and interest on MHS Bonds are payable from and secured by a pledge of the Revenues of the Issuer derived from the Accepted Metropolitan Highway System, including all tolls, rates, fees, rentals, and other charges and certain investment income and other revenues, all as more fully described in *Appendix C – Summary of Certain Provisions of the Trust Agreement – The Pledge Effected by the Trust Agreement*. All MHS Bonds are also secured by a lien and charge on all funds and accounts created under the Trust Agreement (other than the Rebate Fund), except that the Senior Bonds, including the Bonds, are not secured by the Subordinated Debt Service Fund and Subordinated Debt Service Reserve Fund, and Subordinated Bonds are not secured by the Senior Debt Service Fund and Senior Debt Service Reserve Fund. As described herein, the Bonds are secured by the Senior Debt Service Reserve Fund, as further described below. See *Senior Debt Service Reserve Fund*.

The Bonds will be the third series of Senior Bonds to be issued under the Trust Agreement. The first series of Senior Bonds was the 1997 Series A Bonds, which included the 1997 Series A CABs. The second series of Senior Bonds was the 1997 Series C Bonds. The 1997 Series A Bonds, other than the 1997 Series A CABs, are expected to be refunded in full through the issuance of the Bonds. See *Plan of Finance*. The Enabling Act prohibits the issuance of any additional MHS Bonds, other than to refund obligations issued by the Authority prior to July 1, 2009.

Under the Enabling Act, all revenues from the Metropolitan Highway System are deposited to the Trust Fund established under the Transportation Reform Act. Amounts which constitute Revenues under the Trust Agreement shall be deposited to the Revenue Fund as described under *Pledge Under the Trust Agreement* below. All other revenues in the Trust Fund are not pledged for any payment on or with respect to the MHS Bonds.

The MHS Bonds are not subject to acceleration in the event of any default under the Trust Agreement.

### Series A Letter of Credit

The 2010 Series A-1 Bonds are enhanced by the Series A Letter of Credit issued by Citibank. The 2010 Series A-2 Bonds are enhanced by the Series A Letter of Credit issued by Wells Fargo. Each Series A Letter of Credit will entitle the Trustee to draw upon it to pay (i) the principal of the applicable subseries of 2010 Series A Bonds when due, whether upon maturity or redemption, (ii) up to 198 days' of interest on such subseries of 2010 Series A Bonds when due, at the maximum rate of 12% per annum, and (iii) the Purchase Price of such subseries of 2010 Series A Bonds tendered for purchase pursuant to the mandatory or optional tender provisions of the Trust Agreement. The initial expiration date of each Series A Letter of Credit is May 27, 2013. The term of each Series A Letter of Credit may be extended for additional periods solely in the applicable Bank's discretion, upon request of MassDOT, as set forth in the applicable Reimbursement Agreement.

The Series A Letter of Credit constitutes a Credit Facility for all purposes of the Trust Agreement.

Under the Trust Agreement, the reimbursement obligation of MassDOT to the Bank with respect to the payment of the principal of and interest on, or Tender Price of, as applicable, the 2010 Series A Bonds will be included as Debt Service payable from the Senior Debt Service Fund. Any other amounts payable to the Bank will be payable from the General Fund. See *Flow of Funds*. To the extent any amount of principal or interest or Tender Price owed with respect to any 2010 Series A Bond is paid with amounts drawn under a Series A Letter of Credit, then if and to the extent the applicable Bank is not reimbursed for such amount by MassDOT, the Bank will succeed to and be subrogated to the rights of the holder of such 2010 Series A Bond to the extent of such payment.

Unless a Credit Facility Failure shall have occurred and be continuing, the Bank shall be deemed to be the holder of the applicable subseries of 2010 Series A Bonds for the purpose of exercising any voting right or privilege, giving any consent or direction or taking any other action that the holders of such 2010 Series A Bonds are entitled to take pursuant to the Trust Agreement. See *Appendix G – Definitions and Summary of Certain Provisions of the Bonds Relating to Variable Rate Demand Features, the Reimbursement Agreements and the Series A Letter of Credit*.

The Trust Agreement provides that at certain times prior to the expiration of a Series A Letter of Credit, the Issuer may provide for delivery to the Trustee of an Alternate Credit Facility subject to certain limitations set forth in the Trust Agreement. The Trust Agreement contains provisions with respect to the acceptability of the Alternate Credit Facility. See *Appendix G – Definitions and Summary of Certain Provisions of the Bonds Relating to Variable Rate Demand Features, the Reimbursement Agreements and the Series A Letter of Credit*. Under the Trust Agreement, the Trustee shall provide not less than 10 days' written notice to the Owners of the applicable subseries of 2010 Series A Bonds of the termination or replacement of the Series A Letter of Credit. Upon any such substitution, the 2010 Series A Bonds of the applicable subseries shall be subject to mandatory tender. See *The 2010 Series A Bonds – Additional Information Related to Variable Rate Demand Bonds*.

### **Pledge Under the Trust Agreement**

The Bonds are special obligations of the Issuer payable solely from the items pledged therefor pursuant to the terms of the Trust Agreement. The payment of the principal and Redemption Price of, interest on, and Sinking Fund Installments for Senior Bonds is secured by a pledge of the following: (i) the proceeds of the sale of Senior Bonds, (ii) the Revenues, (iii) Dedicated Payments allocated to Senior Bonds and interest earnings thereon, if any, (iv) the rental income from certain leases between the Issuer and certain third parties specifically listed in a schedule to the Metropolitan Highway System Trust Agreement or added by any Supplemental Trust Agreement, and (v) all Funds and Accounts established under the Trust Agreement (other than the Rebate Fund, the Subordinated Debt Service Fund and the Subordinated Debt Service Reserve Fund), including the investment income thereon, if any. Subject only to the prior pledge created for the payment of Senior Bonds described above and the terms and conditions set forth in the Trust Agreement with respect to such prior pledge, the property described in clauses (ii), (iv) and (v) above (except moneys or Investment Obligations in the Senior Debt Service Fund or the Senior Debt Service Reserve Fund), are further pledged, and the proceeds of the sale of Subordinated Bonds, Dedicated Payments allocated to Subordinated Bonds (and interest earnings thereon), the Subordinated Debt Service Fund and the Subordinated Debt Service Reserve Fund, are further pledged to the payment of Subordinated Bonds.

Under the Trust Agreement, “Revenues” means all (i) all rates, fees, tolls, rentals or other charges and other earned income (including, without limitation, any income earned from the investment of such amounts) and receipts as derived in cash by or for the account of the Issuer from the Accepted Metropolitan Highway System or any Extension, (ii) Investment Income, (iii) any Supplemental Revenues, (iv) the proceeds of use and occupancy insurance on any portion of the Accepted Metropolitan Highway System or any Extension and of any other insurance which insures against loss of revenues therefrom payable to or for the account of the Issuer, and (v) all amounts received by the Trustee for the account of the Issuer under a Hedge Agreement. Notwithstanding the preceding sentence, however, Revenues shall not include (i) Dedicated Payments, (ii) amounts received under a Qualified Hedge Agreement which are deposited in a Debt Service Fund and have been relied upon in calculating Debt Service in accordance with the Trust Agreement, (iii) receipts from extraordinary, non-recurring events or sources attributable to the Accepted Metropolitan Highway System or any Extension, such as sale of property or air rights, (iv) rental income from leases of or licenses to use property or air rights attributable to the Accepted Metropolitan Highway System or any Extension unless pledged by the Issuer pursuant to the Trust Agreement or, in the Issuer’s discretion, as Supplemental Revenues pursuant to a Supplemental Trust Agreement, (v) operating assistance, subsidy or other similar funding received from a governmental or other entity which is attributable to the Accepted Metropolitan Highway System or any Extension, unless pledged by the Issuer, in its discretion, as Supplemental Revenues pursuant to a Supplemental Trust Agreement, or (vi)(a) all rates, fees, tolls, rentals or other charges and other earned income (including, without limitation, any income earned from the investment of such amounts) and receipts as derived in cash by or for the account of the Issuer, (b) operating assistance, subsidy or other similar funding received from a governmental or other entity, and (c) the proceeds of use and occupancy insurance and of any other insurance which insures against loss of revenues therefrom payable to or for the account of the Issuer, in each case with respect to portions of the Metropolitan Highway System other than the Accepted Metropolitan Highway System, if any, and unless pledged by the Issuer, in its discretion, as Supplemental Revenues pursuant to a Supplemental Trust Agreement. For a description of the Accepted Metropolitan Highway System, see *Metropolitan Highway System*.

Under the Trust Agreement, “Operating Expenses” means the Issuer’s expenses (including deposits to the Operating and Maintenance Reserve Account for such expenses) incurred in the normal course of business for administration, operation, maintenance, repair, ordinary replacements and ordinary reconstruction of the Accepted Metropolitan Highway System or any part of it or any Extension or part of it and shall include, without limiting the

generality of the foregoing: allocable overhead and administrative expenses as determined by the Issuer in its discretion, including the payment of a private operator or management company, insurance premiums, legal and engineering expenses, pension, retirement, health and hospitalization payments, expenditures relating to advertisements or promotions by or for the Issuer to promote or increase use of the Accepted Metropolitan Highway System or any Extension and any other expenses required to be paid by the Issuer, all to the extent properly and directly attributable to the operation of the Accepted Metropolitan Highway System and any Extension and payable by the Issuer, and the expenses, liabilities and compensation of the Fiduciaries required to be paid under the Trust Agreement. Operating Expenses shall not include (i) any extraordinary costs or expenses for reconstruction, rehabilitation, improvement or new construction, (ii) any provision for depreciation, amortization or similar charges, (iii) General Fund Expenses, or (iv) any costs or expenses in connection with any project which is not part of the Accepted Metropolitan Highway System or any Extension.

Under the Trust Agreement, “Net Revenues” means, as of any date of calculation and for any period, the actual Revenues for any such past period or the projected Revenues for any such future period and any other amounts deposited or to be deposited in the Revenue Fund, less the actual Operating Expenses for any such past period or the projected Operating Expenses for any such future period; provided that in both cases the following shall be excluded from Revenues for this purpose: (i) Investment Income from the Senior Debt Service Reserve Fund and the Senior Debt Service Fund to the extent deposited or to be deposited or retained or to be retained, respectively, in the Senior Debt Service Fund, and (ii) Investment Income from the Subordinated Debt Service Reserve Fund and the Subordinated Debt Service Fund deposited or to be deposited or retained or to be retained, respectively, in the Subordinated Debt Service Fund.

Under the Trust Agreement, “Dedicated Payments” means any revenues of the Issuer which are not Revenues as defined in the Trust Agreement as initially adopted, which the Issuer subsequently pledges as additional security for its payment obligations on MHS Bonds pursuant to a Supplemental Trust Agreement, in each case which are specifically designated as Dedicated Payments by the Issuer in accordance with the limitations of the Trust Agreement and, accordingly, are to be deposited in the Senior Debt Service Fund or the Subordinated Debt Service Fund upon receipt.

If Dedicated Payments are to be received from the United States of America, (i) they must automatically recur without appropriation, approval or other similar action by the United States of America or any agency or instrumentality thereof for so long as the Issuer is relying thereon for the purpose of issuing MHS Bonds or demonstrating compliance with covenants under the Trust Agreement, and (ii) the manner of determining the amounts to be derived therefrom must not be subject to change or revision during such period. If such Dedicated Payments are to be received from the Commonwealth, they must consist of a payment obligation payable to the Issuer pursuant to a statutory or contractual arrangement with the Commonwealth which, in the opinion of Bond Counsel, constitutes a general obligation of the Commonwealth; provided that at the time of entering into such arrangement (i) such arrangement, by its terms, will not terminate so long as the Issuer is relying thereon for the purpose of issuing MHS Bonds or demonstrating compliance with covenants under the Trust Agreement, and (ii) the manner of determining the amounts to be derived from such arrangement is not subject to change or revision during such period. Notwithstanding the source of funding, if the Issuer has received a written confirmation from each Rating Agency that its rating of Outstanding MHS Bonds will not be adversely affected, the Issuer may, in its sole discretion, designate any revenues which are not Revenues, as defined in the Trust Agreement as initially adopted, as Dedicated Payments. See *Appendix C – Summary of Certain Provisions of the Trust Agreement – Dedicated Payments*. Amounts received from the Commonwealth under the 1999 Contract and the 2009 Contract constitute Dedicated Payments under the Trust Agreement. See *Security for the Bonds – Payments from the Commonwealth*.

Under the Trust Agreement, “Senior Net Debt Service” means Debt Service payable on Senior Bonds less (i) the sum of:

- (a) interest accrued or to accrue on such Bonds which is to be paid from deposits in the Senior Debt Service Fund from the proceeds of Bonds (including amounts, if any, transferred to the Senior Debt Service Fund from the Bond Proceeds Fund) in accordance with a certificate of an Authorized Officer to the Trustee;
- (b) amounts transferred to the Senior Debt Service Fund from the General Fund at the Issuer’s direction;

- (c) Investment Income from the Senior Debt Service Reserve Fund and the Senior Debt Service Fund transferred to or retained in the Senior Debt Service Fund; and
- (d) Dedicated Payments deposited in the Senior Debt Service Fund pursuant to the Trust Agreement;

plus (ii) Debt Service payable on Bond Anticipation Notes issued in anticipation of Senior Bonds net of any amounts deposited from the proceeds of such notes available in the Senior Debt Service Fund or in another account established in connection with the issuance of such notes for the payment of such Debt Service.

Under the Trust Agreement, “Subordinated Net Debt Service” means Debt Service payable on Subordinated Bonds less (i) the sum of:

- (a) interest accrued or to accrue on such Bonds which is to be paid from deposits in the Subordinated Debt Service Fund made from the proceeds of such Bonds (including amounts, if any, transferred to the Subordinated Debt Service Fund from the Bond Proceeds Fund) in accordance with a certificate of an Authorized Officer to the Trustee;
- (b) amounts transferred to the Subordinated Debt Service Fund from the General Fund at the Issuer’s direction;
- (c) Investment Income from the Subordinated Debt Service Reserve Fund and the Subordinated Debt Service Fund transferred to or retained in the Subordinated Debt Service Fund; and
- (d) Dedicated Payments deposited in the Subordinated Debt Service Fund pursuant to the Trust Agreement;

plus (ii) Debt Service payable on Bond Anticipation Notes issued in anticipation of Subordinated Bonds net of any amounts deposited from the proceeds of such notes available in the Subordinated Debt Service Fund or in another account established in connection with the issuance of such notes for the payment of such Debt Service.

The Bonds are not a debt of the Commonwealth or any political subdivision thereof and neither the Commonwealth nor any political subdivision thereof shall be liable thereon. The Issuer has no taxing power.

### **Payments from the Commonwealth**

In connection with the issuance of the 1999 Bonds, the Commonwealth entered into the 1999 Contract providing for payments by the Commonwealth to the Authority of the amount of the cost of the operation and maintenance of the Central Artery and CANA, as certified annually by the Authority and in an amount not to exceed \$25 million annually. The 1999 Contract constitutes a general obligation of the Commonwealth for which the full faith and credit of the Commonwealth is pledged for the benefit of MassDOT and the holders of Senior Bonds, except as described below. Amounts payable under the 1999 Contract constitute Dedicated Payments and are allocated to the Senior Debt Service Fund; provided, however, that pursuant to the Trust Agreement, MassDOT has allocated such Dedicated Payments to the Subordinated Debt Service Fund after the earlier of (i) the date on which no Senior Bonds remain Outstanding and (ii) January 1, 2037.

In June 2009, the Commonwealth and the Authority entered into the 2009 Contract, which, as amended, provides for the payment by the Commonwealth to MassDOT of \$100,000,000 per Fiscal Year until June 30, 2039. In the opinion of Bond Counsel, the obligation of the Commonwealth to make such payments to MassDOT constitutes a general obligation of the Commonwealth for which the full faith and credit of the Commonwealth are pledged. Accordingly and as described under *Pledge Under the Trust Agreement* and *Flow of Funds*, under the Trust Agreement such payments constitute Dedicated Payments and are to be deposited directly to the Subordinated Debt Service Fund and used first to pay debt service on the Subordinated Bonds outstanding thereunder and other parity obligations. Under the Enabling Act and the Trust Agreement, as amended, MassDOT may not issue Additional Subordinated Bonds, other than to refund MHS Bonds. Dedicated Payments from the 2009 Contract are anticipated to exceed the total amount of such obligations payable from the Subordinated Debt Service Fund in each year that the Subordinated Bonds are Outstanding. The balance of these Dedicated Payments after satisfaction of all

Subordinated Net Debt Service shall be deposited in the Senior Debt Service Fund and will be available to pay debt service on Senior Bonds, including the Bonds. See *Historical Operating Results – Dedicated Payments*.

### **Flow of Funds**

The Trust Agreement establishes the following Funds and Accounts, to be held and administered by the Trustee:

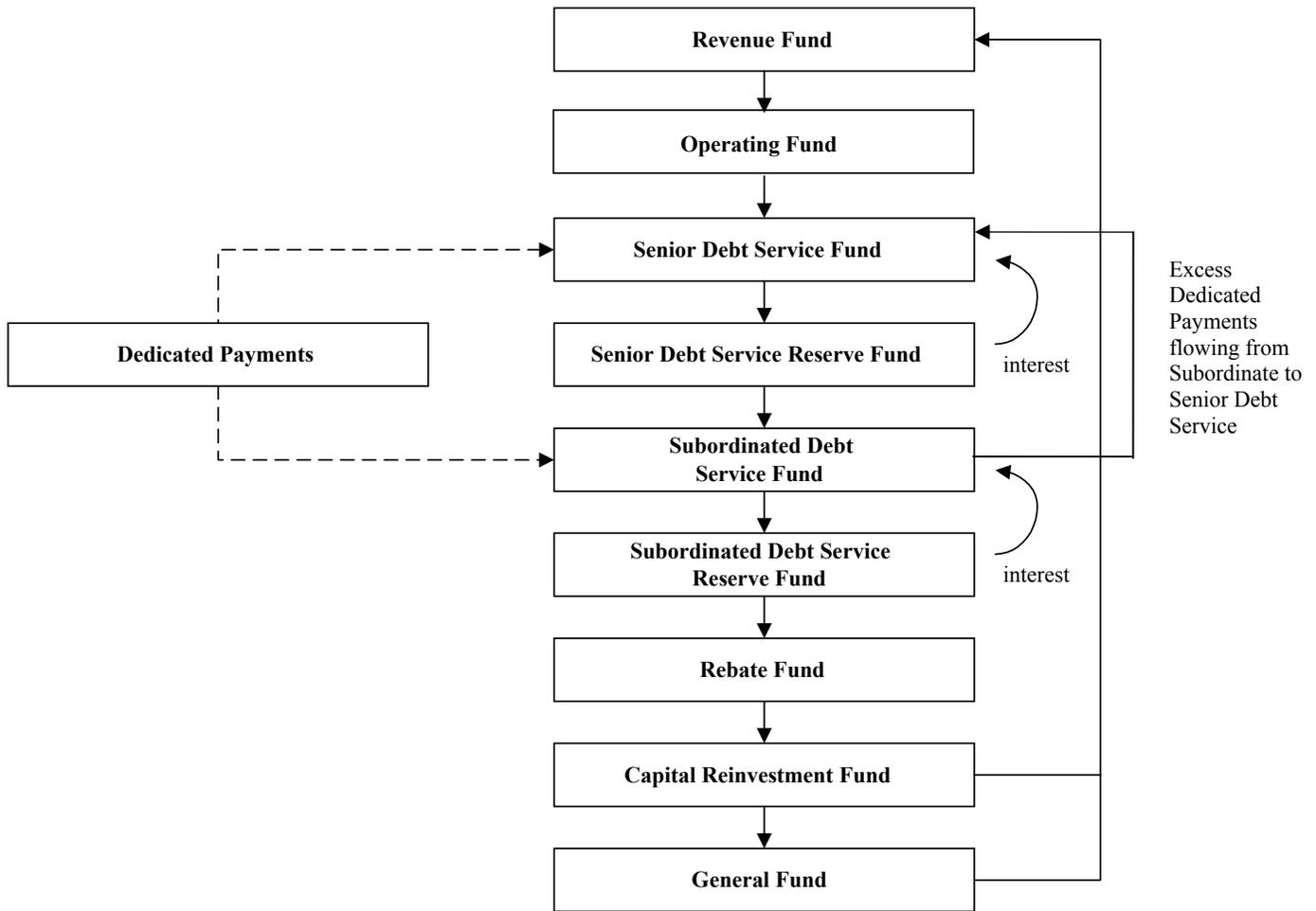
- (i) the Revenue Fund;
- (ii) the Senior Debt Service Fund;
- (iii) the Senior Debt Service Reserve Fund;
- (iv) the Subordinated Debt Service Fund; and
- (v) the Subordinated Debt Service Reserve Fund.

The Trust Agreement establishes the following Funds and Accounts, to be held and administered by the Issuer:

- (i) the Bond Proceeds Fund, which shall include a Metropolitan Highway System Capital Account, a Commonwealth Payment Account, an Extension Account and such other Accounts as the Issuer may create by Supplemental Trust Agreement;
- (ii) the Operating Fund, which shall include an Operations and Maintenance Account and an Operating and Maintenance Reserve Account;
- (iii) the Rebate Fund;
- (iv) the Capital Reinvestment Fund; and
- (v) the General Fund.

The Eighth Supplemental Trust Agreement establishes the following Funds and Accounts, to be held and administered by the Tender Agent: a Bond Purchase Fund for each subseries of the 2010 Series A Bonds, which shall include for each such subseries a Credit Facility Purchase Account, a Remarketing Account and a Department Purchase Account.

Set forth below is an illustration of the flow of funds under the Trust Agreement which is more fully described in *Appendix C – Summary of Certain Provisions of the Trust Agreement – Establishment of Funds and Accounts through Application of General Fund*.



**Toll Covenant**

Under the Trust Agreement, the Issuer is required at all times to establish, levy, maintain and collect such tolls, rentals and other charges in connection with the Accepted Metropolitan Highway System, any Extension and other Projects as shall always be sufficient in the aggregate to provide Revenues in each Fiscal Year to satisfy the requirements described in paragraphs (i) and (ii) below:

- (i) Revenues for each Fiscal Year shall be at least sufficient for the payment of the sum of:
  - (a) Operating Expenses for such Fiscal Year;
  - (b) An amount equal to the Aggregate Debt Service for such Fiscal Year less the amount of Debt Service, if any, payable from Dedicated Payments and any other amounts applied to the reduction of Debt Service, as set forth in the definition of Senior Net Debt Service and Subordinated Net Debt Service, as applicable, and not otherwise included in the definition of Revenues;
  - (c) The amount, if any, to be paid during such Fiscal Year into the Senior Debt Service Reserve Fund (other than amounts required to be paid into such Fund out of the proceeds of Senior Bonds);
  - (d) The amount, if any, to be paid during such Fiscal Year into the Subordinated Debt Service Reserve Fund (other than amounts required to be paid into such Fund out of the proceeds of Subordinated Bonds);
  - (e) The Capital Reinvestment Requirement for such Fiscal Year; and

(f) To the extent not otherwise provided for, the amount which, together with any other lawfully available funds received by the Issuer, shall be sufficient to provide for the payment of all other obligations of the Issuer allocable to the Accepted Metropolitan Highway System, or any Extension; and

(ii) Net Revenues for such Fiscal Year shall be at least equal to the greater of:

(a) 1.20 times the Senior Net Debt Service for such Fiscal Year;

(b) 1.15 times the Combined Net Debt Service (which means Senior Net Debt Service plus Subordinated Net Debt Service) for such Fiscal Year; and

(c) 1.00 times the Combined Net Debt Service plus the Capital Reinvestment Requirement for the Fiscal Year, which is established by the Issuer in its Annual Budget.

The Issuer is permitted under the Trust Agreement, to the extent permitted by law, with respect to the Accepted Metropolitan Highway System, any Extension or any portion of the Metropolitan Highway System which is not part of the Accepted Metropolitan Highway System, at any time to convert to methods of toll collection other than those presently utilized, provided that it shall comply with the foregoing covenants and other provisions of the Trust Agreement. See *Appendix C – Summary of Certain Provisions of the Trust Agreement – Tolls and Charges*.

The Trust Agreement provides that, on or before the 180th and 360th day of each Fiscal Year the Issuer shall determine whether the calculations required under this heading (on an annualized basis) indicate that Revenues are reasonably expected to be at or above the required levels at such time. In the event that Revenues are not at or are not reasonably expected to reach the level necessary to maintain the foregoing covenants, the Issuer will obtain a review by an Independent Consultant for the purpose of estimating whether the Revenues in each of the two subsequent Fiscal Years will be sufficient, together with other available moneys, to meet the foregoing covenants. If such estimates indicate insufficient Revenues to enable the Issuer to maintain the foregoing covenants, the Issuer will adjust its tolls, rentals and other charges and take such other action as shall be necessary and sufficient to comply as nearly as practicable with the foregoing covenants. Failure to comply with the foregoing covenants will not constitute a default under the Trust Agreement if the Independent Consultant is of the opinion that a schedule of tolls, rentals and other charges which will comply with such covenants is impracticable at that time and the Issuer establishes a schedule of tolls, rentals and other charges which is recommended by the Independent Consultant to comply as nearly as practicable with such covenants. See *Appendix C – Summary of Certain Provisions of the Trust Agreement – Tolls and Charges*.

In the event the Issuer permits a reduction of more than ten percent (10%) per annum to occur in Western Turnpike revenues resulting from a discretionary, permanent reduction or removal of tolls which goes into effect prior to December 31, 2016, the Issuer shall not, prior to 2017, reallocate expenses in excess of \$100,000 per Fiscal Year from the Western Turnpike to the Accepted Metropolitan Highway System as Operating Expenses unless the Issuer shall have delivered to the Trustee:

(i) a Certificate of an Authorized Officer estimating that for the prior Fiscal Year (assuming that such reduction in Western Turnpike revenues and the maximum annual reallocation of expenses proposed to occur in any Fiscal Year prior to 2017 had occurred in such Fiscal Year) Net Revenues would have been at least equal to 1.40 times the amount of Senior Net Debt Service and 1.35 times the amount of Combined Net Debt Service; or

(ii) a Certificate of an Independent Consultant estimating that for each full Fiscal Year prior to 2017 following such reduction in Western Turnpike revenues and proposed reallocation of expenses either (x) Net Revenues will be at least equal to 1.40 times the amount of Senior Net Debt Service and 1.35 times the amount of Combined Net Debt Service, or (y) if regardless of such reallocation Net Revenues would have been less than the amounts described in clause (x), the ratios of Net Revenues to Senior Net Debt Service and Net Revenues to Combined Net Debt Service for each such Fiscal Year, respectively, will not decline from the ratios that would have been achieved in each such Fiscal Year had such reduction and reallocation not occurred as a result of additional Revenues made available or Operating Expense reductions implemented by the Issuer in order to provide for such reduction and reallocation.

## **Senior Debt Service Reserve Fund**

To the extent that amounts in the Senior Debt Service Fund are insufficient to pay Senior Net Debt Service, when due, on the Senior Bonds, deficiencies shall be made up from amounts in the Senior Debt Service Reserve Fund after any transfer from the General Fund. The Trust Agreement requires the Issuer to maintain cash and investment obligations or surety bonds, insurance policies, letters of credit or similar instruments in the Senior Debt Service Reserve Fund equal to the Senior Debt Service Reserve Fund Requirement. The Senior Debt Service Reserve Fund Requirement is equal to the sum of the following amounts for all Outstanding Senior Bonds, including the 2010 Series A Bonds and the 2010 Series B Bonds, and any Series of Additional Senior Bonds, calculated for each separate series of Senior Bonds: the least of (i) 10% of the original net proceeds from the sale of such Series, (ii) 125% of average annual Debt Service for such Series, and (iii) the maximum amount of Debt Service due on such Series in any future Fiscal Year, or, in any event, such lesser amount as may be required to comply with the Code (the "Senior Debt Service Reserve Fund Requirement"). See *Appendix C – Summary of Certain Provisions of the Trust Agreement – Definitions and Senior Debt Service Reserve Fund*. To the extent that the amount on deposit in the Senior Debt Service Reserve Fund is less than the Senior Debt Service Reserve Fund Requirement, the Issuer is required to restore the amount on deposit in such Senior Debt Service Reserve Fund in twelve equal monthly installments in the case of restoration after a withdrawal (commencing within 90 days of such withdrawal) and in six equal monthly installments in the case of restoration as a result of valuation (commencing 30 days after such valuation). As of the date of issuance of the Bonds, the Senior Debt Service Reserve Fund will be fully funded in the amount of approximately \$92.34 million.

## **Subordinated Debt Service Reserve Fund**

In connection with the issuance of the 2010 Subordinated Bonds, MassDOT established the 2010 Series A Account and the 2010 Series B Account of the Subordinated Debt Service Reserve Fund.

The Bonds have no claim or lien on and are not payable from monies in the Subordinated Debt Service Reserve Fund.

## **Additional Indebtedness**

The Enabling Act currently prohibits the issuance of Additional MHS Bonds, other than to refund Authority obligations issued prior to July 1, 2009.

Refunding Bonds of a Series shall be authenticated only upon receipt by the Trustee (in addition to the other documents required under the Trust Agreement for the issuance of Refunding Bonds) of:

- (i) if the bonds to be refunded are to be redeemed, instructions to the Trustee, satisfactory to it, to give due notice of redemption of all the bonds so to be refunded on a redemption date specified in such instructions, subject to the provisions of the Trust Agreement;
- (ii) if the bonds to be refunded are to be deemed paid within the meaning of the defeasance provisions of the Trust Agreement, instructions to the Trustee, satisfactory to it, to give due notice in the manner specified in such defeasance provisions with respect to the payment of said bonds pursuant to such provisions;
- (iii) if the bonds to be refunded are to be deemed paid within the meaning of the defeasance provisions of the Trust Agreement, (a) moneys and/or (b) Investment Obligations as shall be necessary to comply with such provisions, which Investment Obligations and moneys shall be held in trust and used only as provided in such provisions;
- (iv) if the proceeds of such Series of Refunding Bonds are to be utilized by the Issuer to purchase bonds to be delivered to the Trustee in satisfaction of a Sinking Fund Installment or to defease a portion of the Bonds which are the subject of a Sinking Fund Installment in accordance with the provisions of the Trust Agreement, a certificate of an Authorized Officer of the Issuer specifying (a) the principal amount, Series, maturity, interest rate and number of the bonds to be so delivered, (b) the date and Series of the Sinking Fund Installment in satisfaction of which such bonds are to be so delivered, (c) the aggregate

principal amount of the bonds to be so delivered, and (d) the unsatisfied balance of each such Sinking Fund Installment after giving effect to the delivery of the bonds to be so delivered; and

(v) either (a) a certificate of an Authorized Officer of the Issuer stating that (1) the final maturity of the Refunding Bonds is no later than the final maturity of the bonds to be refunded and (2) as a result of the issuance of the Refunding Bonds there shall be no increase in the amount of Senior Net Debt Service in any Fiscal Year and there shall be no increase in the amount of Combined Net Debt Service in any Fiscal Year; or (b) the certificates required under the Trust Agreement with respect to such Series of Refunding Bonds, considering for all purposes of such certificate that (1) such Series of Refunding Bonds is a Series of Senior Bonds issued as Additional Senior Bonds under the Trust Agreement or Subordinated Bonds issued as Additional Subordinated Bonds under the Trust Agreement, as applicable, and (2) that the bonds to be refunded are no longer Outstanding. In connection with the issuance of the Bonds, the Issuer anticipates delivering the certificates referred to in (b).

The Additional Senior Bonds of such Series issued as Refunding Bonds shall be authenticated only upon receipt by the Trustee of one of the following (in addition to the other documents required under the Trust Agreement for the issuance of Senior Bonds and in lieu of the requirements for Refunding Bonds described in (v) in the next succeeding paragraph):

(i) a certificate of an Independent Consultant estimating that in each of the Fiscal Years following the issuance of the Additional Senior Bonds, during which Senior Bonds will be Outstanding, Net Revenues will be at least equal to 1.20 times Senior Net Debt Service and 1.15 times Combined Net Debt Service; or

(ii) a certificate of an Authorized Officer estimating that for at least 12 consecutive months during the last 18 months, assuming that such Additional Senior Bonds had been issued, Net Revenues would have been at least equal to 1.20 times the maximum amount of Senior Net Debt Service and 1.15 times the maximum amount of Combined Net Debt Service in the then current or any future Fiscal Year; or

(iii) a certificate of an Independent Consultant that (a) in each of the Fiscal Years following the issuance of the Additional Senior Bonds preceding a particular future Fiscal Year designated for the purpose by the Issuer, Net Revenues will be at least equal to 1.20 times the amount of Senior Net Debt Service and 1.15 times the amount of Combined Net Debt Service in each such Fiscal Year and (b) in such designated future Fiscal Year, Net Revenues will be at least equal to 1.20 times the maximum amount of Senior Net Debt Service and 1.15 times the maximum amount of Combined Net Debt Service in the then current or any subsequent Fiscal Year.

For purposes of any calculation of Combined Debt Service and Senior Net Debt Service, the interest rate on bonds (including the Bonds) that are subject to a Qualified Hedge Agreement shall be determined as if such bonds had interest payments equal to the interest payable on those bonds less any payments reasonably expected to be made to the Issuer by the Provider of the Qualified Hedge Agreement and plus any payments reasonably expected to be made by the Issuer to such Provider in accordance with the terms of the Qualified Hedge Agreement (other than fees or terminations payments payable to such Provider for providing the Qualified Hedge Agreement). The Swap Agreements described under *Plan of Finance* constitute Qualified Hedge Agreements under the Trust Agreement.

For purposes of any calculation of Combined Debt Service and Senior Net Debt Service for variable rate bonds that are not the subject of a Qualified Hedge Agreement, see *Appendix C – Summary of Certain Provisions of the Trust Agreement*.

The Trust Agreement also provides for authentication and delivery of one or more Series of Additional Senior Bonds upon original issue for any of the following purposes or any combination thereof:

(i) to pay or provide for the payment of the 1996 Notes, or any other Issuer bonds, notes or other obligations issued in connection with the Metropolitan Highway System;

(ii) to refund Outstanding Bonds;

(iii) to make payments to the Commonwealth related to the transfer to the Issuer of all or a portion of the Metropolitan Highway System;

- (iv) to pay Project Costs;
- (v) to make a deposit to the Bond Proceeds Fund, the Operating Fund, the Senior Debt Service Fund, the Senior Debt Service Reserve Fund, the Subordinated Debt Service Fund, the Subordinated Debt Service Reserve Fund, the Capital Reinvestment Fund or the General Fund, including any Accounts therein; and
- (vi) to pay or provide for the payment of the costs incurred in connection with the issuance of Bonds.

In addition to the other documents required under the Trust Agreement for the issuance of Additional Senior Bonds, any Series of Additional Senior Bonds issued for any purpose other than refunding Bonds and paying termination amounts, if any, payable in respect of a Qualified Hedge Agreement, shall be authenticated only upon receipt by the Trustee of written confirmation from each Rating Agency that its rating of Outstanding Bonds will not be adversely affected by the issuance of such Additional Senior Bonds.

The Trust Agreement was amended in 2009 to limit the issuance of Additional Subordinated Bonds. In particular, no Additional Subordinated Bonds may be issued under the Trust Agreement except:

- (i) Refunding Bonds issued solely for the purpose of refunding any Subordinated Bonds, to make a deposit to the Subordinated Debt Service Fund or the Subordinated Debt Service Reserve Fund relating to such Refunding Bonds, including any Accounts therein, and to pay or provide for the payment of the costs incurred in connection with the issuance of such Refunding Bonds; and
- (ii) MHS Bonds in lieu of or in substitution for MHS Bonds previously issued.

Additional Subordinated Bonds shall be authenticated only upon receipt by the Trustee of one of the following (in addition to the other documents required under the Trust Agreement for the issuance of Subordinated Bonds):

- (i) a certificate of an Independent Consultant estimating that in each of the Fiscal Years following the issuance of the Additional Subordinated Bonds, Net Revenues will be at least equal to 1.15 times Combined Net Debt Service; or
- (ii) a certificate of an Authorized Officer estimating that for at least 12 consecutive months during the last 18 months, assuming that such Additional Subordinated Bonds had been issued, Net Revenues would have been at least equal to 1.15 times the maximum amount of Combined Net Debt Service in the then current or any future Fiscal Year; or
- (iii) a certificate of an Independent Consultant that (a) in each of the Fiscal Years following the issuance of the Additional Subordinated Bonds preceding a particular future Fiscal Year designated for the purpose by the Issuer, Net Revenues will be at least equal to 1.15 times the amount of Combined Net Debt Service in each such Fiscal Year and (b) in such designated future Fiscal Year, Net Revenues will be at least equal to 1.15 times the maximum amount of Combined Net Debt Service in the then current or any subsequent Fiscal Year.

To the extent permitted under the Enabling Act, the Issuer reserves the right to issue bonds, notes or any other obligations or otherwise incur indebtedness pursuant to other and separate resolutions or agreements of the Issuer, so long as such bonds, notes or other obligations are not, or such other indebtedness is not, except as provided in the Trust Agreement, entitled to a charge or lien or right with respect to the Revenues or the Funds and Accounts created by or pursuant to the Trust Agreement and is permitted by the Enabling Act.

The Trust Agreement also provides for the issuance by the Issuer of General Fund Indebtedness, which means any debt issued by the Issuer which is secured by or payable from the Revenues and other amounts on deposit from time to time in the General Fund, provided that any such pledge shall not be prior or equal to the pledge thereof made by the Trust Agreement for the benefit of Senior Bonds or Subordinated Bonds. See *Appendix C – Summary of Certain Provisions of the Trust Agreement – Additional Senior Bonds and Additional Subordinated Bonds*.

## THE SERIES A LETTER OF CREDIT AND THE BANK

While bearing interest at a Weekly Interest Rate, the 2010 Series A Bonds are subject to optional or mandatory tender for purchase prior to maturity, as described herein. MassDOT will enter into a Reimbursement Agreement with each Bank, providing for the issuance by such Bank to the Trustee of the applicable Series A Letter of Credit. The Trustee may draw upon the Series A Letter of Credit to purchase 2010 Series A Bonds of the applicable subseries bearing interest at the Weekly Interest Rate tendered or deemed tendered to the extent not remarketed, subject to certain funding conditions described herein. Each Bank also is providing credit support for payment of regularly scheduled principal and interest on the applicable subseries of 2010 Series A Bonds.

### **The Series A Letter of Credit**

Each Series A Letter of Credit is an irrevocable obligation of the applicable Bank to pay to the Trustee, upon drawings thereon in accordance with the terms thereof, up to (i) an amount equal to the aggregate principal amount of 2010 Series A Bonds of the applicable subseries outstanding (a) to pay the principal of the 2010 Series A Bonds of such subseries when due at maturity or upon redemption, or (b) to pay the portion of the Tender Price of 2010 Series A Bonds of such subseries tendered for purchase pursuant to the Trust Agreement corresponding to the principal of such 2010 Series A Bonds to the extent remarketing proceeds are not available for such purpose, plus (ii) an amount equal to 198 days' interest (at a maximum rate of 12% per annum based on a year of 365 days) on 2010 Series A Bonds of the applicable subseries (a) to pay interest on the 2010 Series A Bonds of such subseries when due, or (b) to pay the portion of the Tender Price of the 2010 Series A Bonds of such subseries for purchase pursuant to the Trust Agreement corresponding to the accrued interest, if any, on such 2010 Series A Bonds, to the extent remarketing proceeds are not available for such purpose.

In each case that 2010 Series A Bonds are redeemed or deemed to have been paid pursuant to the Trust Agreement, the amount available under the applicable Series A Letter of Credit shall be reduced to an amount equal to the principal amount of 2010 Series A Bonds of the applicable subseries outstanding, plus 198 days' interest on such principal amount computed at a maximum rate of 12% per annum.

Drawings on a Series A Letter of Credit will reduce the amount available to be drawn under it, which amount may be reinstated as set forth in such Letter of Credit.

The initial expiration date of each Series A Letter of Credit is May 27, 2013. The term of a Series A Letter of Credit may be extended for additional periods solely in the applicable Bank's discretion, upon request of the Issuer, as set forth in the related Reimbursement Agreement.

### **The Reimbursement Agreement**

Each Series A Letter of Credit is being issued pursuant to a Reimbursement Agreement, under which the Issuer will be obligated, among other things, to reimburse the applicable Bank, with interest, for each drawing under such Series A Letter of Credit.

The Reimbursement Agreement establishes various representations, warranties and covenants of the Issuer and establishes various events of default thereunder, including, without limitation, the failure to pay to the Bank any sum due under the Reimbursement Agreement, or to comply with any other covenant thereunder, or any occurrence of an "event of default" under the "Related Documents," as defined in the Reimbursement Agreement, and certain events of bankruptcy or insolvency involving the Issuer. See *Appendix G – Definitions and Summary of Certain Provisions of the Bonds Relating to Variable Rate Demand Features, the Reimbursement Agreements and the Series A Letter of Credit*.

Upon the occurrence and continuation of an event of default under the Reimbursement Agreement, the Bank may declare all obligations of the Issuer due under the Reimbursement Agreement to be immediately due and payable, exercise any and all other remedies it may have under the Reimbursement Agreement and any other security or credit document delivered to the Bank or otherwise at law or in equity.

The terms of the Reimbursement Agreement and certain related documents may be modified, amended or supplemented by the Bank and the Issuer from time to time without giving notice to or obtaining the consent of the Bondowners. Any amendment, modification or supplement to the Reimbursement Agreement may contain

amendments or modifications to the covenants of the Issuer or additional covenants of the Issuer and these amended or modified covenants may be more or less restrictive than those in effect at the date of issuance of the 2010 Series A Bonds.

### **The Bank**

See *Appendix F – Information Concerning the Bank* for a summary description and certain financial information concerning each Bank. All information concerning a Bank has been provided by the Bank, and neither MassDOT nor the Underwriters are responsible for its accuracy or completeness.

## **THE METROPOLITAN HIGHWAY SYSTEM**

### **History and General Description**

Pursuant to the Enabling Act, the Metropolitan Highway System is an integrated system of tunnels and highways owned and operated by MassDOT, as successor to the Authority. The Metropolitan Highway System comprises the Tunnels, the Boston Extension, CANA, the Central Artery facilities and the Tobin Bridge, all of which are operated by MassDOT. Ownership of the portions of such facilities that were part of the CA/T Project have been transferred to MassDOT. Transfer of the Ted Williams Tunnel and CANA occurred before 2000. Transfers of the Central Artery facilities were largely completed in 2007. Previously, the Tunnels, CANA and the Boston Extension became part of the Accepted Metropolitan Highway System. The Tobin Bridge, which was transferred to MassDOT effective in January 2010, is part of the Metropolitan Highway System, but not part of the Accepted Metropolitan Highway System for purposes of the Trust Agreement. See *Description of Facilities – Tobin Bridge* below.

MassDOT derives toll revenues with respect to the Metropolitan Highway System only from operation of the Boston Extension and the Tunnels. The Central Artery and CANA are operated as toll-free facilities. The operating expenses of the Metropolitan Highway System increased significantly following transfer to and operation by the Authority of the Ted Williams Tunnel, the Central Artery and CANA.

### **Description of Facilities**

*The Boston Extension.* The Boston Extension, which was completed in 1965, extends approximately 12 miles from the end of the Western Turnpike at Route 128 in the Town of Weston to the interchange of interstate highways I-90 and I-93 in Boston. It was designed as an expressway for interstate and local traffic from the west to downtown Boston. The Boston Extension contains ninety-one bridge structures and includes a tunnel in Boston created in connection with the development of certain structures, including the Hynes Auditorium Convention Center, the Prudential Center complex, Copley Place and the Copley Marriott Hotel, the so-called John Hancock Garage, and two air rights developments in Newton.

Continuing east from Interchange 15 at Route 128, the Boston Extension varies in width, number of lanes and in shoulder treatment. From the barrier toll plaza in Weston to Interchange 17 and from Interchange 22 to the end of the Boston Extension, each roadway has sections of three 11-foot lanes and two-foot paved inner and outer shoulders. From Interchange 17 to Interchange 22, each roadway has four 11-foot lanes and one-foot paved inner and outer shoulders. The Boston Extension portion of the Metropolitan Highway System, excluding the Ted Williams Tunnel, runs for 15 miles between Route 128/I-95 and Logan Airport/Route 1A, through the Ted Williams Tunnel and the I-90 Seaport Access Highway.

*Sumner/Callahan Tunnels.* The Sumner/Callahan Tunnels extend under Boston Harbor from Cross Street, Boston, to Porter Street in East Boston. The Sumner Tunnel has been in operation since 1934 and the Callahan Tunnel has been in operation since 1961. Together the Sumner/Callahan Tunnels provide a four-lane facility joining the Central Artery and the street system of Boston with the McClellan Highway, the street system of East Boston, and Logan Airport.

*Central Artery North Area.* CANA includes all roadways and tunnels for vehicular use consisting of a portion of state highway Route 1 beginning at, but not including, the southern boundary of the Tobin Bridge and continuing to the interchange of Interstate I-93 and state highway Route 1.

*Ted Williams Tunnel.* The Ted Williams Tunnel was opened in December 1995 as the first major segment of the CA/T Project to be opened for vehicular traffic. It is four lanes wide (two lanes in each direction) and doubled the current cross-harbor traffic capacity previously provided by the Sumner/Callahan Tunnels. The Ted Williams Tunnel allows Logan Airport-bound drivers from the west and south of Boston (which are estimated to comprise approximately 70% of airport traffic) and north shore-bound drivers to bypass downtown Boston and the Sumner/Callahan Tunnels. The Ted Williams Tunnel includes the interstate highway I-90 extension and its connecting roadways and tunnels, including (i) the harbor tunnel crossing beneath Boston Harbor, beginning at and including the interchanges of state highway Route 1A and the Logan Airport access and egress roadways with interstate highway I-90 and continuing beneath Boston Harbor to and including the interchange of interstate highway I-90 and South Boston Bypass Road; (ii) the seaport access highway, beginning at the interchange of interstate highways I-90 and I-93 and continuing to the interchange of interstate highway I-90 and South Boston Bypass Road; and (iii) South Boston Bypass Road, a portion of which is also known as South Boston Haul Road, beginning at the interchange of interstate highway I-93 and South Boston Bypass Road and continuing to the interchange of the seaport access highway in South Boston.

*Central Artery.* The Central Artery includes all roadways and tunnels for vehicular traffic that constitute that portion of interstate highway I-93 beginning at a point immediately south of the Southampton Street interchange continuing to and including the interchange of interstate highway I-93 and Massachusetts Avenue in the South End section of the City of Boston, and continuing to and including the interchange of interstate highways I-90 and I-93 in the South Bay section of the City of Boston to and including the interchange of state highway Route 1 and interstate highway I-93 in the Charlestown section of the City of Boston, including the Charles River Crossing portion of interstate highway I-93.

*Charles River Crossings.* The Charles River Crossings consist of a cable-stayed ten-lane bridge and a steel box-girder four-lane bridge over the Charles River. The ten-lane bridge, named the Leonard P. Zakim Bunker Hill Bridge, has five lanes of interstate highway I-93 in the northbound direction and five lanes of interstate highway I-93 in the southbound direction. A four-lane bridge connects the east end of Storrow Drive and Leverett Circle in Boston to interstate highway I-93 in the Charlestown section of the City of Boston. The four-lane bridge is the widest steel box-girder bridge in North America.

*Rose Fitzgerald Kennedy Greenway.* In 1996, the Massachusetts Legislature directed that the open space above a portion of the Central Artery, between Causeway Street and Kneeland Street in downtown Boston, be designated the Rose Fitzgerald Kennedy Greenway (the “Greenway”). Approximately 21 acres in total area, the Greenway has been designed as a series of parks and other open space areas. While MassDOT is responsible for the operation and maintenance of the Greenway, MassDOT, as successor to the Authority, is leasing the Greenway to the Rose Fitzgerald Kennedy Greenway Conservancy (the “Greenway Conservancy”), a nonprofit organization that has assumed responsibility for its operation and maintenance, and certain of its expenses.

*Tobin Bridge.* Effective January 1, 2010 the Tobin Bridge, formerly owned by the Massachusetts Port Authority, became owned and operated by MassDOT. The Tobin Bridge is not part of the Accepted Metropolitan Highway System for purposes of the Trust Agreement and the revenues from the Tobin Bridge are not pledged to MHS Bonds. The Tobin Bridge provides a high-level crossing of the Mystic River and connects Chelsea and points on the North Shore with the Charlestown section of the City of Boston and downtown Boston via the Central Artery. The Tobin Bridge is an alternative harbor crossing to the Tunnels and according to MassDOT’s MHS Traffic Consultant (the “Traffic Consultant”), for the period 2000-2008 the Tobin Bridge accounted for approximately 37%, on average, of all harbor crossing toll transactions. See *Appendix B*.

## **Status of Facilities**

On July 10, 2006, concrete ceiling panels in the eastbound portal of the I-90 seaport access highway (the “Seaport Tunnel”) that leads to the Ted Williams Tunnel came loose and fell on a traveling automobile and the roadway, causing bodily injury and the death of the passenger in the automobile, and extensive property damage to the Seaport Tunnel (the “Accident”). As a result of the Accident, eastbound, westbound and high occupancy vehicle lanes and associated ramps to the Seaport Tunnel were closed for extended periods of time during Fiscal Years 2006 and 2007 while investigation, repair and remediation work was completed in the Seaport Tunnel.

Following the Accident and pursuant to a new state law enacted in response to the Accident, the Commonwealth's Executive Office of Transportation and Public Works assumed oversight and responsibility for the inspection and remediation of the Seaport Tunnel. In addition, the Commonwealth instituted a comprehensive safety audit of all tunnels that are part of the Metropolitan Highway System (the so-called "Stem to Stern Review"), which was conducted in phases. The Authority responded to the recommendations included in the various phases of the safety audit and all immediate and near-term concerns have been addressed.

In January 2007, the Authority implemented a tunnel inspection and testing program. This program requires that elements of all tunnels under its jurisdiction are to be inspected at minimum established frequencies. Inspection results and testing results are utilized to correct deficiencies, adjust scheduled preventative maintenance frequencies and plan capital improvements.

In July 2007, the National Transportation Safety Board (the "NTSB") released its findings pertaining to the Accident. The NTSB's assessment was that the proximate cause of the failure was the use of a fast-setting epoxy anchoring system which was susceptible to "creep" – the tendency for slippage or elongation with the application of sustained tensile loads.

In addition, Federal law directed the Office of Inspector General of the U.S. Department of Transportation (the "OIG") to provide oversight of the activities of the Federal Highway Administration ("FHWA") and the Commonwealth related to the Stem to Stern Review. The final report of the OIG for the final phase of the safety audit was issued in April 2010. The report made several recommendations to FHWA and the Commonwealth and included the responses of FHWA to the OIG recommendations. In particular, the OIG recommended that the Commonwealth institute certain additional testing of adhesive anchors in the Seaport and Ted Williams Tunnels, while acknowledging that those anchors were different from the anchors involved in the Accident. FHWA's response indicated that FHWA, working with national, Federal and Commonwealth officials, had determined that the additional testing recommended by the OIG potentially could damage the tunnels without any offsetting potential safety benefit and that the FHWA and the Commonwealth had developed a more phased and less destructive testing protocol of such anchors, which testing is expected to be completed by May 2010. This testing protocol was endorsed by FHWA and the other engineering experts involved with overseeing these efforts. The OIG report also raised issues with respect to risks related to certain high temperature tunnel fires. FHWA's response highlights that the Seaport and Ted Williams Tunnels meet or exceed all national fire protection standards in effect at the time of their construction and the OIG's proposal effectively constitutes a change in the national tunnel standards. Further, the Commonwealth in its response to the OIG report indicated MassDOT bans the transport of hazardous materials in the tunnels and that such materials are one of the few categories of materials that could cause such a high intensity fire. The report also noted that, independent of the CA/T Project, FHWA is pursuing the development of future national tunnel design and inspection standards that will establish Federal tunnel inspection and oversight requirements, comparable to FHWA's national bridge inspection standards, which are expected to be released later in 2010.

In 2007, the Massachusetts Legislature created the "Central Artery/Tunnel Project Repair and Maintenance Trust Fund" (the "CA/T Trust Fund"). The CA/T Trust Fund was created to hold monies received in connection with judgments and settlement payments relating to the CA/T Project, subject to the condition that such monies be used for non-routine, non-ordinary repairs and maintenance of the CA/T Project facilities. The CA/T Trust Fund is administered by MassDOT's Secretary of Transportation, who may disburse monies from the CA/T Trust Fund for the purpose of paying the costs of, or reimbursing the Commonwealth or MassDOT for costs incurred in connection with, repairs and maintenance of the Central Artery and the Ted Williams Tunnel, if such repairs and maintenance relate to conditions not caused by ordinary or routine wear and tear. See *Capital Investments – Central Artery/Ted Williams Tunnel Project*.

With respect to structures owned or leased by third-parties in air rights above MassDOT facilities, in December 2007 the Authority issued a policy directive entitled "Tunnel Inspection and Testing Protocol for Roadways Covered by Air Rights Developments" that provides that MassDOT also will inspect air rights structures in a manner and on a schedule consistent with its existing inspection protocol for tunnels owned by MassDOT. The protocol provides that MassDOT will provide air rights lessees and owners with copies of completed inspection reports and notice of any deficiencies. It also provides that MassDOT will advise air rights lessees and owners to inspect their structures in accordance with the protocol and, wherever feasible, amend existing air rights agreements

to require compliance with the protocol. The protocol also requires the regular testing of ventilation equipment owned by MassDOT or the air rights lessees.

## HISTORICAL OPERATING RESULTS

This section describes the historical operating results of the Authority through June 30, 2009, the last full Fiscal Year of the Authority before it was dissolved and its assets, liabilities and obligations were assumed by MassDOT. The Authority changed its Fiscal Year end beginning in 2008, from December 31 to June 30; accordingly the information presented below for Fiscal Year 2008 is based on a six-month period only.

MassDOT's ability to generate Net Revenues in each Fiscal Year sufficient to meet its obligations under the Trust Agreement will depend on the levels of Revenues and Operating Expenses. There follows in this section a discussion of the factors affecting revenues and operating expenses, historical operating results, and certain assumptions underlying the projections of future Net Revenues and debt service coverage.

### Revenues

Revenues consist primarily of tolls collected for vehicular traffic through the Tunnels and on the Boston Extension, and to a lesser extent rental income on certain MassDOT property, fines levied for traffic violations and toll evasions on the Metropolitan Highway System, and interest earnings on various funds and accounts under the Trust Agreement. Revenues are affected by many factors which are beyond MassDOT's control, including but not limited to:

- (i) traffic volume on the Boston Extension and through the Tunnels;
- (ii) the level of fines for and the number of traffic violations on the Metropolitan Highway System;
- (iii) the level of future interest rates; and
- (iv) the demand for MassDOT's lease and rental properties.

In particular, traffic volume (and therefore toll Revenues) is affected by a wide variety of demographic, economic or technological factors including, but not limited to:

- (i) levels of employment and other factors relating to economic activity in the region;
- (ii) the price of motor fuel;
- (iii) population growth;
- (iv) real estate development surrounding the Metropolitan Highway System;
- (v) changes that affect the economics of and demand for motor vehicle transportation;
- (vi) the climate in the region; and
- (vii) toll rates and the availability of competing highways or competing modes of transportation. See *Appendix B – Traffic and Revenue Study*.

Other than the so-called "FAST LANE Discount Program," described herein, MassDOT is not currently subject to any legal restrictions with respect to its ability to raise toll rates, except (i) with respect to the Resident Discount Program (as defined below), and (ii) that it must conduct public hearings in accordance with the Enabling Act. See *Toll Collections, Transactions and Rates*. It should be noted, however, that the Transportation Reform Act includes a provision regarding the use of toll revenue requiring that all revenue received from tolls, rates, fees, rentals and other charges for transit over or through all tolled roads, bridges or tunnels shall be applied exclusively to (a) the payment of existing debt service on such tolled roads; and (b) the cost of owning, maintaining, repairing, reconstructing, improving, rehabilitating, policing, using, administering, controlling and operating such tolled roads. The Transportation Reform Act further provides that MassDOT shall be deemed to be compliance with this provision by demonstrating that the aggregate revenues received from all tolled facilities are equal to or less than the aggregate costs described in clauses (a) and (b) above. There can be no assurance that, subject to constitutional

limits, future legislative restrictions will not be imposed that would limit toll increases, require additional toll discounts for certain users of the Metropolitan Highway System, or limit the use of toll revenue.

### **Toll Collections, Transactions and Rates**

Tolls are collected on the Boston Extension and the Tunnels via a barrier system. Vehicles traveling eastbound and westbound on the Boston Extension pay tolls at the Weston mainline barrier (Interchange 15), at Plaza 55 if exiting the Boston Extension to or entering it from Route 128, and at the Allston mainline barrier (Interchange 19). Vehicles traveling to or from the Western Turnpike also pay tolls at the entrance/exit ramps from Route 128/I-95. Vehicles exiting or entering the Boston Extension at Allston pay tolls at two ramp toll plazas (Interchanges 18 and 20). Tolls also are collected from taxis and other commercial vehicles which are authorized to use the U-turn lane at the Allston mainline barrier, which permits such vehicles headed westbound on the Boston Extension to exit, take the U-turn at the ramp, and return eastbound on the Boston Extension, thus avoiding local streets. One-way barrier tolls are collected inbound to Boston at the East Boston ends of the Tunnels.

The following table sets forth the toll rates for selected trips by class of vehicle, which increased to current levels effective January 1, 2008. Police, fire, ambulances and other emergency vehicles travel toll-free on the Metropolitan Highway System in the course of their official duties.

#### **SELECTED CURRENT TOLL RATES**

	<b>FAST LANE Discount</b>	<b>Passenger Cars</b>	<b>Commercial Vehicles</b>							<b>9-Axle or More</b>
			<b>2-Axle Dual Tire</b>	<b>3-Axle</b>	<b>4-Axle</b>	<b>5-Axle</b>	<b>6-Axle</b>	<b>7-Axle</b>	<b>8-Axle</b>	
<b>Boston Extension<sup>1</sup></b>	<b>\$1.00</b>	<b>\$1.25</b>	<b>\$1.25</b>	<b>\$2.00</b>	<b>\$2.50</b>	<b>\$3.25</b>	<b>\$3.75</b>	<b>\$4.50</b>	<b>\$5.00</b>	<b>\$5.75</b>
<b>Sumner Tunnel</b>	<b>3.00</b>	<b>3.50</b>	<b>5.25</b>	<b>5.25</b>	<b>7.00</b>	<b>8.75</b>	<b>10.50</b>	<b>12.25</b>	<b>12.25</b>	<b>12.25</b>
<b>Ted Williams Tunnel</b>	<b>3.00</b>	<b>3.50</b>	<b>5.25</b>	<b>5.25</b>	<b>7.00</b>	<b>8.75</b>	<b>10.50</b>	<b>12.25</b>	<b>12.25</b>	<b>12.25</b>

Source: MassDOT records.

<sup>1</sup> Represents one-way toll at each of the Weston and Allston mainline barrier toll plazas on the Boston Extension. The U-turn toll for commercial vehicles, payable at the Allston mainline barrier, is two times the amount payable on the Boston Extension (e.g., \$2.50 for two-axle dual tire commercial vehicles).

Prior to the January 1, 2008 toll increase, tolls at the Tunnels were last increased in July 2002, with an increase for non-FAST LANE passenger cars from \$2.00 to \$3.00. Prior to the increase in July 2002, Tunnel tolls had been increased in July 1997 from \$1.00 to \$2.00 for passenger cars.

Prior to the January 1, 2008 toll increase, tolls for passenger cars on the Boston Extension were last increased in July 2002, with an increase for non-FAST LANE passenger cars from \$0.50 to \$1.00.

No tolls are imposed or currently expected to be imposed with respect to the use of the Central Artery or CANA portions of the Metropolitan Highway System.

As part of the toll increases in July 2002, the Authority established its FAST LANE discount program. FAST LANE is the Authority's electronic toll collection program that was implemented in 1998. Passenger vehicles using the FAST LANE program receive discounts of \$0.25 on the Boston Extension and \$0.50 on the Tunnels, as set forth under "FAST LANE Discount" in the above table. In Fiscal Year 2009, the cost of the FAST LANE discount was approximately \$13.25 million. In addition, by statute, tolls on the Ted Williams Tunnel for residents of East Boston and South Boston and on the Sumner Tunnel for residents of East Boston and the North End are limited to \$0.40 (the "Resident Discount Program"). MassDOT also maintains a carpool discount program, which is available to passenger vehicles with three or more passengers using the Boston Extension or the Tunnels. The carpool discount program allows such passenger vehicles not to pay actual tolls when traveling on the Boston Extension or in the Tunnels in exchange for the payment of an annual fee ranging from \$50 to \$145, in addition to a one-time

carpool FAST LANE transponder fee. The annual fee range is based on the limits of travel, defined as carpool zones.

FAST LANE is operational on the entire Massachusetts Turnpike including the Tunnels, and on the Tobin Bridge. The FAST LANE program allows patrons to pay their tolls electronically through the use of a transponder. As the patron passes through designated FAST LANES, the transponder is read via the system and the toll is electronically deducted from the patron’s pre registered FAST LANE account. FAST LANE is interoperable with the E-ZPass system, the electronic toll collection system comprising 24 toll agencies, including MassDOT, in 13 states. Through MassDOT’s membership in the Interagency Group reciprocity protocol policies have been established so FAST LANE electronic toll collection is seamless to the motoring public traveling within other states with compatible E-ZPass electronic toll collection systems.

The FAST LANE program to date has approximately 876,000 accounts and has issued over 1.38 million FAST LANE transponders. MassDOT estimates that more than 318,000 transponders have been distributed since February 2009 when the Authority began making transponders available free of charge. According to the Traffic Consultant, as set forth in the Traffic and Revenue Study in *Appendix B*, as of December 2009, FAST LANE transactions represented approximately 77.5% of Boston Extension toll transactions (up from 72.6% in December 2008, an increase of 4.9%), approximately 64.7% of Tunnel toll transactions (up from 60.5% in December 2008, an increase of 4.2%), and approximately 74.5% of total toll transactions on the Metropolitan Highway System (up from 69.8% in December 2008, an increase of 4.7%). See *Appendix B*.

MassDOT’s FAST LANE program is currently operated and maintained under a contract with TransCore Company, headquartered in Hummelstown, Pennsylvania. TransCore operates a FAST LANE account processing center in Auburn, Massachusetts and two FAST LANE satellite offices in East Boston and Natick, Massachusetts.

The following table sets forth the number of toll transactions on the Metropolitan Highway System for Fiscal Years 2005 through 2009.

**METROPOLITAN HIGHWAY SYSTEM  
Toll Transactions  
(in millions)**

	<u>Fiscal Year ending December 31,</u>			<u>Six months ending June 30,</u>	<u>Fiscal Year ending June 30,</u>
	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Tunnels	20.3	19.5 <sup>1</sup>	21.0	10.1	19.5
Boston Extension	67.9	67.9	71.0	34.3	66.0

Source: Derived by MassDOT from Authority records.

<sup>1</sup> Reflects impact of the Accident in the Seaport Tunnel in July 2006. See *The Metropolitan Highway System – Status of Facilities* above and *2006 Operating Results* below.

According to the Traffic Consultant, two-axle passenger vehicles (including passenger cars, light trucks, vans and motorcycles) together with two-axle commercial vehicles (taxis, two-axle limousines and other two axle vehicles with commercial plates) accounted for over 97% of all vehicle classifications on the Boston Extension for the calendar period 2002-2009, and passenger vehicles accounted for approximately 98% of two-axle vehicles for same period. According to the Traffic Consultant, two-axle passenger and commercial vehicles also were the predominant vehicle class in the Tunnels during this period, accounting for approximately 88% of all traffic, excluding resident discount vehicles, with passenger vehicles accounting for approximately 74% of all two-axle vehicles. See *Appendix B*.

**Other Revenues**

MassDOT derives revenues from sources other than tolls, including sales of surplus real estate, leases or licenses of MassDOT land and air-rights, leases or easements for the use of rights-of-way over its property by utilities and telecommunications companies, court fines from toll evasion and other traffic violations, miscellaneous permit fees and investment earnings. Certain of these amounts have been pledged as Revenues under the Trust Agreement. The Authority entered into various leases for land and air rights for terms up to 99 years. Leased

property has been developed for commercial uses, residential uses, fiber optics lines and wireless connections. The Authority also entered into other license agreements, generally for short terms with termination rights at the discretion of the Authority. Under the Enabling Act, all such revenues are deposited into the Trust Fund and, to the extent pledged under the Trust Agreement, are applied in accordance with the provisions of the Trust Agreement.

MassDOT is actively pursuing other real estate opportunities in order to generate additional revenue within the Central Artery corridor and the Boston Extension. See *Historical Revenues and Expenditures* and *Appendix C – Summary of Certain Provisions of the Trust Agreement – The Pledge Effected by the Trust Agreement*.

## **Dedicated Payments**

In July 1998, the Massachusetts Legislature enacted Chapter 235 of the Massachusetts Acts of 1998 (“Chapter 235”), which, among other matters, authorized the Commonwealth, acting through the Secretary of Administration and Finance, to enter into the 1999 Contract with the Authority providing for payments by the Commonwealth to the Authority related to the cost of the operation and maintenance of the Central Artery and CANA, as certified annually by the Authority. Chapter 235 provides that the term of the 1999 Contract shall extend until the end of the 40th Fiscal Year following the transfer of the facilities to the Authority (which is not expected to be prior to 2047) and that the 1999 Contract shall constitute a general obligation of the Commonwealth for which the full faith and credit of the Commonwealth shall be pledged for the benefit of the Authority and the holders of the Bonds. Amounts payable under the contract constitute Dedicated Payments under the Trust Agreement and are deposited directly into the Senior Debt Service Fund, subject to the terms of the Trust Agreement allowing MassDOT to modify such allocation; MassDOT has allocated amounts payable under the 1999 Contract in Fiscal Years 2038 and 2039 to the Subordinated Debt Service Fund.

The Authority applied payments received under the 1999 Contract to Senior Debt Service in the amounts of \$21.4 million in Fiscal Year 2005, \$21.5 million in Fiscal Year 2006, \$28.5 million in Fiscal Year 2007, and \$25 million in Fiscal Year 2009. Due to the change in the Authority’s fiscal year end, which commenced in 2008, from December 31 to June 30 and the resultant six-month 2008 fiscal year, no payments under the 1999 Contract were received in or applied in Fiscal Year 2008. Currently amounts payable by the Commonwealth under the 1999 Contract only cover a portion of the operational expenditures associated with the Central Artery and CANA, and MassDOT expects this deficiency to continue in future Fiscal Years if payments under the 1999 Contract remain capped at \$25 million per year. Additionally, although the Authority had sought reimbursement from the Commonwealth under the 1999 Contract for so-called “Work Program 13 and 16” and other expenses related to the start-up costs of operating and maintaining the Central Artery, a portion of such expenses have been determined by the Commonwealth to be ineligible for reimbursement under the 1999 Contract.

The Commonwealth and the Authority, pursuant to Section 138 of Chapter 27 of the Acts of 2009, entered into the 2009 Contract, which, as amended, provides for the payment by the Commonwealth to MassDOT of \$100,000,000 per Fiscal Year until June 30, 2039. Under the Trust Agreement, such payments constitute Dedicated Payments and are deposited monthly upon receipt first to the Subordinated Debt Service Fund and used to pay debt service on the MHS Subordinated Bonds and other parity subordinated obligations payable therefrom. Dedicated Payments from the 2009 Contract are anticipated to exceed the total amount of such obligations payable from the Subordinated Debt Service Fund in each year that the Subordinated Bonds are Outstanding. The balance of these Dedicated Payments after satisfaction of all Subordinated Net Debt Service are deposited in the Senior Debt Service Fund and will be available to pay debt service on MHS Senior Bonds, including the Bonds. See *Senior Debt Service Requirements*.

For further information about the Commonwealth, reference is made to the Commonwealth’s Information Statement dated March 26, 2009 (the “March Information Statement”), as it appears as Appendix A in the Official Statement dated May 20, 2009 of the Commonwealth with respect to the Commonwealth’s General Obligation Bonds, Consolidated Loan of 2009, Series B, its General Obligation Bonds, Consolidated Loan of 2009, Series C and its General Obligation Bonds, Consolidated Loan of 2009, Series D (Federally Taxable) (the “May Official Statement”). A copy of the May Official Statement has been filed with the Municipal Securities Rulemaking Board (the “MSRB”) through its Electronic Municipal Market Access (“EMMA”) system. The information contained in the March Information Statement has been supplemented by an Information Statement Supplement dated April 29, 2010 (the “April Supplement”), and by a further supplement to the April Supplement dated May 5, 2010 (the “May Supplement”), copies of which have been filed with the EMMA system. The March Information Statement, the

April Supplement, the May Supplement and subsequent filings to the EMMA system as described in the next sentence are referred to collectively as the “Information Statement.” Subsequent filings by the Commonwealth to the EMMA system made prior to the sale of the Bonds, of continuing disclosure documents identified as “other financial/operating data” are hereby deemed to be incorporated by reference into the Information Statement. The Information Statement contains certain fiscal, budgetary, financial and other general information concerning the Commonwealth. Exhibit A to the Information Statement contains certain economic information concerning the Commonwealth. Exhibits B and C to the Information Statement are, respectively, the financial statements of the Commonwealth for the year ended June 30, 2009 prepared on a statutory basis and the financial statements of the Commonwealth for the year ended June 30, 2009 prepared in accordance with generally accepted accounting principles. Specific reference is made to said Exhibits A, B and C, copies of which have been filed with EMMA. The financial statements are also available at the home page of the Comptroller of the Commonwealth located at <http://www.mass.gov/osc> by clicking on “Financial Reports/Audits.”

## **Operating Expenses**

Historically, the majority of the Authority’s operating expenses, before depreciation and amortization and repair and reconstruction, consisted of employee-related expenses including salaries, overtime compensation, benefits and retirement costs. The majority of such expenses are determined by collective bargaining agreements in effect between MassDOT and its employees. See *Massachusetts Department of Transportation – Employees and Retirement Plans and Other Employee Benefits*.

Other operating expenses, before depreciation and amortization and repair and reconstruction, consist principally of rent, utilities, contracted services and insurance. Operating expenses may be affected by factors including but not limited to the age of the facilities, inflation rates, regulatory requirements, weather conditions, and volume and composition of traffic.

The Metropolitan Highway System includes a network of underground roadways and tunnels in an urban environment requiring highly specialized ventilation, lighting, drainage, security, communication, environmental and emergency monitoring and incident response systems. Certain of the costs associated with these systems may be less predictable than those associated with a surface highway.

## **Historical Revenues and Expenditures**

The summary of operating revenues and expenses for the Metropolitan Highway System for Fiscal Years 2005 through 2009 (GAAP basis), summary of revenues, expenses and debt service for the Metropolitan Highway System for Fiscal Years 2005 through 2009 (Trust basis), and summary of balance sheet information for the Metropolitan Highway System at December 31, 2005, 2006 and 2007 and June 30, 2008 and 2009 (GAAP basis) are set forth in the following tables.\*

In 2001, the Authority adopted the Governmental Accounting Standards Board No. 34 – Basic Financial Statements – and Management’s Discussion and Analysis – for State and Local Governments (“GASB 34”).

The information in the summary of operating revenues and expenses and the summary of balance sheet information is prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”), as applied to government enterprise funds, and employs the accrual basis of accounting. The information in the summary of revenues, expenses and debt service is presented on a modified accrual basis in accordance with the Trust Agreement (a “Trust basis”). Due to the differences in the GAAP and the Trust basis presentations, the information on such tables may differ in a material respect. For example, in the category of “court fines and other” revenues, the GAAP presentation excludes certain revenues that constitute Supplemental Revenues under the Trust Agreement and are shown under “court fines and other” revenues in the summary of revenues,

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\* The audited financial statements of the Authority for 2008 were for an 18-month period ending June 30, 2008. The presentations included in this Official Statement for the twelve months ending December 31, 2007 and the six months ending June 30, 2008 have been prepared by MassDOT staff based on Authority records and have not been audited. As such, these presentations may not comply with GAAP.

expenses and debt service. Such Supplemental Revenues include premiums received under the UBS swaptions and the Lehman swaptions and certain proceeds from a real estate disposition and air rights lease that were invested and received by the Authority over a multi-year period. In addition, the value of CA/T Project assets transferred from the Commonwealth to the Authority, net of depreciation, are reflected in the GAAP statements as an increase in assets with no off-setting liability. Depreciation of such asset after transfer is reflected in “depreciation and amortization” on the summary of operating revenues and expenses, resulting in a decrease in “net operating income.” The presentations of the GAAP information also may differ from presentations of financial information contained in the Authority’s financial statements for prior fiscal years, which include information relating to both the Metropolitan Highway System and the Western Turnpike.

The information below has not been audited by the Authority’s or MassDOT’s independent auditors. The Authority’s audited financial statements for Fiscal Year 2009 are set forth in *Appendix A*.

**METROPOLITAN HIGHWAY SYSTEM**  
**Summary of Operating Revenues and Expenses<sup>1</sup>**  
*(Dollars in thousands)*

	<u>Fiscal Year ending December 31,</u>			<u>Six months</u>	<u>Fiscal Year</u>
	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>ending June 30,</u>	<u>ending June 30,</u>
				<u>2008</u>	<u>2009</u>
Operating revenues					
Toll revenue, net <sup>2</sup>	\$144,414	\$141,867 <sup>3</sup>	\$149,302	\$ 89,581	\$168,190
Rentals	8,572	9,874	7,731	3,265	8,389
Court fines and other	<u>7,300</u>	<u>8,914</u>	<u>10,802</u>	<u>4,710</u>	<u>11,632</u>
Total operating revenues	\$160,286	\$160,655	\$167,835	\$ 97,556	\$188,211
Operating expenses					
Operations and public protection	\$ 51,923	\$ 73,506	\$ 77,036	\$ 36,816	\$ 77,288
Administrative	11,207	9,987	17,665	8,614	18,385
Retirement	<u>2,864</u>	<u>3,285</u>	<u>4,091</u>	<u>2,311</u>	<u>5,425</u>
Operating expenses before repair and reconstruction and depreciation	<u>\$ 65,994</u>	<u>\$ 86,778</u>	<u>\$ 98,792</u>	<u>\$ 47,741</u>	<u>\$101,098</u>
Operating income before repair and reconstruction and depreciation	<u>\$ 94,292</u>	<u>\$ 73,877</u>	<u>\$ 69,043</u>	<u>\$ 49,815</u>	<u>\$ 87,113</u>
Repair and reconstruction	\$ 11,979	\$ 11,106	\$ 12,708	\$ 7,658	\$ 11,934
Depreciation and amortization	53,455	53,826	100,183	72,458	143,972
General Fund Expenses	<u>958</u>	<u>5,900</u>	<u>900</u>	<u>262</u>	<u>290</u>
Operating income <sup>4</sup>	<u>\$ 27,900</u>	<u>\$ 3,045</u>	<u>(\$44,748)</u>	<u>(\$30,563)</u>	<u>(\$69,083)</u>

<sup>1</sup> Fiscal Years 2005 through 2009 information has been derived by MassDOT from the Authority's audited financial statements and Authority records.

<sup>2</sup> Toll revenues are from various sources. The table below, which has been derived by MassDOT from the Authority's records, disaggregates toll revenues received during Fiscal Years 2005 through 2009 by source.

Toll Revenues of the Metropolitan Highway System	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Sumner and Ted Williams Tunnels	\$ 61,779	\$ 59,099	\$ 64,166	\$ 36,050	\$ 75,326
Boston Extension	61,275	61,149	63,819	39,470	68,141
Interchange 15 Surcharge	19,872	20,027	20,517	12,686	24,876
Carpool and Violation Toll Revenue (MHS share estimated)	<u>1,373</u>	<u>1,243</u>	<u>800</u>	<u>1,375</u>	<u>537</u>
Total Gross Toll Revenues	\$144,299	\$141,518	\$149,302	\$ 89,581	\$168,880
Less Discounts and Adjustments (MHS share estimated)	<u>115</u>	<u>349</u>	<u>0</u>	<u>0</u>	<u>(690)</u>
Net MHS Toll Revenues	<u>\$144,414</u>	<u>\$141,867</u>	<u>\$149,302</u>	<u>\$ 89,581</u>	<u>\$168,190</u>

<sup>3</sup> It is estimated that approximately \$7.75 million of toll revenues were lost in Fiscal Year 2006 due to the July 2006 Accident in the Seaport Tunnel and the related waiving of tolls at the Ted Williams Tunnel. See *The Metropolitan Highway System – Status of Facilities*.

<sup>4</sup> Excludes other non-operating items, such as interest income and interest expense.

The following table sets forth the revenues, expenses and debt service on a Trust basis for the Metropolitan Highway System for Fiscal Years 2005 through 2009 and is derived by MassDOT from Authority records. Because information in this section is prepared according to the Trust Agreement and not according to GAAP, this

information may differ from the financial information contained in other sections of this Official Statement, as well as the information contained in the Authority's financial statements.

**METROPOLITAN HIGHWAY SYSTEM**  
**Summary of Revenues, Expenses and Debt Service Coverage**  
*(Dollars in thousands)*

	<u>Fiscal Year ending December 31,</u>			<u>Six months</u>	<u>Fiscal Year</u>
	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>ending June 30,</u>	<u>ending June 30,</u>
				<u>2008</u>	<u>2009</u>
<b>Revenues</b>					
Toll Revenues, net <sup>1</sup>	\$144,414	\$141,868	\$149,302	\$ 89,581	\$168,190
Rentals and Leases	11,150	12,575	10,310	3,265	10,877
Court fines and other <sup>2</sup>	<u>38,611</u>	<u>32,846</u>	<u>46,062</u>	<u>11,520</u>	<u>15,805</u>
Total Revenues	\$194,175	\$187,288	\$205,674	\$104,366	\$194,872
<b>Operating Expenses</b>	<u>64,686</u>	<u>85,657</u> <sup>3</sup>	<u>97,814</u>	<u>47,691</u>	<u>99,769</u>
<b>Net Revenues</b>	<u>\$129,489</u>	<u>\$101,631</u>	<u>\$107,860</u>	<u>\$ 56,675</u>	<u>\$ 95,103</u>
Debt Service on Senior Bonds	\$ 57,307	\$ 57,307	\$ 57,307	\$ 28,654	\$ 57,307
Less: Senior Debt Service Fund and Reserve Fund Earnings	(7,436)	(6,954)	(6,391)	(3,211)	(4,073)
Less: Exercise Premiums	0	0	0	0	(2,492)
Less: 1999 Contract Payments	(21,386)	(21,537)	(28,463)	0	(25,000)
Interest Expense (Swap) Senior Bonds	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>7,845</u>
<b>Senior Net Debt Service</b>	<u>\$ 28,485</u>	<u>\$ 28,816</u>	<u>\$ 22,453</u>	<u>\$ 25,443</u>	<u>\$ 33,587</u>
Debt Service on Subordinated Bonds	\$ 53,141	\$ 53,187	\$ 53,545	\$ 24,224	\$ 79,644
Less: Subordinated Debt Service Fund and Reserve Fund Earnings	(5,953)	(5,360)	(6,091)	(2,786)	(6,052)
Less: Use of MHS Reserves	0	0	0	0	(25,996)
Less: Exercise Premiums	0	0	(997)	(524)	(5,587)
Less: Use of Hedge Fund Reserves	0	0	0	0	(12,138)
Interest Expense (Swaps) Subordinated Bonds	<u>0</u>	<u>0</u>	<u>0</u>	<u>1,836</u>	<u>15,463</u>
<b>Subordinated Net Debt Service</b>	<u>\$ 47,188</u>	<u>\$ 47,827</u>	<u>\$ 46,457</u>	<u>\$ 22,750</u>	<u>\$ 45,334</u>
Combined Net Debt Service	\$ 75,673	\$ 76,643	\$ 68,910	\$ 48,193	\$ 78,921
Senior Net Debt Service Coverage	4.55	3.53	4.80	2.23	2.83
Combined Net Debt Service Coverage	1.71	1.33	1.57	1.18	1.21
Funds Available for Deposit to Capital					
Reinvestment Fund and General Fund <sup>4</sup>	<u>\$ 53,816</u>	<u>\$ 24,988</u>	<u>\$ 38,949</u>	<u>\$ 8,481</u>	<u>\$ 16,183</u>

<sup>1</sup>Includes adjustments for the carpool and discount programs. Toll revenues are from various sources.

<sup>2</sup>Court fines and other revenues includes Supplemental Revenues pledged by the Authority under the Trust Agreement, including premiums received under the UBS swaptions in the approximate amount of \$3.2 million per year from 2005 through 2008 and under the Lehman swaptions in the approximate amounts of \$5.85 million per year from 2005 through 2007, proceeds from the May 2003 sale of the Allston Landing South Parcel that were invested and pledged in the amounts of \$17.5 million in 2005, \$10 million in 2006 and approximately \$8.17 million in 2007, and proceeds from an air rights lease that were invested and pledged in the approximate amount of \$2.8 million per year from 2005 through 2008.

<sup>3</sup>See 2006 Operating Results narrative for a description of increased 2006 operating expenses.

<sup>4</sup>Represents funds available to meet the Capital Reinvestment Requirement, to pay General Fund Indebtedness, if any, to pay other General Fund Expenses or to be applied to any lawful purpose of the Authority.

The following table sets forth a summary of balance sheet information for the Metropolitan Highway System at December 31, 2005, 2006 and 2007 and at June 30, 2008 and 2009. The information in the following table is prepared on a GAAP basis and has been derived by MassDOT from the Authority's audited financial statements and Authority records.\*

**METROPOLITAN HIGHWAY SYSTEM**  
**Summary of Balance Sheet Information**  
*(Dollars in thousands)*

Assets	Fiscal Year ending December 31,			Six Months ending June 30,	Fiscal Year ending June 30,
	2005	2006	2007	2008	2009
Current assets	\$ 161,767	\$ 176,540	\$ 212,916	\$ 145,154	\$ 116,016
Restricted assets	543,238	375,054	361,555	354,516	438,740
Other assets	21,317	12,154	4,496	9,840	10,151
Capital Assets	<u>2,098,773</u>	<u>2,210,668</u>	<u>7,028,730</u>	<u>6,445,693</u>	<u>6,220,278</u>
Total assets	<u>\$2,825,095</u>	<u>\$2,774,416</u>	<u>\$7,607,697</u>	<u>\$6,955,203</u>	<u>\$6,785,185</u>
<b>Liabilities</b>					
Current Liabilities	\$ 139,598	\$ 152,480	\$ 165,914	\$ 131,867	\$ 169,923
Noncurrent Liabilities	<u>2,302,556</u>	<u>2,305,720</u>	<u>2,345,607</u>	<u>2,319,702</u>	<u>2,333,814</u>
Total liabilities	<u>\$2,442,154</u>	<u>\$2,458,200</u>	<u>\$2,511,521</u>	<u>\$2,451,569</u>	<u>\$2,503,737</u>
<b>Net assets:</b>					
Invested in capital assets, net of related debt	\$ 220,310	\$ 327,504	\$5,156,293	\$4,571,984	\$4,408,146
Restricted	129,508	45,533	20,659	25,705	128,819
Unrestricted	<u>33,123</u>	<u>(56,821)</u>	<u>(80,776)</u>	<u>(94,055)</u>	<u>(255,517)</u>
Total net assets	<u>\$ 382,941</u>	<u>\$ 316,216</u>	<u>\$5,096,176</u>	<u>\$4,503,634</u>	<u>\$4,281,448</u>

**2009 Operating Results**

For Fiscal Year 2009, the first 12-month period reflecting the 2008 toll increase, net toll revenue was approximately \$168 million, representing an increase of approximately 12.7% as compared to Fiscal Year 2007 net toll revenue (the last 12-month Fiscal Year).

In Fiscal Year 2009, there were approximately 66 million toll transactions on the Boston Extension generating toll revenues of \$93.5 million (including the Interchange 15 surcharge), representing an increase of approximately 9% in toll revenues compared to Fiscal Year 2007.

With respect to the Tunnels, transaction volume for the Sumner and Ted Williams Tunnels totaled approximately 19.5 million in Fiscal Year 2009. This represents an approximately 7% decrease in the number of transactions from Fiscal Year 2007, with revenues increasing by approximately \$11.1 million (17%) as compared to Fiscal Year 2007. The FAST LANE discount program is estimated to have cost approximately \$13.25 million in Fiscal Year 2009 and the Resident Discount Program is estimated to have cost approximately \$5.4 million in Fiscal Year 2009.

For Fiscal Year 2009, court fines and other revenues were approximately \$11.6 million, as compared to \$10.8 million for Fiscal Year 2007. Court fines include revenues recovered from a variety of traffic violations. Other revenues include permit income (e.g., special hauling, propane hauling, reducible load), advertising income, and miscellaneous income. Rental income for Fiscal Year 2009 totaled \$8.4 million, an increase of approximately \$0.7 million from Fiscal Year 2007.

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\* See footnote on page 39.

Total operating expenses for Fiscal Year 2009 (before depreciation and amortization and repair and reconstruction) were approximately \$101 million, as compared to approximately \$98.8 million in Fiscal Year 2007.

### **2008 (6 months) and 2007 Operating Results**

As described above, the Authority changed its Fiscal Year to a June 30 year-end effective with Fiscal Year 2008 resulting in the Authority having a 6-month Fiscal Year for 2008. Amounts for Fiscal Year 2007 and the 6-month Fiscal Year 2008 are presented in this section together.

For Fiscal Year 2007, net toll revenue on the Metropolitan Highway System was approximately \$149.3 million which represents an increase of approximately 5% as compared to Fiscal Year 2006 revenues. For Fiscal Year 2008, net toll revenue on the Metropolitan Highway System was approximately \$89.6 million which represents an increase of approximately 22% compared to the first six months of Fiscal Year 2007, and reflects the January 1, 2008 toll increase.

In Fiscal Year 2007, there were approximately 71 million toll transactions on the Boston Extension generating net toll revenues of \$85 million (after adjustments) on the Boston Extension, including the Interchange 15 surcharge. These Fiscal Year 2007 net toll revenues exceeded Fiscal Year 2006 net toll revenues by approximately \$2.4 million. For Fiscal Year 2008, there were approximately 34 million toll transactions on the Boston Extension, representing a decrease in transactions compared to the first six months of Fiscal Year 2007 of approximately 2.3%. These transactions generated net toll revenues of approximately \$53.5 million, representing an increase of approximately 27% in revenues compared to the first six months of Fiscal Year 2007.

With respect to the Tunnels, transaction volume for the Sumner and Ted Williams Tunnels totaled 21 million in Fiscal Year 2007. This represents an approximately 7% increase in the number of transactions from Fiscal Year 2006, with revenues increasing by approximately \$5 million (8%) as compared to Fiscal Year 2006. The Resident Discount Program is estimated to have cost the Authority approximately \$5 million in Fiscal Year 2007. Transaction volume for Fiscal Year 2008 for the Sumner and Ted Williams tunnels totaled approximately 10 million. This represents an approximate 2.2% decrease in the number of transactions from the first six months in Fiscal Year 2007, with revenues increasing by approximately 14.3% for Fiscal Year 2008 compared to the same time for Fiscal Year 2007.

For Fiscal Year 2007, court fines and other revenues were \$10.8 million as compared to \$8.9 million for Fiscal Year 2006. Court fines include revenues recovered from a variety of traffic violations. Other revenues include permit income (*e.g.*, special hauling, propane hauling, reducible load), advertising income (*e.g.*, toll receipts), and miscellaneous income. Rental income for Fiscal Year 2007 totaled \$7.7 million, a decrease of \$2.1 million from Fiscal Year 2006. For Fiscal Year 2008, court fines and other revenues were approximately \$4.7 million, as compared to approximately \$4 million for the first six months of Fiscal Year 2007. Rental income for Fiscal Year 2008 totaled \$3.3 million, an increase over approximately \$3.1 million for the first six months of Fiscal Year 2007.

Total operating expenses for Fiscal Year 2007 (before depreciation and amortization and repair and reconstruction) were approximately \$98.8 million, as compared to \$86.8 million in Fiscal Year 2006. The increase in operating expenses is due mainly to increased fuel expenses, escalating health insurance costs, pay increases for state police, additional operating and maintenance costs with respect to the transfer of completed CA/T Project facilities to the Authority and a reallocation of a portion of administrative costs to the Metropolitan Highway System from the Western Turnpike. Total operating expenses for Fiscal Year 2008 (before depreciation and amortization and repair and reconstruction) were approximately \$47.7 million, as compared to \$42.9 million for the first six months of Fiscal Year 2007.

### **2006 Operating Results**

For Fiscal Year 2006, net toll revenue on the Metropolitan Highway System was \$141.9 million which represents a decrease of approximately 1.8% as compared to 2005 net toll revenues.

In 2006, there were approximately 67.9 million toll transactions on the Boston Extension generating toll revenues of \$61.1 million (excluding the Interchange 15 surcharge) representing a decrease of approximately 0.33%

in revenues compared to 2005. Total revenues of approximately \$81.2 million (after adjustments) on the Boston Extension, including the Interchange 15 surcharge, were approximately equal to 2005 revenues of \$81.2 million.

With respect to the Tunnels, transaction volume for the Sumner and Ted Williams Tunnels totaled 19.5 million in Fiscal Year 2006. This represents an approximately 3.9% decrease in the number of transactions from Fiscal Year 2005 with revenues decreasing by approximately \$2.7 million (4.3%) as compared to Fiscal Year 2005. The Resident Discount Program is estimated to have cost approximately \$4.7 million in Fiscal Year 2006. It is estimated that approximately \$7.75 million of toll revenues were lost in Fiscal Year 2006 as the result of the July 2006 Accident in the Seaport Tunnel and the related waiving of tolls at the Ted Williams Tunnel. See *Status of Facilities*.

For Fiscal Year 2006, court fines and other revenues were \$8.9 million as compared to \$7.3 million for Fiscal Year 2005 (on a GAAP basis). Court fines include revenues recovered from a variety of traffic violations. Other revenues include permit income (e.g., special hauling, propane hauling, reducible load), advertising income (e.g., toll receipts), and miscellaneous income. Other revenues also included \$1.9 million in revenues from the Parcel 7 garage operations. Rental income for Fiscal Year 2006 totaled \$9.9 million, an increase of \$1.3 million (15%) from Fiscal Year 2005.

Total operating expenses for Fiscal Year 2006 (before depreciation and amortization and repair and reconstruction) were approximately \$86.8 million (on a GAAP basis) as compared to \$66.0 million in Fiscal Year 2005. The increase in operating expenses is due mainly to escalating health insurance costs, pay increases for unionized staff and state police, additional operating and maintenance costs with respect to the transfer of completed Central Artery/Tunnel facilities to the Authority and a reallocation of a portion of administrative costs to the Metropolitan Highway System from the Western Turnpike. General fund expenses for 2006 reflect a one-time payment from the Authority to the Greenway Conservancy of \$5 million.

## **2005 Operating Results**

For Fiscal Year 2005, net toll revenue on the Metropolitan Highway System was \$144.4 million (including the Boston Extension (Interchange 15) surcharge totaling approximately \$19.9 million) which represents an increase of approximately 1.7% as compared to 2004 revenues.

In 2005, there were approximately 67.9 million toll transactions on the Boston Extension generating toll revenues of \$61.3 million (excluding the Interchange 15 surcharge) representing an increase of approximately 0.3% in revenues compared to 2004. Total revenues of approximately \$81.2 million (after adjustments) on the Boston Extension, including the Interchange 15 surcharge, increased approximately \$0.1 million over 2004 revenues of \$81.1 million.

With respect to the Tunnels, transaction volume for the Sumner and Ted Williams Tunnels totaled 20.3 million in 2005. This represents a 3.6% increase in the number of transactions over 2004 with revenues increasing by approximately \$2.5 million (4.3%) as compared to 2004. The Resident Discount Program is estimated to have cost the Authority approximately \$4.8 million in Fiscal Year 2005.

For Fiscal Year 2005, court fines and other revenues were \$7.3 million as compared to \$7.9 million for Fiscal Year 2004 (on a GAAP basis). Court fines include revenues recovered from a variety of traffic violations. Other revenues include permit income (e.g., special hauling, propane hauling, reducible load), advertising income (e.g., toll receipts) and miscellaneous income. Other revenues also included \$1.9 million in revenues from the Parcel 7 garage operations. Rental income for Fiscal Year 2005 totaled \$8.6 million, a decrease of \$4.2 million from 2004. 2004 rental income included a one-time \$5.0 million payment associated with the assignment of an air rights lease in Boston.

Total operating expenses for Fiscal Year 2005 (before depreciation and amortization and repair and reconstruction) were approximately \$66.0 million (on a GAAP basis) as compared to \$64.6 million in Fiscal Year 2004. The increase in operating expenses is due mainly to escalating health insurance costs, pay increases for unionized staff and state police, and additional operating and maintenance costs with respect to the transfer of completed Central Artery/Tunnel facilities to the Authority.

## FISCAL YEAR 2010 OPERATING BUDGET

The following table sets forth the original Fiscal Year 2010 operating budget with respect to the Metropolitan Highway System (the “Original FY10 Budget”), as adopted by the Authority in 2009 before the assumption of Authority operations by MassDOT, compared to the original Fiscal Year 2009 budget and actual results for Fiscal Year 2009, all on a Trust basis.

<b>METROPOLITAN HIGHWAY SYSTEM</b>			
<b>Fiscal Years 2009 and 2010</b>			
<b>Operating Revenues and Expenses</b>			
<i>(Dollars in thousands)</i>			
	<u>Fiscal Year 2009 Budget</u>	<u>Fiscal Year 2009 Results</u>	<u>Original Fiscal Year 2010 Budget</u>
<b>Revenues</b>			
Toll Revenues, net	\$204,296 <sup>1</sup>	\$168,190	\$169,387
Rentals & Leases	18,408	10,877 <sup>2</sup>	8,272
Court Fines & Other Revenues	<u>11,429</u>	<u>15,805<sup>3</sup></u>	<u>8,752</u>
<b>Total Revenues</b>	<b>\$234,133</b>	<b>\$194,872</b>	<b>\$186,411</b>
<b>Operating Expenses</b>			
Engineering and Maintenance	\$ 33,970	\$ 32,369	\$ 33,241
Toll Collection	19,043	20,703	22,679
Public Safety	17,256	17,237	17,152
Insurance Program and Workers Compensation	7,904	6,595	7,550
Administrative Departments	8,672	7,131	2,985
Employee Benefits/Health Insurance	8,626	6,247	9,834
Operations	4,661	3,569	5,788
Retirement	<u>5,579</u>	<u>5,918</u>	<u>5,233</u>
<b>Total Operating Expenses</b>	<b>\$105,711</b>	<b>\$ 99,769</b>	<b>\$104,462</b>
<b>Net Revenues</b>	<b><u>\$128,422</u></b>	<b><u>\$ 95,103</u></b>	<b><u>\$ 81,949</u></b>

Source: Derived by MassDOT from Authority records.

<sup>1</sup> Budgeted Toll Revenue for Fiscal Year 2009 reflected a toll increase approved by the Board of Directors of the Authority but not implemented, due to the subsequent enactment of the Transportation Reform Act and the execution of the 2009 Contract.

<sup>2</sup> The difference between budgeted Rentals & Leases revenue and actual Rentals & Leases revenue for Fiscal Year 2009 reflects approximately \$8 million in reduced revenue from fiber optics leases renegotiated in connection with the settlement of a lawsuit.

<sup>3</sup> Includes revenue from non-recurring events, including reimbursement to the Authority from the CA/T Trust and other CA/T Project cost recovery efforts.

## PROJECTED REVENUES, EXPENSES AND DEBT SERVICE COVERAGE

### Projected Revenues

#### *Toll Revenues*

***Toll Traffic and Revenue Study.*** The Traffic Consultant, Cambridge Systematics, Inc. with Vanasse Hangen Brustlin, Inc., prepared a traffic and toll revenue projection study (the “Traffic and Revenue Study”) with respect to the tolled sections of the Metropolitan Highway System – the Boston Extension, the Sumner Tunnel and the Ted Williams Tunnel (but not including the Tobin Bridge) – to be used in connection with the issuance of the Bonds. The Traffic and Revenue Study includes a review of historical toll transaction and toll revenue data, a review and forecasts of socioeconomic data in the Commonwealth as it relates to MHS traffic, an analysis of impacts from past toll changes and fuel price increases, a review of future roadway and transit improvements, and an estimated 40-year traffic and revenue forecast under the assumption that current toll rates on the Boston Extension and Tunnels will remain in effect for the life of the forecast (*i.e.*, no toll rate increases are assumed for 40 years for the purposes of the forecast) and other input assumptions described in Section 6.0 of the Traffic and Revenue Study. A copy of the Traffic and Revenue Study is attached as *Appendix B*.

**Fiscal 2010 Toll Transaction and Revenue Estimate.** The following Table 6.1 taken from the Traffic and Revenue Study in *Appendix B* provides a summary estimate of Fiscal Year 2010 Metropolitan Highway System annual transaction and toll revenue by toll plaza and facility. As shown in the table, total Toll Revenue in Fiscal Year 2010 is estimated to be \$169.4 million with total estimated toll transactions of 108.6 million. The average toll on the Boston Extension in Fiscal Year 2010 is estimated to be \$1.13 and the average toll in the Tunnels in Fiscal Year 2010 is estimated to be \$3.46.

**Table 6.1 ESTIMATE OF FY 2010 ANNUAL TRANSACTIONS AND TOLL REVENUE**

<u>Toll Plaza</u>	<u>Estimated Toll Transactions (in Millions)</u>	<u>Estimated Average Toll</u>	<u>Estimated Toll Revenue (in Millions)</u>
<b>Boston Extension</b>			
55	13.6	\$1.11	\$15.1
18	10.2	1.12	11.4
19	33.1	1.13	37.5
20	<u>9.6</u>	<u>1.16</u>	<u>11.1</u>
Extension Total:	66.4	\$1.13	\$75.1
<b>Tunnels</b>			
Sumner	7.8	\$3.21	\$25.1
TWT	<u>12.1</u>	<u>3.63</u>	<u>44.0</u>
<b>Tunnels Total:</b>	20.0	\$3.46	\$69.1
<b>MHS Total</b>			
Interchange 15 Surcharge	22.2	\$1.13	\$25.1
<b>MHS Total:</b>	<u>108.6</u>		<u>\$169.4</u>

Source: Traffic and Revenue Study. See *Appendix B*.

**Short-Term and Long-Term Projections of Toll Transactions and Revenue.** The following Table 6.2 taken from the Traffic and Revenue Study in *Appendix B* provides a summary of the projections of toll transactions, estimated total annual toll revenue and estimated annual percentage change in toll revenue for both the short-term forecast period (Fiscal Years 2009-2015) and for each decennial year (2020, 2030, etc.) of the long-term forecast period covered by the Traffic and Revenue Study. In preparing this forecast, the Traffic Consultant has assumed traffic growth in Fiscal Year 2011 of 1.0% on the Boston Extension, and thereafter increases at the rate of 2.0% between Fiscal Years 2012 and 2014, until returning to 2007 transaction levels in Fiscal Year 2014. At the Tunnels, the Traffic Consultant forecasts that transactions will increase at an annual rate of 1.4% between Fiscal Years 2011 and 2014, until it reaches 2007 levels in Fiscal Year 2014, similar to the study's projected passenger growth trends at Logan Airport.

**Table 6.2 MHS SHORT-TERM PROJECTIONS OF TRANSACTIONS AND TOLL REVENUE**

<u>Fiscal Year</u>	<u>Projected Transactions (in Millions)</u>	<u>Projected Toll Revenue (in Millions)</u>	<u>Projected Annual Percent Change in Revenue</u>
<b>Short-term Forecast</b>			
2009	107.5	\$168.3	
2010	108.6	169.4	0.6%
2011	109.8	171.4	1.2
2012	111.9	174.4	1.8
2013	113.9	177.5	1.8
2014	116.1	180.7	1.8
2015	117.3	182.7	1.1
			<b>Average Annual Growth Rate</b>
<b>Long-term Forecast</b>			
2020	123.7	\$193.3	1.1%
2030	134.7	211.6	0.9
2040	141.6	222.4	0.5
2050	148.8	233.8	0.5

Source: Traffic and Revenue Study. See *Appendix B*.

The Short-Term and Long-Term Projections of Transactions and Toll Revenue contained in Table 6.2 of the Traffic and Revenue Study have been used by MassDOT in preparing the MHS revenue and Senior Bond debt service coverage tables included in this Official Statement. No toll rate increases are assumed for the entire life of the forecast for the purposes of the forecast. For a detailed discussion of the assumptions and methodology used by the Traffic Consultant in connection with all of its forecasts summarized above, see *Appendix B*.

**Actual Toll Transactions and Revenues Year-to-Date 2010.** MassDOT produces monthly internal statistical comparison reports of MHS toll transactions and revenues and posts those reports periodically on the MassDOT website. MassDOT recently posted MHS toll transactions and revenues figures for the first quarter of calendar year 2010 ended March 31, 2010, with a comparison to the comparable calendar year 2009 time period. For the three months ended March 31, 2010, reported toll transactions on the Metropolitan Highway System increased 4.6 % over the three months ended March 31, 2009, with electronic toll transactions increasing 10.5% and manual toll collections decreasing 10.2%, reflecting increased usage of FAST LANE transponders. MHS toll revenues (inclusive of Interchange 15 surcharge revenues) for the quarter ended March 31, 2010 were \$39.46 million, a 2.9 % increase over MHS toll revenues of \$38.33 million for the three months ended March 31, 2009.

**Other MHS Revenues.** The Original FY10 Operating Budget budgeted approximately \$17 million in MHS revenues derived from sources other than tolls or Contract Assistance. See *Historical Operating Results – Other Revenues*. The four largest non-toll revenue categories budgeted included \$8.3 million in rental income, \$2.6 million in revenue collected from violators of the electronic toll collection lanes, \$2.5 million in parking revenue from the operation of the Parcel 7 garage located on MHS property, and \$2.3 million in court fines revenue collected from enforcement actions against toll violators.

### Summary of Revenues, Expenses and Debt Service Coverage

The following tables set forth (i) a Summary of Revenues, Expenses and Debt Service Coverage for the Original FY10 Operating Budget, the current Fiscal Year 2010 Outlook and a Preliminary Fiscal Year 2011 Estimate, and (ii) a Summary of Projected Revenues, Expenses and Debt Service Coverage for Fiscal Years 2011 through 2015. The information summarized in such tables is based upon the assumptions described in this Official Statement, including in the footnotes to the tables.

Toll revenues are based on the analysis contained in the Traffic and Revenue Study in *Appendix B*. No changes to the existing toll rate schedule are assumed for the period of the projection. Non-toll revenues are based on the Original FY10 Operating Budget and the Preliminary Fiscal Year 2011 Estimate, with subsequent years adjusted, solely for projection purposes, with rental income growing at 3% per year and all other such revenues

growing at 1% per year for the period of the projection. No additional, new sources of revenues, including revenues derived from future air rights developments underway or proposed over the Boston Extension or in connection with other Metropolitan Highway System property rights, are assumed in such tables.

Certain operating expense savings already have been realized from the consolidation of certain operations and other activities resulting from the creation of MassDOT and the ongoing implementation of the Transportation Reform Act. The first table below sets forth the current outlook for the Fiscal Year 2010 operating budget for the Metropolitan Highway System and a preliminary estimate for the Fiscal Year 2011 operating budget for the Metropolitan Highway System reflecting the savings achieved to date. The Fiscal Year 2010 Outlook and the Preliminary Fiscal Year 2011 Estimate are based on the Original FY10 Operating Budget, adjusted by MassDOT staff to reflect these initial savings. Operating expense savings reflected in the Fiscal Year 2010 Outlook include: (i) reduced property and casualty insurance premium expenses for Metropolitan Highway System facilities, resulting from the economies of scale generated by the purchase of such insurance by MassDOT for the all of the transportation facilities now under MassDOT's control and the resulting reduction in allocable premium expenses attributable to the Metropolitan Highway System; (ii) reduced employee health insurance benefit expenses realized as a result of the use of the Commonwealth's Group Insurance Commission program for employee health coverage (previously provided by the Authority for its employees on a stand-alone basis) for employees allocable to the Metropolitan Highway System; and (iii) certain other realized administrative expense savings and efficiencies resulting from the consolidation. The Preliminary Fiscal Year 2011 Estimate includes the full annualized 12-month expense savings associated with these items, adjusted for an assumed average inflation rate of approximately 2.33%. The information contained in such table reflects MassDOT staff estimates; the Board is not expected to approve a Fiscal Year 2011 operating budget for the Metropolitan Highway System or other MassDOT divisions and facilities until later in Fiscal Year 2010. In the second table, operating expenses are based upon the Preliminary Fiscal Year 2011 Estimate, with subsequent years only adjusted for assumed inflation of 2.33% annually. Debt service figures are based upon the assumptions set forth in the accompanying notes to the table and are preliminary and subject to change.

A number of factors affecting MassDOT's financial results for the Metropolitan Highway System could cause actual results to differ materially from those estimated and projected in the tables and elsewhere in this Official Statement. MassDOT has covenanted in the Trust Agreement to maintain tolls in order that Net Revenues will at least equal the debt service coverage and Capital Reinvestment Fund deposit levels required by the Trust Agreement and expects to monitor its projected needs and financial plan for the Metropolitan Highway System on an ongoing basis.

**METROPOLITAN HIGHWAY SYSTEM**  
**Summary of Revenues, Expenses and Debt Service Coverage**  
**Fiscal Year 2010 Outlook and Preliminary Fiscal Year 2011 Estimate**  
*(Dollars in thousands)*

	Original Fiscal Year 2010 <u>Budget</u>	Current Fiscal Year 2010 <u>Outlook<sup>1</sup></u>	Preliminary Fiscal Year 2011 <u>Estimate<sup>1</sup></u>
<b>Revenues</b>			
Toll Revenues, net <sup>2</sup>	\$169,387	\$169,387	\$171,370
Rentals & Leases	8,272	8,272	8,520
Court Fines & Other Revenues	<u>8,752</u>	<u>8,752</u>	<u>8,839</u>
<b>Total Revenues</b>	<b>\$186,411</b>	<b>\$186,411</b>	<b>\$188,729</b>
<b>Operating Expenses</b>			
Engineering and Maintenance	\$ 33,241	\$ 33,241	\$ 34,017
Toll Collection	22,679	22,679	22,679
Public Safety	17,152	17,152	17,551
Insurance Program and Workers Compensation	7,550	6,486	6,485
Administrative Departments	2,985	2,831	2,897
Employee Benefits/Health Insurance	9,834	9,834	8,398
Operations	5,788	5,788	5,923
Retirement	<u>5,233</u>	<u>4,733</u>	<u>4,733</u>
<b>Total Operating Expenses<sup>3</sup></b>	<b>\$104,462</b>	<b>\$102,744</b>	<b>\$102,683</b>
<b>Net Revenues</b>	<b><u>\$ 81,949</u></b>	<b><u>\$ 83,667</u></b>	<b><u>\$ 86,046</u></b>
<b>Senior Lien Net Debt Service</b>			
Principal and interest on Senior Bonds	\$ 75,759	\$ 75,759	\$ 39,010 <sup>4</sup>
Swap Payments, Net of Exercise Premiums Received	9,444	9,444	-
Less: Senior DSRF and DSF Earnings	(1,111)	(1,111)	(3,220)
Less: Use of MHS Reserves to Pay Debt Service	-	-	-
Less: 1999 Contract Payments	(25,000)	(25,000)	(25,000)
Less: 2009 Contract Payments	<u>(23,855)</u>	<u>(23,855)</u>	<u>(4,883)<sup>5</sup></u>
<b>Senior Net Debt Service</b>	<b><u>\$ 35,238</u></b>	<b><u>\$ 35,238</u></b>	<b><u>\$ 5,907</u></b>
<b>Subordinated Lien Net Debt Service</b>			
Principal and interest on Subordinated Bonds	\$ 56,444	\$ 56,444	\$ 43,397
Swap Payments, Net of Hedge Fund Reserve and Premiums Received	24,468	24,468	-
Less: Subordinate DSRF and DSF Earnings	(4,766)	(4,766)	(564)
Less: 2009 Contract Payments	(100,000)	(100,000)	(81,093)
Less: Use of MHS Reserves to Pay Debt Service	-	-	-
<b>Subordinated Net Debt Service</b>	<b><u>(\$23,855)</u></b>	<b><u>(\$23,855)</u></b>	<b><u>(\$38,260)</u></b>
Combined Net Debt Service	\$ 35,238	\$ 35,238	\$ 5,907
Senior Net Debt Service Coverage	2.3	2.4	14.6
Combined Net Debt Service Coverage	2.3	2.4	14.6

<sup>1</sup> Compiled by MassDOT staff; the MassDOT Board is not expected to approve a Fiscal Year 2011 operating budget for the Metropolitan Highway System or other MassDOT divisions and facilities until later in Fiscal Year 2010.

<sup>2</sup> Toll revenues for Fiscal Year 2010 and Fiscal Year 2011 are from the Traffic and Revenue Study. See *Appendix B*.

<sup>3</sup> Prepared by MassDOT.

<sup>4</sup> Interest on the 2010 Series A Bonds is calculated at the swap rate of 4.75%, plus ongoing fees, which are subject to change over the life of the 2010 Series A Bonds.

<sup>5</sup> Reflects the use of a portion of the 2009 Contract payment allocable to Fiscal Year 2011 debt service to refund the Authority's previously outstanding Subordinated Bonds at the time of issuance of the 2010 Subordinated Bonds.

**METROPOLITAN HIGHWAY SYSTEM**  
**Summary of Projected Revenues, Expenses and Debt Service Coverage**  
**Fiscal Years 2011 through 2015**  
*(Dollars in thousands)*

	<u>Fiscal Year</u> <u>2011</u>	<u>Fiscal Year</u> <u>2012</u>	<u>Fiscal Year</u> <u>2013</u>	<u>Fiscal Year</u> <u>2014</u>	<u>Fiscal Year</u> <u>2015</u>
<b>Revenues</b>					
Toll Revenues, net <sup>1</sup>	\$171,370	\$174,420	\$177,520	\$180,680	\$182,720
Rentals & Leases <sup>2</sup>	8,520	8,775	9,039	9,310	9,589
Court Fines & Other Revenues <sup>2</sup>	<u>8,839</u>	<u>8,928</u>	<u>9,017</u>	<u>9,107</u>	<u>9,198</u>
<b>Total Revenues</b>	<u>\$188,729</u>	<u>\$192,123</u>	<u>\$195,576</u>	<u>\$199,097</u>	<u>\$201,507</u>
<b>Operating Expenses<sup>3</sup></b>	\$102,683	\$105,075	\$107,524	\$110,029	\$112,593
<b>Net Revenues</b>	\$86,046	\$87,048	\$88,052	\$89,068	\$88,915
<b>Senior Lien Net Debt Service</b>					
Principal and interest on Senior Bonds <sup>4</sup>	\$39,010	\$89,132	\$90,431	\$91,065	\$110,999
Swap Payments, Net of Exercise Premiums Received	-	-	-	-	-
Less: Senior DSRF and DSF Earnings	(3,220)	(5,130)	(5,150)	(5,165)	(5,373)
Less: Use of MHS Reserves to Pay Debt Service	-	-	-	-	-
Less: 1999 Contract Payments	(25,000)	(25,000)	(25,000)	(25,000)	(25,000)
Less: 2009 Contract Payments <sup>5</sup>	<u>(4,883)</u>	<u>(53,344)</u>	<u>(53,358)</u>	<u>(53,358)</u>	<u>(53,358)</u>
<b>Senior Net Debt Service</b>	\$5,907	\$5,658	\$6,923	\$7,543	\$27,268
<b>Subordinated Lien Net Debt Service</b>					
Principal and interest on 2010 Subordinated Bonds	\$43,397	\$47,275	\$47,262	\$47,262	\$47,262
Swap Payments, Net of Hedge Fund Reserve and Premiums Received	-	-	-	-	-
Less: Subordinate DSRF and DSF Earnings	(564)	(620)	(620)	(620)	(620)
Less: 2009 Contract Payments <sup>6</sup>	(81,093)	(100,000)	(100,000)	(100,000)	(100,000)
Less: Use of MHS Reserves to Pay Debt Service	-	-	-	-	-
<b>Subordinated Net Debt Service</b>	(\$38,260)	(\$53,344)	(\$53,358)	(\$53,358)	(\$53,358)
<b>Combined Net Debt Service</b>	\$5,907	\$5,658	\$6,923	\$7,543	\$27,268
<b>Senior Net Debt Service Coverage</b>	14.6	15.4	12.7	11.8	3.3
<b>Combined Net Debt Service Coverage</b>	14.6	15.4	12.7	11.8	3.3
<b>Combined Coverage of Projected Maximum Annual Net Debt Service</b>	2.4	2.4	2.4	2.4	2.4
<b>Funds Available for Deposit to Capital Reinvestment Fund and General Fund</b>	\$80,139	\$81,390	\$81,129	\$81,525	\$61,647

<sup>1</sup> Toll Revenues are from the Traffic and Revenue Study. See *Appendix B*.

<sup>2</sup> Fiscal Year 2011 "Rentals & Leases" and "Court Fines & Other Revenues" are taken from prior table; subsequent fiscal year amounts assume "Rentals & Leases" revenues grows 3% per year and "Court Fines & Other Revenues" grown 1% per year.

<sup>3</sup> Operating Expenses for Fiscal Year 2011 Estimate are taken from the prior table; subsequent fiscal years assume the Fiscal Year 2011 Estimate increases at a blended annual inflation rate of 2.33%.

<sup>4</sup> Fiscal Year 2011 debt service includes use of full accrued bond principal and interest allocable to bonds being redeemed and the full swap payment owed on July 1, 2010.

<sup>5</sup> Debt service on the 2010 Subordinated Bonds constituting variable rate demand bonds has been calculated inclusive of fees and using the fixed rate payable by MassDOT under existing swap agreements relating to such Subordinated Bonds. If the actual interest rates on such Subordinated Bonds differ from the assumed rates, amounts under the 2009 Contract available to be applied to debt service on the Senior Bonds will differ, possibly substantially, from what is indicated in the table above.

<sup>6</sup> Reflects the use of a portion of the 2009 Contract payment allocable to Fiscal Year 2011 debt service to refund the Authority's previously outstanding Subordinated Bonds at the time of issuance of the 2010 Subordinated Bonds.

## CAPITAL INVESTMENTS

MassDOT, as successor to the Authority, has covenanted in the Trust Agreement to maintain the Accepted Metropolitan Highway System in good repair, working order and condition. MassDOT anticipates financing the capital needs of the Metropolitan Highway System primarily on a pay-as-you go basis from MHS revenues, after payment of operating expenses and debt service, available for deposit into the Capital Reinvestment Fund, as well as from other Commonwealth financing programs that the Metropolitan Highway System is now eligible for as a result of the enactment of the Transportation Reform Act, such as the Commonwealth's statewide road and bridge program. MassDOT also has available to it, with the approval of the Secretary, monies on deposit in the CA/T Trust Fund for the costs of non-routine repair and maintenance of the CA/T Project components. See *Metropolitan Highway System – Status of Facilities*, above, and *Central Artery/Ted Williams Tunnel Project*, below.

The Transportation Reform Act requires the Secretary of MassDOT to prepare and publish, after public hearings, a comprehensive state transportation plan for the five succeeding fiscal years, beginning with the period of Fiscal Years 2011 to 2015, inclusive, and provides that such plan shall be designed to ensure construction and maintenance of a safe, sound and efficient public highway, road and bridge system throughout the Commonwealth, including the Metropolitan Highway System. The plan is required to include an engineering assessment to anticipate highway, road and bridge needs throughout the Commonwealth as determined by objective engineering measurements of condition, safety and service. MassDOT is required to determine and certify to the Commonwealth's Secretary of Administration and Finance its estimate of the total value of all construction, reconstruction and repair needs of the Commonwealth's highway and bridge infrastructure. The total value estimate is required to be based on satisfying current safety and maintenance standards of the Federal Highway Administration and the American Association of State Highway and Transportation Officials. MassDOT is proceeding with the development of the Secretary's initial 5-year state transportation plan (the "MassDOT 5-Year Capital Plan"), which, under the Transportation Reform Act, is required to be completed by April 30, 2010. MassDOT is in the process of holding public hearings regarding the MassDOT 5-Year Capital Plan and expects to have a draft plan available for review in May 2010. MassDOT expects that the 5-Year Capital Plan will be adopted in June 2010.

Prior to the Authority's dissolution on November 1, 2009 and the assumption of its responsibilities by MassDOT, the Authority prepared its annual capital budgets and longer-term capital expenditure plans based on the facilities assessments included in the Independent Consultant's Triennial Report required under the Trust Agreement (most recently completed in March 2010 and expected to be released in May, 2010) (the "Triennial Report"), the biennial bridge inspection reports filed with the former Massachusetts Highway Department (now a part of the MassDOT Highways Division) as required by the Federal Highway Administration, and on routine ongoing maintenance and inspection of MHS facilities. The Authority also incorporated its historic capital expenditure levels and life-expectancy estimates for new facilities, as well as accepted industry standards for capital reinvestment and replacement, in developing its capital plan. The Authority developed its construction capital needs assessment by evaluating four main asset categories – facilities, roadways, bridges and tunnels.

**Fiscal 2010 Capital Budget.** Prior to the dissolution of the Authority, the Authority's Board of Directors approved a total capital improvement budget for the current Fiscal Year 2010 (the "Authority FY10 CIB") of \$40.9 million, inclusive of certain operational and General Fund expenses allocated to capital projects, an increase of \$25 million over the Fiscal Year 2009 Capital Reinvestment Fund deposit of \$15.9 million, which increase was attributable to the receipt of the first payment under the 2009 Contract in July 2009. The Authority FY10 CIB included \$7.6 million for major maintenance and engineering equipment replacements and \$3 million for motor equipment replacements. The largest ongoing construction projects included in the Authority FY10 CIB were life safety improvements to the Prudential Tunnel on the Boston Extension, repair and resurfacing of the Prudential Tunnel, repair of the façade and louvers in four of the Sumner Tunnel and Callahan Tunnel vent buildings, repair and resurfacing of the Callahan Tunnel, replacement of the bridge deck on the Harvard Street bridge along the Boston Extension in Newton, and HVAC system replacement and window refurbishing at the 185 Kneeland Street MHS facility. The following table identifies the capital construction projects with the largest budget allocations included in the Authority FY10 CIB and their estimated total remaining capital cost to complete. To date, actual expenditures on construction projects included in the Metropolitan Highway System during Fiscal Year 2010 has been less, and in certain cases substantially less, than is reflected in the Authority FY10 CIB due to the delay in the implementation of certain projects.

**Authority Fiscal Year 2010 Capital Budget  
Largest MHS Construction Projects Receiving Budgeted Funds**

<b>Construction Project</b>	<b>FY10 CIB Amount</b> <i>(Dollars in Millions)</i>	<b>Total Remaining Est. Project Cost</b> <i>(Dollars in Millions)</i>
Prudential Tunnel Repair & Major Resurfacing	\$3.2	\$12.0
Sumner Callahan Tunnel Vent Buildings Repairs of Louvers and Facades	2.9	2.9
Callahan Tunnel Repair and Resurfacing	1.4	6.6
Harvard Street, Newton Bridge Deck Replacement	0.8	2.2
185 Kneeland St. Facility HVAC Replacement & Window Refurbishment	0.3	5.5

Source: Derived by MassDOT from Authority records.

As discussed above, the Secretary of MassDOT is expected to present the MassDOT 5-Year Capital Plan, as required by the Transportation Reform Act, later in Fiscal Year 2010. Currently MassDOT's engineering staff is reviewing the capital needs of the Metropolitan Highway System and other MassDOT facilities. In connection with this review, MassDOT's engineering staff is reviewing the Triennial Report and the 10-year capital needs assessment and project plan previously prepared by Authority staff, as described below.

**Triennial Report.** The Trust Agreement provides that the Independent Consultant is required to inspect the Accepted Metropolitan Highway System at least once every three fiscal years and submit a report setting forth (i) the Independent Consultant's findings whether the Accepted Metropolitan Highway System has been maintained in safe and good repair, working order and condition, and (ii) their recommendations as to the proper maintenance, repair and operation of the Accepted Metropolitan Highway System during the ensuing three fiscal years and an estimate of the amount of money necessary for such purposes. The Triennial Report includes a Report of Conditions. The data used to generate the Report of Conditions was obtained from (i) visual inspections conducted in 2009 by the Independent Consultant, HNTB Corporation ("HNTB"), as General Consulting Engineer, along with the support of other consultants, of Metropolitan Highway System facilities that had not been otherwise inspected since 2007, and (ii) 12-month overhead items tunnel inspections, 24-month routine bridge inspections, and 36-month all items tunnel inspections conducted between June 2007 and September 2009 by HNTB, other consultants and the Authority's own forces. Each item of inspection was given a rating according to a scale included in the Report of Conditions. Facilities were assigned a numeric rating from 9 (Excellent Condition – Newly constructed) to 0 (Failed Condition – Facility is closed and out of service. Facility is beyond corrective action). The Triennial Report includes estimated costs for corrective measures for items inspected that were rated 5 (Fair Condition) or less. The Triennial Report estimates that the costs to repair these deficiencies is approximately \$744.7 million, which represents actual estimated costs of approximately \$386.4 million, plus a contingency amount of \$140.2 million, plus construction support costs and a 3% inflation factor aggregating approximately \$218.12 million. The Triennial Report assumes that such costs will be spread over a five-year period for purposes of the report only.

**Authority 10-Year Capital Needs Assessment.** The Authority, prior to the creation of MassDOT, developed a 10-year capital needs assessment and project plan as of January 2009 for the period of 2009 through 2018 (the "Authority 10-Year Plan") that indicated the Metropolitan Highway System would require ongoing capital investments, including capital spending on construction projects, capital equipment and capital maintenance requirements of approximately \$884.5 million in constant 2008 dollars, including approximately \$531.1 million in capital construction project costs, approximately \$96.2 million in construction support costs (e.g., engineering, survey and material testing services, construction inspection and safety expenses), approximately \$57 million for tunnel inspections, approximately \$71 million for motor equipment purchases, facility maintenance and environmental engineering services, and the balance for electronic toll collection capital systems and equipment upgrades and other allocated costs. The aggregate cost of the Authority 10-Year Plan was approximately \$1.01 billion, assuming 3% annual inflation, including approximately \$718.2 million in direct construction costs and construction project support costs. The Authority 10-Year Plan included the costs of bringing facilities to an acceptable state of maintenance/repair (similar to the Triennial Report), and also the costs of maintaining the facilities at such level during the planning period.

MassDOT staff have reviewed and adjusted the Authority 10-Year Plan in connection with assembling information to be used in preparing the MassDOT 5-Year Capital Plan. Adjustments to the Authority 10-Year Plan include reflecting that actual expenditures during Fiscal Year 2009 and expenditures to date in Fiscal Year 2010 for projects included in the Authority 10-Year Plan have been less than originally reflected in the Authority 10-Year Plan, which impacts project implementation and spending in subsequent fiscal years. The table set forth below summarizes estimated capital needs for the Metropolitan Highway System for Fiscal Years 2011 through 2015 (the "Preliminary FY2011-15 Needs Assessment"), based on the original needs assessment reflected in the Authority 10-Year Plan. The information included in this table has been prepared by MassDOT staff and has not been approved by the Secretary or adopted by the MassDOT Board.

**METROPOLITAN HIGHWAY SYSTEM**  
**Preliminary Estimated Needs Assessment**  
**Fiscal Years 2011-2015**  
*(Dollars in Thousands)<sup>1</sup>*

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>Total 2011-15</u>
<b>Construction Program</b>						
Facilities	\$ 7,692	\$ 1,093	\$ 1,126	\$ 870	\$ 896	\$ 11,675
Roadways	11,617	7,813	2,814	4,000	7,881	34,124
Bridges	9,707	40,289	30,726	51,205	54,126	186,054
Tunnels	<u>13,134</u>	<u>26,969</u>	<u>53,777</u>	<u>21,481</u>	<u>21,768</u>	<u>137,128</u>
Total Construction Projects	\$ 42,150	\$ 76,164	\$ 88,443	\$ 77,556	\$ 84,670	\$368,981
Construction Support	<u>\$ 7,587</u>	<u>\$ 13,709</u>	<u>\$ 15,920</u>	<u>\$ 13,960</u>	<u>\$ 15,241</u>	<u>\$ 66,417</u>
<b>Total Construction Program</b>	<b>\$ 49,737</b>	<b>\$ 89,873</b>	<b>\$104,363</b>	<b>\$ 91,516</b>	<b>\$ 99,911</b>	<b>\$435,398</b>
<b>Non-Construction Program<sup>2</sup></b>	<b>\$ 26,757</b>	<b>\$ 27,358</b>	<b>\$ 29,483</b>	<b>\$ 28,918</b>	<b>\$ 28,686</b>	<b>\$141,203</b>
<b>TOTAL CAPITAL PROGRAM</b>	<b>\$ 76,494</b>	<b>\$117,231</b>	<b>\$133,846</b>	<b>\$120,434</b>	<b>\$128,597</b>	<b>\$576,601</b>

Source: Derived by MassDOT from Authority records.

<sup>1</sup> Amounts stated in inflated dollars.

<sup>2</sup> Includes operating costs allocable to capital projects, costs of the bridge and tunnel inspection programs, engineering/design and similar consultant costs, electronic toll system and information systems costs, and other non-construction capital costs.

Three planned construction projects, including deck reconstructions on the Boston Extension at the viaduct near Boston University (the "BU Viaduct"), the deck reconstruction on the Boston Extension interchange with I-95/SR 128 (the "Route 128 Overpass"), and the replacement of the exhaust system plenum and ceiling of the Sumner Tunnel (the "Sumner Tunnel repairs") account for approximately 38.6% of the total construction program costs included in the Preliminary FY2011-15 Needs Assessment. The BU Viaduct is a 29-span structure carrying 8 lanes of the I-90 Boston Extension over various railroad tracks and access roads. The estimated direct construction cost of the BU Viaduct deck replacement in the Preliminary FY2011-15 Needs Assessment is approximately \$79.7 million. The Route 128 Overpass is an eight-span structure carrying six lanes of the I-90 Boston Extension over I-95/SR 128 and the Charles River. The estimated direct construction cost of the Route 128 Overpass deck replacement in the Preliminary FY2011-15 Needs Assessment is approximately \$41.9 million. The estimated direct

construction cost of the Sumner Tunnel repairs in the Preliminary FY2011-15 Needs Assessment is approximately \$46.3 million. The cost estimates included in the Preliminary FY2011-15 Needs Assessment are based on the estimates included in the Authority 10-Year Plan, which in turn were based on the Authority's experience with similar construction projects and then average industry standard costs.

Although there is no assurance that the MassDOT 5-Year Capital Plan, when issued, will include the same projects, priority of projects, or level of funding as reflected in the Triennial Report or the Preliminary FY2011-15 Needs Assessment, it is expected that significant capital investment will be required in the future for the Metropolitan Highway System, both during the periods covered by the Triennial Report and the Preliminary FY2011-15 Needs Assessment and thereafter, due to several factors, including (i) the previous necessary prioritization of capital projects during the implementation of the CA/T Project, (ii) the magnitude of the CA/T Project assets transferred to the Authority (and now owned by MassDOT), (iii) the fact that some elements of the CA/T Project were completed and placed into operation 15 years ago (e.g., Ted Williams Tunnel), and (iv) the type of assets included in the Metropolitan Highway System – the three Tunnels, the tunnels included in the Central Artery, CANA and the Boston Extension, and the significant number of bridge structures in the Metropolitan Highway System due to its urban location, are more costly to maintain than at-grade roadways and require substantial on-going capital reinvestment.

### **Central Artery/Ted Williams Tunnel Project**

One of the largest components of the Commonwealth's capital program in recent years has been the CA/T Project. The CA/T Project involved the replacement of the elevated portion of Interstate 93 in downtown Boston (the Central Artery) with an underground expressway, and the construction of the Ted Williams Tunnel linking the Boston terminus of the Massachusetts Turnpike (Interstate 90) to Logan Airport and points north. The CA/T Project was substantially completed in January, 2006, although certain mitigation projects unrelated to the CA/T Project, but that were required as part of the approvals obtained for the CA/T Project, remain to be completed.

*Project Budget and Oversight and Delay of Federal Funding.* In October, 2000, following an announcement by CA/T Project officials of substantially increased cost estimates, a federal law was enacted that required the U.S. Secretary of Transportation to withhold federal funds and all project approvals for the CA/T Project in each federal Fiscal Year unless the Secretary had approved an annual update of the project's finance plan for such year and had determined that the Commonwealth was maintaining a balanced statewide transportation program and was in full compliance with a project partnership agreement among the Federal Highway Administration, the then Executive Office of Transportation and Public Works, the Authority and the former Massachusetts Highway Department (the "partnership agreement"). In addition, the law limited total federal funding for the CA/T Project to \$8.549 billion (including \$1.5 billion to pay the principal of federal grant anticipation notes), consistent with the partnership agreement. Finally, the law tied future federal funding for the CA/T Project to an annual finding by the Inspector General of the U.S. Department of Transportation that the annual update of the project's finance plan was consistent with Federal Highway Administration financial plan guidance. If any federal assistance was withheld from the CA/T Project pursuant to such law, such funding would nonetheless be available to the Commonwealth for projects other than the CA/T Project. Moreover, the law provided that federal funds would not be withheld if the Commonwealth's Secretary of Administration and Finance certified that such funds were required to pay all or any portion of the principal of federal grant anticipation notes issued for the CA/T Project.

The most current CA/T Project finance plan received the requisite approval in March 2009 (the "updated finance plan"), which permitted the remaining \$162 million of federal funds for the CA/T Project that had been withheld pending the federal approval to be received, and such funds were received in Fiscal Year 2009.

Based on the cost estimate of \$14.808 billion and certain other cash flow adjustments reflected in the updated finance plan, \$210 million of additional funding was needed for the CA/T Project. Pursuant to a September 2008 agreement between the Commonwealth and the Authority (which updated and amended a May, 2007 agreement), the Commonwealth agreed to cover the \$210 million funding shortfall from the following two sources: (a) at least \$177 million projected to be available in a transportation infrastructure fund (the "TIF"), and (b) up to \$33 million of Commonwealth bond proceeds. This commitment by the Commonwealth to cover the funding shortfall was subject to the following conditions: (i) the Authority was required to cover any future shortfalls in Authority funding to complete the CA/T Project and any project costs in excess of \$14.808 billion; (ii) all cost

recoveries and insurance proceeds that were received by the Authority or the Commonwealth were to be deposited into the TIF to pay project costs in lieu of the additional amounts committed by the Commonwealth or to reimburse the Commonwealth for project costs already paid, except to the extent such cost recoveries are required to be credited to the CA/T Trust Fund; (iii) to the extent that, by June 30, 2010, the amounts described in clause (ii) above received by or paid to the Commonwealth have aggregated less than the portion of the \$210 million funding shortfall paid from Commonwealth bonds, the Authority was required to pay the difference to the Commonwealth by not later than January 1, 2011; and (iv) to the extent legally and practically feasible, the Authority was required to comply with new reporting requirements to improve the transparency of project financing matters to the Commonwealth. The Authority's obligations under the September 2008 agreement now have been assumed by MassDOT.

The revised project cost estimates reflected in the updated finance plan were based on assumptions concerning the resolution of claims, liquidated damages and back charges to the Authority that the Authority believed to be reasonable. The actual resolution of such amounts could vary from those assumptions. The order of magnitude of the additional exposure related to such claims, liquidated damages and back charges was estimated to be \$160 million as of May, 2007.

In January 2008, the United States Attorney General and the Massachusetts Attorney General entered into a global resolution of criminal and civil claims with the joint venture of Bechtel/Parsons Brinckerhoff, Bechtel Infrastructure Corp. and PB Americas, Inc., f/k/a Parsons Brinckerhoff Quade and Douglas, Inc. ("Bechtel/Parsons Brinckerhoff"), the management consultant to the CA/T Project. Bechtel/Parsons Brinckerhoff agreed to pay over \$407 million to resolve its criminal and civil liabilities in connection with the collapse of part of the I-90 Connector Tunnel ceiling in connection with the June 2006 Accident and defects in the slurry walls of the Tip O'Neill Tunnel. This settlement does not release the defendants from future catastrophic events having an aggregate cost of greater than \$50 million, but the liability of Bechtel/Parsons Brinckerhoff for such a future catastrophic event is capped at \$100 million. In addition, 24 section design consultants and other contractors who worked on various parts of the project, agreed to pay an additional \$51 million to resolve certain cost-recovery issues associated with the design of the CA/T Project. These settlements followed an earlier settlement with Aggregate Industries Northeast Region for \$42.7 million relating to cost recovery issues with the CA/T Project. In total, the United States and the Commonwealth will recover \$500.7 million, including interest from all of these settlements. To date, approximately \$430.7 million has been deposited in the CA/T Trust Fund, which has accrued approximately \$14.6 million in interest. The balance in the CA/T Trust Fund as of March 31, 2010, including the balance in an account held formerly by the Authority that will be transferred by MassDOT back to the CA/T Trust Fund, was approximately \$426 million.

The settlement agreement and related legislation require that the settlement amounts and certain other cost recovery amounts be deposited in the CA/T Trust Fund and be dedicated to non-routine maintenance of the CA/T Project and reimbursement of certain costs incurred by the Commonwealth and MassDOT to repair components of the CA/T Project. All other cost recoveries, insurance proceeds and certain real estate proceeds will be deposited in the Trust Fund.

## **LEGISLATIVE AND OTHER MATTERS**

From time to time various bills are filed in the Legislature which relate to MassDOT and would affect, among other matters, tolls and fees, holiday toll suspensions, air rights developments and the composition of the Board. In the opinion of Bond Counsel, any such legislation would be subject to the provisions of the United States Constitution and Massachusetts Constitution restricting any law impairing obligations under contracts and therefore could not unconstitutionally impair the obligations of MassDOT under the Bonds and the Trust Agreement. MassDOT does not believe that any legislation having such an effect is likely to be enacted.

## **LITIGATION**

There is no threatened or pending litigation seeking to restrain or enjoin the issuance or delivery of the Bonds or the proceedings and authority under which they are to be issued, or the pledge or application of any moneys or the security provided for the payment of such Bonds or the existence or powers of MassDOT. There is no threatened or pending litigation which questions or affects the ability of MassDOT to own or operate the Metropolitan Highway System, or which seeks to restrain or enjoin the execution, delivery or performance of, the

Trust Agreement, the 1999 Contract, the 2009 Contract or any other agreements, contracts or legal documents to be executed in connection with the issuance of the Bonds.

MassDOT, as successor to the Authority or otherwise, from time to time is engaged in various matters of routine litigation. These matters include personal injury and property damage claims for which liability is covered in whole or in part by insurance. Others include disputes with contractors, subcontractors and others arising from the construction or maintenance of the Metropolitan Highway System and the Western Turnpike. MassDOT is engaged in a number of claims regarding contracts for the CA/T Project that may result in future litigation. MassDOT does not expect that these matters will require any amounts to be paid which, in the aggregate, would materially adversely affect MassDOT's ability to fulfill its obligations under the Trust Agreement.

In *Sandra Murphy, et al. v. Massachusetts Turnpike Authority*, Middlesex Superior Court, Civil Action No. 09-01794-B, the plaintiffs filed suit against the Authority on behalf of a purported "class" consisting of all toll payers within the Metropolitan Highway System. Under the Enabling Act, MassDOT has succeeded to the liabilities of the Authority. The plaintiffs claim that the use of toll money collected on some parts of the Metropolitan Highway System to fund operations, maintenance and debt service for other parts of the Metropolitan Highway System (specifically, the Central Artery) is an unconstitutional tax and seek an injunction and damages. The plaintiffs filed a motion seeking a preliminary injunction prohibiting the Authority from spending any Metropolitan Highway System tolls on the "non-tolled segments" of the Metropolitan Highway System for the duration of the case. The Superior Court denied that motion. The Authority filed a Motion to Dismiss, seeking to dismiss all counts of the Third Amended Complaint. A hearing on such motion was held on October 15, 2009. The Court took the Motion under advisement, and has not yet rendered its decision.

In *Carol Surprenant, et al. v. Massachusetts Turnpike Authority and Massachusetts Port Authority*, United States District Court for the District of Massachusetts, No. 09-10428-RGS, the plaintiffs filed suit against the Authority and the Massachusetts Port Authority on behalf of a purported "class" consisting of all tollpayers at the Tobin Bridge and the Sumner and Ted Williams Tunnels using E-Z Pass or FAST LANE transponders, who do not qualify for the Resident Discount Program. The plaintiffs claim that the Resident Discount Program is unconstitutional and constitutes discriminatory pricing policies. MassDOT has succeeded to the liabilities of the Authority.

The plaintiffs' complaint contains six claims for relief. Claim I alleges that the Resident Discount Program violates the Dormant Commerce Clause of the United States Constitution by discriminating against out-of-state economic interests to the benefit in in-state economic interests. Claim II alleges that the disparate treatment accorded resident and non-resident travelers utilizing the Tunnels violates the Equal Protection Clause of the Fourteenth Amendment of the United States Constitution. Claim III alleges that the Resident Discount Program violates the Privileges and Immunities Clause of the United States Constitution by discriminating against out-of-state residents. Claim IV alleges that the disparate treatment accorded resident and non-resident travelers utilizing the Tunnels violates the Equal Protection Clause of the Massachusetts Constitution. Claim V seeks the imposition of a constructive trust and restitution of the alleged unjust enrichment. Claim VI seeks restitution for money had and received.

The Authority filed a motion to dismiss. A hearing on the Authority's motion was heard in July 2009. In March 2010 the District Court allowed the motion to dismiss as to the Privileges and Immunities Clause (Claim III) and denied as to the Dormant Commerce Clause (Claim I). The District Court authorized a 90-day period for discovery, followed by supplemental briefing. In April 2010, an amended complaint was filed, adding MassDOT as a defendant and adding a claim under 42 U.S.C. § 1983.

*Yerger et al. v. Massachusetts Turnpike Authority*, United States District Court for the District of New Jersey, No. 2:08-cv-05261. In October 2008, eight individual plaintiffs on behalf of all others similarly situated brought a putative class action lawsuit against the Authority in the United States District Court for the District of New Jersey. The plaintiffs allege that the FAST LANE discount program violates the Dormant Commerce Clause, the Equal Protection Clause, and Privileges and Immunities Clause of the United States Constitution. MassDOT has succeeded to the liabilities of the Authority.

In July 2009, the District Court heard the Authority's motion to dismiss for failure to state a claim. In September 2009, the District Court issued a decision dismissing all claims asserted by the plaintiffs and issued an

order dismissing the Complaint in its entirety, with prejudice. In October 2009, the plaintiff's filed a Notice of Appeal with the United States Court of Appeals for the Third Circuit. The briefing and scheduling order requires the brief for the Appellant to be filed and served in April 2010. The Appellee's brief is to be filed and served within 30 days of the service of the Appellant's brief, and any reply briefs are to be filed and served within 14 days of service of the Appellee's brief.

*Perini Corp., Kiewit Constr. Corp., Jay Cashman, Inc., d/b/a Perini – Kiewit – Cashman Joint Venture v. Commonwealth.* In several related cases and potential litigation, plaintiffs make claims for alleged increased costs arising from differing site conditions and other causes of delay on the Central Artery/Ted Williams Tunnel project. Plaintiffs have asserted claims in excess of \$130 million. These claims are at various stages of resolution, including the Superior Court and the Central Artery Tunnel Project Dispute Review Board (“DRB”) panel. The DRB has recently issue decisions on some of the claims, awarding plaintiffs \$55 million on claims of \$73.8 million. Those decisions are now the subject of further court proceedings. Plaintiffs also still have in excess of \$60 million in claims pending.

*United Steelworkers, Local 5696, et al. v. Deval Patrick, Governor of the Commonwealth, et al.,* United States District Court for the District of Massachusetts. Two unions, and individual union members on behalf of a putative class of union members, have brought a lawsuit claiming that the plaintiffs and the members of the putative class have a vested contractual relationship with the Authority and its successor, MassDOT that provides them with the right, upon retirement, to apply earned, unused sick leave to offset any contribution they may owe for medical benefits coverage. The plaintiffs claim that M.G.L. c. 81A, § 32 impairs their contractual rights in violation of the Contract Clause of the United States Constitution by changing the manner in which the Authority retirees under the age of 65 contribute to their health care premiums. The complaint was filed in late March 2010.

#### **TAX EXEMPTION**

In the opinion of Edwards Angell Palmer & Dodge LLP, Bond Counsel to the Issuer (“Bond Counsel”), based upon an analysis of existing laws, regulations, rulings, and court decisions, and assuming, among other matters, compliance with certain covenants, interest on the Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the “Code”). Bond Counsel is of the opinion that interest on the Bonds is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, although Bond Counsel observes that such interest is included in adjusted current earnings when calculating corporate alternative minimum taxable income.

Other than as expressly stated herein, Bond Counsel expresses no opinion regarding any other federal tax consequences arising with respect to the ownership or disposition of, or the accrual or receipt of interest on, the Bonds.

The Code imposes various requirements relating to the exclusion from gross income for federal income tax purposes of interest on obligations such as the Bonds. Failure to comply with these requirements may result in interest on the Bonds being included in gross income for federal income tax purposes, possibly from the date of original issuance of the Bonds. The Issuer has covenanted to comply with such requirements to ensure that interest on the Bonds will not be included in federal gross income. The opinion of Bond Counsel assumes compliance with these covenants.

Bond Counsel is also of the opinion that, under existing law, interest on the Bonds and any profit on the sale of the Bonds are exempt from Massachusetts personal income taxes and that the Bonds are exempt from Massachusetts personal property taxes. Bond Counsel expresses no opinion regarding any other Massachusetts tax consequences arising with respect to the Bonds. Prospective Bondholders should be aware, however, that the Bonds are included in the measure of Massachusetts estate and inheritance taxes, and the Bonds and the interest thereon are included in the measure of certain Massachusetts corporate excise and franchise taxes. Bond Counsel has not opined as to the taxability of the Bonds or the income therefrom under the laws of any state other than Massachusetts. A complete copy of the proposed form of opinion of Bond Counsel is set forth in *Appendix D* hereto.

To the extent the issue price of any maturity of the 2010 Series B Bonds is less than the amount to be paid at maturity of such 2010 Series B Bonds (excluding amounts stated to be interest and payable at least annually over

the term of such 2010 Series B Bonds), the difference constitutes “original issue discount,” the accrual of which, to the extent properly allocable to each owner thereof, is treated as interest on the 2010 Series B Bonds which is excluded from gross income for federal income tax purposes and is exempt from Massachusetts personal income taxes. For this purpose, the issue price of a particular maturity of the 2010 Series B Bonds is the first price at which a substantial amount of such maturity of the 2010 Series B Bonds is sold to the public (excluding bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers). The original issue discount with respect to any maturity of the 2010 Series B Bonds accrues daily over the term to maturity of such 2010 Series B Bonds on the basis of a constant interest rate compounded semiannually (with straight-line interpolations between compounding dates). The accruing original issue discount is added to the adjusted basis of such 2010 Series B Bonds to determine taxable gain or loss upon disposition (including sale, redemption, or payment on maturity) of such 2010 Series B Bonds. Bondholders should consult their own tax advisors with respect to the tax consequences of ownership of 2010 Series B Bonds with original issue discount, including the treatment of purchasers who do not purchase such 2010 Series B Bonds in the original offering to the public at the first price at which a substantial amount of such 2010 Series B Bonds is sold to the public.

2010 Series B Bonds purchased, whether at original issuance or otherwise, for an amount greater than the stated principal amount to be paid at maturity of such 2010 Series B Bonds, or, in some cases, at the earlier redemption date of such 2010 Series B Bonds (“Premium Bonds”), will be treated as having amortizable bond premium for federal income tax purposes and Massachusetts personal income tax purposes. No deduction is allowable for the amortizable bond premium in the case of obligations, such as the Premium Bonds, the interest on which is excluded from gross income for federal income tax purposes. However, a Bondholder’s basis in a Premium Bond will be reduced by the amount of amortizable bond premium properly allocable to such Bondholder. Holders of Premium Bonds should consult their own tax advisors with respect to the proper treatment of amortizable bond premium in their particular circumstances.

Prospective Bondholders should be aware that certain requirements and procedures contained or referred to in the Trust Agreement and other relevant documents may be changed and certain actions (including, without limitation, defeasance of the Bonds) may be taken or omitted under the circumstances and subject to the terms and conditions set forth in such documents. Bond Counsel has not undertaken to determine (or to inform any person) whether any actions taken (or not taken) or events occurring (or not occurring) after the date of issuance of the Bonds may adversely affect the value of, or the tax status of interest on, the Bonds. Further, no assurance can be given that pending or future legislation, including amendments to the Code, if enacted into law, or any proposed legislation, including amendments to the Code, or any future judicial, regulatory or administrative interpretation or development with respect to existing law, will not adversely affect the value of, or the tax status of interest on, the Bonds. Prospective Bondholders are urged to consult their own tax advisors with respect to proposals to restructure the federal income tax.

Although Bond Counsel is of the opinion that interest on the Bonds is excluded from gross income for federal income tax purposes and is exempt from Massachusetts personal income taxes, the ownership or disposition of, or the accrual or receipt of interest on, the Bonds may otherwise affect a Bondholder’s federal or state tax liability. The nature and extent of these other tax consequences will depend upon the particular tax status of the Bondholder or the Bondholder’s other items of income or deduction. Bond Counsel expresses no opinion regarding any such other tax consequences, and Bondholders should consult with their own tax advisors with respect to such consequences.

## RATINGS

Fitch Ratings (“Fitch”), Moody’s Investors Service (“Moody’s”) and Standard & Poor’s Ratings Services (“Standard & Poor’s”) have assigned ratings as set forth on the inside cover page hereof.

Such ratings reflect only the respective views of such organizations and an explanation of the significance of such ratings may be obtained from Fitch, Moody’s and Standard & Poor’s, respectively. MassDOT furnished to each of the rating agencies certain information and materials concerning the Bonds and MassDOT. Generally, rating agencies base their ratings on such information and material and, in addition, on investigations, studies and assumptions made by the rating agencies themselves. There is no assurance that any rating mentioned herein will continue for any period of time or that it will not be revised, either upward or downward, or withdrawn entirely by a

rating agency, if in its judgment circumstances so warrant. Any such downward change in or withdrawal of the ratings may have an adverse effect upon the market price of the Bonds.

The long-term ratings on the Series A-1 Bonds and Series A-2 Bonds are based on the credit quality of the applicable Bank, the underlying rating of MassDOT, as well as the correlation level between the two. Upon a change in the rating of either the applicable Bank or MassDOT or a change in the correlation between the two, as determined by the applicable rating agency, the long-term rating may be evaluated. The short-term ratings on the Series A-1 Bonds and Series A-2 Bonds are based on the credit quality of the applicable Bank, and will be changed whenever such Bank's short-term rating is changed.

The long-term ratings on the 2010 Series B Bonds is based on the credit quality of MassDOT.

## **UNDERWRITING**

Each of the Underwriters has agreed, subject to certain conditions, to purchase all of the Bonds for which it is serving as Underwriter (see the cover page hereof) from the Issuer at a discount from the initial offering price of such Bonds approximately equal to \$4,998,322.44.

The Underwriters may offer and sell the Bonds to certain dealers and others (including dealers depositing Bonds into investment trusts) at prices lower than the public offering prices (or yields higher than the offering yields) stated on the inside cover pages hereof.

Citigroup Inc., parent company of Citigroup Global Markets Inc. has entered into a retail brokerage joint venture with Morgan Stanley. As part of the joint venture, Citigroup Global Markets Inc. will distribute municipal securities to retail investors through the financial advisor network of a new broker-dealer, Morgan Stanley Smith Barney LLC. This distribution arrangement became effective on June 1, 2009. As part of this arrangement, Citigroup Global Markets Inc. will compensate Morgan Stanley Smith Barney LLC for its selling efforts with respect to the 2010 Series A Bonds and the 2010 Series B Bonds.

J.P. Morgan Securities Inc. ("JPMSI"), the Underwriter of the 2010 Series A Bonds and one of the Underwriters of the 2010 Series B Bonds, has entered into a negotiated dealer agreement (the "Dealer Agreement") with Charles Schwab & Co., Inc. ("CS&Co.") for the retail distribution of certain securities offerings, including the Bonds, at the original issue prices. Pursuant to the Dealer Agreement, CS& Co. will purchase Bonds from JPMSI at the original issue price less a negotiated portion of the selling concession applicable to any Bonds that CS&Co. sells.

## **RELATIONSHIP OF CERTAIN PARTIES**

Citibank, N.A. is the issuer of the Series A-1 Letter of Credit. Citibank Global Markets Inc. is one of the underwriters of the 2010 Series B Bonds. Citibank, N.A. and Citibank Global Markets Inc. are affiliated and are subsidiaries of Citigroup Inc.

Wells Fargo Bank, National Association. is the issuer of the Series A-2 Letter of Credit. Wells Fargo Securities, which is the trade name for certain capital markets and investment banking services of Wells Fargo & Company and its subsidiaries, including Wells Fargo Bank, National Association, is one of the underwriters of the 2010 Series B Bonds.

## **LEGALITY FOR INVESTMENT**

Under the Enabling Act, the Bonds are securities in which any public officer, fiduciary, insurance company, financial institution or investment company may properly invest funds and are securities which may be deposited with any public custodian for any purpose for which the deposit of bonds is authorized by law.

## **COMMONWEALTH NOT LIABLE ON BONDS**

Under the Enabling Act, the Bonds are not general obligations of the Commonwealth or any political subdivision thereof and shall not be constitute a debt or pledge of the faith and credit of the Commonwealth or any such political subdivision.

## **CERTAIN LEGAL MATTERS**

Legal matters incident to the authorization, issuance and sale of the Bonds are subject to the approval of Edwards Angell Palmer & Dodge LLP, Bond Counsel. The approving opinion of Bond Counsel in substantially the form attached hereto as *Appendix D* will be delivered with the Bonds. Certain legal matters will be passed upon for MassDOT by Greenberg Traurig, LLP, Boston, Massachusetts, Disclosure Counsel to MassDOT and for the Commonwealth and for the Underwriters by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., as Commonwealth Disclosure Counsel and as counsel to the Underwriters.

## **TRAFFIC AND REVENUE STUDY**

The Traffic and Revenue Study is included herein as *Appendix B* in reliance upon the authority of Cambridge Systematics, Inc. as experts. The Traffic Consultant has advised MassDOT that it has reviewed the summaries contained in this Official Statement of the information, estimates and projections contained in the Traffic and Revenue Study included herein as *Appendix B* and that, in its opinion, the statements made herein are correct and fairly present in summary form the information contained in such Traffic and Revenue Study, and that all material assumptions or qualifications with respect to such statements are reflected in *Appendix B*.

## **FINANCIAL STATEMENTS**

The financial statements of the Authority as of June 30, 2009 and for the year then ended, included in *Appendix A* to this Official Statement have been audited by KPMG LLP, independent auditors to the Authority, as stated in their report appearing therein. Those financial statements include the activities of both the Metropolitan Highway System and the Western Turnpike.

## **FINANCIAL ADVISOR**

Public Financial Management, Inc. (“PFM”) is serving as financial advisor to MassDOT for the issuance of the Bonds. PFM is not obligated to undertake, and has not undertaken, either to make an independent verification of or to assume responsibility for, the accuracy, completeness, or fairness of the information contained in this Official Statement. PFM is an independent financial advisory firm and is not engaged in the business of underwriting, trading, or distributing securities.

## **CONTINUING DISCLOSURE**

Each of MassDOT and the Commonwealth will enter into a Continuing Disclosure Agreement for the benefit of owners of the Bonds setting forth the undertakings of MassDOT and the Commonwealth, respectively, regarding continuing disclosure with respect to the Bonds. A description of the Continuing Disclosure Undertakings is set forth in *Appendix E*.

Neither MassDOT nor the Authority has failed to fulfill any continuing disclosure undertakings with respect to bonds issued pursuant to the Trust Agreement, except that the Authority filed its Fiscal Year 2008 annual reports for the then outstanding Senior Bonds and Subordinated Bonds after the filing dates specified in the Authority’s existing continuing disclosure undertakings, and MassDOT made a partial filing of its Fiscal Year 2009 Annual Report for the outstanding Senior Bonds and Subordinated Bonds as of the filing date specified in such undertakings and subsequently fulfilled the balance of the requirements of the undertakings through the filing of the Preliminary Official Statement related to the Bonds.

## **MISCELLANEOUS**

The foregoing summaries of the provisions of the Enabling Act, the Bonds and the Trust Agreement do not purport to be complete and are made subject to the detailed provisions thereof to which reference is hereby made. Copies of the Enabling Act, the forms of the Bonds and the Trust Agreement are available for inspection at the offices of MassDOT and the Trustee.

Information relating to DTC and the book-entry system described in *Appendix H – Book-Entry-Only System* has been furnished by DTC. Neither MassDOT nor the Underwriters make any representations or warranties whatsoever with respect to such information.

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The execution and delivery of this Official Statement has been duly authorized by MassDOT.

**MASSACHUSETTS DEPARTMENT OF TRANSPORTATION**

By: /s/ John R. Jenkins  
Chairman

By: /s/ Jeffrey B. Mullan  
Secretary of Transportation and Chief Executive Officer

May 19, 2010

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**Financial Statements of the Authority for Fiscal Year 2009**

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**MASSACHUSETTS TURNPIKE AUTHORITY**  
(A Component Unit of the Commonwealth of Massachusetts)

Financial Statements, Required Supplementary Information, and  
Supplementary Schedules

June 30, 2009

(With Independent Auditors' Report Thereon)

**MASSACHUSETTS TURNPIKE AUTHORITY**  
(A Component Unit of the Commonwealth of Massachusetts)

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**KPMG LLP**  
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## Independent Auditors' Report

Members of the Board of Directors  
Massachusetts Department of Transportation:

We have audited the accompanying statement of net assets of the Massachusetts Turnpike Authority (the Authority), a component unit of the Commonwealth of Massachusetts, as of June 30, 2009, and the related statements of revenues, expenses, and changes in net assets, and cash flows for the year then ended. These financial statements are the responsibility of the Authority's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control over financial reporting. Accordingly, we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

As described in note 12, on June 26, 2009, the Governor signed legislation abolishing the Authority and creating the Massachusetts Department of Transportation (MassDOT), into which the assets, liabilities, and operations of the Authority will be transferred, effective November 1, 2009.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Authority at June 30, 2009, and the changes in its financial position and cash flows for the year then ended, in conformity with U.S. generally accepted accounting principles.

The Authority has not presented Management's Discussion and Analysis that U.S. generally accepted accounting principles require to supplement, although not to be part of, the basic financial statements.

The schedules of OPEB and pension funding progress on page 32 are not a required part of the basic financial statements but are supplementary information required by U.S. generally accepted accounting principles. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the required supplementary information. However, we did not audit the information and express no opinion on them.



Our audit was made for the purpose of forming an opinion on the financial statements of the Authority taken as a whole. The combining schedule of net assets as of June 30, 2009 (schedule I) and the combining schedule of revenues, expenses, and changes in net assets for the year then ended (schedule II) are presented for purposes of additional analysis and are not a required part of the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

In accordance with *Government Auditing Standards*, we have also issued our report dated December 18, 2009 on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be considered in assessing the results of our audit.

KPMG LLP

December 18, 2009

**MASSACHUSETTS TURNPIKE AUTHORITY**  
(A Component Unit of the Commonwealth of Massachusetts)

Statement of Net Assets

June 30, 2009

(In thousands)

<b>Assets</b>	
<b>Current assets:</b>	
Cash and cash equivalents (note 2)	\$ 10,494
Unrestricted investments (note 2)	164,825
Restricted and board-designated cash and cash equivalents (note 2)	38,091
Restricted and board-designated investments (note 2)	331,399
Accounts receivable, net of allowance for doubtful accounts of \$585	11,232
Other receivables:	
Mass Highway	7,547
Other, net of allowance for doubtful accounts of \$1,038	4,593
Total receivables	23,372
Prepaid expenses and other assets	7,005
Total current assets	575,186
<b>Noncurrent assets:</b>	
Restricted and board-designated investments (note 2)	102,266
Capital assets, net (note 3)	6,543,526
Prepaid expenses and other assets	11,864
Total assets	\$ 7,232,842
<b>Liabilities</b>	
<b>Current liabilities:</b>	
Accounts payable	\$ 22,697
Accrued payroll and related taxes	3,142
Compensated absences (note 4)	4,797
Current portion of long-term debt (note 4)	49,860
Accrued expenses and miscellaneous liabilities	25,367
Contract retainage	1,071
Payable from restricted assets:	
Accrued interest on bonds payable	74,068
Accrued arbitrage liability	817
Total current liabilities	181,819
<b>Noncurrent liabilities:</b>	
Deposits and deferred revenue	138,327
Deferred credits (note 2)	26,444
Compensated absences (note 4)	10,891
Net OPEB obligation (note 6)	6,242
Accrued interest on capital appreciation bonds (note 4)	84,794
Long-term debt, net (note 4)	2,213,857
Total liabilities	2,662,374
<b>Net Assets</b>	
Invested in capital assets, net of related debt	4,603,971
Restricted for other purposes	170,485
Unrestricted	(203,988)
Commitments and contingencies (notes 6, 7, 8, and 10)	
Total net assets	\$ 4,570,468

See accompanying notes to financial statements.

**MASSACHUSETTS TURNPIKE AUTHORITY**  
(A Component Unit of the Commonwealth of Massachusetts)

Statement of Revenues, Expenses, and Changes in Net Assets

Year ended June 30, 2009

(In thousands)

Operating revenues:	
Toll revenue pledged as security for revenue bonds, net	\$ 278,963
Restaurants, concessions, and service stations	18,299
Other rentals	12,991
Court fines	5,247
Other	14,103
Total operating revenues	329,603
Operating expenses:	
Operations and public protection	143,984
Repair and reconstruction	21,113
General and administration	18,715
Fringe benefits	21,613
Retirement	15,495
Depreciation and amortization	164,651
Total operating expenses	385,571
Operating loss	(55,968)
Nonoperating revenue and (expense):	
Investment income	18,717
Contract assistance (note 10)	25,000
Gain on the sale of asset	500
Attorney General reimbursement	2,000
Interest expense	(110,912)
Total nonoperating expense	(64,695)
Special item:	
Capital assets transferred to Massachusetts Port Authority (note 3)	(94,714)
Total special item	(94,714)
Decrease in net assets	(215,377)
Net assets, beginning of year	4,785,845
Net assets, end of year	\$ 4,570,468

See accompanying notes to financial statements.

**MASSACHUSETTS TURNPIKE AUTHORITY**  
(A Component Unit of the Commonwealth of Massachusetts)

Statement of Cash Flows

Year ended June 30, 2009

(In thousands)

Cash flows from operating activities:	
Receipts from toll payers	\$ 283,066
Receipts from others	119,309
Payments to vendors	(63,198)
Payments to employees	(137,129)
Net cash provided by operating activities	202,048
Cash flows from capital and related financing activities:	
Acquisition and construction of capital assets	(14,830)
Interest paid on bonds and notes	(128,056)
Principal payments on long-term debt	(49,235)
Attorney General reimbursement	2,000
Reimbursements received from the Commonwealth	25,000
Net cash used in capital and related financing activities	(165,121)
Cash flows from investing activities:	
Sales (purchase) of investments, net	(26,955)
Interest received	18,842
Net cash used in investing activities	(8,113)
Net decrease in cash and cash equivalents	28,814
Cash and cash equivalents, beginning of year	19,771
Cash and cash equivalents, end of year	\$ 48,585
Reconciliation of operating income to net cash provided by operating activities:	
Cash flows from operating activities:	
Operating loss	\$ (55,968)
Adjustments to reconcile operating income to net cash provided by operating activities:	
Depreciation and amortization	164,651
Changes in operating assets and liabilities:	
Accounts receivables	12,319
Prepaid expenses and other assets	1,127
Prepaid expenses and other assets – long-term	64,927
Accounts payable	(141)
Accrued payroll	313
Compensated absences	3,314
Accrued expenses, deferred revenue, and other liabilities	11,506
Net cash provided by operating activities	\$ 202,048
Noncash financing activities:	
On June 28, 2009, the Authority transferred capital assets with a net book value of \$94.7 million to the Massachusetts Port Authority.	

See accompanying notes to financial statements.

**MASSACHUSETTS TURNPIKE AUTHORITY**  
(A Component Unit of the Commonwealth of Massachusetts)

Notes to Financial Statements

June 30, 2009

**(1) Summary of Significant Accounting Policies and Practices**

**(a) Description of Business**

The Massachusetts Turnpike Authority (the Authority) was established by Chapter 354 of the Acts of 1952 of the Commonwealth of Massachusetts (the Commonwealth). It is a public instrumentality that was authorized and empowered to construct, maintain, repair, and operate a toll express highway, known as the Massachusetts Turnpike (the Turnpike). Chapter 598 of the Acts of 1958 authorized and empowered the Authority to acquire from the City of Boston, the Sumner Tunnel and to construct an additional vehicular tunnel between Boston proper and East Boston, the Callahan Tunnel, and to operate and maintain both facilities. Chapter 102, as amended by Chapter 273 of the Acts of 1995, authorized the transfer of ownership of the Ted Williams Tunnel from the Commonwealth to the Authority. Since this date, its operations have been included in the accompanying financial statements.

The Authority is a component unit of the Commonwealth. The Authority's financial statements are incorporated into the financial statements of the Commonwealth.

In March 1997, the Commonwealth established pursuant to Chapter 3 of the Acts of 1997, a new enabling act, and repealed the two prior special acts noted above that previously had governed the Authority. The new enabling act establishes two separate systems to be owned and operated by the Authority, the Metropolitan Highway System, and the Western Turnpike.

The Metropolitan Highway System comprises the Boston Extension of the Turnpike, the Callahan Tunnel, the Central Artery/Tunnel (CA/T Project), the Central Artery North Area (CANANA), the Sumner Tunnel and the Ted Williams Tunnel. The Western Turnpike consists of that portion of the Turnpike extending from the New York border in the Town of West Stockbridge to Route 128 in Weston.

As of July 1, 1997, the Massachusetts Highway Department (MHD) and the Authority entered into the Project Management Agreement whereby the Authority assumed all responsibility for managing and overseeing the remaining construction and other activities related to the CA/T Project, also known as the "Big Dig." The Authority entered into the Project Management Agreement in anticipation of its ultimate ownership and operation of the facilities currently under construction. The Project Management Agreement provides that the Authority is not liable for any CA/T Project costs other than with respect to any payment required under law or any other payment the Authority agreed to make (see note 9).

**(b) Basis of Presentation**

The Authority's financial statements are reported on the accrual basis of accounting as specified by the Governmental Accounting Standards Board's (GASB) requirements for an enterprise fund. Under GASB Statement No. 20, *Accounting and Financial Reporting for Proprietary Funds and Other Governmental Entities that Use Proprietary Fund Accounting*, the Authority applies all Financial Accounting Standards Board Statements and Interpretations issued on or before November 30, 1989, except those that conflict with or contradict GASB pronouncements.

**MASSACHUSETTS TURNPIKE AUTHORITY**  
(A Component Unit of the Commonwealth of Massachusetts)

Notes to Financial Statements

June 30, 2009

The Authority distinguishes operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from its toll and rental activities. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

**(c) Cash and Cash Equivalents**

For purposes of the statements of cash flows, the Authority considers unrestricted investments purchased with a maturity date of three months or less to be cash equivalents.

**(d) Investments**

Investment securities are recorded at fair value, based on quoted market price. The Authority recorded unrealized holding losses of approximately \$19 thousand as of June 30, 2009. This amount is included in investment income.

**(e) Restricted and Board-Designated Cash and Investments**

Certain cash, cash equivalents and investments are restricted for use by bond indentures and other external requirements. Other cash, cash equivalents and investments have been designated primarily for expenditures related to future construction or asset acquisitions.

**(f) Capital Assets**

Capital assets are recorded at historical cost. Infrastructure consists of the construction costs to initially build or replace the highways, bridges, structures, pavement, shoulders, service areas, and other similar items. The costs of normal upkeep, maintenance, and repairs, including repaving of roads, are not capitalized. Such costs consist of reconditioning of the highway structure and improvements to protection devices, lighting systems, signage, and other similar costs.

**(g) Depreciation**

The Authority provides for depreciation using the straight-line method. Depreciation is intended to distribute the cost of depreciable properties over the following estimated average useful lives:

	<u>Years</u>
Infrastructure	40 – 60
Buildings	30
Improvement to roadways and tunnels	30
Equipment	5 – 12

**(h) Other Assets**

Other assets consist of the unamortized portion of bond issue costs, and amounts held in escrow.

**(i) Amortization**

Revenue bond discounts are deferred and amortized on a weighted average basis over the term of the bonds. Unamortized amounts are presented as a reduction of the face amount of bonds payable.

**MASSACHUSETTS TURNPIKE AUTHORITY**  
(A Component Unit of the Commonwealth of Massachusetts)

Notes to Financial Statements

June 30, 2009

Costs related to the issuance of bonds are amortized on a weighted average basis over the life of the bonds. The weighted average amortization method approximates the effective interest method.

The difference between the reacquisition price and net carrying amount of defeased bonds is deducted from, or added to the refunding debt liability and amortized on the straight-line method over the shorter of the maturity of the new debt or the defeased debt.

**(j) *Compensated Absences***

Certain employees of the Authority accumulate unused vacation and sick time (subject to certain limitations) to be used at a later date or paid in cash upon termination and/or retirement from the Authority. The liability for vacation leave is based on the amount earned but not used; for sick leave, it is based on the amount accumulated at the balance sheet dates based on years of service (vesting method). The liability for both amounts is calculated based on the pay or salary rates in effect at the balance sheet dates.

**(k) *Use of Estimates***

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenditures during the reporting period. Actual results could differ from those estimates.

**(l) *New Accounting Pronouncements***

For fiscal 2009, the Authority is subject to GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations*. The Authority has assessed the applicability of this new standard and has determined that no pollution remediation obligations exist at this time.

In addition, in fiscal 2009, the Authority adopted GASB Statement No. 50, *Pension Disclosures*.

**(2) *Deposits and Investments***

The Authority has adopted GASB No. 40, *Deposit and Investment Risk Disclosure*. The standard requires that entities disclose essential risk information about deposits and investments.

The Authority is authorized to invest in obligations of the U.S. Treasury, its agencies and instrumentalities; bonds or notes of public agencies, states, or municipalities; bank time deposits, guaranteed interest contracts, money market accounts, interest rate swap agreements and swaptions, repurchase agreements or commercial paper; and notes, bonds or other obligations of any corporation that has obtained specific ratings.

**(a) *Custodial Credit Risk – Deposits***

The custodial credit risk for deposits is the risk that in the event of a bank failure, the Authority's deposits may not be recovered. The deposits in the bank in excess of the insured amount are uninsured and uncollateralized.

**MASSACHUSETTS TURNPIKE AUTHORITY**  
(A Component Unit of the Commonwealth of Massachusetts)

Notes to Financial Statements

June 30, 2009

The deposits at June 30, 2009, were \$48.6 million. Of this amount, \$0.7 million was insured and \$47.7 million collateralized.

**(b) Investments**

The Authority has implemented an investment policy which incorporates the investment protocols within the Trust Agreements.

In most cases, the Authority has chosen to limit investing to U.S. Government Treasuries or agencies of the U.S. government. U.S. Government Agency Obligations purchased may include, but not be limited to, debt issued by: the Student Loan Marketing Association, the Federal Home Loan Bank, the Federal Home Loan Mortgage Corporation, and the Federal National Mortgage Association.

The following guaranteed investment contract (GIC) was in force as of June 30, 2009, all of which is fully collateralized and appears as follows:

Fund	Investment agreement provider	Rate	Maturity	Amount (In millions)
MHS 1999 Series A	Sub. DSRF AIG Financial Products	5.951%	January 1, 2029	\$ 64.67

In September 2008, as a result of the financial deterioration, AIG, the GIC provider, was required to increase the security collateral held by Wells Fargo to 105% of the GIC's market value. The value of the collateral posted was \$69.7 million (108%) as of June 30, 2009. As of November 23, 2009, the value of the collateral posted was \$69.7 million.

**MASSACHUSETTS TURNPIKE AUTHORITY**  
(A Component Unit of the Commonwealth of Massachusetts)

Notes to Financial Statements

June 30, 2009

The Authority's investments at June 30, 2009 are presented below. All investments are presented by investment type and debt securities are presented by maturity.

Investments by Fund

June 30, 2009

(Expressed in thousands)

Fund name	Fund	Investment type			Fair value	Investment maturities (in years)			
		Money market mutual funds	U.S. government agency obligations	Guaranteed investment contracts		Less than 1	1 - 3	4 - 8	More than 8
WT Revenue Fund	515	\$ 3,013	—	—	3,013	3,013	—	—	—
WT Operating	520	20,298	—	—	20,298	20,298	—	—	—
WT Sr. Debt Service	530	17,069	—	—	17,069	17,069	—	—	—
WT Capital									
Reinvestment	550	1,532	—	—	1,532	1,532	—	—	—
WT General Fund	530	67,942	—	—	67,942	67,942	—	—	—
MHS Capital Fund	601	1,497	—	—	1,497	1,497	—	—	—
MHS Revenue Fund	615	2,731	—	—	2,731	2,731	—	—	—
MHS Operating	620	13,782	—	—	13,782	13,782	—	—	—
MHS 97 Sr. Debt Service	630	61,741	—	—	61,741	61,741	—	—	—
MHS 97 Sr. Debt Service Reserve Fund	635	63,085	37,439	—	100,524	63,085	12,595	24,844	—
MHS 97/99 Sub. Debt Service	640	24,402	25,419	—	49,821	49,821	—	—	—
MHS 97/99 Sub. Debt Service Reserve Fund	645	18,202	—	64,665	82,867	18,202	162	—	64,665
MHS Capital									
Reinvestment	650	13,616	162	—	13,778	13,616	—	—	—
MHS General Fund	660	137,212	—	—	137,212	137,212	—	—	—
MHS Sr. Rebate Fund	670	4,123	—	—	4,123	4,123	—	—	—
MHS Sub. Rebate Fund	675	557	—	—	557	557	—	—	—
MTA General Fund	690	20,003	—	—	20,003	20,003	—	—	—
		<u>\$ 470,805</u>	<u>63,020</u>	<u>64,665</u>	<u>598,490</u>	<u>496,224</u>	<u>12,757</u>	<u>24,844</u>	<u>64,665</u>

Investment type	Fair value	Investment maturities (in years)			
		Less than 1 year	1 - 3	4 - 8	More than 9
Money market mutual funds	\$ 470,805	470,805	—	—	—
U.S. agency obligations	63,020	25,419	12,757	24,844	—
Guaranteed investment contracts	64,665	—	—	—	64,665
	<u>\$ 598,490</u>	<u>496,224</u>	<u>12,757</u>	<u>24,844</u>	<u>64,665</u>

During fiscal 2009, the 1997 and 1999 MHS Debt Service and Debt Service Reserve funds held by the Trustee have been invested in Forward Delivery Agreements (Agreements). These Agreements administered by Lehman Brothers Special Financing, Inc. (Lehman), provide the Authority with a guaranteed rate of return on trusteed deposits held for debt payments until such time as payments are

**MASSACHUSETTS TURNPIKE AUTHORITY**  
(A Component Unit of the Commonwealth of Massachusetts)

Notes to Financial Statements

June 30, 2009

due. These deposits are recorded on the Authority's financial statements at the fair value of the underlying securities.

In September 2008, Lehman filed for bankruptcy, which constituted an event of default under a Debt Service Reserve Fund Agreement.

On September 19, 2009, the Authority terminated the Agreement and reinvested the proceeds in agency securities and money market accounts, currently yielding less than the Agreement. As a result of the reinvestment of proceeds at lower yields, the Authority has earned less interest than it would have if the Agreement had remained outstanding.

The Authority will forgo an estimated \$25 million in future guaranteed earnings as a result of the termination but retains the ability to reinvest proceeds at current market rates, which may be higher or lower than the guaranteed rate of the Agreement.

The Authority has filed a \$50.1 million claim against Lehman as a result of the bankruptcy, which represents lost interest earnings and replacement costs. The actual payment realized may be significantly less than the initial claim amount.

**(c) Credit Ratings**

With respect to MHS and WT operating accounts, all securities purchased, such as FNMA, FHLMC, and FHLB issues have credit ratings of AAA. Trust funds securities purchased for the MHS Debt Service and Debt Service Reserve funds include only those Agencies with a AAA rating, as this requirement is included in the terms of the respective agreements noted in the table above. The GICs are generally not rated.

Institutional Money Market mutual funds purchased for both Trust and Operating Funds are AAA rated.

**(d) Concentration of Credit Risk – Investments**

Concentration of credit risk is the risk of loss attributable to the magnitude of a government's investment in a single issuer. The issuers where securities at year end exceeded 5% of the total investments are as follows (in thousands):

GICs:	
AIG	\$ 64,665
U.S. agency obligations:	
Federal Home Loan Bank (FHLB)	10,817
Federal Home Loan Mortgage Corporation (FHLMC)	37,439
Federal National Mortgage Association (FNMA)	14,603
	<u>\$ 127,524</u>

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**(e) Interest Rate Risk – Investments**

Interest rate risk is the risk that changes in interest rates of debt investments will adversely affect the fair value of an investment. The Authority attempts to minimize interest rate risk by structuring investment portfolios to anticipate cash requirements and investing in securities guaranteed by the U.S. government or under the federal government's oversight.

**(f) Cash and Investments by Fund**

The following summarizes cash and investments as of June 30, 2009 by the various funds and accounts established by the Authority for debt covenant requirements and other purposes (in thousands):

Revenue Fund	\$	22,097
Operating and Maintenance Fund		49,287
General Fund		228,232
Rebate Fund		4,680
Senior Debt Service Fund		82,517
Senior Debt Service Reserve Fund		100,524
Subordinated Debt Service Fund		58,252
Subordinated Debt Service Reserve Fund		82,867
Maintenance Capital Reinvestment Fund		18,619
Total	\$	<u>647,075</u>

The restrictions and board designations placed on these funds are as follows (in thousands):

Unrestricted	\$	175,319
Board-designated for capital and other expenditures		31,009
Externally restricted by bond and other requirements		440,747
Total	\$	<u>647,075</u>

**(g) Summary of Swap and Swaption Transactions**

**1999 Tax Basis Swap**

The Authority received a premium payment on July 20, 1999 of \$5.35 million as part of the swaption agreement. This premium amount was recorded as a deferred credit and is being recognized as an adjustment of interest expense over the 30-year life of the agreement. The counterparty, JP Morgan Chase Bank (JPMC), exercised its option on October 1, 2002. As such, the Authority's payment obligation is equal to the difference between the SIFMA and 67% of 3-month LIBOR, multiplied by the \$100 million. Conversely, the Authority receives payments under this agreement when 67% of 3-month LIBOR exceeds the SIFMA.

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As of June 30, 2009, the long term ratings for JPMC were AA- (Fitch), Aa1 (Moody's), and AA- (Standard & Poor's). As of October 30, 2009, the ratings were AA-, Aa1, and AA-, respectively. The following table summarizes the provisions of the 1999 Tax Basis Swap.

Date of trade	Exercise date	Notional amount (In thousands)	Termination date	Variable receivable swap rate	Variable payable swap rate	Premium payment from counterparty (In thousands)	Net fair option value at June 30, 2009 (In thousands)
06/18/1999	10/01/2002	\$ 100,000	07/01/2029	67% of 3 month LIBOR	SIFMA	07/20/1999 \$ 5,350	(11,544)

Based on the credit rating on the Authority's MHS Senior Bonds of A- by Standard and Poor's, the Authority was required to post collateral on behalf of JPMC equal to the market value of the swaption. The market value of the collateral posted was approximately \$8.0 million as of December 10, 2009.

**2004 Lehman Swap**

Lehman Brothers Special Financing, Inc. failed to meet its obligations under the terms of this swap by not remitting the required swap payment for the quarter ended September 30, 2008. In December 2008, the Authority exercised its right to terminate the Lehman swap and made a termination payment of \$3.2 million.

**2001 UBS Swaptions**

In May 2001, the Authority entered a "swaption" with five tranches with UBS AG. This swaption grants UBS the right to enter a swap with the Authority under which the Authority would pay a fixed rate and receive a floating rate from UBS. The swaption exercise dates and the fixed rates due from the Authority are designed to match the call provisions and rates of certain Authority bonds.

Additionally, in May 2001 UBS paid Ambac Assurance \$6.2 million on behalf of the Authority to purchase insurance for the payments that the Authority may be required to make under the swaps, if exercised. This amount was recorded in the accompanying financial statements as prepaid insurance and will be amortized over the life of the swap, which is 35 years. Under the agreement, UBS made premium payments on the swaption over eight years totaling \$29.1 million. The last premium payment was received by the Authority on January 2, 2008.

The premiums received were recorded as deferred credits and are being amortized over the life of the swap. The unamortized balance at June 30, 2009 is \$22.9 million.

Prior to fiscal year 2009, UBS exercised three of the five tranches in the swaption resulting in the commencement of three related swaps. The swaptions exercised were associated with the 1997 Series A and Series B Bonds and had a total notional amount of \$334.4 million. The Authority received \$4.0 million in premiums as part of the exercise of the swaption and recorded these premiums as a reduction in interest expense. The Authority planned on refunding certain fixed rate

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bonds with floating rate bonds when UBS exercised its option in an effort to lower overall debt service payments for the Authority. However, the Authority has been able to refund its fixed rate bonds as planned.

During fiscal 2009, UBS exercised the remaining two swaptions related to the 1999 Series A Bonds having a notional amount of \$465.6 million. The related swaps became effective on January 1, 2009. The Authority received and deferred exercise premiums of \$5.6 million.

On June 24, 2009, Standard & Poor's downgraded the credit rating of Ambac, the insurer of the UBS swaps, below the threshold at which UBS asserted it was entitled to provide a notice of potential termination of its swap agreements with the Authority. UBS provided such notice on June 24, 2009. The swap agreements provide that, upon valid notice of a termination event, the Authority has 30 days to provide alternate credit support that was acceptable to UBS, provide collateral essentially equal to the fair value of the swaps or obtain an "A" rating or better on all of the Authority's underlying Metropolitan Highway System (MHS) bonds. Prior to the 30-day deadline, the Authority obtained sufficiently high ratings on its underlying subordinated MHS bonds to cure the asserted termination events with respect to four of the five UBS swaps. The deadline for curing the asserted termination event with respect to the remaining UBS swap was extended several times by mutual agreement and on October 20, 2009, the Authority reached agreement with UBS that one of the ratings currently assigned to the underlying senior MHS bonds was sufficient to cure the asserted termination event. Legislation authorizing a Commonwealth guaranty of the Authority's swap obligations expired on November 1, 2009. No guaranty was ultimately required to cure the termination event.

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As of June 30, 2009, the long-term ratings for UBS, the counterparty to the transaction, were A+ (Fitch), Aa2 (Moody's), and A+ (Standard & Poor's). As of October 30, 2009, the ratings were A+, Aa2, and A+, respectively. The following table summarizes the 2001 UBS swaptions:

First exercise date	Notional amount (in thousands)	Termination date	Associated bonds	Fixed payable swap rate	Variable receivable swap rate	Premium payments from counterparty	Net fair option value at June 30, 2009 (in thousands)
						06/04/2001 \$ 1,751,663	
						01/01/2002 875,897	
						01/01/2003 875,897	
01/01/2007	\$ 207,665	01/01/2037	1997 Series A	4.750%	68% of 1 month LIBOR	01/01/2004 875,897	(72,081)
						01/01/2005 875,897	
						01/01/2006 875,897	
						01/01/2007 875,897	
						01/01/2008 875,897	
						06/04/2001 673,872	
						01/01/2002 388,650	
						01/01/2003 388,650	
01/01/2007	83,100	01/01/2037	1997 Series B	4.875	68% of 1 month LIBOR	01/01/2004 388,650	(29,114)
						01/01/2005 388,650	
						01/01/2006 388,650	
						01/01/2007 388,650	
						01/01/2008 388,650	
						06/04/2001 303,162	
						01/01/2002 212,112	
						01/01/2003 212,112	
01/01/2007	43,625	01/01/2029	1997 Series B	5.000	68% of 1 month LIBOR	01/01/2004 212,112	(13,609)
						01/01/2005 212,112	
						01/01/2006 212,112	
						01/01/2007 212,112	
						01/01/2008 212,112	
						06/04/2001 2,848,263	
						01/01/2002 1,393,901	
						01/01/2003 1,393,901	
01/01/2009	371,380	01/01/2039	1999 Series A	4.750	68% of 1 month LIBOR	01/01/2004 1,393,901	(132,638)
						01/01/2005 1,393,901	
						01/01/2006 1,393,901	
						01/01/2007 1,393,901	
						01/01/2008 1,393,901	
						06/04/2001 575,495	
						01/01/2002 410,119	
						01/01/2003 410,119	
01/01/2009	94,230	01/01/2029	1999 Series A	5.000	68% of 1 month LIBOR	01/01/2004 410,119	(29,894)
						01/01/2005 410,119	
						01/01/2006 410,119	
						01/01/2007 410,119	
						01/01/2008 410,119	
Total fair value							\$ (277,336)

**2002 Lehman Swaptions**

In 2002, the Authority entered into an interest rate swaption with five tranches with Lehman Brothers Special Financing Inc. (Lehman).

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In connection with these swaptions, Lehman paid the Authority a premium of \$35.2 million. This amount was recorded in the accompanying financial statements as a deferred credit and will be amortized over the 35 year life of the swap. As of June 30, 2009, the deferred credit is fully amortized due to the swap termination.

In September 2008, Lehman filed for bankruptcy and had not exercised any of its options related to this transaction. In December 2008, as a result of the bankruptcy filing, the Authority exercised its right to terminate the Lehman swap and made a termination payment of \$3.2 million.

**Risk Disclosures**

*Basis Risk* – The Authority is exposed to basis risk in the 1999 Tax Basis swap when 67% of 3 month LIBOR does not exceed SIFMA.

The Authority is also exposed to basis risk in the 2001 UBS swaps. This will occur when the fixed rate on the swaps exceeds 68% of 1 month LIBOR.

*Tax Risk* – If maximum tax rates were to decline, it is possible that the 68% of one month LIBOR the Authority receives under the 2001 UBS swap would be less than the amount needed to pay its variable rate bonds. The Authority and its financial advisor take this risk into consideration when analyzing the sufficiency of the hedge reserve fund balance.

*Termination Risk* – The Authority or the counterparty may terminate the swap if the other party fails to perform under the terms of the contract. Termination risk is related to credit risk and represents the risk that a swap is terminated and the swap counterparty is unable to make the termination payment if necessary. If any of the swaps are terminated, the related variable rate bonds would no longer be hedged. Finally, if at the time of termination the swap has a negative fair value, the Authority would be liable for a payment equal to the swaps' fair value.

*Credit Risk* – The net fair values were calculated by the Authority's financial advisor on a mark to market basis. As of June 30, 2009, the Authority was not exposed to credit risk on its outstanding swaps because they had negative fair values. However, if interest rates and volatilities change and the fair values of the swaps were to become positive, the Authority would be exposed to credit risk in the amount of the positive fair values. To mitigate credit risk, the Authority's counterparties are all rated in the A category or higher by at least two of the three rating agencies (FitchRatings, Moody's Investors Service, and Standard & Poor's).

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**(3) Capital Assets**

Capital assets consisted of the following at June 30, 2009 (in thousands):

	<u>Beginning balance</u>	<u>Increases</u>	<u>Decreases</u>	<u>Ending balance</u>
Capital assets, not being depreciated:				
Land	\$ 312,747	—	5,451	307,296
Construction in progress	10,782	23,107	24,839	9,050
Total capital assets, not being depreciated	<u>323,529</u>	<u>23,107</u>	<u>30,290</u>	<u>316,346</u>
Capital assets, being depreciated:				
Infrastructure	7,279,323	—	104,908	7,174,415
Improvements	622,452	22,748	—	645,200
Buildings	47,919	—	—	47,919
Equipment	136,716	6,273	14,630	128,359
Total capital assets, being depreciated	<u>8,086,410</u>	<u>29,021</u>	<u>119,538</u>	<u>7,995,893</u>
Less accumulated depreciation for:				
Infrastructure	1,252,048	132,720	15,493	1,369,275
Improvements	255,674	20,249	—	275,923
Buildings	27,099	1,146	—	28,245
Equipment	98,064	10,447	13,241	95,270
Total accumulated depreciation	<u>1,632,885</u>	<u>164,562</u>	<u>28,734</u>	<u>1,768,713</u>
Total capital assets, being depreciated, net	<u>6,453,525</u>	<u>(135,541)</u>	<u>90,804</u>	<u>6,227,180</u>
Capital assets, net	<u>\$ 6,777,054</u>	<u>(112,434)</u>	<u>121,094</u>	<u>6,543,526</u>

***Contributed Capital Assets***

As of July 1, 1997, the Authority entered into a Project Management Agreement with respect to the Central Artery/Tunnel Project in anticipation of the Authority's ultimate ownership and operation of the assets being constructed.

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As of June 30, 2003 (the Commonwealth's fiscal year end), the construction of these assets had been accounted for in the Commonwealth's financial statements until such time as the title to the assets is transferred to the Authority. Through December 31, 2002, title to only two assets – the Ted Williams Tunnel and CANA – had been transferred to the Authority and, as such, the estimated cost of these assets were recorded as a capital asset in the Authority's December 31, 2002 financial statements.

From calendar year 2003 through calendar year 2005, the Commonwealth transferred assets totaling approximately \$237 million (\$236 million in 2003 and \$793 thousand in 2005).

In the fiscal period ended June 30, 2008, the Authority received a transfer from the Commonwealth of land and infrastructure with a net book value to the Commonwealth of \$4.6 billion. This amount was recorded by the Authority, net of cash contributions made and previously recorded by the Authority, in the amount of \$4.4 billion.

In the fiscal period ended June 30, 2009, the Authority transferred certain assets it had constructed or received from the Commonwealth to the Massachusetts Port Authority. This transfer amount was recorded by the Authority at historical cost, net of accumulated depreciation, in the amount of approximately \$94.7 million.

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**(4) Bonds and Notes Payable**

Long-term debt consisted of the following at June 30, 2009 (in thousands):

	<u>Beginning balance</u>	<u>Additions</u>	<u>Reductions</u>	<u>Ending balance</u>	<u>Due within one year</u>
Revenue bonds:					
Metropolitan Highway System:					
1997, Series A, 5.05% to 5.65%, issued September 24, 1997 due 2010 to 2037*	\$ 1,183,047	—	—	1,183,047	22,455
1997, Series C, Capital Appreciation Bonds (CAB's) 5.40% to 5.55%, issued September 24, 1997 due 2016 to 2023	89,136	—	—	89,136	—
Western Turnpike:					
1997, Series A, 5.55%, issued September 24, 1997 due 2017 (mandatory sinking fund requirements from 1999 to 2017)	162,430	—	17,245	145,185	17,820
Subordinated debt:					
Metropolitan Highway System:					
1999, Series A, 3.90% to 5.26%, issued March 11, 1999 due 2004 to 2039	764,910	—	31,990	732,920	6,710
1997 Series B, 5.00% to 5.57%, issued September 24, 1997 due 2010 to 2037	194,680	—	—	194,680	2,875
Subtotal	2,394,203	—	49,235	2,344,968	49,860
Less unamortized amounts:					
Bond discounts	84,605	—	3,421	81,184	—
Net unamortized excess of reacquisition price over net carrying value of de feased bonds	76	—	9	67	—
Total bonds payable	2,309,522	—	45,805	2,263,717	49,860
Compensated absences, net	12,373	3,315	—	15,688	4,797
Total long-term liabilities	\$ 2,321,895	3,315	45,805	2,279,405	54,657

\*\$42,007 of the \$1,183,047 of the 1997, Series A MHS revenue bonds are capital appreciation bonds.

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Interest is payable semiannually on all debt, except on Capital Appreciation Bonds which accrued over the lives of the Bonds and is payable upon maturity of the Bonds.

Revenue Bonds are collateralized by a lien and a pledge on substantially all of the Authority's cash and revenues.

Debt service requirements on revenue bonds are as follows (in thousands):

	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
Year ending June 30:			
2010	\$ 49,860	110,934	160,794
2011	52,615	108,281	160,896
2012	46,930	105,693	152,623
2013	48,555	103,205	151,760
2014	50,200	100,612	150,812
2015 – 2019	256,408	556,073	812,481
2020 – 2024	257,783	551,821	809,604
2025 – 2029	319,481	489,744	809,225
2030 – 2034	549,420	249,380	798,800
2035 – 2039	713,716	94,544	808,260
Total	<u>\$ 2,344,968</u>	<u>2,470,287</u>	<u>4,815,255</u>

At June 30, 2009, the principal amounts outstanding on revenue bonds and notes outstanding that are considered defeased are as follows (dollars in thousands):

<u>Description</u>	<u>Redemption date</u>	<u>Redemption price</u>	<u>Principal amount outstanding</u>
1993 Series A Term	2013 to 2023	100%	\$ 263,355

Outstanding bonds that are redeemable before their scheduled due dates are as follows at June 30, 2009 (dollars in thousands):

<u>Description</u>	<u>Redemption date</u>	<u>Redemption price</u>	<u>Principal amount outstanding</u>
Metropolitan Highway System:			
1999 Series A	2010 to 2039	100% to 101%	\$ 732,920
1997 Series B	2010 to 2037	100% to 102%	194,680
Western Turnpike:			
1997 Series A	2008 to 2017	100%	\$ 145,185

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**(5) Employee Benefit Plans**

**(a) Plan Description – Pension Plan**

The Massachusetts Turnpike Authority Employees' Retirement Plan (the Plan) is a single employer contributory defined benefit pension plan administered by the Massachusetts Turnpike Authority Employees' Retirement System (the System). The Plan provides retirement, disability, and death benefits to plan members and beneficiaries.

Massachusetts General Laws (MGL), principally Chapter 32, establishes and amends benefit provisions. The System does not issue publicly available audited financial statements for the Plan. The report may be obtained by writing to the Massachusetts Turnpike Employees' Retirement System at the State Transportation Building, 10 Park Plaza, Boston, Massachusetts 02116.

**(b) Funding Policy**

The contribution requirements of plan members and the Authority are established and may be amended by the State Legislature. Depending upon their employment date, active plan members are required to contribute 5% to 9% of their annual covered compensation. Members hired after December 31, 1978 must contribute an additional 2% of regular compensation in excess of \$30 thousand. The Authority is required to contribute amounts pursuant to MGL Section 22(6A) of Chapter 32 which is the normal cost plus estimated expenses, less a ten-year level amortization of the January 1, 1998 surplus with interest to July 1999.

**(c) Annual Pension Cost**

The annual required contribution (ARC) for the year ended June 30, 2009 was determined as part of the January 1, 2008 actuarial valuation using the individual entry age normal cost method. The ARC equaled the annual pension cost (APC) and the employer contributions for the last three years. Those amounts are as follows (in thousands):

	Annual pension cost (APC)	Percentage of APC contributed
Year ending June 30, 2009	\$ 7,524	100%
Eighteen-month period ending June 30, 2008	8,512	100
Year ending December 31, 2006	4,500	100

**(d) Funded Status and Funding Progress**

In fiscal 2009, the Authority adopted GASB Statement No. 50. This new standard now requires entities to report the results of the most recent actuarial valuation in the footnotes. This information was previously only required to be reported as required supplementary information.

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The funded status of the System as of January 1, 2008, the most recent actuarial valuation, is as follows (in thousands):

Actuarially accrued liability (AAL)	\$	288,569
Actuarial value of plan assets		223,447
Unfunded actuarial accrued liability (UAAL)	\$	65,122
Funded ratio (actuarial value of plan assets/AAL)		77.4%
Covered payroll (active plan members)	\$	71,887
UAAL as a percentage of covered payroll		90.6%

**(e) Actuarial Methods and Assumptions**

The actuarial assumptions included (a) 8.25% investment rate of return, and (b) projected salary increases of 5%. Both (a) and (b) include an inflation component of 4.5%. Liabilities for cost of living increases have been approximated, assuming an annual cost of 3% on the first \$12 thousand annual pension. The actuarial value of assets was determined using the fair value of investments. The System's unfunded actuarial accrued liability is being amortized as increasing amortization at 4.5% per year. The remaining amortization period at January 1, 2008 is 21 years.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about termination rates, retirement rates, mortality, and salary increases. Amounts determined regarding the funded status of the plan and the annual required contributions of the Authority are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents multi-year trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

**(6) Other Postemployment Benefits**

During the period ended June 30, 2008, the Authority implemented GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. Statement No. 45 requires governments to account for other postemployment benefits, primarily healthcare, on an accrual basis rather than on a pay-as-you-go basis. The effect is the recognition of an actuarially required contribution as an expense on the statement of revenues, expenses, and changes in net assets when a future retiree earns their postemployment benefit rather than when they use their postemployment benefit. To the extent that an entity does not fund their actuarially required contribution, a postemployment benefit liability is recognized on the balance sheet over time.

**(a) Plan Description**

In addition to providing the pension benefits described in note 5, the Authority provides post-employment health care and life insurance benefits (OPEB) for retired employees. The benefits,

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benefit levels, employee contributions and employer contributions are governed by the Authority and can be amended by the Authority. As of June 30, 2008, the actuarial valuation date, approximately 979 retirees and 1,057 active employees meet the eligibility requirements. The plan does not issue a separate financial report.

**(b) Benefits Provided**

The Authority provides medical, prescription drug, mental health/substance abuse and life insurance to retirees and their covered dependents. All active employees who retire from the Authority and meet the eligibility criteria will receive these benefits.

**(c) Funding Policy**

Plan members contribute between 0% to 20% of premiums depending on their union or nonunion status and the type of Plan selected. The Authority contributed \$5.3 million on a pay as you go basis for these postemployment benefits.

**(d) Annual OPEB Costs and Net OPEB Obligation**

The Authority's 2009 OPEB expense is calculated based on the annual required contribution of the employer (ARC), an amount actuarially determined in accordance with the parameters of GASB Statement No. 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover the normal cost each year and amortize the unfunded actuarial liability over a period of thirty years. The following table shows the components of the Authority's annual OPEB cost for the year ending June 30, 2009, the amount actually contributed to the plan, and the change in the Authority's net OPEB obligation based on an actuarial valuation as of June 30, 2008 (in thousands):

Annual Required Contribution (ARC)	\$	10,433
Interest on net OPEB obligation		177
Adjustment to ARC		(120)
		10,490
Annual OPEB cost		10,490
Contributions made		(6,697)
		3,793
Change in net OPEB obligation		3,793
Net OPEB obligation – beginning of year		2,449
Net OPEB obligation – end of year	\$	6,242

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The Authority's annual OPEB cost, the percentage of annual OPEB cost contributed to the plan, and the net OPEB obligation were as follows (in thousands):

	<u>Annual OPEB cost</u>	<u>Percentage of OPEB cost contributed</u>	<u>Net OPEB obligation</u>
Eighteen-month period ending			
June 30, 2008	\$ 11,267	78.3%	\$ 2,449
Year ending June 30, 2009	10,490	63.8	6,242

**(e) Funded Status and Funding Progress**

The funded status of the plan, based on an actuarial valuation as of June 30, 2008, was as follows (in thousands):

Actuarially accrued liability (AAL)	\$ 179,509
Actuarial value of plan assets	<u>51,748</u>
Unfunded actuarial accrued liability (UAAL)	<u>\$ 127,761</u>
Funded ratio (actuarial value of plan assets/AAL)	28.8%
Covered payroll (active plan members)	\$ 71,887
UAAL as a percentage of covered payroll	177.7%

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the Authority are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents multi-year trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

**(f) Actuarial Methods and Assumptions**

Projections of benefits for financial reporting purposes are based on the plan as understood by the Authority and the plan members and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the Authority and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

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In the June 30, 2008 actuarial valuation, the projected unit credit cost method was used. The actuarial value of assets was \$51.7 million. The actuarial assumptions included a 7.25% investment rate of return and an initial annual healthcare cost trend rate of 9.0% which decreases to a 5.0% long-term trend rate for all healthcare benefits after five years. The amortization costs for the initial UAAL is a level percentage of payroll for a period of 30 years, on a closed basis. This has been calculated assuming an inflation rate of 4.5%.

As a result of changes in assumptions in the June 30, 2008 actuarial valuation, obligations increased by \$51.2 million. This was the net result of an increase in obligations due to raising the valuation-year per capita health costs, an increase in obligations due to a change in the future trend on per capita healthcare costs, based on projections of what is likely to occur in the marketplace, and an increase in obligations due to lowering the discount rate partially offset by a decrease in obligations due to lowering the percent married assumption.

**(7) Leases**

**(a) Commitments**

The Authority has commitments under various operating leases. The principal lease is with the Commonwealth for administrative office space and other facilities and expires in June 2010. Total lease expense in 2009 was \$934 thousand, of which \$855 thousand was paid to the Commonwealth. The Commonwealth lease is cancelable by either party with 12 months written notice. The lease payment due in 2010 under the Commonwealth lease is approximately \$944 thousand.

**(b) Rental Income**

The Authority leases property and air rights to others. During the year ended June 30, 2009, the Authority earned \$13.0 million in rental income, of which \$18.3 million was received for restaurant, concessions, and service station rentals.

**MASSACHUSETTS TURNPIKE AUTHORITY**  
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June 30, 2009

The following is a schedule by years of minimum future rental income on noncancelable operating leases as of June 30, 2009 (in thousands):

	<b>Amount</b>
Years:	
2010	\$ 27,134
2011	23,939
2012	23,975
2013	24,441
2014	24,614
2015 – 2019	125,778
2020 – 2024	113,881
2025 – 2029	29,173
2030 – 2034	13,958
2035 – 2039	12,277
2040 – 2044	9,492
2045 – 2049	9,124
2050 – 2054	10,607
2055 – 2059	11,421
2060 – 2064	13,135
2065 – 2069	14,124
2070 – 2074	13,141
2075 – 2079	13,190
2080 – 2084	15,554
2085 – 2089	16,545
2090 – 2094	19,507
2095 – 2099	20,753
2100	4,177
Total	\$ 589,940

On May 3, 2006, the Authority executed five (5) separate Ground and Air Rights Lease Agreements (collectively, the Leases) for air rights over property of the Authority and air rights over adjacent property owned by the Massachusetts Bay Transportation Authority (MBTA) for the development and construction of the proposed residential and commercial project at Columbus Center (the Project). Each of the Leases is between the Authority and limited liability companies owned and controlled by a joint venture entity established by WDC Development Associates Limited Partnership and its equity partner, California Urban Investment Partners, LLC.

In March 2008, the Tenants suspended construction of the Project and requested that the Authority agree to an extension of time to complete construction under the Leases. As of October 1, 2008, the Authority had not agreed to the request, construction remains suspended, and no further payments have been made pursuant to the lease agreement.

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**(8) Risk Management**

As part of its normal operations, the Authority encounters the risk of accidental loss stemming from third party liability claims, property loss or damage, and job-related injuries and illnesses. In managing these loss exposures, a combination of risk management measures is applied, including safety and loss prevention programs, emergency planning, contractual risk transfer, self insurance, and insurance.

In connection with the self insurance and insurance programs, the Authority retains part of the losses incurred and internally manages the self insured claims. The self insured retention currently includes \$500,000 for worker's compensation per job-related accident, up to \$250,000 per occurrence for automobile liability, general liability and other types of third party claims, \$250,000 per loss involving damage to buildings and their contents, and \$10,500,000 per bridge and tunnel loss. Insurance is purchased above the self-insured amounts, subject to availability and reasonableness of cost.

Liabilities for self-insured claims are reported if it is probable that a loss has been incurred and the amount can be reasonably estimated. These losses include an estimate of claims that have been incurred but not reported at year-end and are based on the historical cost of settling similar claims. The Authority records such liabilities as accrued expenses. The Authority from time to time is engaged in various matters of routine litigation. These matters include personal injury and property damage claims for which the Authority's liability is covered in whole or in part by insurance. The Authority does not expect that these matters will require any amounts to be paid which in the aggregate would materially affect the financial statements.

Settled claims resulting from the risks discussed above have not exceeded the amount of insurance coverage in force in any of the past three fiscal periods. Further, insurance maintained in fiscal 2009 and calendar 2008 has not changed significantly from prior periods.

Changes in the claims liability insurance reserves in the year ended 2009 were as follows (in thousands):

	<u>Workers'</u> <u>compensation</u>
Liability balance, June 30, 2008	\$ 8,680
Provision to record estimated losses	3,988
Payments	<u>(3,570)</u>
Liability balance, June 30, 2009	<u>\$ 9,098</u>

**(9) Central Artery/Tunnel Repair and Maintenance Trust Fund**

On July 23, 2008 the Authority entered into a Memorandum of Understanding (MOU) between the Commonwealth of Massachusetts (the Commonwealth) acting by and through the Executive Office of Transportation and Public Works (EOT) and the Federal Highway Administration (FHWA).

The MOU outlines that Massachusetts General Law, Chapter 10, Section 63A, establishes the Central Artery/Tunnel Project Repair and Maintenance Fund (the Fund) for the purpose of paying the costs of, or reimbursing the Commonwealth or the Authority for costs incurred in connection with repairs and

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maintenance of the Central Artery and the Ted Williams tunnel, as those terms are defined in section 3 of chapter 81A, which indicates that such repairs and maintenance relate to conditions not caused by ordinary or routine wear and tear. \$414.9 million has been placed into the Fund as a result of a cost recovery settlement agreement dated January 23, 2008 between the United States, the Commonwealth, and certain Central Artery/Tunnel Project consultants, and it is anticipated that future cost recoveries will also be placed in the Fund.

The Authority has received and deferred approximately \$58 million from EOT during the fiscal period ended June 30, 2009 for reimbursement of Central Artery/Tunnel repair and maintenance costs incurred by the Authority.

**(10) Commitments**

The Authority enters into construction contracts for the Metropolitan Highway System and the Western Turnpike with various construction and engineering companies. Construction contracts outstanding at June 30, 2009 approximated \$67 million.

During the construction of the Central Artery/Tunnel Project, the Authority has been responsible for and funded a portion of the cost of the Project. As of June 30, 2009, the Authority's commitment for Project funding had been completed.

The Authority has committed to pay an amount not to exceed \$55 million for certain construction costs associated with the CA/T Project. These costs will be paid by the Authority over the life of the CA/T Project as specific construction activities occur. The Authority expended approximately \$191,000 under this agreement during the fiscal period ended June 30, 2008, representing construction costs paid by the Authority in that fiscal period. As of June 30, 2008, the Authority has expended a total of approximately \$54.9 million under this commitment.

On July 31, 1998, the Massachusetts Legislature enacted Chapter 235 of the Acts of 1998 (Chapter 235), which, among other matters, authorized the Commonwealth, acting through the Secretary of Administration and Finance, to enter into a contract with the Authority providing for payments, by the Commonwealth to the Authority related to the cost of the operation and maintenance of the CA/T Project and CANA, as certified annually by the Authority.

Chapter 235 provides that the term of the contract shall extend until the end of the 40th fiscal year following the transfer. The Authority received \$25 million from the Commonwealth during the fiscal period ended June 30, 2009 for reimbursement of CA/T Project and CANA operation and maintenance costs incurred by the Authority.

**(11) Litigation**

**(a) *Sandra Murphy, et al. vs. Massachusetts Turnpike Authority***

In *Sandra Murphy, et al. v. Massachusetts Turnpike Authority*, Middlesex Superior Court, Civil Action No. 09-01794-B, the plaintiffs have filed suit against the Authority on behalf of a purported "class" consisting of all tollpayers within the Metropolitan Highway System (MHS). The plaintiffs

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Notes to Financial Statements

June 30, 2009

claim that the use of toll money collected on some parts of the MHS to fund operations, maintenance and debt service for other parts of the MHS (specifically, the Central Artery) is unconstitutional.

The plaintiffs' Third Amended Complaint contains five counts. Count I alleges that MHS tolls are an unconstitutional tax, not a lawful fee. Count II alleges that the tolls violate the separation of powers, because the Legislature did not delegate to the Authority the power to tax. Count III alleges that MHS tolls violate the Commerce Clause. Count IV seeks damages under 42 U.S.C. §1983 for the alleged misuse of MHS tolls. Count V seeks an injunction prohibiting the Authority from using MHS tolls on the Central Artery.

At the outset of the case, the plaintiffs brought an *ex parte* motion in Superior Court to place a lien on the Authority's bridges, tunnels and other real property. That motion was denied. The plaintiffs then filed a motion seeking a preliminary injunction prohibiting the Authority from spending any MHS tolls on the "non-tolled segments" of the MHS for the duration of the case. The Superior Court denied that motion as well.

The Authority has filed a Motion to Dismiss, seeking to dismiss all counts of the Third Amended Complaint. A hearing on the Authority's motion was held on October 15, 2009. The Court took the Motion under advisement, and has not yet rendered its decision.

**(b) *Carol Surprenant, et al. v. Massachusetts Turnpike Authority and Massachusetts Port Authority***

In *Carol Surprenant, et al. v. Massachusetts Turnpike Authority and Massachusetts Port Authority*, United States District Court for the District of Massachusetts, No. 09-10428-RGS, the plaintiffs have filed a lawsuit against the Authority and MassPort on behalf of a purported "class" consisting of all tollpayers at the Tobin Memorial Bridge and the Sumner and Ted Williams Tunnels using E-Z Pass or Fast Lane transponders, who do not qualify for the Resident Discount Programs. The plaintiffs claim that the Authority's Annual Fast Lane Tunnel Communities Resident Program is unconstitutional and constitutes discriminatory pricing policies.

The plaintiffs' complaint contains six claims for relief. Claim I alleges that the Resident Discount Program violates Article I, §8, Clause 3, the Commerce Clause by discriminating against out-of-state economic interests to the benefit in in-state economic interests. Claim II alleges that the disparate treatment accorded resident and non-resident travelers utilizing the Tunnels violates the Equal Protection Clause of the Fourteenth Amendment. Claim III alleges that the Resident Discount Program violates the Privileges and Immunities Clause by discriminating against out of state residents. Claim IV alleges that the disparate treatment accorded resident and non-resident travelers utilizing the Tunnels violates the Equal Protection Clause of the Massachusetts Constitution. Claim V seeks the imposition of a construction trust and restitution alleging unjust enrichment, and Claim VI seeks restitution for money had and received.

The Authority has filed a motion to dismiss. A hearing on the Authority's motion was heard on July 29, 2009. The Court took the motion under advisement, and has not yet rendered its decision.

**MASSACHUSETTS TURNPIKE AUTHORITY**  
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Notes to Financial Statements

June 30, 2009

**(c) *Yerger et al. v. Massachusetts Turnpike Authority***

In *Yerger et al. v. Massachusetts Turnpike Authority*, United States District Court for the District of New Jersey, No. 2:08 cv 05261, on October 24, 2008 eight individual plaintiffs on behalf of all others similarly situated brought a putative class action lawsuit against the Authority in the United States District Court for the District of New Jersey. The plaintiffs allege that the Fast Lane Discount Program, an electronic toll discount program run by the Authority that provides Fast Lane transponder holders with discounts at four toll plazas in the Boston Metropolitan area, violates the dormant commerce clause, equal protection clause, and privileges and immunities clause of the United States Constitution.

On July 14, 2009, the District Court heard the Authority's motion to dismiss for failure to state a claim. On September 25, 2009 the District Court issued a decision dismissing all claims asserted by the plaintiffs and issued an Order dismissing the Complaint in entirety, with prejudice. On October 19, 2009, the plaintiff's filed a Notice of Appeal with the United States Court of Appeals for the Third Circuit. A briefing schedule has not been set to date.

**(d) *CA/T Project Obligations/Contract C11A1 Dispute***

By letter agreement dated May 17, 2007, the Authority agreed to take responsibility for all costs to complete the Central Artery/Tunnel Project that are in excess of the \$14.798 billion budget provided in the CA/T Finance Plan. At this time, the Authority has identified no financial obligations pursuant to this agreement as it is anticipated that all costs to complete the CA/T Project, including costs related to additional exposures for claims, will be within the budgeted amount.

The most significant claim at this time involves Contract C11A1. In several related cases and potential litigation, plaintiffs make claims for alleged increased costs arising from differing site conditions and other causes of delay on the Central Artery/Tunnel Project. Plaintiffs have asserted claims in excess of \$130.0 million. These claims are at various stages of resolution, including the Superior Court and the Central Artery Tunnel Project Dispute Review Board (DRB) panel.

**(12) Subsequent Events**

**(a) *Transportation Reform Legislation***

On June 18, 2009, the Legislature enacted, and on June 26, 2009 the Governor approved, legislation designed to reform the Commonwealth's transportation system. The legislation creates a new authority to be called the Massachusetts Department of Transportation (MassDOT), to be governed by a five-member board appointed by the Governor. The Governor also appoints a Secretary of MassDOT to serve as the new authority's chief executive officer. MassDOT has an office of planning and programming and four divisions including highways, mass transit, aeronautics, and the Registry of Motor Vehicles that will share administrative functions such as human resources, financial management, information technology and planning. Each division is headed by an administrator appointed by the Secretary of MassDOT. The board of MassDOT began exercising its powers on November 1, 2009.

**MASSACHUSETTS TURNPIKE AUTHORITY**  
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Notes to Financial Statements

June 30, 2009

The transportation reform legislation provides for the dissolution of the Authority and the transfer of its assets, liabilities, obligations, and debt to MassDOT, which will have a separate legal existence from the Commonwealth. MassDOT is to assume the rights, powers, and duties of the Authority upon the transfer on November 1, 2009.

The legislation establishes a Massachusetts Transportation Trust Fund within MassDOT, into which all bridge, tunnel and highway tolls, as well as transit fares, will be deposited. Moneys in the Central Artery and Statewide Road and Bridge Infrastructure Fund are also expected to be transferred to the Massachusetts Transportation Trust Fund. The Trust Fund is to be used for operations, maintenance and capital costs related to the transportation assets under MassDOT's jurisdiction, including MBTA assets and assets of the Authority transferred pursuant to the legislation, as well as debt service on outstanding Authority debt. MassDOT will be authorized to issue special obligation debt secured by moneys in the Trust Fund to refinance Authority debt issued before July 1, 2009. MassDOT debt will not be debt of the Commonwealth.

The legislation contemplates that the Legislature will continue to make capital appropriations for transportation improvements and that such appropriations will continue to be funded through the issuance by the State Treasurer of Commonwealth debt. Currently outstanding capital spending authorizations are to be made available to MassDOT by the Secretary of Administration and Finance.

The legislation also establishes a Commonwealth Transportation Fund as a budgetary fund of the Commonwealth for transportation-related purposes, to receive essentially the same revenues that were deposited in the Highway Fund, including gasoline tax receipts and registry fee revenues.

Legislation approved by the Governor on July 20, 2009 provides that the Commonwealth Transportation Fund will also receive the sales tax receipts dedicated to transportation purposes, with a guaranteed annual payment of \$275 million. The guaranteed amount of \$275 million includes \$100 million earmarked for costs including debt service on Authority debt, \$160 million earmarked for the MBTA, and \$15 million earmarked for the regional transit authorities.

**(b) Commonwealth Assistance**

The fiscal 2010 budget included a provision authorizing a contract between the Secretary of Administration and Finance, acting on behalf of the Commonwealth, with the concurrence of the Secretary of Transportation and Public Works, and the Authority providing for the Commonwealth to make payments to the Authority or the Massachusetts Department of Transportation (MassDOT), as appropriate, in the amount of \$100 million in each fiscal year for the purpose of defraying costs, including debt service on bonds issued by the Authority or MassDOT to finance or refinance improvements to the Metropolitan Highway System. The contract, which pledges the full faith and credit of the Commonwealth to such payments, was executed on June 30, 2009. The term of the contract extends until fiscal 2039, the last fiscal year in which Metropolitan Highway System bonds issued before July 1, 2009 are scheduled to mature. Payments under the new contract are in addition to the payments required by the contract for financial assistance dated as of February 19, 1999 between the Authority and the Commonwealth.

**MASSACHUSETTS TURNPIKE AUTHORITY**  
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Required Supplementary Information

June 30, 2009

(In thousands)

**Schedule of Pension Funding Progress**

(1) Actuarial valuation date	(2) Actuarial value of plan assets*	(3) Actuarial accrued liability (AAL)	(4) (Overfunded) unfunded (UAAL) AAL(2) - (3)	(5) Actuarial value of assets as a percentage of AAL (funded ratio) (2)/(3)	(6) Annual covered payroll	(7) (UAAL) AAL as a percentage of covered payroll (4)/(6)
1/1/2008	\$ 223,447	288,569	65,122	77.4%	\$ 71,887	90.6%
1/1/2006	196,826	251,898	55,072	78.1	70,554	78.1
1/1/2004	194,784	224,272	29,488	86.9	64,285	45.9
1/1/2003	170,928	203,425	32,497	84.0	58,100	55.9
1/1/2002	197,134	191,249	(5,885)	103.1	61,615	(9.6)

\* Five-year smoothed market value.

**Schedule of OPEB Funding Progress**

(1) Actuarial valuation date	(2) Actuarial value of plan assets	(3) Actuarial accrued liability (AAL)	(4) (Overfunded) unfunded (UAAL) AAL(2) - (3)	(5) Actuarial value of assets as a percentage of AAL (funded ratio) (2)/(3)	(6) Annual covered payroll	(7) (UAAL) AAL as a percentage of covered payroll (4)/(6)
6/30/2008	\$ 51,748	179,509	127,761	28.8%	\$ 71,887	177.7%
12/31/2005	\$ 48,560	127,242	78,682	38.2	\$ 69,223	113.7

See accompanying independent auditors' report.

**MASSACHUSETTS TURNPIKE AUTHORITY**  
(A Component Unit of the Commonwealth of Massachusetts)

Combining Schedule of Net Assets

June 30, 2009

(In thousands)

Assets	Metropolitan Highway System	Western Turnpike	MTA General Fund	Eliminations	Combined totals
Current assets:					
Cash – unrestricted	\$ 3,261	7,233	—	—	10,494
Investments – unrestricted	55,049	89,773	20,003	—	164,825
Restricted cash	25,157	12,934	—	—	38,091
Restricted investments	311,317	20,082	—	—	331,399
Accounts receivable, net of allowance for doubtful accounts of \$585	7,039	4,193	—	—	11,232
Other receivables:					
Mass Highway	7,547	—	—	—	7,547
Other, net of allowance for doubtful accounts of \$1,038	3,917	676	—	—	4,593
Total receivables	18,503	4,869	—	—	23,372
Prepaid expenses and other assets	2,773	4,232	—	—	7,005
Due from other funds	36,430	47,900	—	(84,330)	—
Total current assets	452,490	187,023	20,003	(84,330)	575,186
Noncurrent assets:					
Restricted investments	102,266	—	—	—	102,266
Capital assets, net	6,220,278	323,248	—	—	6,543,526
Prepaid expenses and other assets, long-term	10,151	1,713	—	—	11,864
Total assets	\$ 6,785,185	511,984	20,003	(84,330)	7,232,842

**MASSACHUSETTS TURNPIKE AUTHORITY**  
(A Component Unit of the Commonwealth of Massachusetts)

Combining Schedule of Net Assets

June 30, 2009

(In thousands)

Liabilities	Metropolitan Highway System	Western Turnpike	MTA General Fund	Eliminations	Combined totals
Current liabilities:					
Accounts payable	\$ 14,847	7,850	—	—	22,697
Accrued payroll and related taxes	610	2,532	—	—	3,142
Compensated absences	2,075	2,722	—	—	4,797
Current portion of long-term debt	32,040	17,820	—	—	49,860
Accrued expenses and miscellaneous liabilities	8,143	17,224	—	—	25,367
Contract retainage	409	662	—	—	1,071
Due to other funds	40,943	43,387	—	(84,330)	—
Payable from restricted assets:					
Accrued interest on bonds payable	70,039	4,029	—	—	74,068
Accrued arbitrage liability	817	—	—	—	817
Total current liabilities	169,923	96,226	—	(84,330)	181,819
Deposits and deferred revenue	132,120	6,207	—	—	138,327
Deferred credits	22,877	—	3,567	—	26,444
Compensated absences	4,653	6,238	—	—	10,891
Net OPEB obligation	2,185	4,057	—	—	6,242
Accrued interest on capital appreciation bonds	84,794	—	—	—	84,794
Long-term debt, net	2,087,185	126,672	—	—	2,213,857
Total liabilities	2,503,737	239,400	3,567	(84,330)	2,662,374
Net Assets					
Invested in capital assets, net of related debt	4,408,146	195,825	—	—	4,603,971
Restricted for other purposes	128,819	41,666	—	—	170,485
Unrestricted	(255,517)	35,093	16,436	—	(203,988)
Total net assets	\$ 4,281,448	272,584	16,436	—	4,570,468

See accompanying independent auditors' report.

**MASSACHUSETTS TURNPIKE AUTHORITY**  
(A Component Unit of the Commonwealth of Massachusetts)

Combining Schedule of Revenues, Expenses, and Changes in Net Assets

Year ended June 30, 2009

(In thousands)

	Metropolitan Highway System	Western Turnpike	MTA General Fund	Combined totals
Operating revenues:				
Toll revenue, net	\$ 168,190	110,773	—	278,963
Restaurants, concessions, and service stations	—	18,299	—	18,299
Rentals	8,389	4,602	—	12,991
Court fines	1,937	3,310	—	5,247
Other	9,695	4,408	—	14,103
Total operating revenues	188,211	141,392	—	329,603
Operating expenses:				
Operations and public protection	77,288	66,696	—	143,984
Repair and reconstruction	11,934	9,179	—	21,113
General and administration	9,479	9,236	—	18,715
Fringe benefits	9,196	12,417	—	21,613
Retirement	5,425	10,070	—	15,495
Depreciation	143,972	20,679	—	164,651
Total operating expenses	257,294	128,277	—	385,571
Operating income (loss)	(69,083)	13,115	—	(55,968)
Nonoperating revenue and (expense):				
Investment income	16,671	1,574	472	18,717
Contract assistance	25,000	—	—	25,000
Gain on the sale of assets	500	—	—	500
Attorney General reimbursement	2,000	—	—	2,000
Interest expense	(102,560)	(8,636)	284	(110,912)
Total nonoperating (expense) revenue, net	(58,389)	(7,062)	756	(64,695)
(Decrease) increase in net assets before special item	(127,472)	6,053	756	(120,663)
Special item:				
Contributed capital assets	(94,714)	—	—	(94,714)
Increase (decrease) in net assets	(222,186)	6,053	756	(215,377)
Net assets, beginning of year	4,503,634	266,531	15,680	4,785,845
Net assets, end of year	\$ 4,281,448	272,584	16,436	4,570,468

See accompanying independent auditors' report.

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**Traffic and Revenue Study**

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*Moving Massachusetts Forward.*  
**massDOT**

**Massachusetts Turnpike: Metropolitan Highway System**

*Traffic and Revenue Study*

**final**  
**report**

*prepared for*

**Massachusetts Department of Transportation**

*prepared by*

**Cambridge Systematics, Inc.**

*with*

**Vanasse Hangen Brustlin, Inc.**

---

*final report*



# Massachusetts Turnpike: Metropolitan Highway System

*Traffic and Revenue Study*

*prepared for*

Massachusetts Department of Transportation

*prepared by*

Cambridge Systematics, Inc.  
100 CambridgePark Drive, Suite 400  
Cambridge, MA 02140

*with*

Vanasse Hangen Brustlin, Inc.

*date*

January 28, 2010

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# 1.0 Introduction

## 1.1 BACKGROUND

The Massachusetts Department of Transportation (MassDOT) is the owner and operator of all toll roads, bridges, and tunnels in Massachusetts. These facilities include:

- Massachusetts Turnpike:
  - Original 123 miles from the New York State line to Route 128/I-95 (the “Western Turnpike”; and
  - Boston Extension, which continues for 15 miles east to I-93.
- Ted Williams Tunnel;
- Sumner and Callahan Tunnels; and
- Tobin Bridge.

This report provides a traffic and revenue forecast for the toll facilities on the Metropolitan Highway System (MHS) portion of the Massachusetts Turnpike, which, for the purpose of this report, consists of:

- The Massachusetts Turnpike Boston Extension;
- The Ted Williams Tunnel; and
- The Sumner Tunnel.

This report does not include forecast of traffic and revenue for the Tobin Bridge, as its revenues are not currently pledged to secure MassDOT’s outstanding bonds.

### Turnpike History

The need for an east/west, limited access Interstate highway was clear as Massachusetts entered the postwar era of the 1950s. The suburbs were expanding. Drivers were spending too much time stuck on state highways designed for lighter traffic volumes, and goods hauled in trucks took too long to move across the State.

To break the gridlock, the Massachusetts Legislature created the former Massachusetts Turnpike Authority (MTA) in 1952 and gave it responsibility for constructing, maintaining, and operating a 123-mile east/west toll highway.

The Massachusetts Turnpike would become Massachusetts’ segment of Interstate 90, the transcontinental highway ending in Seattle. Revenue from tolls – not state or Federal tax revenue – would pay the bonds sold to finance the

highway's construction, and no state or Federal funds would be spent to operate or maintain the completed Turnpike.

### *Turnpike Opens*

Construction of the Turnpike began on January 24, 1955, at the New York border. A little more than two years later - on May 15, 1957 - the Massachusetts Turnpike opened between West Stockbridge on the New York State border and Route 128/I-95 at Boston's doorstep on the Weston/Newton line. The original Turnpike cost \$257 million to build.

The former Turnpike Authority's next job was to bring the new highway into downtown Boston through an existing rail corridor in Newton. The groundbreaking for what would be called the Boston Extension occurred on March 5, 1962. The Boston Extension opened in two stages, first to the Allston/Brighton toll plaza in September 1964 and then all the way to I-93 in downtown Boston on February 18, 1965. The new extension added 12 miles to the MassPike's original 123.

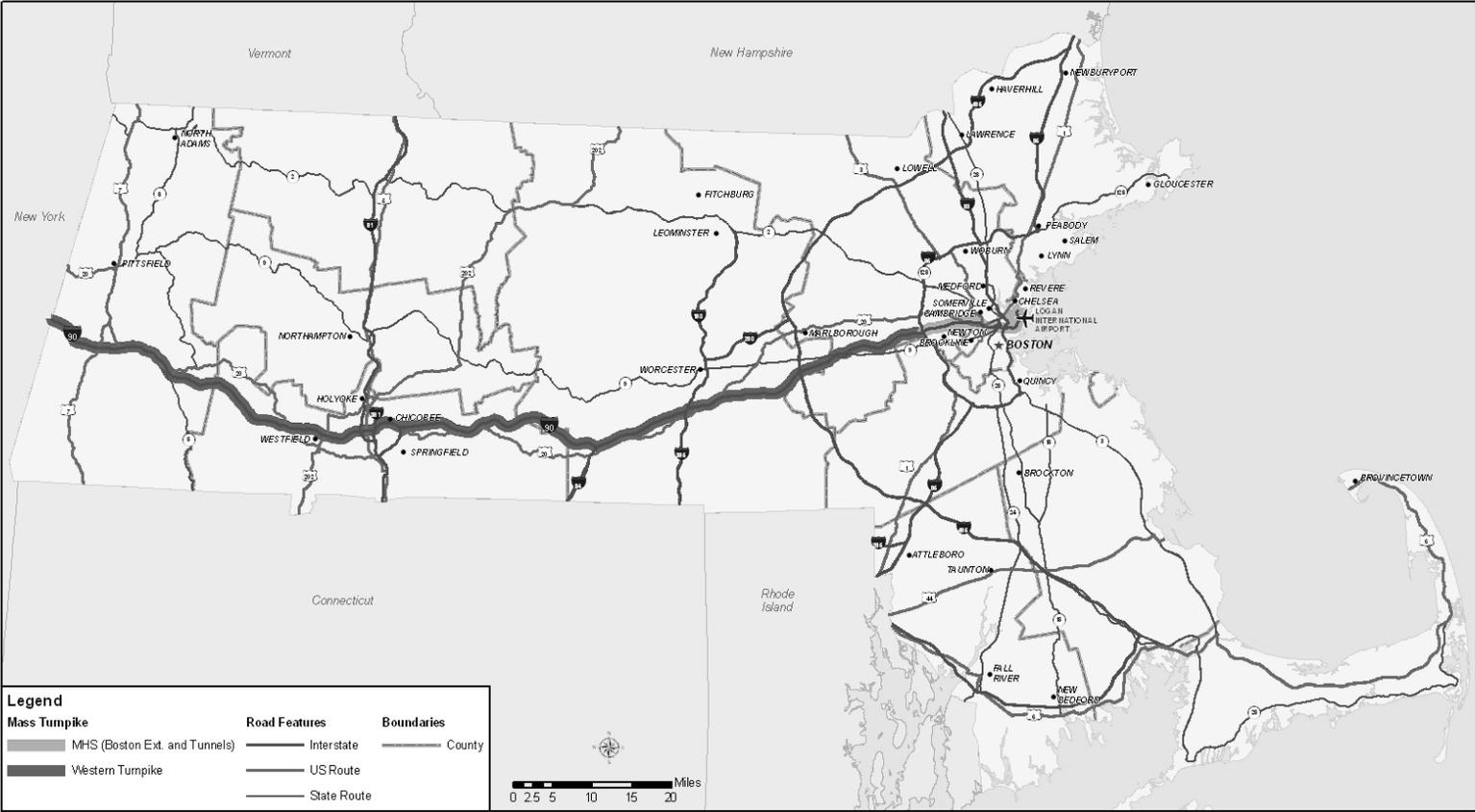
In 1958, the Legislature turned operation of the Sumner Tunnel over to the former Turnpike Authority and directed them to construct a second passage beneath Boston Harbor, the adjacent Callahan Tunnel. The new tunnel opened in 1961. Once the Callahan Tunnel opened, the Sumner, now owned by the Department of Transportation, closed briefly for repairs. The twin tunnels began joint operation in 1962, doubling the traffic lanes connecting the city and the airport. The Sumner and Callahan Tunnels function as a single tunnel, with the Callahan bringing cars from downtown Boston to East Boston and the Sumner bringing cars back from East Boston into the North End. Tolls have been collected one-way, on the East Boston side of the Sumner Tunnel, since 1983.

### *Turnpike Expands*

In 1968 the Turnpike was widened from four lanes to six (three in each direction) between Interchange 9 in Sturbridge and Interchange 12 in Framingham, a 33-mile stretch. The following year a new interchange - 11a - opened on the Hopkinton/Westborough line at Interstate 495. The interchange put the Turnpike on the travel route for millions of vacationers destined for Cape Cod or New Hampshire and Maine.

In 1995, the Turnpike opened the Ted Williams Tunnel, a new harbor crossing from South Boston to East Boston constructed as part of the Central Artery/Tunnel Project. This third harbor crossing doubled traffic capacity between downtown Boston and Logan International Airport in East Boston.

Figure 1.1 Massachusetts Turnpike Location Map



### *The MHS Era*

In 1997, the Legislature passed the Metropolitan Highway System (MHS) act, giving the former Turnpike Authority responsibility for supervising the completion of the entire Central Artery/Tunnel Project. The former Turnpike Authority also was mandated to assume ownership and operation of the new roadway facilities upon completion.

The MHS law rewrote the former Massachusetts Turnpike Authority's enabling legislation. It divided the former Turnpike Authority into two components: The original, 123-mile Turnpike and the Metropolitan Highway System (MHS), which currently includes the Boston Extension from Route 128/I-95 to the terminus of I-90 in East Boston, the Sumner, Callahan, and Ted Williams Tunnels and all other roadways built as part of the CA/T Project.

The Department of Transportation now operates the Western Turnpike and the MHS as independent and financially self-sustaining road systems.

### *FastLane Introduced*

In 1998, the former Turnpike Authority introduced FastLane, a new electronic toll collection system. FastLane came on line in the summer and fall of 1998 at the Ted Williams Tunnel and the Boston Extension. In June 1999, the system was turned on at every interchange. Today, more than two-thirds of all toll transactions are processed via FastLane, which is fully compatible with the E-Zpass system in use throughout the Northeast and Mid-Atlantic States.

### *Transition of the MTA into Massachusetts Department of Transportation (MassDOT)*

In June 2009, Governor Deval Patrick signed Chapter 25 of the Acts of 2009, "An Act Modernizing the Transportation Systems of the Commonwealth of Massachusetts," (as amended, the "Act"). This transportation reform legislation integrated all transportation agencies and authorities (other than the Massachusetts Port Authority, Massport) into a new Massachusetts Department of Transportation (MassDOT), effective November 1, 2009. The former MTA was integrated along with the Massachusetts Highway Department (MHD) under the Highway Division of MassDOT. The new MassDOT also oversees three additional divisions: Mass Transit, Aeronautics, and the Registry of Motor Vehicles (RMV), in addition to an Office of Planning and Programming. MassDOT is administered by a Secretary of Transportation, appointed by the Governor to serve as Chief Executive Officer (CEO). A five-member Board of Directors also appointed by the Governor with expertise in transportation, finance, and engineering oversee the new organization, while serving as the governing body of both MassDOT and the Massachusetts Bay Transportation Authority (MBTA).

In addition, effective January 1, 2010, ownership of the Tobin Bridge was transferred from Massport to MassDOT. Massport did not receive compensation for the bridge and all bridge liabilities, excluding Massport's indebtedness relating to the Tobin Bridge, have been transferred to MassDOT. This report does not include any forecast related to revenues derived from the Tobin Bridge.

## **1.2 STUDY PURPOSE AND APPROACH**

The purpose of this study was to develop long-term traffic and toll revenue projections for the MHS, to be used in a possible refinancing of the MHS. Our approach to this study included a review of historical toll transaction and toll revenue data, review and forecasts of socioeconomic data in the State as it relates to MHS traffic, analysis of impacts from past toll changes and fuel price increases, review of future roadway and transit improvements, and estimation of a 40-year traffic and revenue forecast under a set of toll rate and input forecast assumptions.

## **1.3 PROJECT DESCRIPTION – METROPOLITAN HIGHWAY SYSTEM**

The tolled components of the MHS consist of the Boston Extension, the Sumner/Callahan Tunnels, and the Ted Williams Tunnel (Figure 1.2).

### **Boston Extension**

The Boston Extension extends 12 miles from the eastern terminus of the Western Turnpike at SR 128/I-95 to the east going into Boston, with an east terminus at the I-90/I-93 interchange (see Figure 1.2). The Boston Extension provides connectivity and a direct commuter route between Boston and the suburbs located to the west. The continuing growth of these suburbs over the years has been providing the Boston Extension with a strong base of commuter traffic. Intermediate interchanges are shown in Table 1.1.

From the Weston mainline plaza (Interchange 15) to Interchange 17, a distance of approximately five miles, the Boston Extension has three lanes in each direction. Between Interchanges 17 and 22 (Dartmouth Street), the Boston Extension widens to four lanes in each direction for about six miles before resuming to a six-lane section from Interchange 22 to Interchange 24 (South Station/I-93), a one-mile segment.

**Table 1.1 Boston Extension Interchanges**

<b>Interchange Name</b>	<b>Interchange Number</b>
Newton/Boston/Weston	15
West Newton	16
Newton Corner	17
Allston/Brighton/Cambridge	18/19/20
Massachusetts Avenue	21
Dartmouth Street	22
Clarendon Street	22A
Arlington Street	23
South Station/I-93 North/South	24
South Boston	25
Logan Airport	26

Source: <http://www.masspike.com/interchange.html>.

Notes: Logan Airport interchanges part of the Tunnels system.

*Interchange 15 (SR 128/I-95)*

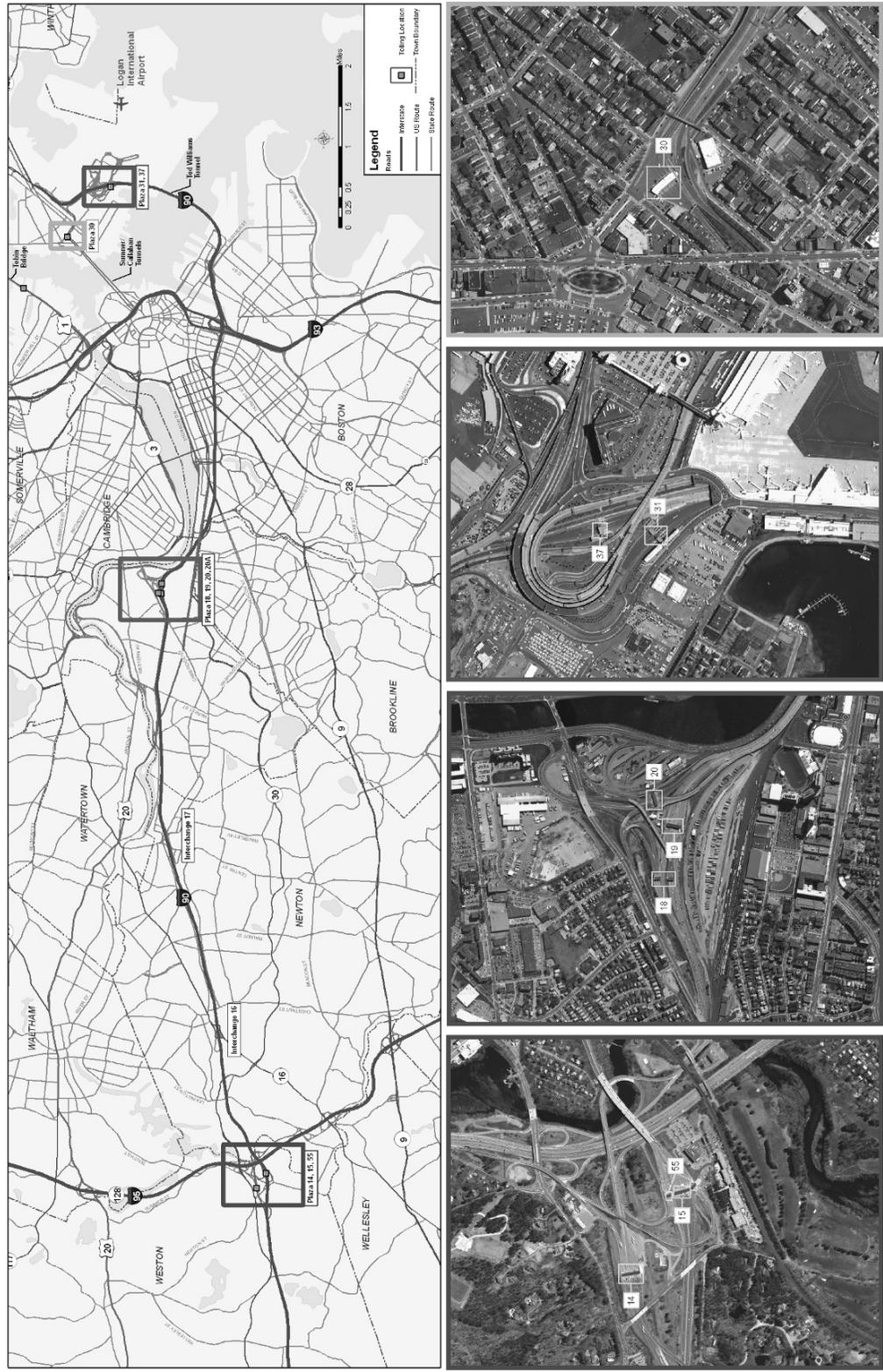
Interchange 15 in Weston, with exit numbers 14 and 15 on I-90 and 24 and 25 on SR 128/I-95, is the western terminus of the Boston Extension. The toll facility at this interchange is comprised of three toll plazas, identified as plazas 14, 15, and 55, shown in Figure 1.2.

Plaza 15, the mainline plaza, serves both eastbound and westbound through movements of travel on I-90. Western Turnpike vehicles on the eastbound direction heading to Boston surrender their tickets<sup>1</sup> and pay a surcharge at Plaza 15 to begin the trip on the barrier system. The converse also is true, vehicles heading west on I-90 (New York direction), take a ticket which is later surrendered upon exiting the Western Turnpike. On each side of Plaza 15, two ramp plazas, collectively referred as Plaza 55, handle traffic from/to SR 128/I-95. Plaza 55 on the north side of Plaza 15 handles westbound traffic on I-90 heading north or south on SR 128/I-95. Plaza 55 on the south side of Plaza 15 handles southbound and northbound traffic from SR 128/I-95 heading east on I-90.

Ramp Plaza 14, near plazas 15 and 55, is part of the Western Turnpike and handles eastbound traffic on I-90 heading north or south on SR 128/I-95. This plaza also handles north/southbound traffic on SR 128/I-95 heading west on the Western Turnpike.

<sup>1</sup> FastLane and E-Zpass travelers have their origin or destination point recorded for offline processing.

Figure 1.2 MHS Tolling Locations



### *Interchange 18/19/20 (Allston/Brighton/Cambridge)*

This interchange is the major one in the Boston Extension, in terms of toll transactions and revenues, with exit numbers 18, 19, and 20. This toll facility is comprised of three ramp toll plazas and one mainline toll plaza, as well as an ETC-only plaza for U-turn movements for two-axle passenger vehicles, taxis, and buses:

1. **Mainline Plaza 19** handles east/west traffic on I-90.
2. **Ramp Plaza 20** handles westbound traffic on I-90 exiting to Cambridge Street and Soldiers Field Road as well as traffic from these arterials entering the Boston Extension and heading in the east direction on I-90.
3. **Ramp Plaza 18** handles traffic exiting the Boston Extension in the eastbound direction and traffic entering the system heading west on I-90. The eastbound plaza handles traffic going to Cambridge Street and Soldiers Field Road. The westbound plaza handles traffic from these arterials heading west on I-90.

To traverse the entire Boston Extension, in the eastbound direction heading to Boston from the western terminus at Weston, drivers “exit” the Western Turnpike, then enter the Boston Extension (barrier system) and pay a surcharge toll of \$0.90 at the Weston mainline barrier (Interchange 15) for a passenger car equipped with a FastLane transponder, or \$1.15 if paying by cash or using an E-Zpass transponder. This surcharge is in addition to the toll they pay for using the Western Turnpike’s ticket system.

Entering or exiting the Boston Extension to and from the east from Plaza 55 (SR 128 interchange) costs \$1.00 for FastLane passenger cars and \$1.25 for Cash/E-Zpass users. There is a slight toll difference (\$0.10 less for passenger cars) when entering the Boston Extension from the western turnpike versus from the SR 128 interchange. Upon exiting the Boston Extension system, at Interchange 18/19/20 (Allston/Brighton), the toll rates are \$1.00 for a passenger vehicle equipped with a FastLane transponder, or \$1.25 if paying by cash or using an E-Zpass transponder. The total one-way trip cost for passenger cars is \$1.90 for FastLane customers or \$2.40 for cash/E-Zpass customers if traveling to or from the Western Turnpike, and \$2.00 and \$2.50 respectively for those entering from or exiting to SR 128. Passenger vehicle toll rates associated with these movements are shown in Table 1.2.

**Table 1.2 Passenger Vehicle Toll by Movement**

From Plaza/Interchange	To Plaza/Interchange				
	15	55	16	17	18/19/20
15	N/A	N/A	N/A	\$1.15/\$0.90	\$2.40/\$1.90
55	N/A	N/A	N/A	\$1.25/\$1.00	\$2.50/\$2.00
16	N/A	N/A	N/A	<b>Toll Free</b>	\$1.25/\$1.00
17	\$1.15/\$0.90	\$1.25/\$1.00	<b>Toll Free</b>	N/A	\$1.25/\$1.00
18/19/20	\$2.40/\$1.90	\$2.50/\$2.00	\$1.25/\$1.00	\$1.25/\$1.00	N/A

Source: MassDOT.

Notes: Cash/E-Zpass toll rate shown first and FastLane toll rate shown second.

Table 1.3 shows the Boston Extension’s toll schedule for each vehicle class, as well as toll rate increases since 1990. Proportionally higher toll rates are charged for nonpassenger car vehicles. For example, the current passenger car per axle toll rate is \$0.625. For a four-axle vehicle, this calculates to a \$2.50 toll rate.

**Table 1.3 Boston Extension Historical Toll Changes since 1990**

Vehicle Class	March 1, 1990		July 1, 2002	January 1, 2008	
	Plaza 16 <sup>a</sup>	Plazas 55,18,19,20	Plazas 55,18,19,20	Plazas 55,18,19,20	20A (U-Turn)
Any Two-Axle Noncommercial Vehicle, FastLane	N/A	N/A	\$0.75	\$1.00	\$2.50
Any Two-Axle Noncommercial Vehicle, Cash or E-Zpass	\$0.25	\$0.50	\$1.00	\$1.25	\$2.50
Any Two-Axle Noncommercial Vehicle, FastLane, Carpool Discount Program	Free, with annual fee		Free, with annual fee	Free, with annual fee	
Two-Axle Commercial Vehicle	0.25	0.50	1.00	1.25	2.50
Three-Axle Vehicle	0.35	0.75	1.50	2.00	4.00
Four-Axle Vehicle	0.50	1.00	2.00	2.50	5.00
Five-Axle Vehicle	0.60	1.25	2.50	3.25	6.50
Six-Axle Vehicle	0.75	1.50	3.00	3.75	7.50
Seven-Axle Vehicle	0.85	1.75	3.50	4.50	9.00
Eight-Axle Vehicle	1.00	2.00	4.00	5.00	10.00
Nine-Axle Vehicle	1.10	2.25	4.50	5.75	11.50

Source: MassDOT.

<sup>a</sup> Tolls were removed from Plaza 16 on September 26, 1996.

*Boston Extension FastLane Carpool Discount Programs*

MassDOT offers a toll discount program for commuters that carpool in the Boston Extension. Motorists who travel with three or more people in their

passenger vehicles can pay an annual fee ranging from \$50 to \$145 in addition to a one-time FastLane transponder fee and in return do not pay actual tolls when traveling on the Extension. Different annual fees are charged depending on the limits of travel, defined as zones. Only passenger vehicles with FastLane transponders can participate in the program.

### Boston Inner Harbor Tunnels

MassDOT operates three tunnels that allow vehicles to cross the Boston Inner Harbor: the Sumner/Callahan Tunnels and the Ted Williams Tunnel.

#### *Sumner/Callahan Tunnels*

The Sumner/Callahan Tunnels operate with the Sumner carrying traffic from East Boston into downtown Boston and the Callahan the reverse movement. Tolls are collected one-way from East Boston to downtown Boston at the Sumner Tunnel's toll facility, Plaza 30 (Figure 1.2); there are no tolls when traveling the reverse movement on the Callahan Tunnel.

Passenger cars pay a toll of \$3.50, or \$3.00 if equipped with FastLane transponders. Other vehicle classes pay more. Table 1.4 shows current and historical toll rates by class.

**Table 1.4 Boston Inner Harbor Tunnels**  
*Toll Rates since 1995*

Vehicle Class	December 15, 1995 (Commercial Vehicle Toll Increase)	July 10, 1997	July 1, 2002	January 1, 2008
Any Two-Axle Noncommercial Vehicle, FastLane	N/A	N/A	\$2.50	\$3.00
Any Two-Axle Noncommercial Vehicle, Cash or E-Zpass	\$1.00	\$2.00	\$3.00	\$3.50
Two-Axle Commercial Vehicle	\$2.00	\$3.00	\$4.50	\$5.25
Three-Axle Vehicle	\$2.50	\$3.00	\$4.50	\$5.25
Four-Axle Vehicle	\$3.00	\$4.00	\$6.00	\$7.00
Five-Axle Vehicle	\$3.50	\$5.00	\$7.50	\$8.75
Six-Axle Vehicle	\$4.00	\$6.00	\$9.00	\$10.50
Seven-Axle Vehicle	\$4.00	\$7.00	\$10.50	\$12.25
MBTA Bus	\$1.00	\$0.00	\$0.00	\$0.00
Resident Discount	\$0.40	\$0.40	\$0.40	\$0.40
Carpool Program	Free, with annual fee	Free, with annual fee	Free, with annual fee	Free, with annual fee

Source: MassDOT.

### *Ted Williams Tunnel*

The Ted Williams Tunnel (TWT) became operational in 1995, adding new capacity between South Boston and Logan International Airport in East Boston.<sup>2</sup> Tolls are collected only in the westbound direction and the toll rates are identical to the Sumner Tunnel (Table 1.4).

TWT's two toll plazas are located on East Boston, identified as Plazas 31 and 37, in the vicinity of Logan International Airport (Figure 1.2). Mainline Plaza 37 handles westbound traffic from Route 1A to I-90 and ramp Plaza 31 handles vehicular traffic from Logan International Airport.

### *Tunnels Toll Discount Programs*

There are two discount programs available at the Inner Harbor Tunnels. The Carpool Program offers unlimited usage for motorists who travel with three or more people in their vehicles at all times, which must be equipped with a FastLane transponder. An annual fee of \$50 is paid each year by the user, which allows them free passage at the toll plaza while carrying three or more people.

MassDOT also offers the Annual FastLane Tunnel Communities Resident Program for residents in East Boston, South Boston, or the North End. Eligible drivers pay a toll of \$0.40 rather than the \$3.00 rate for other FastLane users. To prevent misuse of the discount, residents must reapply to the program on yearly basis. There is no annual fee.

## **1.4 REGIONAL HIGHWAY AND TRANSIT SYSTEM**

### **Other Transportation Facilities**

Other major transportation facilities in the Boston area that serve the same transportation corridors as Boston Extension or Tunnels are the Tobin Memorial Bridge, U.S. Route 20, Massachusetts Routes 9, 16, and 30, Soldiers Field Road/Storrow Drive, Memorial Drive, and alternative transit modes, including rail and ferry services.

### *Tobin Memorial Bridge*

The Tobin Memorial Bridge was erected in 1948-1949 and opened to traffic in 1950. It provides a high-level crossing of the Mystic River and connects the Charlestown section of Boston via the Central Artery (I-93) in the south with Chelsea via U.S. Route 1. The bridge provides three travel lanes northbound on its lower level and three lanes southbound on the upper level. Tolls are collected from southbound cars only, with the toll plaza located on the southern terminus of the bridge.

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<sup>2</sup> When it opened in 1995, the TWT was only used by taxis and commercial vehicles. It opened to all traffic when the I-90 Connector was completed in 2003.

The Tobin Memorial Bridge was owned and operated by the Massport, which owns and operates Logan International Airport, for the last 50 years. Ownership of the Tobin Bridge was recently transferred to MassDOT, effective January 1, 2010. Recent annual toll transaction and toll revenue data for the Tobin Bridge, as well as the corresponding passenger vehicle cash toll rate is shown in Table 1.5. During 2004 the toll rate on the Tobin Bridge became equal to the Sumner Tunnel and TWT. When the passenger car cash/E-Zpass toll increased to \$3.50 for the Sumner and TWT on January 1, 2008, and to \$3.00 for FastLane customers, the Tobin Bridge remained at \$3.00. Toll rates for commercial vehicles are proportionally higher. Residents of Chelsea or Charlestown can participate in a resident commuter program and pay a reduced toll of \$0.30 for a two-axle passenger vehicle, and \$0.50 for a passenger vehicle with either a one- or two-axle trailer. Residents must fill out an application and participate in the FastLane program.

**Table 1.5 Tobin Memorial Bridge Toll Transactions and Toll Revenue**

Year	Tobin Bridge		Passenger Car Cash Toll Rate	
	Toll Transactions	Toll Revenue	Tobin Bridge	Sumner and TWT
2000	12,005,495	12,970,962	\$1.00	\$2.00
2001	12,356,020	13,395,764	\$1.00	\$2.00
2002	11,231,381	22,838,232	\$2.00	\$3.00
2003	11,235,900	22,690,049	\$2.00	\$3.00
2004	10,134,341	26,233,486	\$3.00	\$3.00
2005	9,913,213	27,606,422	\$3.00	\$3.00
2006	10,638,126	29,802,058	\$3.00	\$3.00
2007	10,766,140	30,018,673	\$3.00	\$3.00
2008	10,636,063	29,279,148	\$3.00	\$3.50

Source: Massport.

Notes: Tobin Bridge Toll increased to \$3.00 in April of 2004.

The Tobin Bridge competes with the Sumner and TWT tunnels for some of the traffic crossing the Boston Inner Harbor. During peak hours, the Tobin Bridge is operating at or near capacity levels. Table 1.6 displays the number of toll transactions for the three toll facilities that handle harbor traffic crossings for the period 2000-2008.

**Table 1.6 Annual Toll Transactions (in Thousands) at the Boston Inner Harbor Crossing’s Toll Facilities**

Year	Tobin Bridge	Sumner Tunnel	TWT	Total	Tobin Transactions as Percent of Total Harbor Crossing Transactions
2000	12,005	12,894	6,196	31,095	39
2001	12,356	12,406	5,684	30,445	41
2002	11,231	11,520	5,613	28,364	40
2003	11,236	8,571	8,986	28,793	39
2004	10,134	6,826	12,779	29,740	34
2005	9,913	6,894	13,452	30,259	33
2006	10,638	8,972	10,481	30,091	35
2007	10,766	8,385	12,652	31,803	34
2008	10,636	7,936	12,167	30,739	35

Source: Massport (Tobin Bridge data) and MassDOT (Sumner and TWT data).

For the period 2000-2008, the Tobin Bridge accounted for approximately 37 percent, on average, of all harbor crossing toll transactions. The Tobin Bridge’s share of total harbor crossing toll transactions decreased by 4 percentage points between 2000 and 2008. Toll transactions on the Sumner Tunnel and Tobin Bridge were reduced when the TWT became fully operational and connections with Route 1A were completed in 2003.

Overall transactions have grown modestly across the harbor screenline, with more of redistribution to the TWT from the Sumner Tunnel. TWT’s toll transactions have experienced a twofold increase during the period 2000-2008. In 2006, transactions at the TWT were decreased considerably due to a ceiling panel collapse which closed some portions of the system and reduced operational capacity for a period of approximately six months. This caused diversion to the Sumner Tunnel and Tobin Bridge. In addition traffic was waved through without tolls for 30 days (July 11-August 9) in the TWT. These non-toll transactions are not reflected in the 2006 toll transactions shown in Table 1.6.

### *State Route 9*

In the vicinity of the Boston Extension, Route 9 is about two miles to the south, and provides a toll-free route from Route 128 in Newton to downtown Boston. Near Route 128, this road generally has two travel lanes per direction, grade separated intersections and 40-50 mph speed limits. Near Boston, Route 9 becomes Huntington Avenue in an urban setting, where there are at-grade signalized intersections and a 30-35 mph speed limit. The Green Line, a light rail route of the Massachusetts Bay Transportation Authority (MBTA) shares the right-of-way with Route 9 in Boston for a short distance.

### *State Route 16*

The segment of Route 16 between Route 128 and West Newton is a competitor to the Boston Extension. Route 16 generally has two travel lanes per direction, many signalized at-grade intersections and a 30 mph speed limit. East of West Newton, the roadway is one travel lane per direction.

### *U.S. Route 20*

From Route 128 to Watertown, U.S. Route 20 has two travel lanes per direction, a 25-30 mph speed limit, and signalized intersections. East of Watertown, Route 20 becomes North Beacon Street, Brighton Avenue, and Commonwealth Avenue, all busy urban thoroughfares.

### *State Route 30*

Between Route 128 and downtown Boston, Route 30 is Commonwealth Avenue. It varies between one and two lanes per direction and has signalized intersections. The Green line tracks parallel the roadway for several miles inward to downtown Boston.

### *Soldiers Field Road/Storrow Drive*

This route, generally two lanes per direction is restricted to passenger cars only and connects Newton and Watertown with downtown Boston along the southern bank of the Charles River.

### *Memorial Drive*

This route borders the northern bank of the Charles River and parallels Soldiers Field Road/Storrow Drive. This route varies between one and two travel lanes per direction, is restricted to passenger cars only, and provides access between Boston, Cambridge, and points west.

### *Transit*

The Massachusetts Bay Transportation Authority (MBTA) operates the Boston region's subway, bus, commuter rail, and ferry routes, with some routes competing directly with the MHS (Figure 1.3 for "T" system map).

In addition to commuter rail and subway services, MBTA runs bus routes that provide another transportation alternative to travelers to the MHS. Several bus routes utilize the MHS (Boston Extension) to provide public transportation service to patrons; these include routes 500, 501, 502, 503, 504, 505, 553, 554, 555, 556, and 558. Other bus routes operate in the MHS's tunnels; these include routes 441, 442, 448, 449, 450, 455, and 459, which serve Boston's northeast communities. Another bus route that uses the MHS tunnels is Silver Line 1 (SL1); the SL1 provides service between Logan International Airport and the South Station.



### *Logan International Airport – Mass Transit Access*

The Blue and Silver lines, part of MBTA’s subway system, provide direct access between downtown Boston, South Boston, Logan International Airport, East Boston, and Revere.

MBTA has recently increased its bus frequency on the SL1 route to decrease waiting time, add more capacity, and improve reliability. This route is an important service between South Boston and Logan and was launched in 2005.

**MBTA Ridership** – In most metropolitan areas, public transportation ridership increased in 2008 due to higher fuel costs. MBTA reported a spike in ridership in the summer and fall of 2008, at a time when fuel prices increased significantly, reaching record levels, which drove more people to use transit. The short-term effects on the MHS from the higher fuel costs in 2008 were clear: lower traffic volumes, which explain the increase in public transit ridership as people leave vehicles at home and switch to mass transit. Transit ridership on the MBTA, however, declined in 2009, compared to 2008 levels, due to the economic recession. In October 2009, ridership was down by 2.5 percent compared to the previous year.

## **1.5 ORDER OF PRESENTATION**

Section 2.0 of this report presents summaries of the traffic trends and network characteristics of the region, including transaction and revenue data for the MHS and traffic volumes and travel times on other major facilities in the study area. Section 3.0 discusses the socioeconomic trends for the region and the population and employment forecasts specifically developed for this study. Section 4.0 presents the Boston MPO’s highway and transit improvement program for the Boston Metropolitan Area. Section 5.0 discusses toll elasticity and fuel price impacts on transactions, and Section 6.0 presents the 40-year forecast of toll transactions and revenue for the MHS.

## **1.6 DISCLAIMER**

The traffic and toll revenue forecasts presented in this document are based on judgments and assumptions which may differ materially from the actual results. This report is not intended nor should it be construed to constitute a guaranty of any particular outcome(s) or result(s). This report is similarly not intended nor should it be construed to represent a promise or representation with respect to any particular outcome(s) or result(s).

## 2.0 Traffic Trends and Network Characteristics

### 2.1 TRAFFIC VOLUMES, TOLL TRANSACTIONS, AND REVENUE TRENDS

This section describes current and historic traffic volumes on the MHS and other major roadways in the Boston region, including average daily and average weekday traffic volumes, and monthly, and day of the week traffic patterns. The section continues with a description of historic and current toll transactions and revenue trends. Electronic toll collection also is addressed in this section.

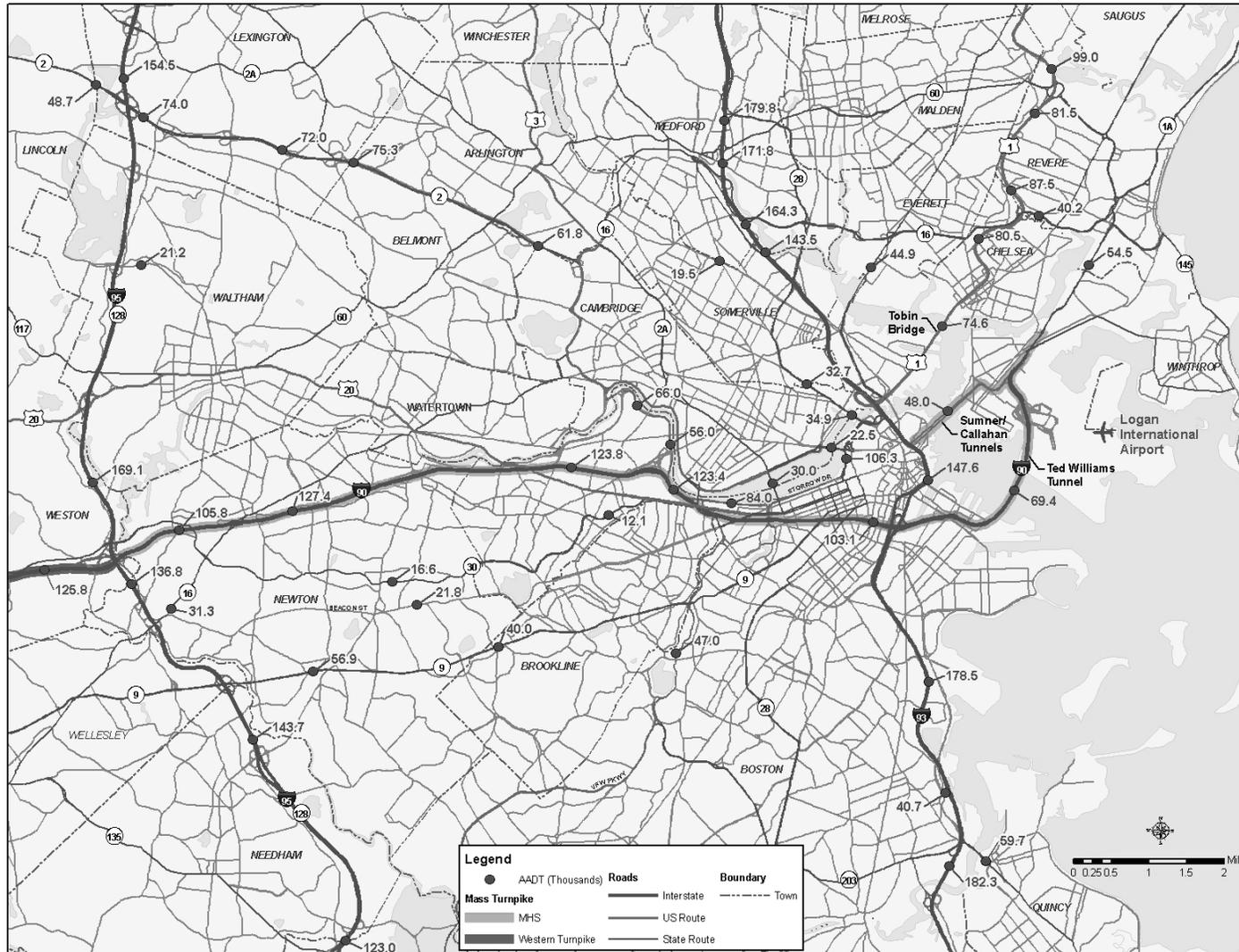
This section concludes with a description of typical travel speeds and times for the corridor based on data obtained from MPO and additional travel-time surveys of facilities parallel to the Boston Extension conducted by the consultant team.

All traffic data presented here were obtained from MassDOT and the Boston Region Metropolitan Planning Organization (MPO). It should be noted that the former MTA's fiscal year (FY) was on a calendar year (CY) basis until 2008, when it moved to the state fiscal year (FY) of July 1 through June 30. The FY 2008 audit covered the 18-month period of January 1, 2007 through June 30, 2008. Traffic and revenue data, however, is still collected and reported on a calendar year basis; therefore, for the purpose of examining trends, the data in this section is presented on a calendar year (CY) basis. When possible, some of the historical data was compiled and presented on a FY basis [for FYs 2008, 2009, and 2010 (partial)]. Tables with data by FY are included in Appendix B.

#### Regional Traffic Volumes

SR 128 which forms a ring road around north, west, and south Boston and feeds the Boston Extension carries in the range of 120,000 to 170,000 vehicles on an average day. Interstate 93 which runs north-south and directly feeds into downtown Boston carries similar type volumes. Other routes with significant volumes that parallel the Boston Extension are Route 2 which carries more than 70,000 vehicles on an average day, and Route 9 which carries volumes nearing 60,000 vehicles. Route 1 at the Tobin Bridge carries volumes in excess of 80,000 vehicles on an average day. Figure 2.1 shows average daily traffic volumes for these roads in the region.

Figure 2.1 Current Average Daily Traffic Levels

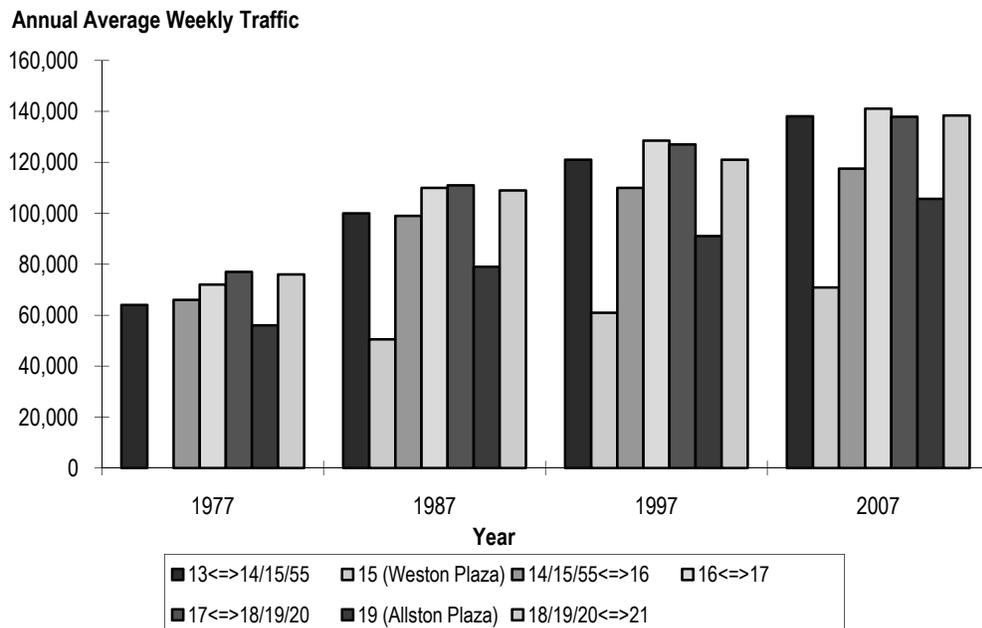


## Historic Traffic

### *Boston Extension*

Figure 2.2 displays historical AWDT from 1977 through 2007 for Interstate 90, from just west of the SR 128 interchange, eastward through Interchange 20 in Allston. Between 1977 and 1987 traffic grew significantly at an average rate of around 4 percent per year. Traffic growth reduced to an average rate of less than 2 percent during the next decade, and has further slowed to an average rate of between 1 and 1.5 percent between 1997 and 2007. The trend in these volumes shows overall slowing of traffic growth along the Boston Extension, consistent with Boston becoming relatively built out, and the facility becoming increasingly mature.

**Figure 2.2 I-90 Historic Annual Average Weekday Traffic  
1977 to 2007**



### *Boston Inner Harbor*

In 2003 the I-90 connector from South Boston to Route 1A in East Boston opened and the TWT opened to general traffic use, resulting in a 60 percent increase in traffic through the TWT as compared to 2002 levels, followed by a 40 percent increase of traffic in 2004. Previous to 2003, travel through the TWT was limited to commercial traffic only. The TWT increased its share of inner harbor traffic through 2005 (Table 2.1). The Tobin Bridge and the Sumner Tunnel both lost traffic to the TWT; with the Sumner Tunnel losing a greater amount due to its

closer proximity and that it shares common trip origins and destinations with the TWT. The ceiling panel collapse of 2006 in the TWT had a significant impact to TWT traffic, and while traffic has recovered significantly since then, it has not reached the market share of traffic across the screenline that it did in 2005. A significant portion of this can be attributed to the significant downturn in enplanements at Logan Airport which affects toll transactions across the Sumner and Ted Williams Tunnels. The Tobin Bridge has a significant traffic imbalance, with the nontolled direction having more than 50 percent more traffic than the tolled direction. The Tunnels have a more balanced traffic condition between tolled and nontolled directions, as there are no real viable nontolled options, while the Tobin Bridge users have more viable alternate routes. Average annual growth across the screenline was 5.1 percent between 2003 and 2005, reducing to 2.2 percent between 2005 and 2007. In 2008, average daily traffic across this screenline was down 2.7 percent versus 2007. AADT further decreased in 2009 compared to 2008 level, by approximately 2.5 percent.

**Table 2.1** Historic Annual Average Daily Traffic  
*Boston Inner Harbor Tunnels*

Tunnel	2003	2004	2005	2006	2007	2008	2009
Ted Williams Westbound	24,600	34,900	36,900	30,500	34,700	33,400	33,100
Ted Williams Eastbound	20,300	32,700	35,300	29,100	33,000	31,900	31,600
Sumner	23,500	18,700	18,900	24,600	23,000	21,700	21,300
Callahan	21,600	19,400	21,000	26,700	25,000	23,600	23,100
Tobin Westbound	30,800	27,700	27,200	29,100	29,500	29,500	28,600
Tobin Eastbound	44,200	44,900	42,900	45,100	45,100	45,100	42,900
Total Westbound	78,900	81,300	83,000	84,200	87,200	84,600	83,000
Total Eastbound	86,100	97,000	99,200	100,900	103,100	100,600	97,600
<b>Total ADT</b>	<b>165,000</b>	<b>178,300</b>	<b>182,200</b>	<b>185,100</b>	<b>190,300</b>	<b>185,200</b>	<b>180,600</b>
TWT as Percent of Total AADT	27.2%	37.9%	39.6%	32.2%	35.6%	35.3%	35.8%

Source: TWT WB, Sumner, and Tobin Bridge WB volumes estimated from annual toll transactions provided by Massachusetts Turnpike Authority and Massport. Relationship between nontolled and tolled direction traffic obtained from the Massachusetts Highway Department count files and applied to tolled direction ADT to estimate nontolled direction ADT.

Note: 2009 data is an average through November 2009. Nontolled relationship from 2006 applied to estimate nontolled directions for 2007 through 2009. 2006 data reflects TWT ceiling panel collapse.

## Historical Annual Toll Transactions and Toll Revenue

### *Boston Extension*

Historical toll transactions and revenues from 1966 to 2009 for the Boston Extension are shown in Figure 2.3.

In 1966, the first full year of operation for the Boston Extension, total annual toll transactions were 33.4 million. By 2009, this figure had increased to 66.2 million, representing an average annual growth of 1.6 percent. Overall toll transaction growth has been positive, with declines in individual years due to toll increases in years 1980, 1990, 2002, and 2008, recessionary periods, and the removal of tolls at Interchange 16 in the second half of 1996.

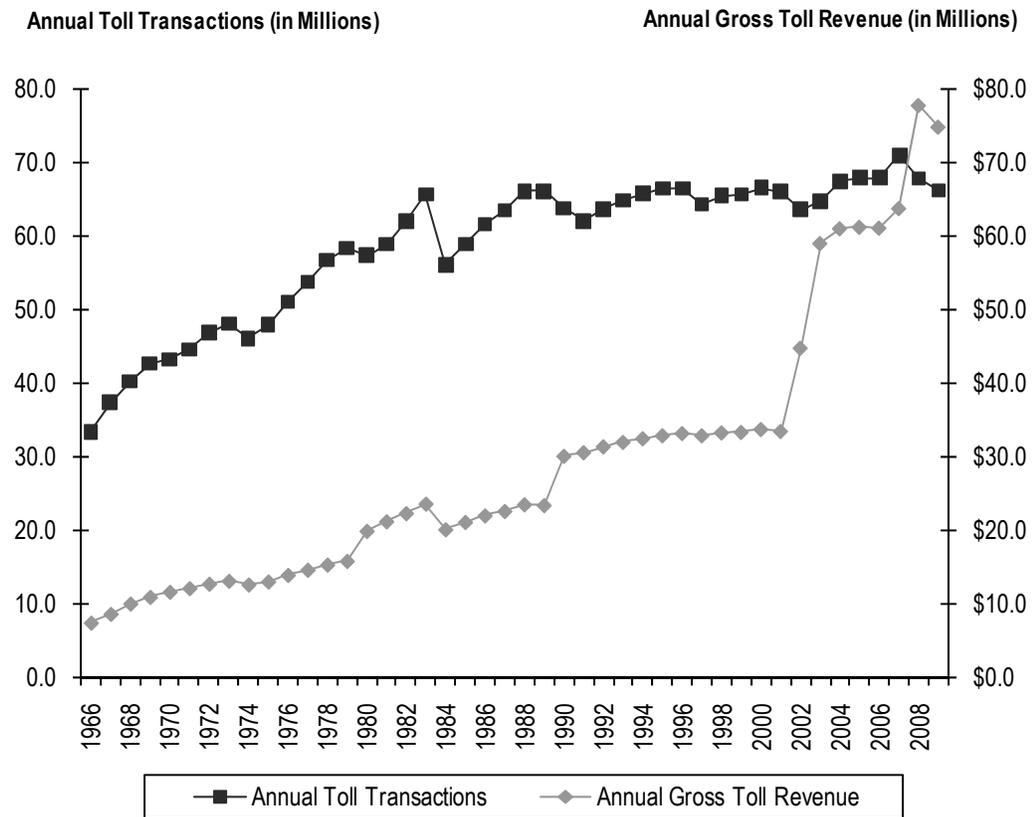
Due to the tolls removal at Interchange 16, the Boston Extension experienced a reduction of toll transactions of approximately 3.0 percent in 1997 compared to 1996 levels. The removal of tolls at Interchange 16 also had the effect of attracting traffic from the Interchange 15 toll plaza to the now toll-free interchange. Further, toll-free movement was now allowed between Interchanges 16 and 17, generating additional traffic on the Boston Extension between these two interchanges.

In 1966, toll revenue for the Boston Extension was \$7.4 million. By 2009, toll revenue had grown to \$74.9 million, an average annual growth rate of 5.5 percent reflecting the positive impact on revenues from toll increases, as well as higher traffic volumes.

The steep decline in toll transactions and revenues in 1984 is the product of an accounting change by MTA. Travelers that use the Western Turnpike as well as the Boston Extension pay their Extension toll as a surcharge at the Weston toll plaza. Toll transactions and surcharge revenues generated from vehicles going through Plaza 15 were included in Boston Extension revenue figures until 1984. Since 1984, the surcharge revenue is counted only the Western Turnpike's books, but is then transferred from the Western Turnpike to the MHS on a monthly basis. For 2009, 22.3 million surcharge transactions were processed and \$25.1 million in surcharge revenues were transferred to the MHS. These are not included in the results since 1984 as explained above.

The reduction in transactions in 2002 is reflective of the toll increase that occurred, with passenger vehicle cash toll increase from \$0.50 to \$1.00 and the FastLane increase from \$0.50 to \$0.75 on July 1, 2002. Similarly, transactions declined in 2008 due to the January toll increase of \$0.25, coupled with significant fuel price increases and the beginning of the recent economic recession. The 2006 transactions reflect the impact of the ceiling panel collapse in the Ted Williams Tunnel (TWT). The event had a significant effect on the usage of the Extension, as the first half of 2006 grew by about 3.5 percent when compared with the first half of 2005. This was then followed by a reduction of 3.5 percent during the second half of 2006 when compared with the second half of 2005. Without this event, traffic growth would most likely have looked more normal between 2005, 2006, and 2007. The events of 2008, however, brought transactions back to 2005 levels. Transactions in 2008 were about 0.1 percent lower than 2005 transactions. This declining trend continued in 2009, with transactions down by 2.1 percent, compared to 2008 levels.

**Figure 2.3 Historical Transactions and Toll Revenue – Boston Extension  
1966 to 2009**



Source: Massachusetts Turnpike Authority and March 2, 1999 MHS traffic and revenue report by URS.

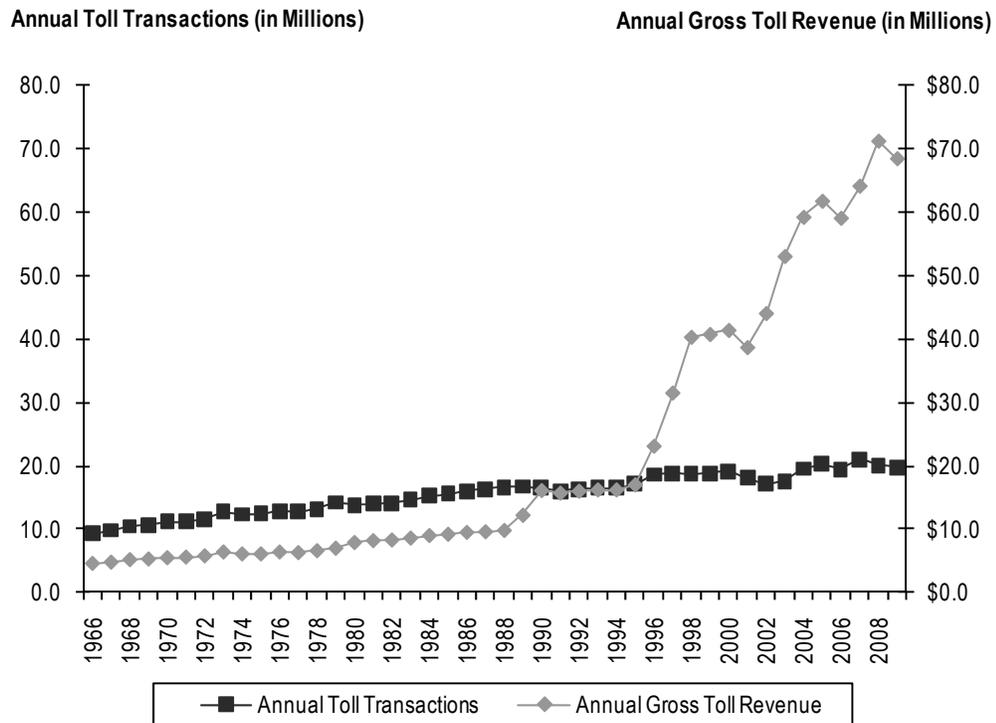
- Notes:
- 1) Toll increase October 1, 1967.
  - 2) Toll increase March 1, 1980.
  - 3) Accounting adjustment: Beginning in 1984 transactions and revenue collected at Interchange 15 of the Western Turnpike for travel on the Boston Extension was included in Western Turnpike Reports. Since October 1997 these revenues have been allocated to the MHS as a separate line item.
  - 4) Toll increase March 1, 1990.
  - 5) Reflects impact of toll removal at Interchange 16 on September 26, 1996.
  - 6) Reflects full impact of toll removal at interchange 16 on 1996.
  - 7) Transactions and revenue associated with the surcharge at Interchange 15 of the Western Turnpike are not included from this point forward.
  - 8) Includes nonrevenue vehicles.
  - 9) Toll increase July, 2002.
  - 10) Toll increase January 2008.

### Inner Harbor Tunnels

From 1966 to 2009, annual toll transactions for the Inner Harbor Tunnels increased from 9.3 million to 19.8 million, representing an average annual growth rate of 1.8 percent, slightly higher than the growth of the Boston

Extension during the same period (Figure 2.4). At the end of 1995, the TWT opened to traffic, which shifted traffic away from the Sumner Tunnel as it provide an additional direct link to East Boston and Logan International Airport. This resulted in a modest increase in traffic due to the fact that only commercial traffic was permitted at that time.

**Figure 2.4 Historical Transactions and Toll Revenue – Tunnels**  
1966 to 2009



- Notes:
- 1) 1966-1982 adjusted to be comparable to post 1983 one-way toll collection.
  - 2) One-way toll collection began May 1, 1983.
  - 3) Toll increase August 1, 1989.
  - 4) Ted Williams Tunnel opened December 15, 1995 to commercial vehicles. Taxis became a separate vehicle class in both sets of Tunnels. Commercial vehicle toll rates increase 100 percent.
  - 5) Toll increase July 10, 1997.
  - 6) Includes nonrevenue vehicles.
  - 7) Toll increase on July 1, 2002.
  - 8) Toll increase on January 1, 2008.

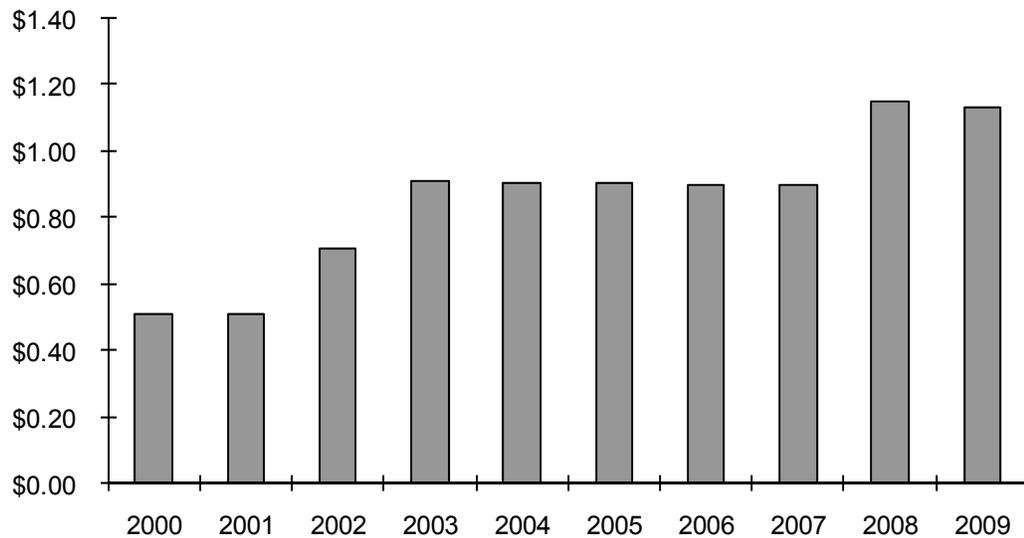
Toll revenue growth on the Inner Harbor Tunnels has significantly outpaced the growth of toll transactions, for the period 1966-2008 due to toll increases in 1989, 1997, 2002, and 2008 and the doubling of tunnel capacity with the construction of the Ted Williams Tunnel. In 1966, toll revenues for the Harbor Tunnels were \$4.6 million. By 2009, this figure had increased to \$68.5 million, a 6.5 percent average annual growth.

Traffic and revenue decreases during 2001 and 2002 were the result of the September 11, 2001 terrorist attacks, recession impacts, and the toll increase of July 1, 2002. Traffic and revenue decreases during 2006 were the result of a ceiling panel collapse in the TWT which resulted in traffic disruption, general diversion away from the Tunnel as some motorists felt uneasy about using the Tunnel, as well as free passage for travelers for 30 days. When drivers were “waved through” the toll plazas without collecting payment, these zero-toll transactions were not counted in the transaction and revenue figures. Without the ceiling panel incident, transaction and revenue growth between 2005, 2006, and 2007 would in all likelihood have been more normal in pattern. The first half of 2006 grew by about 4.9 percent when compared with 2005. This was then followed by a reduction of tolled transactions of 13.3 percent during the second half of 2006 when compared with the second half of 2005. From 2005 to 2007, the average annual percent growth has been about 1.7 percent per year. Traffic on the tunnels declined in 2008 due to various factors, as explained earlier for the Boston Extension, including the January toll increase of \$0.50, significant fuel price increases through October 2008, and economic recession that started by the end of that year. Transactions in 2008 were 1.0 percent lower compared to 2005 transactions. This declining trend continued in 2009, with transactions down by 1.2 percent, compared to 2008 levels.

### **Recent Historical Average Tolls**

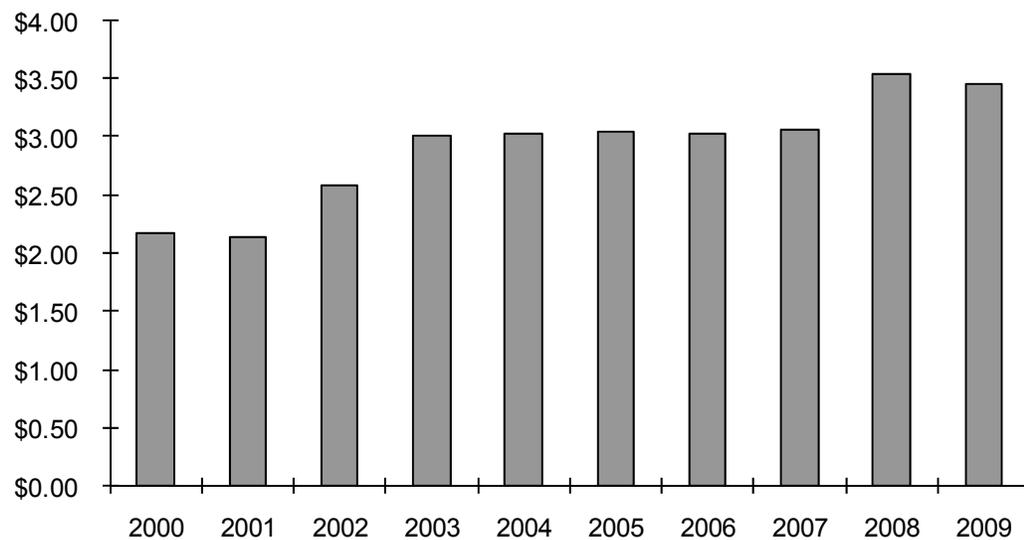
In 2000 and 2001, the average toll for Boston Extension was \$0.51 (Figure 2.5), just a penny above the passenger car toll rate of \$0.50. This emphasizes the heavily car-oriented traffic stream on this road. The toll increase on July 1, 2002 to \$1.00 included a discount for FastLane customers, so the average toll increased to \$0.90. The average toll of \$0.70 in 2003 reflects a half year at each toll rate. The average toll in 2008 has increased to \$1.15 from \$0.90 in 2007, reflecting the January 1, 2008 toll increase. The average toll rate fell in 2009 to \$1.13, as a result of higher ETC penetration and lower truck traffic.

**Figure 2.5 Recent Historical Average Tolls on the Boston Extension**



The average toll for the Tunnels was \$2.11 in 2000 on a passenger car toll of \$2.00 (Figure 2.6). When tolls were raised on July 1, 2002 to \$3.00 for passenger cars and proportionally higher for commercial vehicles, the average toll rose to \$3.00. The average toll of \$2.60 in 2002 reflects a half year at each toll rate. The average toll reflects the FastLane discount, as well as the discount for East Boston and North End residents. On January 1, 2008 the passenger car toll rate increased to \$3.50, resulting in an overall average toll of \$3.55. The average toll rate fell in 2009 to \$3.46, as a result of higher ETC penetration and lower truck traffic.

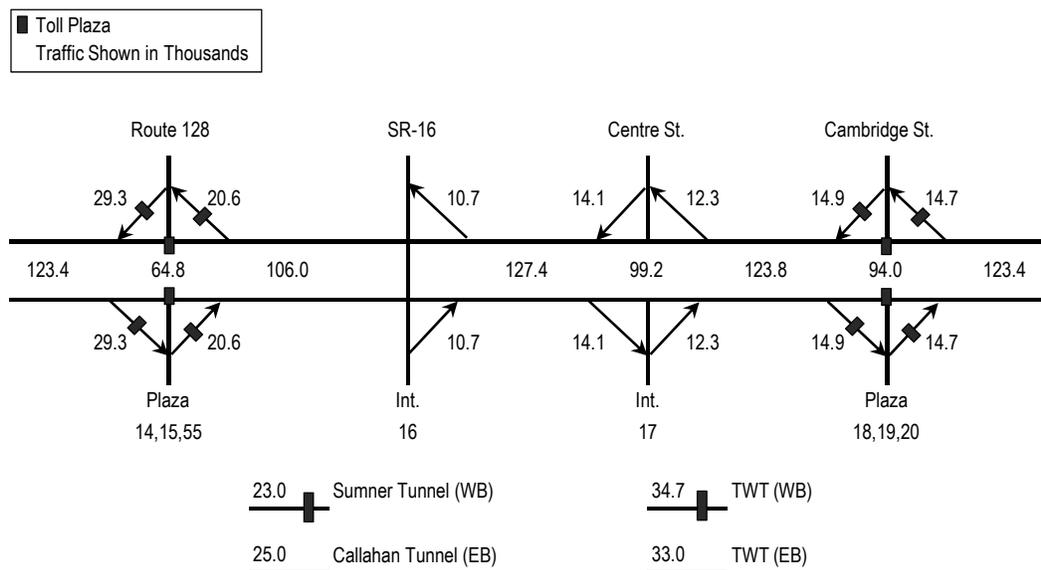
**Figure 2.6 Recent Historical Average Tunnel Tolls**



## Average Daily Traffic on the Boston Extension and Inner Harbor Tunnels in 2007

Average daily traffic for 2007 shows that traffic along the Extension to be highest east of Interchange 16 (Figure 2.7). Average daily transactions are highest at Plaza 19 at 94,000, followed by 64,800 at Plaza 15 where the surcharge for entering the Extension is collected (see surcharge explanation later in this section). Plaza 55 has over 41,000 average daily transactions, while Plaza 18 and 20 are fairly balanced with nearly 30,000 average daily transactions at each of them. Average daily traffic utilizing the tunnels also is shown, with 23,000 average daily transactions in the Sumner Tunnel and 34,700 average daily transactions in the Ted Williams Tunnel in the westbound direction. Estimates in the nontolled eastbound direction also are shown.

**Figure 2.7 2007 Average Daily Traffic**



Source: Massachusetts Turnpike Authority toll transaction data, CTPS traffic flow diagrams, and MHD.

Source: MTA toll transaction data, CTPS traffic flow diagrams, and MHD. 2007 is the most recent data available from CTPS.

## Monthly Traffic Variations - 2009 Transactions

Traffic on the MHS varies from month to month due to vacations, school and college holidays, winter storms, and national holidays. Monthly traffic variations on the Boston Extension and Tunnels are shown in Table 2.2. The Daily Index column represents the ratio of the month's average daily transactions to the annual average daily transactions. Monthly variations are modest on both the Extension and the Tunnels. In 2009, January and October were the months with lowest (0.92) and highest (1.04) average daily transactions,

respectively, for the Boston Extension. Tunnel traffic was the lowest (0.87) in January and the highest during the months of August and October (1.05).

**Table 2.2 2009 Monthly Toll Transactions**

Month	Boston Extension		Tunnels	
	Average Daily Transactions	Daily Index	Average Daily Transactions	Daily Index
January	168,500	0.92	47,500	0.87
February	177,800	0.97	49,900	0.92
March	182,000	1.00	52,900	0.97
April	189,100	1.03	54,100	0.99
May	188,700	1.03	55,500	1.02
June	189,300	1.03	57,000	1.05
July	181,100	0.99	56,800	1.04
August	178,100	0.97	57,000	1.05
September	187,400	1.02	56,100	1.03
October	189,900	1.04	57,000	1.05
November	184,300	1.01	54,800	1.01
December	177,800	0.97	53,200	0.98
<b>Average Day</b>	<b>182,900</b>	<b>1.00</b>	<b>54,400</b>	<b>1.00</b>

Source: MassDOT – 2009 Actual Reported Transactions.

Note: Daily Index=Ratio of individual month's average traffic to average daily traffic for the year.  
FY 2009 data is included in Appendix B.

### Daily Traffic Variations - 2009 Transactions

Daily traffic variations for 2009 are shown in Table 2.3 for the Boston Extension and the Tunnels. The daily index provides a comparison of the day's daily transactions to the average daily transactions.

The Boston Extension's days with the lowest and highest daily transactions were Sundays and Thursdays, respectively. Saturdays and Fridays were the days with lowest and highest transaction volumes, respectively, for the Tunnels. The Tunnels on Sundays have a higher Daily Index than the Boston Extension, due to passenger traffic from/to Logan International Airport. Because Logan International Airport is an important generator of traffic for the tunnels, the traffic index on weekends is not as low as it is on the Boston Extension.

**Table 2.3 2009 Daily Transactions**

Day	Boston Extension		Tunnels	
	Average Daily Transactions	Daily Index	Average Daily Transactions	Daily Index
Monday	192,800	1.05	57,400	1.05
Tuesday	201,200	1.10	55,600	1.02
Wednesday	203,200	1.11	56,700	1.04
Thursday	208,700	1.14	59,300	1.09
Friday	206,500	1.12	60,200	1.10
Saturday	144,600	0.79	45,800	0.84
Sunday	128,700	0.70	46,600	0.86
<b>Average Day</b>	<b>183,700</b>		<b>54,500</b>	
Average Weekday	202,500		57,800	
Average Weekend Day	136,700		46,200	
<b>Weekend to Weekday Ratio</b>	<b>0.68</b>		<b>0.80</b>	

Source: MassDOT – Daily Traffic and Revenue Counts 2009.

Note: Holidays and snow days were removed from the data. Daily Index = Ratio of individual day’s average traffic to average daily traffic for the week. FY 2009 data is included in Appendix B.

## Vehicle Classification

### *Boston Extension*

The Boston Extension can be characterized as a commuter route. Traffic from heavy commercial vehicles is relatively low, representing a slightly more than 2 percent of overall traffic (Table 2.4).

Two-axle passenger vehicles includes passenger cars, light trucks, vans, and motorcycles, while two-axle commercial vehicles includes any two-axle vehicle with commercial license plates, e.g., taxis, two-axle limousines. Together, these account for over 97 percent of all vehicle classifications for the period 2002-2009. Passenger vehicles, on average, accounted for 98 percent of two-axle vehicles for the eight-year period. During this period, two-axle commercial and passenger vehicles experienced an annual growth rate of 0.7 percent. When subdividing Class 1 into passenger and commercial vehicles, passenger vehicles’ grew at 0.6 percent on average and commercial vehicles’ grew at a much higher rate of 2.0 percent on average. Trucks have experienced a decline of 1.6 percent per year on average. Nonrevenue transactions account for less than 0.5 percent of transactions and have decreased every year since 2004.

**Table 2.4 Vehicle Classification**  
*Boston Extension (2002 to 2009)*

Class	Description	2002	2003	2004	2005	2006	2007	2008	2009	AAPC 02-09
1	Two-Axle Noncommercial Vehicle	60,461,232	61,568,669	64,087,880	64,416,259	64,538,665	67,801,508	64,439,742	63,223,434	0.64%
2	Two-Axle Commercial Vehicle	1,178,605	1,357,297	1,522,361	1,533,806	1,414,261	1,252,283	1,454,185	1,356,680	2.03%
3	Three-Axle Vehicle	523,018	502,155	496,075	518,927	543,080	562,470	571,591	520,569	-0.07%
4	Four-Axle Vehicle	224,484	185,964	160,651	188,501	190,358	200,848	188,201	165,659	-4.25%
5	Five-Axle Vehicle	738,775	737,367	713,484	743,144	763,772	761,287	753,049	640,597	-2.02%
6	Six-Axle Vehicle	16,214	14,810	19,161	24,888	35,505	27,742	28,829	20,318	3.28%
7	Seven-Axle Vehicle	1,349	2,204	3,371	3,219	2,552	1,584	1,901	1,430	0.84%
8	Eight-Axle Vehicle	943	1,016	3,024	1,625	1,093	2,176	539	470	-9.47%
9	Nine-Axle or More Vehicle	1,768	3,638	7,872	1,140	373	288	248	489	-16.77%
10	Nonrevenue	414,084	433,945	465,784	436,087	366,817	343,792	322,709	296,406	-4.66%
	<b>Total</b>	<b>63,560,472</b>	<b>64,807,065</b>	<b>67,479,663</b>	<b>67,867,596</b>	<b>67,856,476</b>	<b>70,953,978</b>	<b>67,760,994</b>	<b>66,226,052</b>	<b>0.59%</b>
<b>Subtotals</b>										
	Two-Axle Vehicle	61,639,837	62,925,966	65,610,241	65,950,065	65,952,926	69,053,791	65,893,927	64,580,114	0.67%
	Trucks	1,506,551	1,447,154	1,403,638	1,481,444	1,536,733	1,556,395	1,544,358	1,349,532	-1.56%
	Nonrevenue	414,084	433,945	465,784	436,087	366,817	343,792	322,709	296,406	-4.66%
<b>Percent Share</b>										
	Two-Axle Vehicle	97.00%	97.10%	97.20%	97.20%	97.20%	97.30%	97.24%	97.51%	
	Trucks	2.40%	2.20%	2.10%	2.20%	2.30%	2.20%	2.28%	2.04%	
	Nonrevenue	0.70%	0.70%	0.70%	0.60%	0.50%	0.50%	0.48%	0.45%	
	<b>Total</b>	<b>100.00%</b>								

Source: MassDOT – Traffic by Class Reports.

Note: AAPC = average annual percent change  
 Data for FYs 2008-2010 (partial) is included in Appendix B.

### *Inner Harbor Tunnels*

The predominant vehicle class on the Harbor Tunnels is two-axle passenger and commercial vehicles (Table 2.5). Between 2002 and 2009, these two-axle vehicles accounted for approximately 88 percent of all traffic, excluding Resident Discount vehicles, and experienced an annual growth rate of 2.2 percent. Passenger vehicles, excluding Resident Discount vehicles, represent approximately 74 percent of all two-axle vehicles and increased at an annualized rate of 3.0 percent in the eight-year period. Two-axle commercial vehicles' average annual growth rate during this same period was -0.1 percent, which is mainly indicative of the decline in commercial vehicle transactions over the last two years.

During this eight-year period, heavy trucks accounted for less than 2.0 percent of all toll transactions, with an annual growth rate of 2.2 percent. Resident Discount vehicles' share of overall traffic for the same period ranged from 8.6 to 10.0 percent, with transactions in this category declining since 2004, although they increased by 5.3 percent in 2009, compared to 2008 levels. Nonrevenue vehicles represented less than 1.0 percent of the overall traffic for the eight-year period.

**Table 2.5 Vehicle Classification  
Tunnels**

Class	Description	2002	2003	2004	2005	2006	2007	2008	2009	AAPC 02-09
1	Two-Axle Noncommercial Vehicle	10,710,519	11,257,714	12,851,470	13,315,745	12,550,888	13,634,415	13,159,031	13,228,096	3.06%
2	Two-Axle Commercial Vehicle and Taxis	4,261,419	4,065,565	4,364,680	4,638,297	4,640,157	5,086,383	4,695,300	4,209,535	-0.17%
3	Three-Axle Vehicle	170,220	149,135	175,441	180,742	167,742	195,418	215,767	231,551	4.49%
4	Four-Axle Vehicle	52,020	47,118	55,758	51,589	39,369	44,335	47,198	42,878	-2.72%
5	Five-Axle Vehicle	100,196	98,613	122,927	128,877	96,806	106,869	110,680	98,158	-0.29%
6	Six-Axle Vehicle	2,922	3,075	4,669	6,293	6,899	7,709	7,304	5,461	9.34%
7	Seven-Axle Vehicle	504	4,182	891	1,045	647	501	478	358	-4.77%
9	Resident Program	1,665,505	1,763,170	1,855,287	1,841,922	1,795,002	1,817,929	1,735,012	1,827,777	1.34%
10	Nonrevenue	169,269	168,716	174,534	181,563	155,907	142,978	132,366	129,836	-3.72%
	<b>Total</b>	<b>17,132,574</b>	<b>17,557,288</b>	<b>19,605,657</b>	<b>20,346,073</b>	<b>19,453,417</b>	<b>21,036,537</b>	<b>20,103,136</b>	<b>19,773,650</b>	<b>2.07%</b>
<b>Subtotals</b>										
	Two-Axle Vehicle	14,971,938	15,323,279	17,216,150	17,954,042	17,191,045	18,720,798	17,854,331	17,437,631	2.20%
	Trucks	325,862	302,123	359,686	368,546	311,463	354,832	381,427	378,406	2.16%
	Resident Discount	1,665,505	1,763,170	1,855,287	1,841,922	1,795,002	1,817,929	1,735,012	1,827,777	1.34%
	Nonrevenue	169,269	168,716	174,534	181,563	155,907	142,978	132,366	129,836	-3.72%
<b>Percent Share</b>										
	Two-Axle Vehicle	87.40%	87.30%	87.80%	88.20%	88.40%	89.00%	88.81%	88.19%	
	Trucks	1.90%	1.70%	1.80%	1.80%	1.60%	1.70%	1.90%	1.91%	
	Resident Discount	9.70%	10.00%	9.50%	9.10%	9.20%	8.60%	8.63%	9.24%	
	Nonrevenue	1.00%	1.00%	0.90%	0.90%	0.80%	0.70%	0.66%	0.66%	
	<b>Total</b>	<b>100.00%</b>								

Source: MassDOT – Traffic by Class Reports.

Note: AAPC = average annual percent change  
Data for FYs 2008-2010 (partial) is included in Appendix B.

## 2009 Toll Transaction and Toll Revenue by Toll Plaza

Toll transactions and toll revenue by toll plaza in 2009 are shown in Table 2.6. The overall average toll for Extension transactions in 2009 was \$1.13 reflecting the mix of passenger car cash/E-Zpass payment traffic which was assessed a toll of \$1.25, FastLane passenger vehicle traffic which was assessed a toll of \$1.00, nonrevenue transactions, and commercial vehicle traffic which is assessed proportionally higher toll rates. The Tunnels have an overall average toll rate of \$3.46, reflecting a mixture of the \$3.50 cash/E-Zpass passenger car toll rate, the \$3.00 FastLane passenger vehicle toll rate, the \$0.40 resident discount toll rate, nonrevenue transactions, and commercial traffic which is tolled at proportionally higher toll rates. Transactions and toll revenue from the surcharge transfer from the Western Turnpike to the MHS also shown. Violation revenue (V-Tolls) is shown as well.

**Table 2.6 2009 Toll Transactions and Toll Revenue by Plaza**

Toll Plaza	Toll Transactions	Average Toll	Toll Revenue
<b><i>Boston Extension</i></b>			
55	13,513,782	\$1.11	\$15,067,219
18	10,157,077	\$1.12	11,406,176
19	32,956,618	\$1.13	37,339,123
20	9,598,575	\$1.16	11,105,981
<b>Extension Total</b>	<b>66,226,052</b>	<b>\$1.13</b>	<b>\$74,918,498</b>
<b><i>Tunnels</i></b>			
Sumner	7,772,180	\$3.21	24,912,695
TWT	12,001,470	\$3.63	43,560,973
<b>Tunnels Total</b>	<b>19,773,650</b>	<b>\$3.46</b>	<b>\$68,473,668</b>
<b><i>MHS Total</i></b>			
I/C 15 Surcharge	22,317,388	\$1.13	25,110,757
V-Toll Charges			2,080,083
<b>MHS Total</b>			<b>\$170,583,006</b>

Source: MassDOT.

Note: MHS total revenue does not include accounting adjustments.  
FY 2009 data is included in Appendix B.

## Interchange 15 Surcharge Calculation

Vehicles that are traveling between the Western Turnpike and the Boston Extension are assessed a “surcharge” when they either surrender or pick up their toll ticket at Interchange 15 for Western Turnpike travel (or do so “virtually” when using FastLane or E-Zpass. This surcharge is the toll paid for traveling on

the Extension west of Plazas 18, 19 for traffic to or from the Western Turnpike. Revenue from this surcharge is transferred to the MHS from the Western Turnpike on a monthly basis.

To illustrate the surcharge calculation, the additional toll charge for traveling eastbound between the New York border (Interchange 1) and Interchange 14 and between Interchange 1 and Interchange 15 (SR 128) is shown in Table 2.7 for the year 2008. Actual transactions by vehicle class also are shown. The weighted average surcharge is calculated by multiplying the percent of each class by the toll surcharge. The overall calculated average surcharge toll is \$1.25 for 2008. This weighed surcharge of \$1.25 is then applied to all vehicles entering or exiting at Interchange 15 (excluding those transactions that are nonrevenue or carpool). A \$0.25 reduction is made for passenger vehicles using FastLane to reflect the discounted toll for those users.

### **2009 versus 2008 Transactions and Toll Revenue**

Table 2.8 displays monthly transactions, toll revenue, and average toll for the Extension and Tunnels for calendar years 2008 and 2009. It should be noted that:

- Tolls increased on the MHS on January 1, 2008.
- February 2008 had 29 days versus 28 days in 2009, which is expected to account for a 4.0 percent decline in MHS traffic if all other things are equal.
- The economic recession that started in 2008 has significantly impacted transactions in 2009, even after fuel prices returned to under \$3 per gallon by October 2008.

Taking the above into consideration (and after adjusting for the extra day in February), overall systemwide traffic is down 2.0 percent and 1.4 percent over calendar year 2008 levels, for the Extension and Tunnels, respectively. However, data for the months of July through December 2009 show early signs of recovery. Transaction increases on the Extension were modest in July and August (0.1 and 0.4 percent, respectively), followed by a decline in transactions in September and October, compared to the previous year, but the declines were not as high as in the first half of calendar year 2009. In November and December 2009, transactions on the Extension increased by 1.9 percent and 4.2 percent, respectively. On the Tunnels, transactions have been increasing at a faster rate than the Extension since July 2009.

**Table 2.7 Interchange 15 Surcharge Calculation**  
2008

Vehicle Class	Vehicle Description	Interchange 1-14 Toll Charge	Interchange 1-15 Toll Charge	MHS Surcharge	Interchange 15 Transaction by Vehicle Class	Percent Transaction by Vehicle Class	Weighted Average Surcharge
1	Two-Axle, Four Tire (Car/Light Truck)	\$2.70	\$3.85	\$1.15	11,111,401	95.17%	\$1.09
2	Two-Axle, Four-Tire with Trailer	5.70	8.00	2.30	9,848	0.08	0.00
3	Five- to Nine-Axle Vehicle with Dual Tires	15.15	19.25	4.10	221,920	1.90	0.08
5	Two-Axle, Six-Tire Vehicle	8.80	11.50	2.70	178,525	1.53	0.04
6	Three-Axle Vehicle	11.25	14.25	3.00	54,583	0.47	0.01
7	Four-Axle Vehicle	13.95	17.00	3.05	25,542	0.22	0.01
8	Bus	7.15	8.75	1.60	71,716	0.61	0.01
9	Tandem Trailer Unit	29.50	35.25	5.75	1,285	0.01	0.00
<b>Total</b>					<b>11,674,820</b>	<b>100.00</b>	<b>\$1.25</b>

Source: MassDOT; ticket system toll rates for 2008 and 2007 “Origin-Destination by Class Report.”

Notes: MHS surcharge reflects difference in toll between Interchange 14 (exiting to Route 128) and Interchange 15 (continuing travel onto Boston Extension). The weighted average surcharge can be applied to all vehicles entering or exiting at Interchange 15 (excluding nonrevenue, carpool). A 25 cent deduction is made for all Class 1 FastLane transactions to reflect discounted toll.

**Table 2.8 2009 versus 2008 Toll Transactions and Toll Revenue by Month**

Month	Toll Transactions			Toll Revenue			Average Toll		
	2008	2009	Percent Change	2008 (Dollars)	2009 (Dollars)	Percent Change	2008 (Dollars)	2009 (Dollars)	Percent Change
<b>Boston Extension</b>									
January	5,519,797	5,012,039	-9.2%	6,333,613	5,701,418	-10.0%	1.15	1.14	-0.9%
February	5,268,526	4,904,223	-6.9%	6,040,721	5,557,837	-8.0%	1.15	1.13	-1.2%
March	5,830,713	5,512,302	-5.5%	6,674,466	6,230,412	-6.7%	1.14	1.13	-1.3%
April	5,903,935	5,650,435	-4.3%	6,779,977	6,395,176	-5.7%	1.15	1.13	-1.4%
May	6,044,486	5,804,814	-4.0%	6,960,449	6,574,404	-5.5%	1.15	1.13	-1.6%
June	5,798,167	5,738,387	-1.0%	6,680,633	6,496,568	-2.8%	1.15	1.13	-1.7%
July	5,634,641	5,655,532	0.4%	6,512,707	6,417,071	-1.5%	1.16	1.13	-1.8%
August	5,550,527	5,553,963	0.1%	6,425,689	6,313,145	-1.8%	1.16	1.14	-1.8%
September	5,689,641	5,628,847	-1.1%	6,545,288	6,361,542	-2.8%	1.15	1.13	-1.8%
October	6,018,436	5,948,223	-1.2%	6,910,569	6,707,969	-2.9%	1.15	1.13	-1.8%
November	5,344,727	5,443,998	1.9%	6,100,426	6,120,794	0.3%	1.14	1.12	-1.5%
December	5,157,398	5,373,289	4.2%	5,875,509	6,042,163	2.8%	1.14	1.12	-1.3%
<b>Total</b>	<b>67,760,994</b>	<b>66,226,052</b>	<b>-2.3%</b>	<b>77,840,046</b>	<b>74,918,499</b>	<b>-3.8%</b>	<b>1.15</b>	<b>1.13</b>	<b>-1.5%</b>
<b>Tunnels</b>									
January	1,571,531	1,437,340	-8.5%	5,552,556	4,978,964	-10.3%	3.53	3.46	-2.0%
February	1,522,647	1,389,852	-8.7%	5,406,472	4,800,820	-11.2%	3.55	3.45	-2.7%
March	1,721,301	1,613,355	-6.3%	6,133,669	5,603,123	-8.6%	3.56	3.47	-2.5%
April	1,723,964	1,620,336	-6.0%	6,151,708	5,607,243	-8.9%	3.57	3.46	-3.0%
May	1,799,635	1,721,400	-4.3%	6,420,781	5,962,077	-7.1%	3.57	3.46	-2.9%
June	1,784,140	1,724,016	-3.4%	6,384,447	5,973,071	-6.4%	3.58	3.46	-3.2%
July	1,759,165	1,774,237	0.9%	6,233,407	6,129,171	-1.7%	3.54	3.45	-2.5%
August	1,757,576	1,775,579	1.0%	6,221,428	6,138,253	-1.3%	3.54	3.46	-2.3%
September	1,648,027	1,685,177	2.3%	5,857,393	5,861,652	0.1%	3.55	3.48	-2.1%
October	1,739,321	1,785,208	2.6%	6,177,475	6,245,454	1.1%	3.55	3.50	-1.5%
November	1,543,909	1,626,422	5.3%	5,401,681	5,630,699	4.2%	3.50	3.46	-1.0%
December	1,531,920	1,620,728	5.8%	5,324,455	5,543,142	4.1%	3.48	3.42	-1.6%
<b>Total</b>	<b>20,103,136</b>	<b>19,773,650</b>	<b>-1.6%</b>	<b>71,265,471</b>	<b>68,473,669</b>	<b>-3.9%</b>	<b>3.54</b>	<b>3.46</b>	<b>-2.3%</b>

Source: MassDOT.

Revenues are down even more than transactions – about 1.8 times on a percentage basis than transactions. This is true even after the toll increase in January 2008, and is evidenced by a decrease in the average toll by about 1.5 percent on the Extension and 2.3 percent on the Tunnels for calendar year 2009, compared to last year. This can be explained by three factors:

1. A 12.6 percent decrease percent in truck traffic compared to an almost 2.0 percent decline in passenger car traffic on the Extension;
2. A decrease of 10 percent of commercial two-axle vehicles on the Tunnels compared to a 0.4 percent decline in passenger vehicles; and
3. An increase in market share of electronic toll collection (FastLane and E-Zpass) compared to 2008 with accompanying lower toll rates (see Table 2.9).

**Table 2.9 Electronic Toll Collection Market Share for 2008 and 2009**

	2008	2009	Percentage Point Difference
<b>Extension</b>			
January	68.4%	73.7%	5.3%
February	68.6%	73.7%	5.1%
March	68.5%	74.4%	5.9%
April	68.8%	74.4%	5.6%
May	68.3%	73.9%	5.7%
June	68.1%	74.4%	6.3%
July	67.4%	73.4%	6.0%
August	66.6%	73.2%	6.5%
September	70.2%	75.4%	5.3%
October	71.3%	76.3%	5.0%
November	71.5%	76.9%	5.5%
December	72.6%	77.5%	4.9%
<b>Tunnels</b>			
January	50.0%	62.4%	12.4%
February	50.3%	62.9%	12.6%
March	49.5%	63.1%	13.6%
April	49.7%	62.8%	13.1%
May	48.9%	61.9%	13.0%
June	51.9%	62.1%	10.2%
July	50.7%	60.7%	10.0%
August	50.8%	61.0%	10.1%
September	58.2%	64.3%	6.1%
October	60.9%	65.7%	4.8%
November	61.1%	66.1%	5.0%
December	60.5%	64.7%	4.2%
<b>MHS</b>			
January	64.3%	71.2%	6.9%
February	64.5%	71.3%	6.8%
March	64.2%	71.9%	7.7%
April	64.5%	71.8%	7.3%
May	63.8%	71.2%	7.4%
June	64.3%	71.6%	7.3%
July	63.5%	70.4%	7.0%
August	62.8%	70.2%	7.4%
September	67.5%	72.9%	5.4%
October	69.0%	73.9%	4.9%
November	69.1%	74.4%	5.3%
December	69.8%	74.5%	4.7%

Source: Cambridge Systematics Analysis of MassDOT data (Traffic and Revenue by Plaza, 2008 and 2009).

Some of the factors driving the increase in electronic toll collection include: 1) mandatory use of electronic toll collection for taxis and commercial vehicles using the tunnels; 2) additional availability of FastLane tags at eight branches of the Registry of Motor Vehicles; 3) more aggressive marketing; and 4) elimination of FastLane upfront fee<sup>3</sup> (starting in February 2009). In addition, passenger cars with FastLane receive a \$0.25 discount on tolls paid on the Boston Extension and a \$0.50 discount on the Tunnels. Recent transaction data shows that while manual collection transactions in 2009 continue to decline, electronic toll transactions are on the rise, which results in a lower average toll due to FastLane toll discounts.

Table 2.10 compares transactions, revenue, and average tolls by toll plaza for calendar year 2009 and 2008. Plaza 19, a mainline plaza of the Boston Extension has had the smallest reduction in traffic in 2009. The mainline tends to be less sensitive to toll increases since it handles those trips that are heading to Logan, downtown Boston, or beyond, where the alternative routes are not as feasible as a trip that has an origin or destination within the Extension corridor. Traffic on both the Sumner Tunnel and TWT is down compared to 2008 traffic levels.

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<sup>3</sup> In the past, FastLane users were charged an upfront fee of \$25.95 per transponder. Starting in February 2009, MTA began providing FastLane transponders free of charge. The new policy resulted in more than 250,000 transponders being given away since February 2009, about a 23 percent increase in FastLane transponders over nine months.

**Table 2.10 Comparison of 2008 and 2009 Toll Transactions and Revenue by Tolling Location**  
*January through December*

Location	Toll Transactions			Toll Revenue			Average Toll		
	2008	2009	Percent Change	2008 (Dollars)	2009 (Dollars)	Percent Change	2008 (Dollars)	2009 (Dollars)	Percent Change
<b><i>Boston Extension</i></b>									
55	14,080,987	13,513,782	-4.0%	15,927,640	15,067,219	-5.4%	1.13	1.11	-1.4%
18	10,299,252	10,157,077	-1.4%	11,747,992	11,406,176	-2.9%	1.14	1.12	-1.6%
19	33,337,844	32,956,618	-1.1%	38,301,207	37,339,123	-2.5%	1.15	1.13	-1.4%
20	10,042,911	9,598,575	-4.4%	11,863,207	11,105,981	-6.4%	1.18	1.16	-2.0%
Total	67,760,994	66,226,052	-2.3%	77,840,046	74,918,498	-3.8%	1.15	1.13	-1.5%
<b><i>Tunnels</i></b>									
Sumner (30)	7,936,493	7,772,180	-2.1%	26,156,018	24,912,695	-4.8%	3.30	3.21	-2.7%
TWT (31,37)	12,166,643	12,001,470	-1.4%	45,109,454	43,560,973	-3.4%	3.71	3.63	-2.1%
Total	20,103,136	19,773,650	-1.6%	71,265,472	68,473,668	-3.9%	3.54	3.46	-2.3%
<b>MHS Total</b>	<b>87,864,130</b>	<b>85,999,702</b>	<b>-2.1%</b>	<b>149,105,518</b>	<b>143,392,166</b>	<b>-3.8%</b>	<b>1.70</b>	<b>1.67</b>	<b>-1.7%</b>

Source: MassDOT.

## Electronic Toll Collection Trends

FastLane is MTA's electronic toll collection (ETC) program and is operational on the entire Massachusetts Turnpike. The system was implemented in 1998 and has over 1.3 million transponders in circulation and approximately 876,000 FastLane accounts. FastLane is interoperable with the E-Zpass system, the ETC program comprised of 24 toll agencies, including MTA, in 13 states. Collectively, E-Zpass has over 19 million transponders in operation,<sup>4</sup> making it the largest ETC system nationwide. E-Zpass transactions on the MHS have accounted for approximately 21 percent of all ETC transactions in 2008.

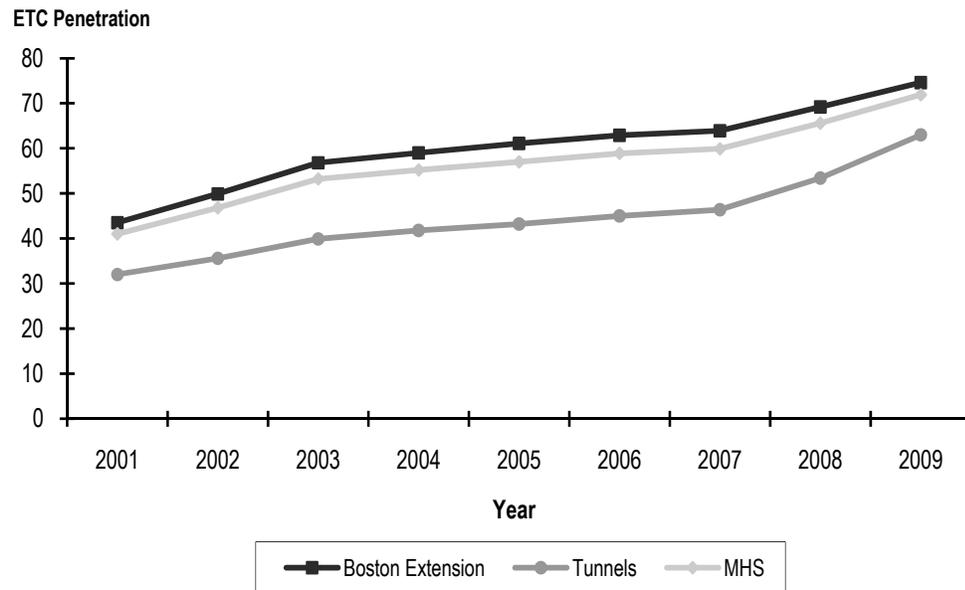
Since its implementation, FastLane has proven to be popular among customers because of convenience of use, as there is no need for stopping to pay the toll or search for cash. In addition, reduced tolls for FastLane customers, has enticed customers to sign up for FastLane accounts.

The Boston Extension has higher ETC usage than the Tunnels, primarily due to differences in trip purposes, with the Extension serving a more commuting population, and the Tunnels serving significant travel to and from Logan which would include rental cars and passengers from out of state (Figure 2.8). ETC market share on the Boston Extension has increased from 43.5 percent in 2001 to almost 75 percent this year. Similar increases have been in evidence on the Tunnels, with about two-thirds of customers using ETC in 2009.

In 2002, a discount was initiated for FastLane customers on the MHS (but not for E-Zpass customers). The result was an increase in ETC market share. When tolls were increased in 2008, the market share increased slightly again. In addition, by October 2009 ETC became mandatory for all taxis and commercial drivers using the tunnels, which led to a significant jump in ETC share in the tunnels. In February 2009, the former MTA began distributing FastLane transponders free of charge, prompting another wave of increases in ETC share.

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<sup>4</sup> E-Zpass Interagency Group, data through June 2009. Available at <http://www.E-Zpassiag.com/> (Last accessed January 6, 2010).

**Figure 2.8 Electronic Toll Collection Penetration on MHS Components**

## 2.2 TRAVEL TIMES AND SPEEDS

To understand the travel-time advantages that the MassPike offers over alternative nontolled routings, we obtained existing travel-time and speed data<sup>5</sup> on the MHS, as well as other routes that have a direct impact on MHS' traffic. We supplemented the existing data with new travel-time information on routes not included in the existing data.

### Travel Times and Speeds on I-90

Overall average speeds on I-90 during these peak periods are slightly higher than 40 mph (Tables 2.11 and 2.12). Individual section speeds indicate that the slowest speeds are in the vicinity of the tolling locations (Interchange 20) and the SR 128 Interchange (Interchange 15). On average, it takes about 22 minutes to travel between Logan and the SR 128 interchange.

<sup>5</sup> Speeds and Travel Times on Limited-Access Highways in the Boston Metropolitan Region 2004-2007. Boston Regional Metropolitan Organization.

**Table 2.11 I-90 Peak-Period Travel-Time and Speed Averages,  
Morning Peak Period (Eastbound)**  
*6:00 to 10:00 a.m.*

From	To	Time (mm:ss)	Speed (mph)
Exit 14 I-95/SR 128, Weston	Interchange 15, Weston Plaza	2:18	18
Interchange 15, Weston Plaza	Weston/Newton	0:49	9
Weston/Newton	Exit 16, Route 16, Newton (On-Ramp)	3:33	38
Exit 16, Route 16, Newton (On-Ramp)	Shaw's Market, Newton	1:39	35
Shaw's Market, Newton	Exit 17, Newton (Off-Ramp)	1:15	53
Exit 17, Newton (Off-Ramp)	Newton Corner (On-Ramp)	0:46	47
Newton Corner (On-Ramp)	Exit 18, Boston	4:19	46
Exit 18, Boston	Interchange 19, Allston Plaza	0:36	30
Interchange 19, Allston Plaza	Exit 22, Boston	3:09	46
Exit 22, Boston	Exit 25, Boston	2:01	45
Exit 25, Boston	TWT	0:52	49
TWT	Exit 26, Logan Airport	1:32	47
<b>Total Average Travel Time and Speed</b>		<b>22:48</b>	<b>41</b>

Source: Boston MPO.

**Table 2.12 I-90 Peak-Period Travel Time and Speed Averages,  
Evening Peak Period (Westbound)**  
*3:00 to 7:00 p.m.*

From	To	Time (mm:ss)	Speed (mph)
Logan Airport (Toll Plaza)	Exits 25/24, Boston	2:34	41
Exits 25/24, Boston	Bus/2+ Vehicles Off-Ramp, Boston	1:15	48
Bus/2+ Vehicles Off-Ramp, Boston	Artery On-Ramp, Boston	0:23	31
Artery On-Ramp, Boston	Arlington Street, On-Ramp, Boston	0:36	50
Arlington Street, On-Ramp, Boston	Prudential/Copley, On-Ramp, Boston	0:37	50
Prudential/Copley, On-Ramp, Boston	Exit 20 (Brighton/Cambridge), Boston	2:42	49
Exit 20 (Brighton/Cambridge), Boston	Interchange 19 (Allston Plaza), Boston	0:55	14
Interchange 19 (Allston Plaza), Boston	Exit 17, Newton	5:19	37
Exit 17, Newton	Newton Corner, On-Ramp, Newton	0:59	34
Newton Corner, On-Ramp, Newton	Exit 16, Route 16, Newton	2:59	49
Exit 16, Route 16, Newton	Interchange 15 (Weston Plaza)	2:25	45
Interchange 15 (Weston Plaza)	Route 128/local On-Ramp, Weston	0:51	43
<b>Total Average Travel Time and Speed</b>		<b>21:34</b>	<b>42</b>

Source: Boston MPO.

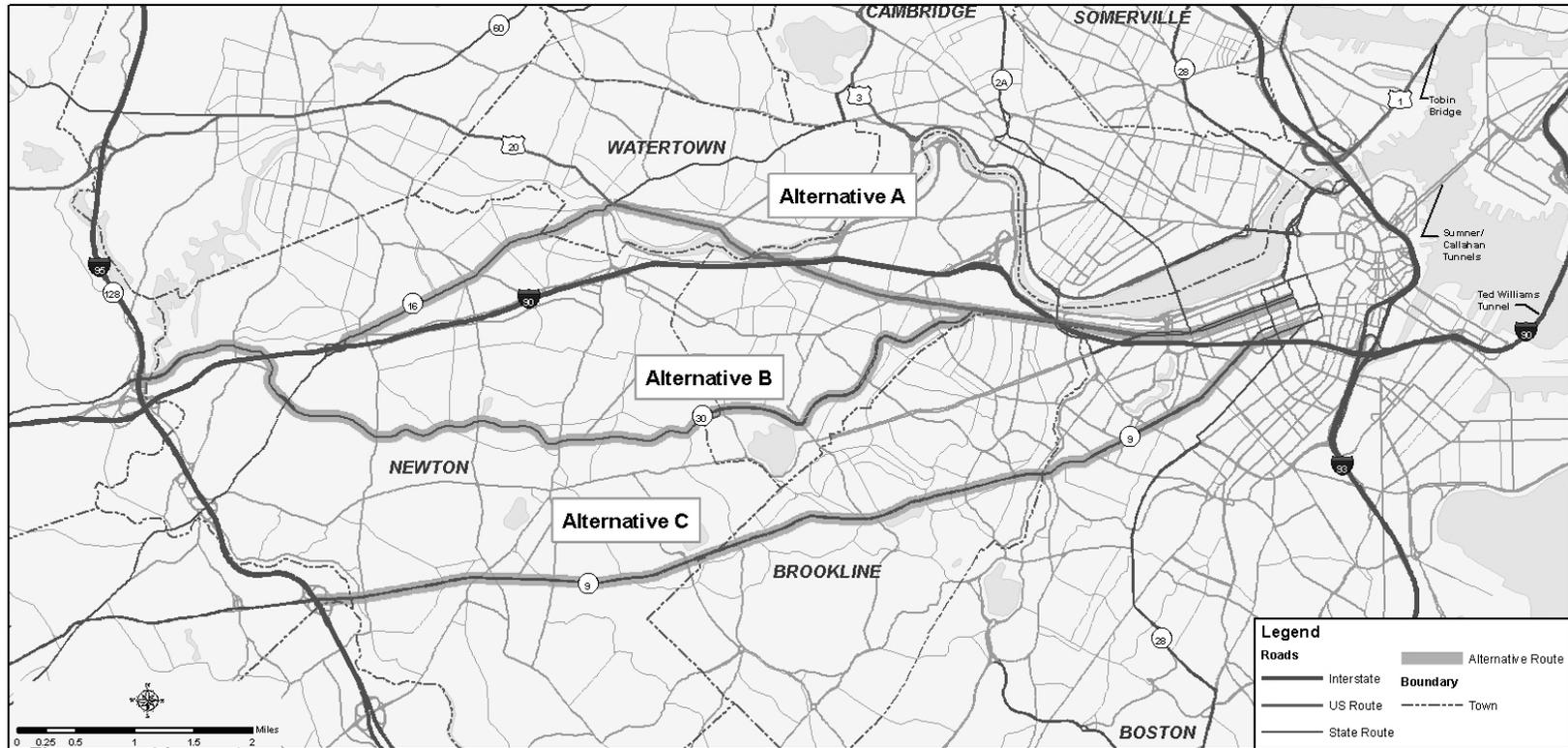
## **Travel-Time Comparisons - Boston Extension versus Sample Alternative Routes**

Motorists traveling from the western suburbs to downtown Boston have several alternatives to choose from, including the Boston Extension. Figure 2.9 shows some sample alternatives for travel between the western suburbs and downtown Boston. For this trip, the three alternative routes to using the Boston Extension have Arlington Street as a common starting/ending location in downtown Boston, the closest point of choice to the eastern terminus of the Boston Extension.

A motorist selecting Alternative B (Route 30/20), for instance, over MassPike to travel from the western terminus of the Boston Extension at SR 128/I-95 to downtown Boston during the morning peak period would add approximately 14 minutes of travel time to the trip compared to what it would take traveling on MassPike (Table 2.13). This additional time represents a difference of over 60 percent between the two routes, making the Boston Extension a preferable alternative in terms of travel time. The same trip during the evening peak period, in the westbound direction, takes an average travel time of 15 and 35 minutes on the Boston Extension and Route 30/20, respectively. The evening commute for a motorist deciding to use Route 30/20 instead of the Boston Extension would more than double the commute travel time.

A similar analysis as the one above for the other two alternative routes reveals that the Boston Extension offers motorists a significant savings in travel times when traveling between the western suburbs and downtown Boston during peak periods. Taking Alternative A (Route 16/20), a morning-peak motorist in Newton can either select Route 16/20 (30 minutes) or enter the Boston Extension at Interchange 16 (14 minutes), less than half the travel time. Similarly, the same trip in the westbound direction would take more than twice the time if selecting Route 16/20 over the Boston Extension during the evening peak period.

Figure 2.9 Boston Extension Sample Alternative Routes



**Table 2.13 Average Travel Times and Speeds**  
*6:00 to 10:00 a.m., 3:00 to 7:00 p.m.*

Route and Segment	Travel Time (Minutes)	
	A.M. Peak Period	P.M. Peak Period
<b>Comparison 1</b>		
<b>Boston Extension – From Exit 14 I-95/SR 128, Weston, to Exit 25, Boston</b>		
Eastbound	20.5	17.2
Westbound	15.2	19.0
<b>Alternative B (Route 30/20) – From SR 128/I-95 Exit 24, Weston, to Arlington Street, Downtown Boston</b>		
Eastbound	34.1	36.4
Westbound	35.2	35.4
<b>Alternative C (Route 9) – From SR 128/I-95 Exit 20 to Arlington Street, Downtown Boston</b>		
Eastbound	31.7	30.1
Westbound	27.3	30.0
<b>Comparison 2</b>		
<b>Boston Extension – From Exit 16, Newton, to Exit 25, Boston</b>		
Eastbound	13.7	12.6
Westbound	12.2	15.8
<b>Alternative A (Route 16/20) – From Exit 16 on I-90 to Arlington Street, Downtown Boston</b>		
Eastbound	32.3	37.4
Westbound	33.7	37.2

Source: Boston MPO and VHB travel-time surveys.

## 3.0 Economic and Socioeconomic Trends and Forecasts

### 3.1 INTRODUCTION

This section describes the demographic and economic factors expected to influence traffic and revenue projections for the Metropolitan Highway System (MHS): population, employment, income, inflation, and fuel costs. It also discusses the development patterns in the Boston area and the outlook for Logan International Airport's passenger volumes.

Traffic volumes on the MHS are directly affected by socioeconomic factors, some of which include population, employment, and income. Other less quantifiable factors, but still highly important, include attractiveness of the region, access to public services, education, and health care.

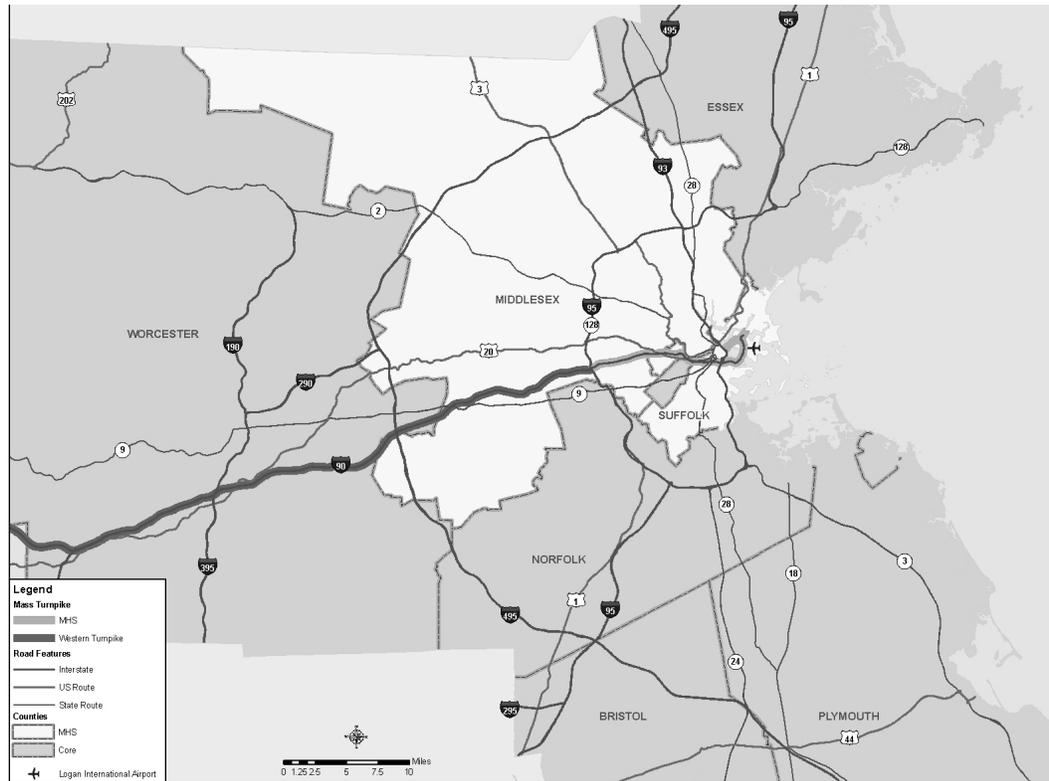
### 3.2 POPULATION TRENDS

In recent years, Massachusetts population has grown at a slower pace than the United States as a whole. During the 1990s, Massachusetts' population grew at an average annual rate of 0.6 percent (translating to a net gain of about 33,000 people per year), but still less than half of U.S. rate of approximately 1.3 percent. Massachusetts lost population in 2004, coinciding with a period of slow jobs growth and escalating housing costs. Between 2001 and 2002, the annual growth rate declined as the Massachusetts' economy was beset with employment losses due to the popping of the tech bubble that had ramped up in the 1990s. As employment growth resumed mid-decade, Massachusetts population growth strengthened. Recently, the State has been posting the highest growth rates since the 1990s, largely due to much fewer people leaving the State. People are staying because the state economy is generally outperforming the nation's during the recession, a worse job situation in the Sun Belt, and less home equity.

We analyzed population trends at a more granular level by isolating the counties in the traffic shed of the MHS: these included Middlesex and Suffolk ("MHS Counties") and Bristol, Essex, Norfolk, Plymouth, and Worcester (referred to as the "Core Counties") (see Figure 3.1). Population growth in the MHS Counties between 1991 and 2008 followed a similar trend as the State's, with an average annual growth rate of 0.39 percent versus 0.41 percent for the State. By comparison, the exclusively suburban "Core Counties" grew at a faster 0.53 percent annual rate over the period. Similar to the trends for Massachusetts described above, the MHS and Core Counties, have resumed stronger population

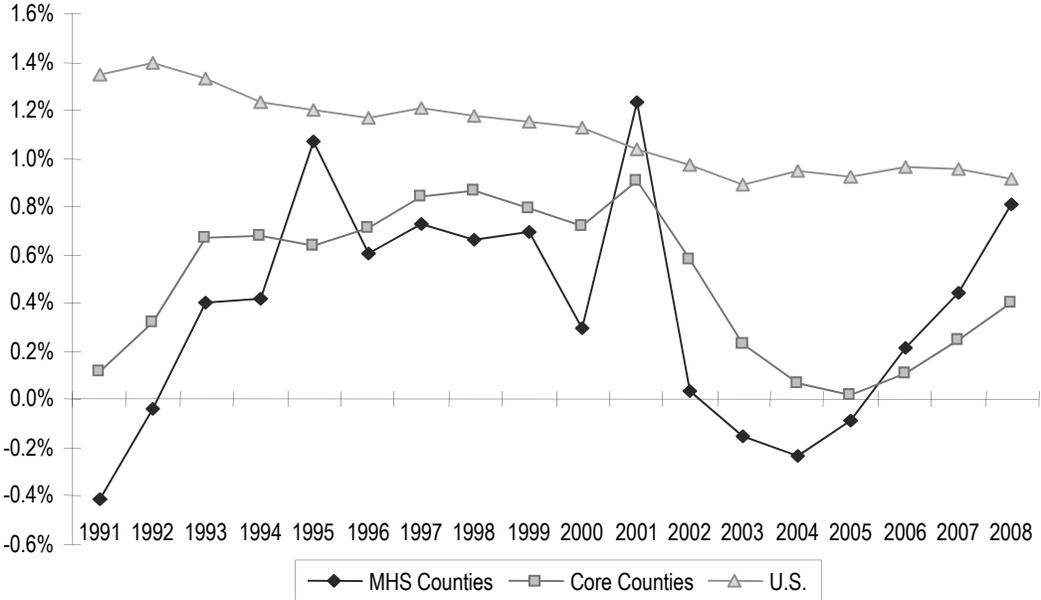
growth. Recent growth (2007-2008) in the two MHS counties has been particularly pronounced (Figure 3.2).

**Figure 3.1 MHS and Core Counties**



Middlesex County is the most populous county in the Commonwealth and accounts for over 27 percent of the total population of the MHS and Core Counties. From 1991 to 2008, the county grew at an average annual rate of 0.34 percent, contributing close to 20 percent of the MHS and Core County net growth for the same period. Middlesex County has the greatest traffic impact on the MHS due to its location with respect to the MHS, its population size and the commuter and Logan International Airport traffic it generates. Suffolk County, at the center of the MHS, has experienced a rebound in population growth in recent years, benefiting from Boston’s attractiveness to young people, “empty-nesters,” and immigrants as a place to live.

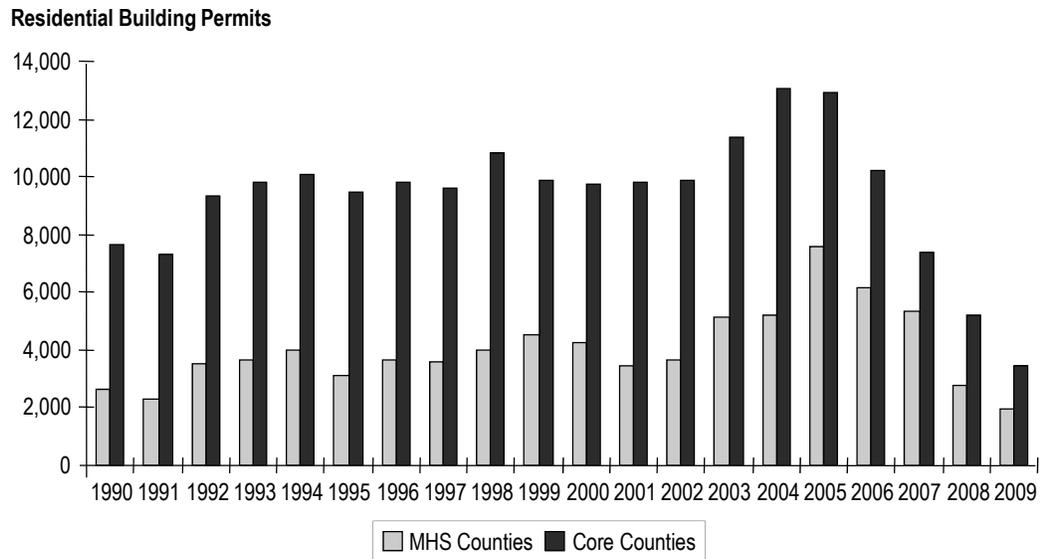
Figure 3.2 Population Growth Rates in the U.S., MHS, and Core Counties



### 3.3 RESIDENTIAL BUILDING PERMIT TRENDS

Figure 3.3 shows the growth trend for housing permits in the MHS and Core Counties from 1990 to 2008. The cycles of the Eastern Massachusetts economy can be seen in residential building permit statistics, including the 1990s expansion and the short 2001-2002 recession. Stimulated by low interest rates and easier access to loans, housing construction grew quickly between 2002 and 2005. In 2006, as lenders became more selective in approving financing, home permits began to decline. The effects of the collapse in home-financing and the current deep recession are very clear in 2008 and 2009, with housing permits reaching historical lows.

**Figure 3.3 New Housing Permits for MHS and Core Counties  
1990 to 2009**



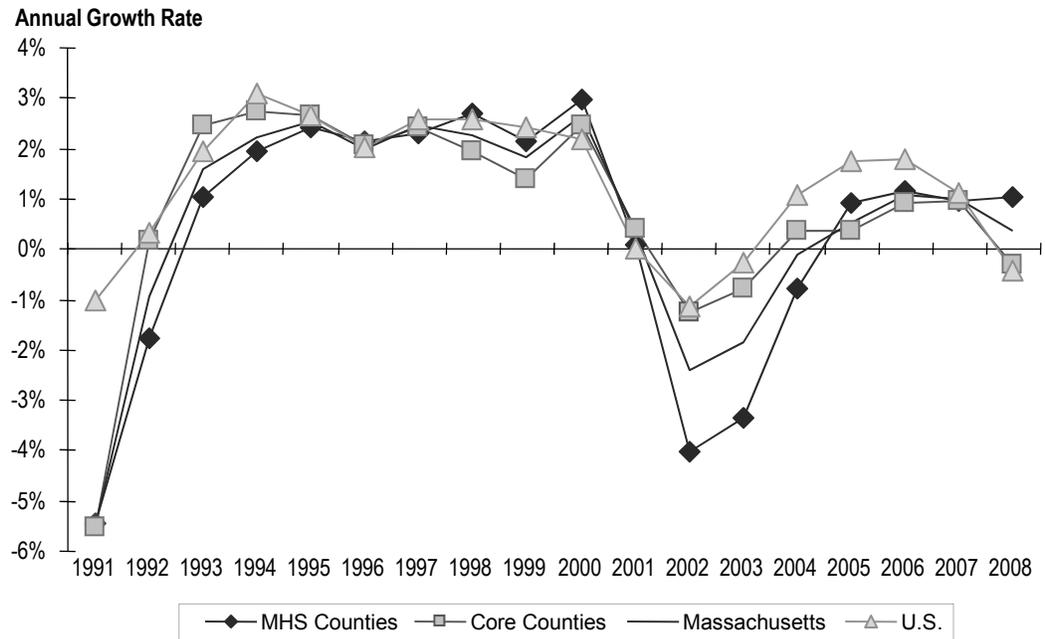
Source: U.S. Census Bureau; 2009 is an estimate.

### 3.4 EMPLOYMENT TRENDS

After a period of steady growth in the range of two or more percent per year in the 1990s through 2000, employment in Massachusetts experienced a sharp decline in employment from 2001 through 2004, with modest growth from 2004 to 2007. The State proved to be more susceptible to the 2001-2002 economic recession than the United States, with the MHS Counties particularly hard hit (see Figure 3.4). However, while the Nation experienced a steep decline in the employment growth rate in 2007 and began losing jobs in 2008, the State proved more resilient due to lower exposure to the residential home construction industry. Looking into 2009, Massachusetts and the Boston area, in particular, continue to outperform the nation, with lower relative job losses.<sup>6</sup> Longer term, however, Massachusetts and the MHS and Core counties are expected to revert to the decades-long trend of lower jobs growth than the nation’s.

<sup>6</sup> Annualized county-level data for 2009 were not available as of this writing.

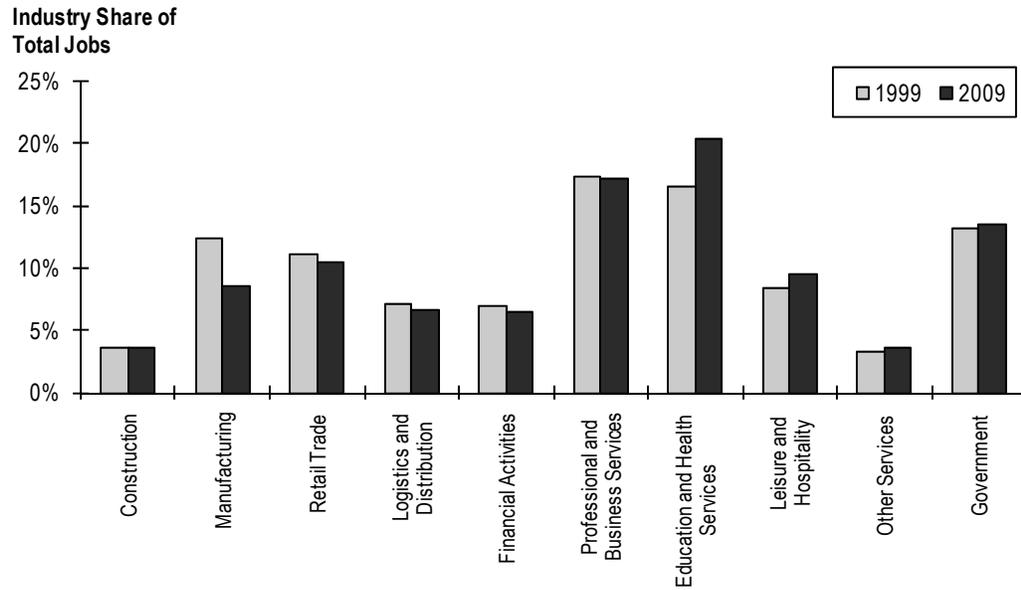
**Figure 3.4 Annual Jobs Growth**  
1991 to 2008



### Trends in Employment by Major Industry

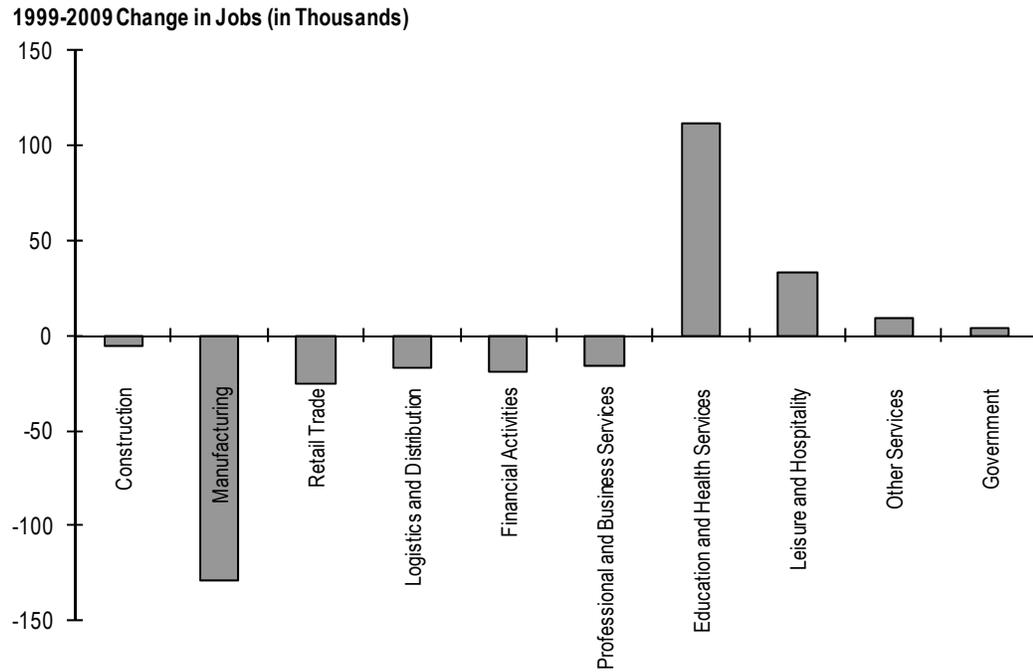
The strength of the Massachusetts economy stems from globally competitive technology and knowledge-based sectors that increasingly rely on worldwide demand for their products and services. The two pillars of the state economy as can be seen in Figure 3.5 are professional and business services (which include legal, accounting, consulting, research, advertising, and other knowledge-based business) and education and health services. Education and healthcare led jobs growth in the State between 1999 and 2009, adding 111,000 jobs (see Figure 3.6). Education and healthcare, in conjunction with leisure and hospitality (tourism) have maintained long-term jobs growth in the State as other sectors, including professional services begin to show net 10-year declines due to the recession. Consistent with national trends, manufacturing has posted the biggest jobs declines over the past 10 years. Professional services, education and healthcare, and tourism are particularly concentrated in the Boston Central Business District (Back Bay, Financial District, and South Boston Waterfront) and Cambridge – the largest employment centers in Massachusetts and key destinations for users of the MHS. The continued strength of technology-based products and knowledge-based services will be crucial to the future of Massachusetts economic and employment growth.

**Figure 3.5 Employment Shares by Major Industry**  
1999 to 2009



Source: Bureau of Labor Statistics.

**Figure 3.6 Change in Employment by Major Industry**  
1999 to 2009



Source: Bureau of Labor Statistics.

## 3.5 INCOME TRENDS

Although Massachusetts has experienced only slow-to-moderate growth in employment and population, two key transportation demand factors, the State has seen much higher relative growth in income. Massachusetts historically has had a higher per capita income<sup>7</sup> when compared the U.S. per capita average (Figure 3.7), and the gap between Massachusetts' per capita income and that of the United States has become wider during the last decade. Massachusetts' per capita income was about 18 percent higher than that of the United States in 1991 and 27 percent higher in 2008, the largest difference ever according to records going back to 1969.

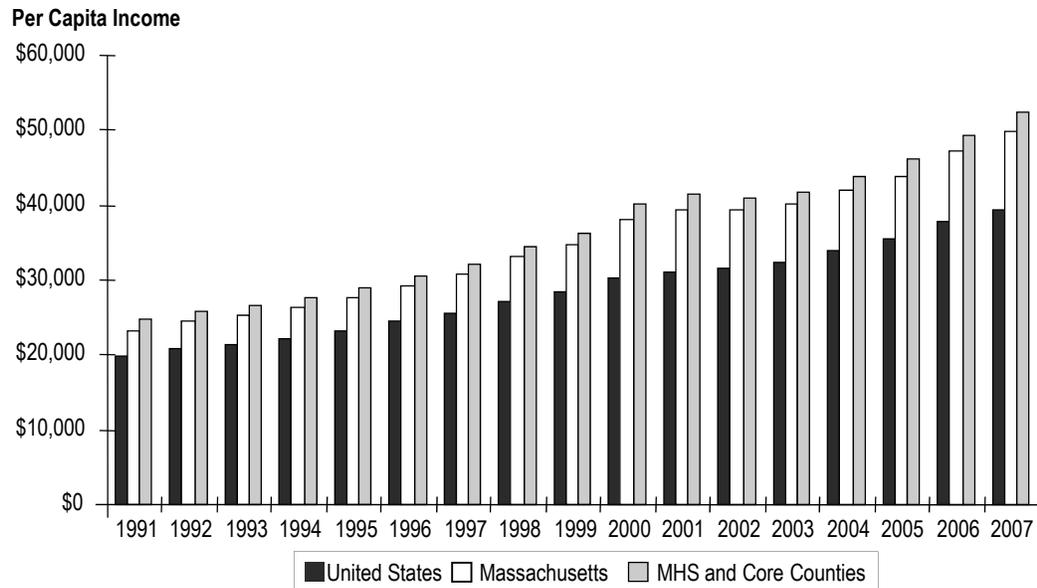
At the MHS and Core Counties level, this picture is accentuated, as the per capita income for the multicounty area is even higher than the State's. The gap between its per capita income levels and the State's has been widening in recent years. In 2007, the MHS and Core Counties' per capita income was 4.9 percent higher than Massachusetts', compared to 3.8 percent higher earlier in the decade.

Quality of life may be a factor that attracts high-income earners (and jobs) to the area, which may explain, at least partially, the differences in per capita income levels. Economic strengths in high-end finance, higher education, healthcare, professional services, and research and development, all present in Boston, Cambridge, and their suburbs, explain the high-income levels in the area. Quality of life is important because it helps attract talented people to the region, further strengthening the economy. Some of the factors that contribute to the attractiveness of the area are explained later in this section.

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<sup>7</sup> Per capita personal income is defined by the U.S. Department of Commerce, Bureau of Economic Analysis, as "income that is received by persons from all sources. It is calculated as the sum of wage and salary disbursements, supplements to wages and salaries, proprietors' income with inventory valuation and capital consumption adjustments, rental income of persons with capital consumption adjustment, personal dividend income, personal interest income, and personal current transfer receipts, less contributions for government social insurance."

**Figure 3.7 Per Capita Income Comparison**  
1991 to 2007



Note: 2007 is the latest data available.

### 3.6 GROSS DOMESTIC PRODUCT

Gross domestic product (GDP) is an important indicator of potential economic growth. A preliminary estimate released by the U.S. Department of Commerce, Bureau of Economic Analysis, shows that Massachusetts will rank 13<sup>th</sup> in real GDP growth in the nation for 2008.<sup>8</sup> This same release ranks Massachusetts' GDP per capita of \$48,088 (in 2000 dollars) at 4<sup>th</sup> in the nation in 2008. This estimate is 27 percent higher than the U.S. average GDP per capita of \$37,899 and almost twice the GDP per capita of the lowest ranking state (Mississippi).

The fact that Massachusetts has one of the highest GDP per capita levels in the nation underscores the underlying economic strength of the State and provides some reassurance of its economic future in the midst of the uncertain economic conditions being experienced today.

<sup>8</sup> [http://www.bea.gov/newsreleases/regional/gdp\\_state/2009/pdf/gsp0609.pdf](http://www.bea.gov/newsreleases/regional/gdp_state/2009/pdf/gsp0609.pdf).

## 3.7 PROSPECTS FOR FUTURE GROWTH IN THE MHS CORRIDOR

The MHS Corridor is mature, with over four decades of economic development and growth since the Turnpike was opened in 1966. Nonetheless, the area continues to be dynamic economically and is weathering the worst recession in decades better than many other parts of the country. There are numerous large-scale projects (planned or in progress) along the corridor that will affect future travel volumes. It appears that the region's steady and slow growth in jobs and population will continue into the future.

### Short-Term Outlook

The national economy is in a sharp downturn, and has only recently shown consistent signs of recovery. As a result, the short-term overall economic outlook for the MHS Corridor remains uncertain, but it appears to have better prospects than the U.S. economy as a whole. We expect growth in the MHS Corridor to remain soft, depending on the speed and strength of the nascent national economic recovery.

Consumers are changing behaviors in response to 2008's higher energy prices, and their adjustments will have an impact on traffic as they shift to other modes of transportation, carpooling, or eliminating nondiscretionary trips. The economy has had an adverse impact on air travel, an important driver of traffic demand on the MHS, especially the tunnels. Although seeing improvements in the latter half of 2009, Logan International Airport experienced lower overall passenger volumes in 2008 and 2009, hence lower traffic on the MHS. Logan is an important traffic generator for the system.

In the short term, the MHS Corridor's economic prospects face challenging times, as the United States as a whole is only in the early stages of emerging from a severe recession. Like many other major metropolitan areas, Boston is moving hesitantly out of the recession. Nevertheless, amid this economically challenging environment, the Boston area's economy is relatively diverse, and is reasonably positioned relative to many of the nation's other metropolitan areas to regain momentum and resume growth.

### Mid- to Long-Term Outlook

The MHS Corridor possesses attributes that will continue to contribute to the economic growth of the region. Some of the factors that have a direct impact on the economic growth and desirability for people to live and work in the corridor are discussed below.

*Educated Workforce, High-Tech Economy, Colleges and Universities, Health Care, and Finance*

**Educated Workforce** - The latest Census data show that Middlesex County has a very high level of educational attainment. More than 43 percent of the residents had at least a Bachelor's degree, compared to 33 and 24 percent for the State and the United States, respectively. This higher-than-average figure reflects the required educational preparation of the workforce to satisfy the needs of the various industries/sectors that feed the local economy.

**High-Tech Economy** - Boston is home for advanced technology industries in the areas of software, medical devices, biotechnology, energy, aerospace and defense, and IT. Fortune 500 companies in these industries are headquartered in the area, such as Raytheon, Boston Scientific, Biogen-IDEC, EMC, and Genzyme. The Boston area also has large-scale operations for many multinational high-technology companies, including Hewlett-Packard, Microsoft, Oracle, IBM, Google, Pfizer, and Novartis, among many others. While electronics has been the source of much of the region's growth for decades, biotechnology is now gaining momentum and Boston is positioning itself as the global leader in this industry. Despite the recession, the biotechnology industry continues to make significant investments in Eastern Massachusetts, including \$2.3 billion in factory investments as of early 2010.<sup>9</sup> Within the Boston area, the Cambridge-Kendall Square and Longfellow (Boston) areas have been the main centers of the industry's growth, but sizeable expansions are taking place on the South Boston Waterfront and along SR 128. The MHS would be a primary route for many commuters to reach all of these locations.

**Colleges and Universities** - The Boston area is known for its prestigious colleges and universities, many of them globally recognized as world-class institutions, including Harvard University and the Massachusetts Institute of Technology. Higher education acts as an economic catalyst for the area through innovation and by spinning off new companies and constantly regenerating a workforce with advanced technical skills. In their own right, Boston area colleges and universities also are major activity centers in the region with their students, visitors, faculty, and staff generating thousands of daily trips by roadway and transit. The expansion plans of these universities are expected to stimulate additional trips on the MHS.

**Health Care** - The Boston area is nationally recognized for its health care network and medical research. Proximity to medical research institutions with state-of-the-art facilities augments Boston status in health care and research and development. Health care and advanced medical research will continue to spur economic growth for the MHS Corridor.

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<sup>9</sup> New York Times, *Biopharmaceutical Industry Is Banking on Boston*, January 6, 2010.

**Finance and Professional Services** – The Boston Central Business District (CBD), the largest employment center in New England, and a leading destination for MHS traffic, includes about 60 million square feet of office space concentrated into a relatively small land area (Back Bay, Financial District, and South Boston Waterfront). Boston is a leading center for the mutual funds and investment management industries, including the headquarters for major companies (e.g., Fidelity and State Street Bank) with global operations. Other major office users of office space in the Boston CBD include marketing, law, government, and commercial banking. Long term, the Boston CBD has expanded continuously since the first modern skyscrapers were constructed in the Back Bay and Financial District in the mid-1960s. The land-constrained Financial District has pushed significant development into the neighboring South Boston Waterfront. The health of the CBD's businesses and the success of Boston as a center of finance, professional services, and tourist destination will be key factors influencing the pace of development and future traffic volumes on the MHS.

### *Developments in the Corridor*

Development projects in the MHS Corridor have the potential to influence travel patterns, depending on the size and nature of the specific project. The following listing includes major projects currently underway or proposed that may impact MHS's traffic volumes. Given today's economic circumstances, numerous projects are stalled and will not commence until businesses and banks have more confidence with the economy's long-term growth prospects.

**Harvard University's Allston Initiative** – Harvard University's ambitious plans to expand its research and educational infrastructure to Allston are on hold indefinitely due to the sharp drop in the university's endowment. The new Allston campus would have added up to 12,000 permanent jobs to the economy and had a direct impact on the MHS given its proximity to the Brighton-Allston tolls. The Allston site will undergo a review and changes to the site will be included in Harvard's revised Institutional Master Plan expected to be released in 2012.

**South Boston Waterfront** – The South Boston Waterfront area between Fort Point Channel and the Black Falcon Cruise Terminal is undergoing a large-scale redevelopment program to transform the former industrial area into a thriving businesses, retail, recreational, cultural, and residential district. With the Back Bay and Financial District largely built-out, the South Boston Waterfront is considered Boston's growth frontier and one of the only areas within the urban core that can absorb substantial new growth. Situated on approximately 1,000 acres, the South Boston Waterfront is located to the east of Boston's Financial District. The MHS provides commuters with a dedicated exit to the South Boston Waterfront and also allows direct access to Logan Airport via the Ted Williams Tunnel. As such, the growth of the Waterfront will have a significant bearing on future MHS traffic volumes.

Some estimates put the potential of combined new office, retail, cultural, recreational, industrial, and residential space at about 10 million square feet. The redevelopment of this area has spurred the construction of hotels, office buildings, and retail, with significantly more development planned. The South Boston Waterfront houses the new Institute of Contemporary Arts as well as the new Boston Convention and Exhibition Center, now the seventh busiest convention facility in the country. The South Boston Waterfront, depending on the pace and extent of its success, will have a positive impact on MHS traffic volumes. Today, however, development in the district has slowed due to the recession and planned projects will not get started until business and financial confidence is restored. Overall, Boston's growth as a leisure and convention destination will positively influence traffic volumes on the MHS.

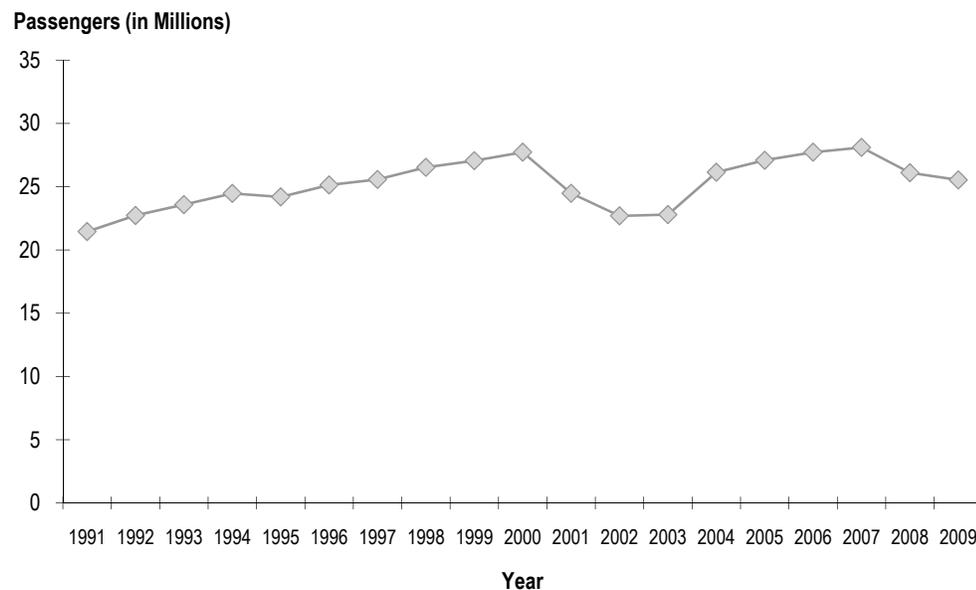
### **3.8 LOGAN INTERNATIONAL AIRPORT**

Logan International Airport (Logan) is a leading source/destination of traffic for the MHS and is one of the busiest airports in the Nation. Located at the eastern terminus of the Massachusetts Turnpike, Logan has a direct impact on MHS traffic volumes.

In 2007, Logan reached a record of 28.1 million passengers but passenger volumes have since experienced a decline due to the economic slowdown. Since 1991, Logan passenger levels have been moving on a gradual upward trend (see Figure 3.8), with breaks in the growth due to economic cycles (e.g., the 2001-2002 tech bubble burst combined with the September 2001 terrorist attacks and the present recession that began in 2008).

Despite an adverse economic environment for air passenger traffic, and its direct impact on the MHS, Logan remains and will continue to be one of the country's leading domestic destinations and gateways to Europe. In late 2009, year over year passenger figures began to recover at Logan and the airport has been less impacted by the recession than most other major airports around the country. Logan is not a hub airport, providing it with strong competition from multiple air carriers and less exposure to service losses should a particular airline cease operations. As the main airport for the nation's fifth most populous urban agglomeration, Logan supports some of the highest origin and destination traffic in the country. Strong airline competition and a large population base will continue to support substantial passenger volumes at Logan into the future.

Given today's uncertain economic environment, however, and the service adjustments air carriers are making, it is less clear how robust Logan Airport's passenger volume growth will be in the mid to long term. Logan International Airport will always be a key traffic generator/destination for the MHS, but the extent of future growth is somewhat uncertain given today's weak economy.

**Figure 3.8 Logan Airport Passengers**

Source: Massport; 2009 is an estimate.

### 3.9 SOCIOECONOMIC FORECASTS

Cambridge Systematics developed population, household, and employment forecasts for Massachusetts, and the MHS and Core Counties for 2010, 2020, and 2030 using a combination of public and private third-party forecasts and through a review of major projects either under construction or planned in Boston.

#### Massachusetts Population and Employment Forecast

After two decades of moderate population and job growth between 1980 and 2000, the Massachusetts economy essentially stopped generating significant numbers of new jobs (net) since 2000. The lackluster jobs market, in turn, contributed to strong domestic out-migration from the State and put the brakes on population growth throughout most of the 2000s. Although the population outlook has turned progressively more positive since 2005, Massachusetts' long-term growth is expected to continue to be slow. The main reasons behind the weakness in the State's long-term growth include:

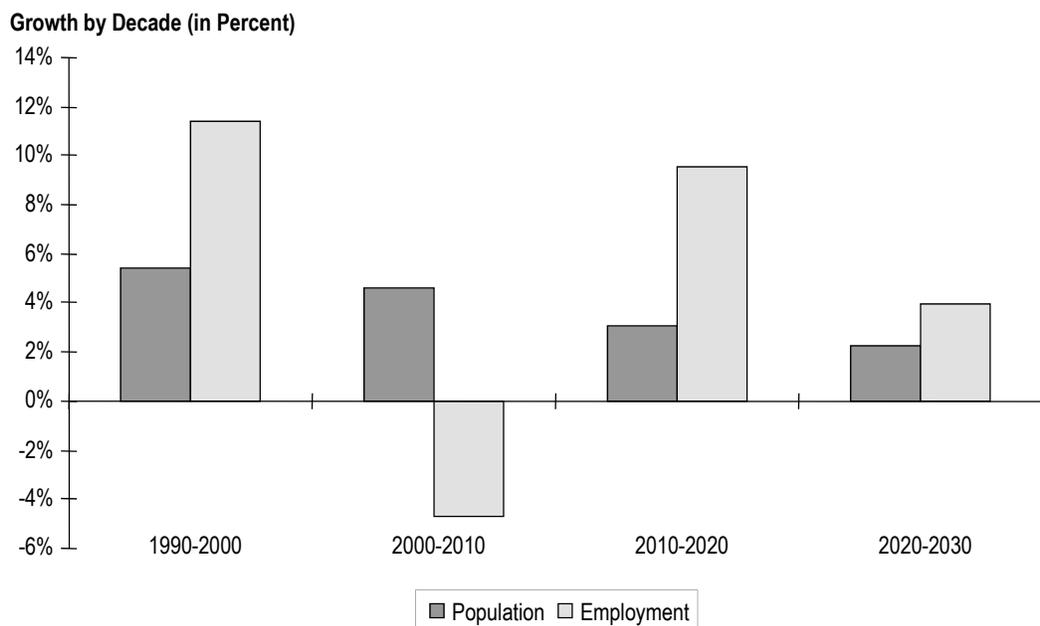
- Continued net out-migration;
- Low housing affordability;
- Young people leaving for opportunities elsewhere;

- Older residents moving to the South and West as they approach retirement age, a process that may accelerate over the next two decades as Baby Boomers retire; and
- Low natural population growth (Massachusetts has one of the lowest birthrates in the country).

The slow growth in population and employment experienced over the last decade is expected to continue into the foreseeable future, with population growth rates of 3.1 percent between 2010 and 2020 and 2.3 percent between 2020 and 2030 (Figure 3.10). Employment growth for 2010-2020 is expected to be 9.5 percent, and 4.0 percent between 2020 and 2030. The higher growth rate in jobs between 2010 and 2020 reflects a recovery period from the current recession.

Against this backdrop, the 2010, 2020, and 2030 population, household, and employment forecasts that will influence traffic volumes on the MHS were developed.

**Figure 3.9 Massachusetts Population and Employment Growth by Decade 2000 to 2030**



Sources: U.S. Census Bureau (historic) and Cambridge Systematics (forecast).

### Population and Household Forecasts

The long-term population growth forecast (2020 and 2030) for Massachusetts was based on state-level projections released by the U.S. Census Bureau in 2005 (the most recently available). The Census forecast was selected to serve as a base because it represented a midpoint between the much higher Woods & Poole and much lower Economy.com projections (see Figure 3.11). Due to the variability

between the growth rates shown in these forecasts, CS contacted the Massachusetts State Data Center at the Donahue Institute (University of Massachusetts at Amherst) and they also recommended the use of the Census forecast. However, in order to reflect slower than anticipated growth between 2000 and 2009, CS lowered the Census forecast for use in this study.

Using 2010 as a starting point, the population growth rates from the Census forecasts were used to forecast the Massachusetts population for 2020 and 2030. Since the State's 2010 population is likely to come in lower than the original Census projection (published in 2005), the CS population forecast for 2020 and 2030 is somewhat lower than the Census projections.

### **County Population Forecasts**

After a state population forecast was established, CS applied Economy.com's<sup>10</sup> county allocations (share of state total) for 2010, 2020, and 2030 to forecast county populations. As can be seen in the comparison of Suffolk County population growth forecasts in Figure 3.12, this method was thought to best capture an evolving national trend towards higher center city growth. Boston, along with other major cities, including San Francisco; New York City; Washington, D.C.; and Seattle, are continuing to experience resurgence and are attracting new people. Suffolk County's recent population and employment growth underlines these trends. In future years, high fuel prices and a preference among many people to live in large cities will support Suffolk County's long-term growth. The CS population forecast calls for continued slow-to-moderate population growth in Suffolk County.

The Massachusetts population is forecast to grow by 7.0 percent between 2008 and 2030, about one-third the rate of the United States. Among the two MHS Counties, Middlesex and Suffolk will grow close to the same rate as Massachusetts (see Table 3.1). For Suffolk County, this represents a reversal over previous decades (1950 to 2000) when it repeatedly lagged the State in growth by a wide margin (or experienced losses in population).

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<sup>10</sup>Disclaimer: Moody's Economy.com (MEDC) and its respective officers, directors, agents and employees are to be held harmless from and against any claims, liabilities, expenses damages or losses (including reasonable attorneys' and professionals' fees and court costs) resulting from the use by Client of the Publications or data obtained from DataBuffet.com in connection with a prospectus or other documents prepared in connection with the offering of securities.

**Table 3.1 Population Forecast by County**  
2008 to 2030

	2008	2010	2020	2030	2008 to 2030
Middlesex	1,482.5	1,518.6	1,563.5	1,596.5	7.7%
Suffolk	732.7	736.2	761.2	778.8	6.3%
<b>MHS Counties</b>	<b>2,215.2</b>	<b>2,254.7</b>	<b>2,324.7</b>	<b>2,375.3</b>	<b>7.2%</b>
Bristol	545.8	555.2	572.4	585.5	7.3%
Essex	736.5	755.2	776.6	792.2	7.6%
Norfolk	659.9	671.4	681.2	685.5	3.9%
Plymouth	492.1	508.0	528.9	545.1	10.8%
Worcester	783.8	804.9	827.4	843.7	7.6%
<b>Core Counties</b>	<b>3,218.1</b>	<b>3,294.7</b>	<b>3,386.5</b>	<b>3,452.0</b>	<b>7.3%</b>
Massachusetts	6,543.6	6,641.3	6,847.1	7,003.4	7.0%
United States	304,059	310,233	336,930	364,800	20.0%

Sources: Cambridge Systematics (Massachusetts forecasts) and the U.S. Census Bureau (U.S. forecast).

Note: Populations are in thousands.

Growth in Eastern Massachusetts will be fairly evenly distributed. The fastest growth is forecast to take place in Plymouth County, which offers buildable land, lower costs than other suburban locations, and appeal to retirees due to its coastal location and proximity to Cape Cod. In terms of net population growth, Middlesex County and Worcester County are anticipated to add the most people (114,000 and 60,000, respectively) between 2008 and 2030.

### Employment Forecast

The growth and location of jobs affects commuting patterns and truck flows on the MHS and other eastern Massachusetts roadways.

The starting point for the long-term jobs forecast was Economy.com’s projection for 2010 shifted very slightly upward to reflect a better than expected jobs situation in the State in late 2009. The population forecast described earlier in this section is a determinant for the employment forecast. Although the pace of jobs growth can exceed population growth (as occurred in Massachusetts in the 1990s and forecast for the 2010-2020 recovery period), population levels and job levels are ultimately correlated. For the 2020 and 2030 employment forecasts, the ratios between the Economy.com employment and population forecasts was applied to the CS population forecast. This yielded a Massachusetts employment growth forecast of 13.8 percent for the 2010-2030 period (see Figure 3.14). Barring a repeat of 2000-2010 (a decade that saw no net growth in jobs), a recovery (2010-2020) followed by slow growth (2020-2030) in Massachusetts employment is reasonable.

Following the establishment of a statewide Massachusetts employment forecast through 2030, Cambridge Systematics used Economy.com’s distribution of employment between counties to allocate jobs by county. Economy.com’s forecast, among the forecast options, recognized a slowly increasing concentration of jobs into Suffolk County. Suffolk County’s employment levels until 2009 had been growing quickly since hitting a low in 2003 following the previous recession. In future years, Suffolk County’s combination of strengths in the life sciences, healthcare, finance, transportation, and tourism industries, combined with expansions at academic institutions point to a likely period of growth that will exceed the State’s.

Employment in Massachusetts is forecast to grow by 11.4 percent between 2008 and 2030, about two-thirds the rate of the United States. Similar to the population trend, Middlesex County, the State’s largest, is expected to add the most jobs. Suffolk County, for reasons described earlier, is forecast to add jobs at a faster pace than the State (see Table 3.2). Although Suffolk County will grow relatively quickly, the appeal of suburban locations will continue to draw some businesses to locations outside the center city. Constraints on new building in Boston and the high cost of land will push expanding companies seeking lower rents and campus-like settings, as evidenced by recent biotechnology expansions in Middlesex and Worcester counties, to areas outside of Boston.

**Table 3.2 Employment Forecast by County**  
2008 to 2030

	2008	2010	2020	2030	Percent of Change 2008-2030
Middlesex	832.8	808.6	876.1	912.5	9.6%
Suffolk	598.1	582.1	651.8	681.5	13.9%
<b>MHS Counties</b>	<b>1,430.9</b>	<b>1,390.7</b>	<b>1,527.9</b>	<b>1,593.9</b>	<b>11.4%</b>
Bristol	218.6	213.9	234.3	243.6	11.4%
Essex	302.6	296.3	322.9	335.3	10.8%
Norfolk	328.2	322.3	354.6	364.7	11.1%
Plymouth	178.5	175.7	192.4	200.1	12.1%
Worcester	323.1	318.8	346.8	356.4	10.3%
<b>Core Counties</b>	<b>1,351.0</b>	<b>1,326.9</b>	<b>1,451.0</b>	<b>1,500.0</b>	<b>11.0%</b>
Massachusetts	3,242.8	3,173.0	3,475.8	3,613.4	11.4%
United States	137	131	151	161	17.5%

Sources: Cambridge Systematics (Massachusetts forecasts) and Economy.com (U.S. forecast).

Note: Employment levels are in thousands.

## Major Developments Planned for the Boston Central Business District

There are a number of major projects either currently under construction or planned for Boston's central business areas that will affect future traffic volumes on the MHS. The following list represents an example of the types of projects and their expected completion dates. It must be noted, however, that construction on new projects and progress on the development of new districts (i.e., South Boston Seaport) will be slow until the economy is more firmly rooted in recovery.

### *Currently Under Construction*

- **Russia Wharf** is an 850,000 square-foot mixed-use development located on the Fort Point Channel. The development will include a 31-story office tower, 32,000 square feet of retail and civic uses, 200 residential units, and 512 parking spaces. The majority of the building's office space will be occupied by Wellington Financial. Construction began in the fall of 2007 and is scheduled for completion in 2011.
- **Harborside Pier.** The site of the former restaurant will be redeveloped as 71,000 square feet of office and restaurant space in two buildings on Northern Avenue.
- **179 Lincoln Street.** Rehabilitation of the Teradyne building will provide 250,000 square feet of office space.
- **Suffolk University Modern Theater.** Suffolk University is restoring the historic Modern Theater on Washington Street and adding a 12-story tower above the existing façade that will include 200 dormitory beds, a black box theater, and gallery space.
- **Fan Pier (Gradual Phase-In).** The Boston Redevelopment Authority (BRA)-approved 21-acre Fan Pier project represents the largest private investment project in the City of Boston. The nine-building mixed-used development includes approximately three million square feet of office space, 675 residences, 2 hotels, restaurants, retail, the Institute of Contemporary Art, and a 6-acre marina along the South Boston waterfront. The Institute of Contemporary Art was completed in 2006, and the first office building – an 18-story tower with 500,000 square feet of office space and 40,000 square feet of retail space – is under construction now with completion scheduled by 2010. Upon completion, Fan Pier is expected to generate 2,000 permanent jobs.

### *BRA Approved*

- **Parcel 7 Air Rights.** This project consists of a mixed use development over Massachusetts Turnpike Air Rights in the Fenway/Kenmore area, including approximately 500,000 square feet of residential space, 390,000 square feet of office space, 90,000 square feet of retail space, and 1,290 parking spaces.

- **1 Franklin/Filene's Redevelopment.** The renovation of two existing buildings and construction of a new structure at this site is stalled indefinitely. The original developer lost financing and the City is now exploring other options for the site. Due to the location in Downtown Crossing, it is expected that the site will be redeveloped within a relatively short timeframe.
- **Columbus Center** will be a 1.1 million square-foot mixed-use development constructed over the Massachusetts Turnpike. The project will include a 34-story tower housing a 199-room hotel, 150 condominiums, and retail space on the ground floor. A mid-rise building and a series of townhouses will provide additional residential and retail space. The project needs financing and may receive financing from the State as a jump-start.
- The **South Station Air Rights** project is stalled. The project includes a 41-story tower and a 9-story office building that will house 1.3 million square feet of office space, a 200-room hotel, 150 condominiums, a small amount of retail space, and 900 parking spaces. The project also incorporates transit improvements, including expanding the capacity of the bus terminal by 40 percent. The structures will be built behind South Station, on top of the existing railroad tracks leading to the bus terminal.
- **120 Kingston.** A 265-foot tall building will replace the 1889 Dainty Dot building. The mixed-use development will include 147 condominium units, ground-floor retail, and 95 parking spaces.
- **Hayward Place.** A 14-story mixed-use building will replace a surface parking lot one block from the Boston Common. The building will have 188 residential units, 19,000 square feet of retail space, and up to 271 parking spaces below ground.
- **Parcel P-7a (240 Tremont Street).** This development consists of a 14-story structure having approximately 74,458 square feet of gross floor area to include approximately 72 studio and one-bedroom dwelling units and restaurant space.
- **212 Stuart Street.** This project includes the construction of a 10-story building containing 65,700 square feet of retail and office space.
- **Kensington Place.** Construction is expected to begin soon on this 30-story mixed-use project located in Chinatown. The development will include 346 apartment units, retail, restaurant and office space, and 334 parking spaces.
- **4-6 Newbury Street.** A 49,000 square-foot, seven-story building will replace an existing parking garage. The building will provide three floors of retail space, four floors of office space, and 16 parking spaces. Construction is expected to finish in 2010.
- **Pier Four.** Located along the South Boston waterfront, this project has been approved by the BRA for over one million square feet of hotel, retail, office,

residential, and civic uses on 9.5 acres. Development plans include a 200-room hotel, 200 residential units, and 385,000 square feet of office space. The project site is served by MBTA Silver Line at Courthouse Station.

- **Waterside Place** is a 1.7 million square-foot mixed-use project, including a high-end 640,000 square-foot shopping center, a 300-room hotel, 200 residences in a 19-story building, 2,300 parking spaces, and a visitor center. The project was scoped down in 2009 but has yet to start.
- **Leachmore Point**, a 64-unit condominium building, will sit atop Broadway Station on the Red Line. The eight-story building also will include 4,700 square feet of retail space and 69 underground parking spaces.
- **Congress Street Hotel**. This 24-story 502-room hotel will occupy a vacant parcel of land near the BCEC. The building also will include 9,000 square feet of retail space and 150 parking spaces.
- **350 Boylston Street** is a proposed nine-story office building with ground-floor retail and 150 parking spaces.
- **Parcel 24** proposes 325 units of rental and condominium housing with 50 percent on-site affordability and accessory retail space in Chinatown. The building design includes 3- and 4-story townhouses and a 20-story tower.
- **368 Congress Street**. This property will rehabilitate 100,000 square feet of office space and add new ground-level retail.
- **371 D Street**. Four buildings on an existing vacant six-acre site will provide 585 new residences in South Boston. The project aims to create an active pedestrian environment and will incorporate new courtyards, trees on surrounding sidewalks, and decorative planters.

#### *Undergoing BRA Review*

- **45 Stuart Street**. This project would consist of a 250,000 square foot office building on an existing parking lot in downtown Boston.
- **315 A Street**. The proposed redevelopment of this parcel includes the construction of an approximately 315,000-square-foot, 240-foot-tall building that would include approximately 232 apartments and 98 above-grade parking spaces.
- **Harbor Garage Redevelopment**. This proposed development would convert an existing 1,475-space parking garage into a 1.5-million-square-foot mixed use project that will include 860,000 square feet of office space, 220,000 square feet of residential use, a 350,000-square-foot hotel and 1,400 parking spaces.
- **Seaport Square**. The proposed 6.5-million square-foot development consists of 2.5 million square feet for residences, 1.5 million square feet of office space, two hotels, and 1.5 million square feet of retail space. The 23-acre site abuts

Fan Pier and Waterside Place and is served by the MBTA's Silver Line at Courthouse Station.

- **Waterside Crossing.** A mixed-use development proposal for this 2.8-acre site includes a 300-room hotel, a grocery store, and a large department store. The site in the South Boston waterfront area currently is a surface parking lot.

### 3.10 LOGAN INTERNATIONAL AIRPORT PASSENGER FORECAST

Logan International Airport is a leading generator of MHS traffic, with thousands of daily trips by airport-related employees, passengers, and taxis. Although transit options are available for passengers, the overwhelming majority arrives and leaves Logan by car. Long-term growth at Logan will be a key factor contributing to traffic volumes on the MHS. Cambridge Systematics developed a long-term Logan passenger forecast based on historical growth, recent trends, and Massport forecasts.<sup>11</sup>

Logan International Airport serves a mature market and is space-constrained, limiting its ability to expand. Long term, the Federal Aviation Administration (FAA) expects Logan to rank among the slower-growing major U.S. airports.<sup>12</sup> In developing a long-term forecast for Logan, CS observed a 1.2 percent annual growth rate in passengers between 1990 and 2007, prior to the current economic downturn. The growth in the 17-year period was clearly interrupted by the terrorist attack in 2001. Between 2004 and 2007, the airport grew robustly, but the high fuel prices and economic headwinds encountered in 2008 have resulted in lower passenger levels in 2008 and 2009.

Looking into the future, passenger levels – given stable fuel prices and a recovering national economy – are expected to return to trend in the 2010-2030 forecast period. Improved results at Logan in the latter half of 2009 are now pointing to the resumption of growth in 2010.

In formulating the passenger forecast, Cambridge Systematics adjusted the Massport “financial forecast” included in its 2007 Logan International Airport Market Analysis (an appendix in recent bond reports). The Massport financial forecast estimates 1.5 percent annual growth through the 2030 time horizon.<sup>13</sup>

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<sup>11</sup>Massport “financial forecast” included in the 2008 Bonds, Series C-Official Statement, July 1, 2008, page B-169.

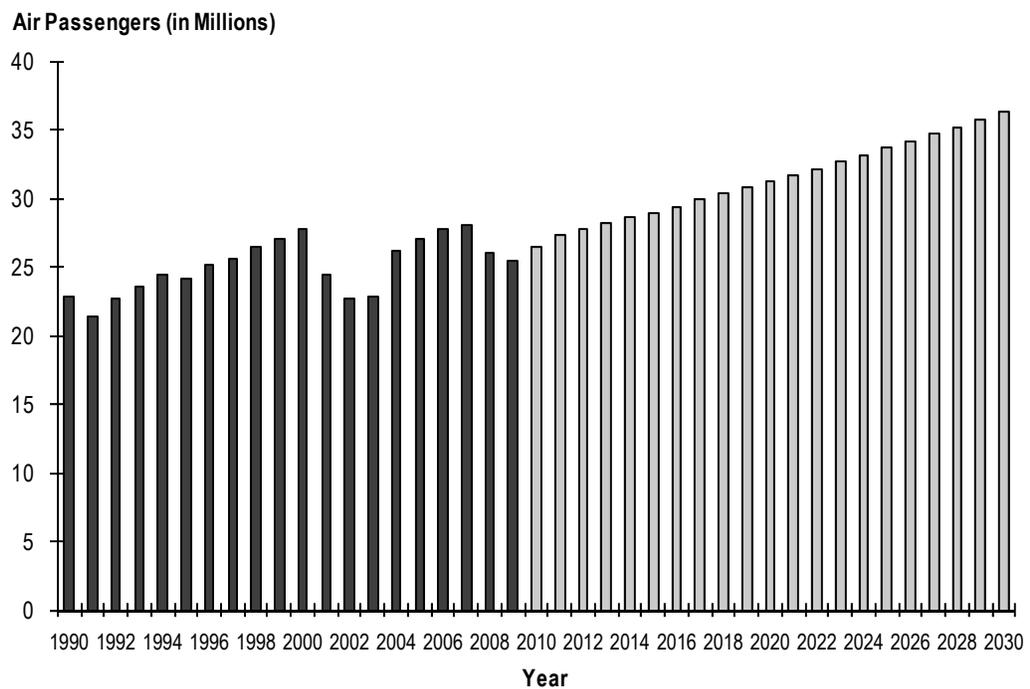
<sup>12</sup>FAA Terminal Area Forecast Reports, 2008-2025 Summary projects Logan to grow at a slower pace than all but nine major U.S. airports between 2008 and 2025.

<sup>13</sup>A June 2008 update to the 2007 Logan International Airport Market Analysis, in response to the changing climate for air travel, considers the Massport financial forecast

*Footnote continued*

Because this forecast was developed prior to the recession, Cambridge Systematics lowered 2008 and 2009 passenger volumes to reflect available historical data. This is followed by stronger growth than the long-term trend in 2010 and 2011 to reflect an economic recovery and then a return to the 1.5 percent annual rate of increase included in the financial forecast for the 2012-2030 period. The Cambridge Systematics forecast (see Figure 3.17) represents a 36 percent increase in passenger enplanements between 2010 and 2030 (a net increase of 9.7 million passengers).

**Figure 3.10 Logan International Airport Passenger Traffic**  
1990 to 2030



Sources: Massport (historic) and Cambridge Systematics (forecast).

(annual growth reverting to 1.5 percent after correcting for the recent downturn in passenger volume) as “reasonable” (consistent with long-term average growth).

## 4.0 Highway Improvements

### 4.1 HIGHWAY AND TRANSIT IMPROVEMENT PLANS

In developing our traffic and revenue forecast it is important to consider not only the existing highways and other components of the regional transportation system, but also planned highway improvements which may be complimentary or competitive to the MHS. JOURNEY to 2030, the Transportation Plan of the Boston Region Metropolitan Planning Organization (referred to as the Plan), is the long-range, comprehensive transportation planning document for the Boston region.

The major infrastructure and capacity expansion program is available to fund the projects currently underway and also those that constitute the planned major infrastructure and expansion projects for the transportation system. After accounting for the costs of ongoing projects, the remaining funds available in the major infrastructure and capacity expansion program are dedicated to planned major infrastructure and capacity expansion projects. An expansion project is any project that adds capacity to the existing system through the addition of a travel lane, the construction of an interchange, the construction of a commuter rail extension or rapid transit line, or the procurement of additional (not replacement) public transportation vehicles. A major infrastructure project is any project that costs over \$25 million.

The next sections list the major roadway and transit plans that the MPO has recommended occur over the next 23 years that are assumed to be funded under this program.

#### **MPO Recommended List of Planned Major Infrastructure and Expansion Projects**

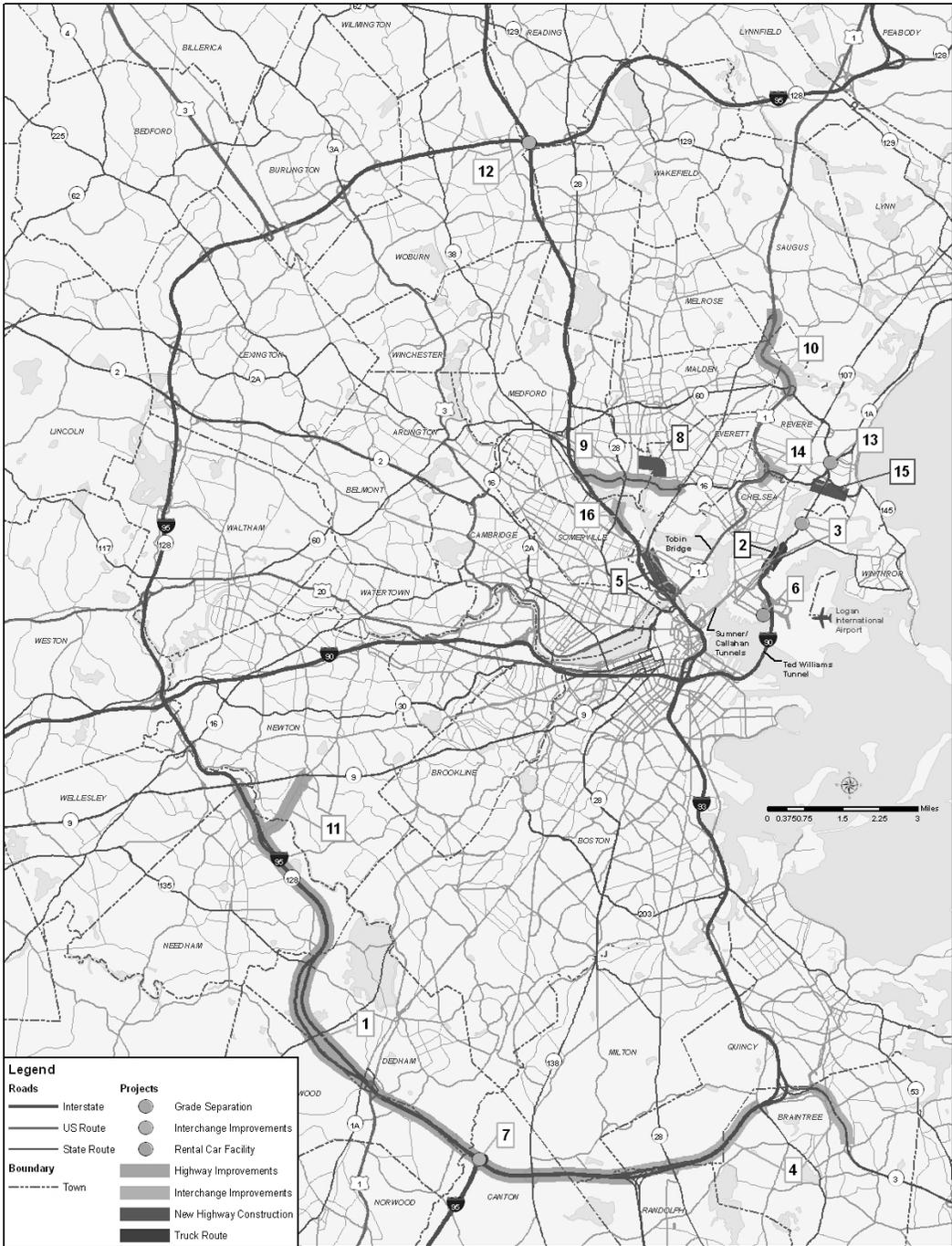
A summary of significant roadway projects now underway or planned for the future is provided in Table 4.1. In addition to showing the project name and a brief description of the improvement, currently anticipated completion dates are also presented. These projects are depicted with a Map ID in Figure 4.1. The Route 128 project currently is under construction and includes widening this existing portion of Route 128 to eight lanes from its current six-lane configuration.

**Table 4.1 Major Infrastructure and Expansion Highway Projects in the Recommended Transportation Plan for the Boston Region MPO**

Project	Map ID	Improvement Description	Estimated Completion Date
Route 128 Additional Lanes (Randolph to Wellesley)	1	Add one lane in each direction.	Currently under construction – 2015
East Boston Haul Road/Chelsea Truck Route (Boston)	2	A new grade separated roadway connecting the City of Chelsea and the harbor tunnels/ Logan Airport.	2020
Route 1A/Boardman Street Grade Separation (Boston)	3	Construct an overpass with ramps to replace the existing signalized intersection of Route 1A and Boardman Street.	2020
Braintree: I-93/Route 3 Interchange (Braintree Split)	4	Added capacity, upgrades, and interchange improvements.	
Rutherford Avenue/Sullivan Square (Boston)	5	A new four-lane bypass road adjacent to the I-93 viaduct.	2020
Consolidated Rental Car Facility (Logan Airport, Boston)	6	A consolidated rental car facility, a commercial parking facility, and a passenger bus system.	2015
I-93/I-95 Interchange (Canton)	7	Interchange reconstruction.	2020
River's Edge Boulevard (formerly Telecom City Boulevard) (Everett, Malden, and Medford)	8	Construct a two-lane, median-divided roadway between Santilli Highway in Everett and Corporation Way in Medford.	2020
Revere Beach Parkway (Everett, Medford, and Revere)	9	Widen Route 16 in places to provide a continuous six-lane mainline parkway between Route 38 in Medford and Sweetser Circle in Everett.	2030
Route 1 Improvements (Malden and Revere)	10	Widen Route 1 from four to six lanes between Copeland Circle (Route 60) and Route 99.	2030
Needham Street/Highland Avenue/Winchester Street (Newton and Needham)	11	Widen Needham Street to a four-lane cross section.	2020
I-93/I-95 Interchange (Reading and Woburn)	12	Capacity and interchange improvements.	2020
Mahoney Circle Grade Separation (Revere)	13	Removal of the rotary with grade separation improvements.	2030
Route 1/Route 16 Interchange (Revere)	14	Interchange construction with direct connections.	2020
Route 1A/Route 16 Connection (Revere)	15	Realignment of Route 16 and connection with Route 1A.	2030
I-93/Mystic Avenue Interchange (Somerville)	16	Construct a new underpass grade separating Route 28 northbound.	2030

Source: Boston MPO – JOURNEY 2030 Transportation Plan.

**Figure 4.1 Major Infrastructure and Expansion Highway Projects in the Recommended Transportation Plan for the Boston Region MPO**



## MPO Recommended List of Transit Expansion Projects

Table 4.2 lists the transit projects funded under the capacity expansion program, construction, a brief project description, and when they are projected to be completed. The Massachusetts Department of Environmental Protection (DEP) has a State Implementation Plan (SIP) that contains procedures and programs to monitor, control, maintain, and enforce compliance with all national air quality standards. Specific projects are included in the SIP as mitigation measures for the Central Artery/Tunnel project. Implementation of these projects is required in order to provide air quality benefits in the region. The projects following under the SIP are identified below. These projects, as well as other transit projects, are shown in Figure 4.2.

- Fairmount Line improvements consisting of enhancements to existing stations and the addition of four new stations;
- One thousand new park-and-ride spaces serving commuter transit facilities within the Boston Region MPO area;
- Complete final design of the Red Line–Blue Line Connector; and
- Green Line Extension from Lechmere Station to Medford Hillside with a spur to Union Square in Somerville.

## 4.2 IMPLICATIONS TO MHS DEMAND

Shortages of funding for transportation projects have become a significant issue in recent years. The aging of our roadway infrastructure is requiring more and more preventive and rehabilitation efforts. In addition to these needs, significant increases in construction costs and stagnant gas tax revenues will likely result in future funding of major infrastructure projects to be limited.

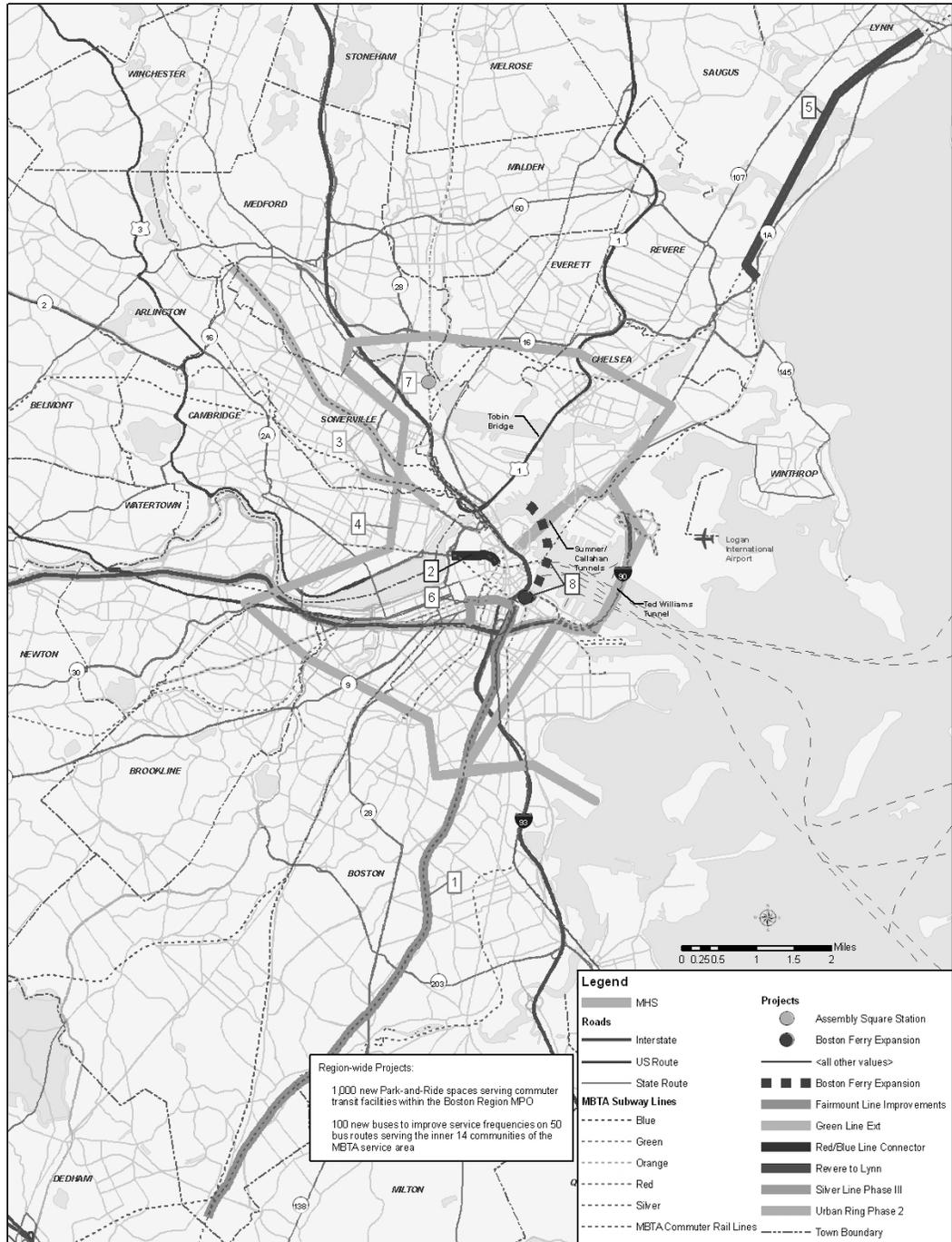
With this in mind, there is no guarantee that any of the above projects, other than the current Route 128 expansion project, will be built by the indicated date or even within our forecast period. The projects listed in the above sections are viewed as being a positive in that they will support the overall population and employment growth that is forecasted for the Boston area, and will help in meeting the mobility needs that come with growth and redevelopment of the Boston metropolitan area. It is our opinion that these projects will have no real significant impact to MHS demand. The majority of the roadway improvements, other than the Route 128 project, are located northeast of Boston and do not directly compete with the MHS corridor. Similarly, we also believe that the proposed transit projects will not negatively impact demand for the MHS, but may even positively influence demand as these projects will help support downtown development. We do not believe these projects to be risk factors to the long-term projections of traffic and revenue for the MHS.

**Table 4.2 Expansion Transit Projects in the Recommended Transportation Plan for the Boston Region MPO**

Project	Map ID	Improvement Description	Estimated Completion Date
SIP Commitments (Region)	1	The Massachusetts DEP has a SIP that contains procedures and programs to monitor, control, maintain, and enforce compliance with all national air quality standards. Specific projects are included in the SIP as mitigation measures for the Central Artery/Tunnel project.	2020
Urban Ring Phase 2 (Compact Communities)	2	The Urban Ring is a proposed system of public transit improvements that is designed to provide a new transit line through a circumferential corridor, or "ring," located roughly one to two miles outside of downtown Boston.	2020
North Shore Transit Improvements (Revere to Lynn)	3	Blue Line Extension via Eastern Route Mainline. Consists of maintaining the existing Wonderland Station and constructing a connection to the Eastern Route Main Line (ERML) right-of-way that runs from north of the station to Lynn.	2020
Silver Line Phase III (Boston)	4	The third phase of the Silver Line is composed of a double-barrel bus-rapid-transit (BRT) tunnel that will connect the existing Silver Line service on Washington Street (which opened in 2002) to the existing Silver Line service on the South Boston Waterfront (which opened in 2004).	2020
One hundred Additional Buses to Improve Service on Existing Routes (Regionwide)	N/A	The proposal calls for expanding the MBTA bus fleet by 100 vehicles.	2020
Assembly Square Orange Line Station (Somerville)	5	This project would involve adding a new Orange Line station in Somerville. The station would be located between the existing Wellington Station in Medford and the existing Sullivan Station in the Charlestown section of Boston.	2020
Russia Wharf Ferry Terminal (Boston)	6	This project would consist of implementing a new ferry route in Boston Inner Harbor, from the existing terminal at the Charlestown Navy Yard to a new terminal at Russia Wharf, which is located in Fort Point Channel at Congress Street.	2010

Source: Boston MPO – JOURNEY 2030 Transportation Plan.

**Figure 4.2 Expansion Transit Projects in the Recommended Transportation Plan for the Boston Region MPO**



## 5.0 Toll Sensitivity and the Impact of Motor Fuel Prices

Section 3.0 addressed one of the most important elements in forecasting future traffic and revenue for the MHS, that is expected changes in socioeconomic conditions. This section covers two other important considerations: the sensitivity of MHS users to toll changes and to changes in motor fuel prices.

### 5.1 IMPACT OF PAST TOLL CHANGES

The MHS is a mature toll facility with a well-established customer base. And, as demonstrated earlier, travel times on alternative routes are typically far greater than on the MHS, especially during peak time periods.

When drivers choose to pay a toll on the MHS, they are weighing the benefits of the route – faster travel time, less stop and go due to traffic signals, and greater reliability – against the cost of the toll. When the toll rate changes, drivers need to reassess whether the MHS continues to provide value equal to or greater than the cost of the toll.

We can look to past experience of toll increases on the MHS for evidence of driver sensitivity to toll increases. The following three toll increases in the last 11 years provide valuable data for this analysis:

- July 1997 on the Tunnels;
- July 2002 on the entire MHS; and
- January 2008 on the entire MHS.

#### July 1997 Toll Increase

In July 1997, tolls on the Tunnels were increased from \$1.00 for passenger cars to \$2.00, with similar increases for other vehicle classes. The 1999 Traffic and Revenue Report for the MHS<sup>14</sup> analyzed the result of that toll increase, and concluded that there was an elasticity of -0.066, meaning a 100 percent toll increase would result in a 6.6 percent loss in transactions. Our own review of the data for that toll increase indicated that a significant amount of traffic shifted to the resident category (with hefty discounts) after the toll rate increase. If that

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<sup>14</sup>Traffic and Revenue Report for the Metropolitan Highway System. March 2, 1999. Prepared for the Massachusetts Turnpike Authority by URS Greiner Woodward Clyde Group Consultants, Inc.

option had not been available to those residents, then some of those users would likely have forgone trips resulting in a higher elasticity in the range of -0.07 to -0.10 in our view. Since the resident discount category has stabilized over time and is now showing decreases with stricter enforcement, significant jumps into this category with future toll increases is not likely to happen.

Toll rates on the Tobin Bridge also increased on July 1, 1997. Passenger car tolls increased from \$0.50 to \$1.00, and tolls for other vehicle categories also increased. A 5.5 percent reduction in transactions occurred between fiscal year 1997 and 1998 as a result of this increase.

### **July 2002 Toll Increase**

On July 1, 2002, the toll rates on the Boston Extension were increased by 100 percent, from \$0.25 per axle to \$0.50 per axle. On that same date, passenger cars utilizing FastLane were provided a \$0.25 discount at all toll plazas on the Boston Extension. This resulted in the average toll increasing from \$0.51 in the 12 months before the toll change to \$0.92 during the 12 months after the toll increase. This is an 81 percent increase in the average toll rate, reflecting the discount for FastLane users.

Toll rates also were increased on the tunnels from \$1.00 per axle to \$1.50 per axle (\$2.00 for cars to \$3.00 for cars). Similar to the Boston Extension, passenger cars utilizing FastLane were provided a \$0.50 discount at the Tunnel toll plazas.

#### *Analysis of 2002 Toll Increase on Boston Extension*

We compared monthly toll transactions for the 12 months from July 2001 to June 2002 with the those in July 2002-June 2003 and found that the 81 percent increase in tolls yielded a 6.1 percent decrease in transactions, for an elasticity of -0.08 (Table 5.1). The September 11 terrorist attack resulted in unusually low volumes in September 2001, so the reduction in September 2002 over the previous year was not nearly as high as the other months (only 3.4 percent). To correct for this anomaly, we eliminated both September data from the calculations, but found that the elasticity value was still -0.08.

The FastLane discount resulted in a significant increase in tolls collected electronically, meaning that some drivers only had a 50 percent increase in tolls on the Extensions (from 50 cents to 75 cents), rather than 100 percent. Use of FastLane and E-Zpass on the Extension increased from 43.5 percent in 2001 to 49.9 percent in 2002 and 56.8 percent in 2003. This change in toll collection methods is reflected in the average toll change shown in Table 5.1

We also compared transactions for the first half of 2001 and first half of 2002 (prior to any toll increase) and found that traffic growth was flat during this time period. Employment in the Boston Metro area during this same time period was down by about 3.0 percent. Post toll increase, Boston Metro employment was down by 2.3 percent (Table 5.2).

**Table 5.1 Boston Extension Monthly Comparison of Toll Transactions and Average Toll from July 2001 through June 2003**

Month	Toll Transactions			Average Toll			
	2001/2002	2002/2003	Percent of Impact	2001/2002	2002/2003	Percent of Impact	Elasticity
July	5,443,642	4,980,356	-8.5	\$0.51	\$0.93	83.4	-0.10
August	5,664,179	5,070,801	-10.5	0.51	0.93	83.2	-0.13
September	5,246,670	5,070,051	-3.4	0.51	0.92	82.5	-0.04
October	5,829,673	5,476,812	-6.1	0.51	0.92	81.3	-0.07
November	5,435,004	4,962,538	-8.7	0.51	0.92	81.3	-0.11
December	5,256,936	4,867,894	-7.4	0.51	0.91	80.4	-0.09
January	5,317,514	4,978,935	-6.4	0.51	0.91	79.5	-0.08
February	5,005,177	4,568,594	-8.7	0.51	0.91	80.0	-0.11
March	5,649,704	5,398,718	-4.4	0.51	0.91	79.9	-0.06
April	5,716,909	5,419,375	-5.2	0.51	0.91	80.0	-0.07
May	5,902,463	5,684,423	-3.7	0.51	0.91	80.1	-0.05
June	5,540,253	5,507,685	-0.6	0.50	0.91	81.4	-0.01
July-June	66,008,124	61,986,182	-6.1	0.51	0.92	81.1	-0.08
Excluding September	60,761,454	56,916,131	-6.3	0.51	0.92	80.9	-0.08

Notes: 100 percent toll increase on July 1, 2002 for cash and E-Zpass; 50 percent increase for FastLane. September 11, 2001 terrorist attack significantly reduced transactions in September 2001.

**Table 5.2 Comparison of Boston Metro Employment between July 2001 and June 2003**

Month	Boston Metro Employment		
	2001/2002	2002/2003	Percent of Impact
July	2,523,000	2,451,000	-2.9
August	2,515,000	2,444,000	-2.8
September	2,522,000	2,464,000	-2.3
October	2,524,000	2,473,000	-2.0
November	2,525,000	2,481,000	-1.7
December	2,526,000	2,482,000	-1.7
January	2,451,000	2,394,000	-2.3
February	2,445,000	2,384,000	-2.5
March	2,457,000	2,393,000	-2.6
April	2,472,000	2,414,000	-2.4
May	2,481,000	2,424,000	-2.3
June	2,487,000	2,430,000	-2.3
<b>Average</b>	<b>2,494,000</b>	<b>2,436,000</b>	<b>-2.3</b>

Source: BLS, Boston NECTA, CES data series.

Since the impact of the employment decline seems to have resulted in zero traffic growth, we assumed that the total traffic reduction after the toll increase was due to the toll increase. This means that that 2002 toll increase indicates an elasticity of -0.08 for the Boston Extension.

*Analysis of 2002 Toll Increase on Tunnels*

A similar analysis was performed for demand at the tunnels. During the first half of 2002, tunnel toll transactions were down an average of 5.6 percent as compared to this same time period of 2001. This is directly related to Logan airport enplanements being down by nearly 18 percent for this same time period, reflective of the impact of the September 11, 2001 terrorist attack and the job losses experienced during the recession of this time period. Transactions were down by an average of 7.2 percent during April, May, and June of 2002 versus 2001. After the toll increase went into effect transactions fell to 11 percent over the previous year in July and August (Table 5.3). The toll rate increase resulted in an additional 4 to 5 percent decrease in transactions.

**Table 5.3 Tunnel Monthly Comparison of Toll Transactions and Average Toll from July 2001 through June 2003**

Month	Toll Transactions			Average Toll			
	2001/2002	2002/2003	Percent of Impact	2001/2002	2002/2003	Percent of Impact	Elasticity
July	1,583,106	1,405,587	-11.2	\$2.14	\$3.04	42.3	-0.27
August	1,672,588	1,476,312	-11.7	\$2.14	\$3.04	42.5	-0.28
September	1,266,624	1,323,245	4.5	\$2.06	\$3.05	48.1	0.09
October	1,436,603	1,446,119	0.7	\$2.11	\$3.09	46.5	0.01
November	1,389,129	1,310,963	-5.6	\$2.11	\$3.04	44.3	-0.13
December	1,395,617	1,350,761	-3.2	\$2.08	\$3.04	46.0	-0.07
January	1,397,892	1,315,706	-5.9	\$2.10	\$3.01	43.3	-0.14
February	1,319,331	1,196,740	-9.3	\$2.11	\$3.04	43.7	-0.21
March	1,536,303	1,438,766	-6.3	\$2.12	\$3.04	43.2	-0.15
April	1,506,237	1,400,421	-7.0	\$2.13	\$3.03	42.4	-0.17
May	1,571,702	1,518,152	-3.4	\$2.13	\$3.03	42.2	-0.08
June	1,488,122	1,535,732	3.2	\$2.11	\$3.04	43.7	0.07
November-June	11,604,333	11,067,241	-4.6	\$2.11	\$3.03	43.6	-0.11

Notes: Toll Increase on July 1, 2002. September 11, 2001 terrorist attack.

Elasticity calculations excluded the months of July through October to remove as much of the September 11 impact from the analysis. The remaining eight months of data were used, resulting in a calculated elasticity of -0.11.

Logan Airport enplanements for this time period are shown in Table 5.4. The events of September 11, 2001 have significant impacts on the relationships shown in this table. Overall, total enplanements were up by about 2.1 percent when comparing these time periods. That coupled with employment being down, we again assume that normal transaction growth at the Tunnels without a toll increase would have been relatively flat or possibly even negative. Therefore, we assume that the total traffic reduction after the toll increase was due to the toll increase. This means that that 2002 toll increase indicates an elasticity of -0.11 for the Tunnels.

**Table 5.4 Comparison of Logan Enplanements between July 2001 and June 2003**

Month	Logan Airport Enplanements		Percent Impact
	2001/2002	2002/2003	
July	2,558,752	2,169,585	-15.2
August	2,690,873	2,288,659	-14.9
September	1,353,119	1,812,851	34.0
October	1,644,499	2,054,480	24.9
November	1,540,247	1,721,007	11.7
December	1,484,718	1,778,657	19.8
January	1,415,697	1,523,384	7.6
February	1,514,124	1,497,806	-1.1
March	1,871,888	1,854,349	-0.9
April	1,984,468	1,917,663	-3.4
May	1,992,165	1,902,600	-4.5
June	2,092,560	2,083,569	-0.4
<b>Average</b>	<b>22,143,110</b>	<b>22,604,610</b>	<b>2.1</b>

Source: Massport.

### 2008 Toll Increase Impacts

On January 1, 2008, tolls were increased on both the Boston Extension and Tunnels, as follows:

- **Boston Extension** - From \$1.00 to \$1.25 for passenger cars, with a \$0.25 discount for FastLane.
- **Tunnels** - From \$3.00 to \$3.50 for passenger cars, with a \$0.50 discount for FastLane.
- **Commercial Vehicle** - Toll rates on the Boston Extension and the Tunnels increased proportionally.

We evaluated the impact of this toll increase from January through April, ignoring May through December because of the compounding effects of rapidly rising fuel during the spring and summer of 2008 and the economic recession that began in the last quarter of 2008 (see Section 5.2 for a discussion of fuel price effects and Section 3.0 for economic analysis.)

### *Analysis of 2008 Toll Increase on Boston Extension*

For the Extension, the overall average toll increase was about 27.6 percent for two-axle vehicles, and 34.7 percent for trucks with more than two axles. Passenger vehicle and two-axle commercial vehicle toll transactions were down by about 1.8 percent during this time period when compared to 2007 traffic levels (Table 5.5). Truck transactions during this same time period increased by 2.6 percent, indicating that commercial vehicles are relatively inelastic; meaning there is limited response by heavy trucks when a toll is increased.

**Table 5.5 Impacts of the 2008 Toll Increase on Boston Extension Demand**

Month	2007 Toll Transactions			2008 Toll Transactions			Percent Impact		
	Cars	Trucks	Total	Cars	Trucks	Total	Cars	Trucks	Total
January	5,457,905	120,762	5,578,667	5,362,196	128,839	5,491,035	-1.75	6.69	-1.57
February	5,027,787	110,665	5,138,452	4,946,209	115,127	5,061,336	-1.62	4.03	-1.50
March	5,884,073	126,983	6,011,056	5,678,442	124,726	5,803,168	-3.49	-1.78	-3.46
April	5,750,407	128,014	5,878,421	5,746,177	130,172	5,876,349	-0.07	1.69	-0.04
May	6,164,896	140,803	6,305,699	5,878,689	138,037	6,016,726	-4.64	-1.96	-4.58
June	5,968,283	134,684	6,102,967	5,640,248	130,659	5,770,907	-5.50	-2.99	-5.44
July	5,769,854	130,620	5,900,474	5,475,154	132,407	5,607,561	-5.11	1.37	-4.96
August	5,978,081	141,051	6,119,132	5,394,338	130,286	5,524,624	-9.76	-7.63	-9.72
September	5,852,822	127,518	5,980,340	5,527,370	136,101	5,663,471	-5.56	6.73	-5.30
October	6,266,103	142,619	6,408,722	5,847,389	143,656	5,991,045	-6.68	0.73	-6.52
November	5,716,445	132,506	5,848,951	5,205,956	114,433	5,320,389	-8.93	-13.64	-9.04
December	5,217,135	120,170	5,337,305	5,015,109	115,803	5,130,912	-3.87	-3.63	-3.87
January-December	69,053,791	1,556,395	70,610,186	65,717,277	1,540,246	67,257,523	-4.83	-1.04	-4.75
January-April	22,120,172	486,424	22,606,596	21,733,024	498,864	22,231,888	-1.75	2.56	-1.66
Month	2007 Toll Revenue (Dollars)			2008 Toll Revenue (Dollars)			Percent Impact		
	Cars	Trucks	Total	Cars	Trucks	Total	Cars	Trucks	Total
January	4,751,393	\$253,485	\$5,004,877	\$5,969,864	\$363,749	\$6,333,613	25.64	43.50	26.55
February	4,391,506	230,801	4,622,306	5,509,358	323,062	5,832,420	25.45	39.97	26.18
March	5,140,724	263,654	5,404,378	6,325,753	348,713	6,674,466	23.05	32.26	23.50
April	5,040,596	264,654	5,305,249	6,416,445	363,532	6,779,977	27.30	37.36	27.80
May	5,411,100	291,584	5,702,684	6,573,455	386,994	6,960,449	21.48	32.72	22.06
June	5,246,304	280,272	5,526,575	6,313,803	366,830	6,680,633	20.35	30.88	20.88
July	5,084,381	270,752	5,355,132	6,140,964	371,744	6,512,707	20.78	37.30	21.62
August	5,271,962	299,374	5,571,335	6,061,806	363,883	6,425,689	14.98	21.55	15.33
September	5,150,916	269,687	5,420,602	6,166,181	379,108	6,545,288	19.71	40.57	20.75
October	5,495,392	303,361	5,798,752	6,511,084	399,486	6,910,569	18.48	31.69	19.17
November	5,003,016	284,916	5,287,931	5,785,668	314,758	6,100,426	15.64	10.47	15.37
December	4,558,907	259,783	4,818,689	5,553,127	322,383	5,875,509	21.81	24.10	21.93
January-December	60,546,192	3,272,318	63,818,510	73,327,506	4,304,239	77,631,745	21.11	31.53	21.64
January-April	19,324,218	1,012,593	20,336,810	24,221,420	1,399,056	25,620,476	25.34	38.17	25.98

Month	2007 Average Toll (Dollars)			2008 Average Toll (Dollars)			Percent Impact		
	Cars	Trucks	Total	Cars	Trucks	Total	Cars	Trucks	Total
January	0.87	2.10	0.90	1.11	2.82	1.15	27.89	34.50	28.57
February	0.87	2.09	0.90	1.11	2.81	1.15	27.52	34.55	28.10
March	0.87	2.08	0.90	1.11	2.80	1.15	27.51	34.65	27.93
April	0.88	2.07	0.90	1.12	2.79	1.15	27.39	35.08	27.84
May	0.88	2.07	0.90	1.12	2.80	1.16	27.40	35.38	27.92
June	0.88	2.08	0.91	1.12	2.81	1.16	27.35	34.92	27.84
July	0.88	2.07	0.91	1.12	2.81	1.16	27.28	35.45	27.97
August	0.88	2.12	0.91	1.12	2.79	1.16	27.42	31.59	27.75
September	0.88	2.11	0.91	1.12	2.79	1.16	26.76	31.71	27.50
October	0.88	2.13	0.90	1.11	2.78	1.15	26.97	30.74	27.48
November	0.88	2.15	0.90	1.11	2.75	1.15	26.98	27.92	26.83
December	0.87	2.16	0.90	1.11	2.78	1.15	26.72	28.78	26.84
January-December	0.88	2.10	0.90	1.12	2.79	1.15	27.26	32.91	27.71
January-April	0.87	2.08	0.90	1.11	2.80	1.15	27.58	34.72	28.10
<b>Elasticity</b>									
January-December							-0.21	-0.03	-0.21
January-April							-0.10	0.07	-0.10

Source: BLS, Boston NECTA, CES data series.

Notes: Toll increase on January 1, 2008. Nonrevenue transactions excluded from analysis. January through April is viewed as a more representative sample as fuel prices rose significantly during the months of May through September 2008. For elasticity calculations, it is assumed that passenger vehicle transaction normal growth during January to April of 2008 would have been 1 percent as compared to January to April of 2007.

From 2005 to 2007, annual transaction growth on the Extension averaged 2.25 percent. Assuming normal traffic growth would have been lower than recent years due to slowing economic conditions (Table 5.6), we assume there would have been a 1.0 percent increase in toll transactions had there not been a toll increase. Therefore, the passenger car average toll increase of 27.6 percent resulted in approximately a 2.75 percent reduction in transactions on the Extension. This is equivalent to a toll elasticity of -0.10, which is within the normal ranges of facilities such as the Massachusetts Turnpike and is consistent with our impact analysis of the 2002 toll increase.

**Table 5.6 Recent Trends in Boston Metro Employment (in Thousands)**

Month	Employment				Percent Growth		
	2006	2007	2008	2009	2006-2007	2007-2008	2008-2009
January	2,355	2,394	2,421	2,380	1.7%	1.1%	-1.7%
February	2,362	2,399	2,429	2,380	1.6%	1.2%	-2.0%
March	2,375	2,408	2,439	2,380	1.4%	1.3%	-2.4%
April	2,403	2,436	2,464	2,399	1.4%	1.1%	-2.6%
May	2,413	2,453	2,474	2,408	1.7%	0.9%	-2.7%
June	2,434	2,471	2,485	2,420	1.6%	0.5%	-2.6%
July	2,410	2,444	2,458	2,390	1.4%	0.6%	-2.8%
August	2,406	2,439	2,451	2,384	1.4%	0.5%	-2.7%
September	2,427	2,454	2,465	2,397	1.1%	0.4%	-2.7%
October	2,441	2,473	2,474	2,408	1.3%	0.0%	-2.7%
November	2,450	2,484	2,465	2,412	1.4%	-0.8%	-2.2%
December	2,457	2,485	2,447	N/A	1.1%	-1.5%	N/A
Average	2,411	2,445	2,456	2,396	1.4%	0.4%	-2.4%

### *Analysis of 2008 Toll Increase on Tunnels*

A comparison of the Tunnel toll transactions between 2007 and 2008 are shown in Table 5.7. Nonrevenue and resident discount transactions were excluded from the analysis as a toll increase would have no effect on these users, and could influence the findings as they make up a significant portion of the traffic. Unlike the Extension, it is estimated that no growth or even slight negative growth in transactions would have occurred at the Tunnels in the absence of a toll increase. Logan airport enplanements during 2008 are down nearly 6 percent when compared to 2007 levels. Tunnel passenger vehicles (including two-axle commercial) are estimated to have an elasticity of -0.09, while trucks continue to show growth in transactions and are relatively inelastic to toll rate increases of this magnitude.

**Table 5.7 Impacts of the 2008 Toll Increase on Tunnels Demand**

Month	2007 Transactions			2008 Transactions			Percent Impact		
	Cars	Trucks	Total	Cars	Trucks	Total	Cars	Trucks	Total
January	1,380,162	25,331	1,405,493	1,385,760	31,665	1,417,425	0.4	25.0	0.8
February	1,307,494	24,624	1,332,118	1,297,414	28,245	1,325,659	-0.8	14.7	-0.5
March	1,597,987	28,288	1,626,275	1,528,561	30,242	1,558,803	-4.3	6.9	-4.1
April	1,546,976	27,570	1,574,546	1,531,077	29,848	1,560,925	-1.0	8.3	-0.9
May	1,668,480	30,579	1,699,059	1,603,921	31,030	1,634,951	-3.9	1.5	-3.8
June	1,679,681	30,546	1,710,227	1,598,410	30,527	1,628,937	-4.8	-0.1	-4.8
July	1,644,730	29,705	1,674,435	1,574,385	31,061	1,605,446	-4.3	4.6	-4.1
August	1,702,243	32,535	1,734,778	1,575,630	31,206	1,606,836	-7.4	-4.1	-7.4
September	1,532,748	30,749	1,563,497	1,461,475	33,924	1,495,399	-4.7	10.3	-4.4
October	1,679,661	33,136	1,712,797	1,540,741	37,665	1,578,406	-8.3	13.7	-7.8
November	1,554,614	31,442	1,586,056	1,361,741	31,835	1,393,576	-12.4	1.2	-12.1
December	1,426,022	30,327	1,456,349	1,348,880	33,170	1,382,050	-5.4	9.4	-5.1
January-December	18,720,798	354,832	19,075,630	17,807,995	380,418	18,188,413	-4.9	7.2	-4.7
January-April	5,832,619	105,813	5,938,432	5,742,812	120,000	5,862,812	-1.5	13.4	-1.3
Month	2007 Revenue (Dollars)			2008 Revenue (Dollars)			Percent Impact		
	Cars	Trucks	Total	Cars	Trucks	Total	Cars	Trucks	Total
January	4,517,615	148,551	4,666,166	\$5,290,660	\$203,152	\$5,493,813	17.1	36.8	17.7
February	4,305,231	146,166	4,451,397	4,982,663	182,082	5,164,745	15.7	24.6	16.0
March	5,273,106	166,793	5,439,899	5,875,091	196,616	6,071,707	11.4	17.9	11.6
April	5,096,265	160,808	5,257,073	5,898,276	191,056	6,089,331	15.7	18.8	15.8
May	5,489,087	177,492	5,666,579	6,157,329	200,617	6,357,945	12.2	13.0	12.2
June	5,516,807	171,540	5,688,347	6,128,000	197,005	6,325,004	11.1	14.8	11.2
July	5,340,911	165,992	5,506,903	5,971,701	201,317	6,173,017	11.8	21.3	12.1
August	5,530,368	180,309	5,710,677	5,966,722	196,763	6,163,485	7.9	9.1	7.9
September	5,034,869	169,568	5,204,436	5,585,008	213,936	5,798,944	10.9	26.2	11.4
October	5,558,245	183,371	5,741,615	5,878,912	236,635	6,115,547	5.8	29.0	6.5
November	5,121,908	172,040	5,293,947	5,150,354	193,792	5,344,146	0.6	12.6	0.9
December	4,623,839	166,869	4,790,708	5,064,316	203,037	5,267,353	9.5	21.7	9.9
January-December	61,408,252	2,009,496	63,417,748	67,949,031	2,416,006	70,365,036	10.7	20.2	11.0
January-April	19,192,218	622,317	19,814,535	22,046,690	772,906	22,819,596	14.9	24.2	15.2

Month	2007 Average Toll (Dollars)			2008 Average Toll (Dollars)			Percent Impact		
	Cars	Trucks	Total	Cars	Trucks	Total	Cars	Trucks	Total
January	3.27	5.86	3.32	3.82	6.42	3.88	16.6	9.4	16.7
February	3.29	5.94	3.34	3.84	6.45	3.90	16.6	8.6	16.6
March	3.30	5.90	3.35	3.84	6.50	3.90	16.5	10.3	16.4
April	3.29	5.83	3.34	3.85	6.40	3.90	16.9	9.7	16.8
May	3.29	5.80	3.34	3.84	6.47	3.89	16.7	11.4	16.6
June	3.28	5.62	3.33	3.83	6.45	3.88	16.7	14.9	16.7
July	3.25	5.59	3.29	3.79	6.48	3.85	16.8	16.0	16.9
August	3.25	5.54	3.29	3.79	6.31	3.84	16.6	13.8	16.5
September	3.28	5.51	3.33	3.82	6.31	3.88	16.3	14.4	16.5
October	3.31	5.53	3.35	3.82	6.28	3.87	15.3	13.5	15.6
November	3.29	5.47	3.34	3.78	6.09	3.83	14.8	11.3	14.9
December	3.24	5.50	3.29	3.75	6.12	3.81	15.8	11.2	15.9
January-December	3.28	5.66	3.32	3.82	6.35	3.87	16.3	12.1	16.4
January-April	3.29	5.88	3.34	3.84	6.44	3.89	16.7	9.5	16.7
<b>Elasticity</b>									
January-December							-0.30	0.59	-0.28
January-April							-0.09	1.41	-0.06

Source: MassDOT.

Notes: Toll Increase on January 1, 2008. Nonrevenue and resident discount transactions excluded from analysis. January through April is viewed as a more representative sample as fuel prices rose significantly during the months of May through September 2008. For elasticity calculations it is assumed that there would have been no normal growth in passenger vehicle transactions during January-April of 2008 due to the downturn at Logan International Airport.

### **Elasticity Factor Assumptions for Future Analysis of Toll Increases**

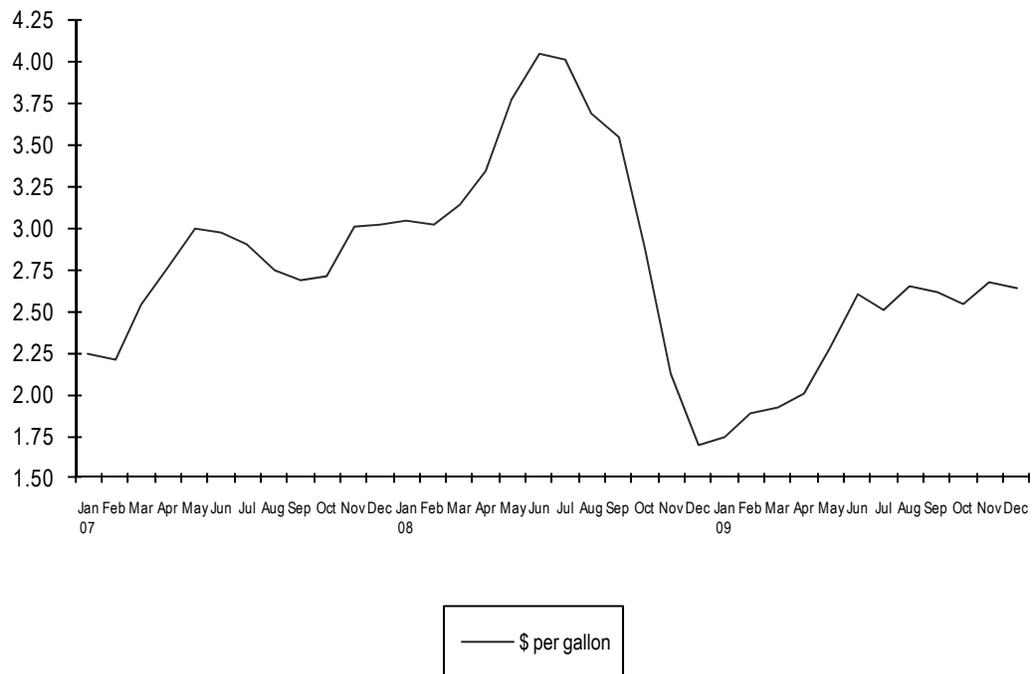
For future year traffic and revenue analysis, a toll elasticity factor of -0.09 will be assumed for the Boston Extension, reflecting an average of the -0.08 calculated from the 2002 toll increase and the -0.10 calculated from the 2008 toll increase. For the Tunnels, a toll elasticity factor of -0.10 will be used in analyzing future toll rate increases, reflecting an average of the -0.11 calculated from the 2002 toll increase, and the -0.09 calculated from the 2008 toll increase. It is our opinion that this will be a slightly conservative revenue approach given that other competing nontolled facilities will become more congested in the future and in calculating the elasticity factor we have assumed all of the reduction in transactions was due to the toll increases, and not economic and terrorist attack impacts which may themselves have led to reductions in toll transaction even without a toll increase.

## **5.2 IMPACTS OF FUEL PRICE CHANGES ON MHS TRAFFIC**

Fuel prices experienced an unprecedented and rapid increase during May and June 2008, which impacted the amount of driving in general in the Boston area and the United States as a whole. Most, if not all toll agencies saw the effects of this, and the MHS was no exception.

Between May of 2007 and March of 2008, the price of fuel averaged around \$3.00 (Figure 5.1). Fuel prices increased rapidly through August of 2008, dropping sharply by the end of 2008. During April of 2008, fuel price started to climb and continued at a very aggressive rate through June before reaching a peak of \$4.05 in June and early July, and then falling below April averages by October of 2008. Even with the rise of fuel prices to \$3.00 between February and May of 2007, drivers did not noticeably adjust their driving patterns. Once fuel prices started to significantly rise beyond \$3.00, to levels not yet experienced, driving behavior significantly changed. Fuel prices then dropped significantly through December of 2008, reaching \$1.70 per gallon, and increased steadily in 2009, showing the typical trend of peak prices during the summer, and remaining fairly steady at around \$2.60 per gallon.

**Figure 5.1 Recent Trend in Average Retail Unleaded Gasoline Prices**



Source: Massachusetts AAA and Energy Information Administration.

To better isolate the impact of just the rapid rise in fuel prices, we focused on the Western Turnpike, as the toll increases of 2008 are on the Boston Extension and Tunnels only. Toll transactions on the Western Turnpike for the period of January through April of 2008 were down about 0.4 percent as compared to this same time period for 2007 (Table 5.8). Between May and September, transactions were down an additional 3.8 percent, while fuel prices remained over \$3.50 per gallon, which was 25 to almost 40 percent higher than prices during the previous year. Using this relationship, we calculate an average elasticity of -0.11, meaning a 100 percent increase in fuel price would cause a short-term reduction in transactions of 11 percent. The continuing decline in transactions experienced after September of 2008 is highly correlated to the economic recession that started in the fall of 2008, and that led to significant job losses in Massachusetts (and nationwide) over the last year.

Similar 3 to 4 percent reductions in transactions due to the sharp increase in fuel prices were found on the Boston Extension and Tunnels as well, indicating similar fuel rise impacts on demand. However, some caution should be used for the Tunnels as enplanements at Logan International Airport are highly correlated with Tunnel transactions, meaning the rise in fuel prices has secondary impacts on not only airport travel, but the airlines in terms of capacity reductions and fare increases.

**Table 5.8 Western Turnpike 2008 versus 2007 Monthly Transactions**

Month	Transactions			2008 Fuel Price
	2007	2008	Percent Difference	
January	8,038,715	7,950,068	-1.10%	\$3.05
February	7,334,528	7,302,344	-0.44%	3.02
March	8,491,367	8,473,087	-0.22%	3.14
April	8,664,016	8,679,779	0.18%	3.34
May	9,371,500	9,124,357	-2.64%	3.77
June	9,214,476	8,831,692	-4.15%	4.05
July	9,369,957	9,119,889	-2.67%	4.01
August	9,900,848	9,428,235	-4.77%	3.69
September	9,074,955	8,667,348	-4.49%	3.55
October	9,402,975	9,054,055	-3.71%	2.88
November	8,741,943	8,260,081	-5.51%	2.12
December	8,057,211	7,960,203	-1.20%	1.70
<b>Total</b>	<b>105,662,491</b>	<b>102,851,138</b>	<b>-2.66%</b>	
January-April	32,528,626	32,405,278	-0.38%	
May-September	46,931,736	45,171,521	-3.75%	
October-December	26,202,129	25,274,339	-3.54%	

Source: MassDOT. Fuel prices from the Energy Information Agency and AAA. February 2008 transactions normalized to reflect 28 days for direct comparison against 2007.

For our forecast presented in this report, we are assuming that fuel prices will stabilize near current levels and grow normally, and no long-term price surges will occur that will significantly effect long-term normal growth. At the time, this report was prepared (January 2010), the price of a barrel of crude oil was below \$80. They had been over \$140 when retail gasoline prices were well in excess of \$4. Current gasoline prices are approximately \$2.75 per gallon.

## 6.0 Traffic and Revenue Forecast

### 6.1 PRIMARY ASSUMPTIONS

The traffic and toll revenue forecasts presented in this document are based on judgments and assumptions which may differ materially from the actual results. This report is not intended nor should it be construed to constitute a guaranty of any particular outcome(s) or result(s). This report is similarly not intended nor should it be construed to represent a promise or representation with respect to any particular outcome(s) or result(s).

While not exhaustive, the following list identifies the primary assumptions on which the traffic and revenue forecasts presented in this report are based:

- Toll rates will be as they are today;
- Tolls on the Western Turnpike will remain as they are today until they are removed on December 31, 2017;
- The transportation system improvements shown in Section 4.0 will be implemented as described;
- The entire Massachusetts Turnpike system will continue to be well-maintained, efficiently operated, and effectively signed and promoted to encourage maximum usage;
- Regional and corridor growth in population and employment will occur as anticipated in this report;
- Motor fuel will continue to remain in adequate supply to motorists and the long-term rate of price change will generally track the overall rate of change in consumer prices;
- No local, regional, national, or international emergency will arise which would abnormally restrict the use of motor vehicles, or substantially alter economic activity or freedom of mobility; and
- The traffic and toll revenue forecasts are intended to reflect the overall trend over a period of years, rather than specific forecasts in a particular year.

### 6.2 SHORT-TERM FORECAST OF TRANSACTIONS AND REVENUE

As discussed in Section 2.0, transactions during 2009 have been lower than 2008 levels (on a calendar year basis), attributed primarily to the economic recession that is affecting the entire nation. Just prior to this traffic and revenue study, Cambridge Systematics had developed a 12-month forecast (July 2009 through

June 2010) for the Boston Extension and Tunnels to assist MTA in developing their fiscal year 2010 budget. Actual transactions and revenue for September through December are slightly higher compared to our projections, which is indicative of the conservative assumptions used for short-term employment growth and Logan passengers. The data for July through December show an upward trend in transactions for 2009 compared to 2008 in the tunnels (2.9 percent); traffic growth on the Extension was 0.6 percent over that period, showing signs of improvement compared to the first half of calendar year 2009. Revenues on the MHS have continued to fall, compared to 2008 levels, primarily due to both a decline in truck and commercial traffic and a higher penetration of FastLane users.

We estimate that total FY 2010 transactions will increase by less than 1 percent, compared to FY 2009, as a result of modest growth in the Boston Extension as the economy begins to show signs of recovery, coupled with an approximately 2 percent growth monthly in Tunnel transactions through the end of FY 2010.

We estimate a total of 66.4 million transactions for the Boston Extension during FY 2010, resulting in \$75.1 million in annual toll revenue (Table 6.1). Annual transactions for FY 2010 at the tunnels are estimated to be 20.0 million, resulting in \$69.1 in annual toll revenue. In addition, 22.2 million annual transactions resulting in \$25.1 million in annual toll revenue is estimated to occur as a result of the toll surcharge at Interchange 15 (Plaza 15) for travel between the Western Turnpike and the Boston Extension. Total toll revenue for the MHS is estimated to be \$169.4 million for FY 2010, which is about 0.6 percent higher than FY 2009 levels.

**Table 6.1 Estimate of FY 2010 Annual Transactions and Toll Revenue**

Toll Plaza	Estimated Toll Transactions (in Millions)	Estimated Average Toll	Estimated Toll Revenue (in Millions)
<b>Boston Extension</b>			
55	13.6	\$1.11	\$15.1
18	10.2	\$1.12	\$11.4
19	33.1	\$1.13	\$37.5
20	9.6	\$1.16	\$11.1
Extension Total	66.4	\$1.13	\$75.1
<b>Tunnels</b>			
Sumner	7.8	\$3.21	\$25.1
TWT	12.1	\$3.63	\$44.0
Tunnels Total	20.0	\$3.46	\$69.1
<b>MHS Total</b>			
Interchange 15 Surcharge	22.2	\$1.13	\$25.1
MHS Total			\$169.4

Note: Totals may not add up due to rounding.

Historically, when there have been recessions or recessions coinciding with toll rate increases, there have been strong rebounds in transaction growth during the next two years. This is evident by looking at the historical transaction growth for the Boston Extension from 1990 through 1993. On March 1, 1990, there was a toll increase which coincided with a fairly significant recession. Two years of declining transactions were then followed by two years of positive growth of more than 2 percent per year. Similarly, in 2001 there were the negative impacts of the September 11 attacks; the bursting technology bubble; and a recession. These coincided with a toll increase on July 1, 2002, resulting in transaction growth of -0.7 percent and -3.7 percent during 2001 and 2002. During 2003 and 2004, transaction growth rebounded at a rate of 1.9 percent and 3.9 percent, respectively.

However, the recent economic recession has brought Massachusetts' employment and MHS transactions below 2007 levels. Massachusetts' employment and Logan passenger forecasts show estimates reaching 2007 levels by the end of 2013 (first half of FY 2014). Based on these projections, we are assuming modest traffic growth in FY 2011 (1.0 percent) on the Boston Extension, and then increasing at a rate of 2.0 percent between FYs 2012 and 2014, until it reaches 2007 transaction levels. This assumption is consistent with Moody's Economy.com employment forecast for Massachusetts, which anticipates slow growth in calendar year 2011, followed by significant rebound growth in calendar years 2012 and 2013. At the Tunnels, we forecast that transactions will increase at an annual rate of 1.4 percent between FYs 2011 and 2014, until it reaches 2007 levels, similar to the projected growth trends of Logan Airport passengers. Table 6.2 shows short and long-term projections of transactions and toll revenue for the MHS (Boston Extension, Tunnels, and Interchange 15 Surcharge).

**Table 6.2 MHS Short-Term Projections of Transactions and Toll Revenue**

Fiscal Year	Projected Transactions (in Millions)	Projected Toll Revenue (in Millions)	Projected Annual Percent Change in Revenue
<b>Short-Term Forecast</b>			
2009	107.5	\$168.3	
2010	108.6	\$169.4	0.6%
2011	109.8	\$171.4	1.2%
2012	111.9	\$174.4	1.8%
2013	113.9	\$177.5	1.8%
2014	116.1	\$180.7	1.8%
2015	117.3	\$182.7	1.1%
<b>Long-Term Forecast</b>			<b>Average Annual Growth Rate</b>
2020	123.7	\$193.3	1.1%
2030	134.7	\$211.6	0.9%
2040	141.6	\$222.4	0.5%
2050	148.8	\$233.8	0.5%

## 6.3 LONG-TERM FORECAST OF TRANSACTIONS AND REVENUE

In estimating transactions and toll revenue beyond FY 2014, we applied the employment and Logan passenger forecasts described earlier to the Massachusetts statewide travel demand model to estimate a long-term trend of growth.

Our growth assumptions for employment for the overall Boston Metro Area are low, consistent with the mature conditions of this area. Our long-term transaction growth forecast for the MHS is higher than overall traffic growth in the area due to the relative location of the development, near the Plaza 18/19/20 interchange, in South Boston, and in Logan Airport passengers. However, the overall forecast in transaction growth is still very modest as compared to historical growth, reflecting the build out of the area. Our traffic and revenue forecast assumes no changes in current toll rates and tolling policies, and therefore, reflects only normal growth in transactions as a result of economic growth.

We used our Logan passenger and employment forecasts and the statewide travel demand model to estimate traffic growth on the MHS between FYs 2011 and 2030. This growth was applied to our FY 2011 transactions resulting in estimates of transactions and revenue for FYs 2020 and 2030. We interpolated between forecast years to estimate transactions and revenue for intermediate years. As mentioned in Section 6.2, transactions and revenues through FY 2014 assumed faster growth as the economy recovers and projections of employment and Logan passengers reach 2007 levels. Transactions and revenue post FY 2030 were assumed to grow at 0.5 percent per year.

Table 6.3 shows the estimated transactions and revenue for the Boston Extension, Tunnels, Plaza 15 surcharge, and the MHS overall. MHS transactions and revenue beyond FY 2014 are forecasted to grow at an average annual rate of 1.1 percent between FYs 2014 and 2020, and at an average annual rate of 0.9 percent between FYs 2020 and 2030.

**Table 6.3 MHS Annual Toll Transactions and Revenue Forecast**  
*In Thousands*

Fiscal Year	Boston Extension		Tunnels		Interchange 15 Surcharge		Total MHS	
	Annual Transactions	Annual Revenue	Annual Transactions	Annual Revenue	Annual Transactions	Annual Revenue	Annual Transactions	Annual Revenue
2009	66,018	\$75,326	19,486	\$68,141	22,004	\$24,876	107,507	\$168,344
2010	66,431	\$75,150	19,957	\$69,107	22,230	\$25,130	108,618	\$169,387
2011	67,100	\$75,900	20,240	\$70,070	22,470	\$25,400	109,810	\$171,370
2012	68,440	\$77,490	20,520	\$71,050	22,890	\$25,880	111,850	\$174,420
2013	69,810	\$79,120	20,810	\$72,040	23,320	\$26,360	113,940	\$177,520
2014	71,210	\$80,780	21,100	\$73,050	23,750	\$26,850	116,060	\$180,680
2015	71,920	\$81,590	21,370	\$74,000	24,000	\$27,130	117,290	\$182,720
2016	72,640	\$82,410	21,650	\$74,960	24,260	\$27,430	118,550	\$184,800
2017	73,370	\$83,230	21,930	\$75,930	24,520	\$27,720	119,820	\$186,880
2018	74,100	\$84,060	22,220	\$76,920	24,780	\$28,020	121,100	\$189,000
2019	74,840	\$84,900	22,510	\$77,920	25,040	\$28,310	122,390	\$191,130
2020	75,590	\$85,750	22,800	\$78,930	25,310	\$28,610	123,700	\$193,290
2021	76,190	\$86,440	23,040	\$79,760	25,530	\$28,860	124,760	\$195,060
2022	76,800	\$87,130	23,280	\$80,600	25,750	\$29,110	125,830	\$196,840
2023	77,410	\$87,830	23,520	\$81,440	25,970	\$29,360	126,900	\$198,630
2024	78,030	\$88,530	23,770	\$82,290	26,190	\$29,610	127,990	\$200,430
2025	78,650	\$89,240	24,020	\$83,150	26,410	\$29,860	129,080	\$202,250
2026	79,280	\$89,950	24,270	\$84,020	26,640	\$30,120	130,190	\$204,090
2027	79,910	\$90,670	24,520	\$84,900	26,870	\$30,380	131,300	\$205,950
2028	80,550	\$91,400	24,780	\$85,790	27,100	\$30,640	132,430	\$207,830
2029	81,190	\$92,130	25,040	\$86,690	27,330	\$30,900	133,560	\$209,720
2030	81,840	\$92,870	25,300	\$87,600	27,560	\$31,160	134,700	\$211,630
2031	82,250	\$93,330	25,430	\$88,040	27,700	\$31,320	135,380	\$212,690
2032	82,660	\$93,800	25,560	\$88,480	27,840	\$31,470	136,060	\$213,750
2033	83,070	\$94,270	25,690	\$88,920	27,980	\$31,630	136,740	\$214,820

Massachusetts Turnpike: Metropolitan Highway System

Fiscal Year	Boston Extension		Tunnels		Interchange 15 Surcharge		Total MHS	
	Annual Transactions	Annual Revenue	Annual Transactions	Annual Revenue	Annual Transactions	Annual Revenue	Annual Transactions	Annual Revenue
2034	83,490	\$94,740	25,820	\$89,360	28,120	\$31,790	137,430	\$215,890
2035	83,910	\$95,210	25,950	\$89,810	28,260	\$31,950	138,120	\$216,970
2036	84,330	\$95,690	26,080	\$90,260	28,400	\$32,110	138,810	\$218,060
2037	84,750	\$96,170	26,210	\$90,710	28,540	\$32,270	139,500	\$219,150
2038	85,170	\$96,650	26,340	\$91,160	28,680	\$32,420	140,190	\$220,230
2039	85,600	\$97,130	26,470	\$91,620	28,820	\$32,580	140,890	\$221,330
2040	86,030	\$97,620	26,600	\$92,080	28,960	\$32,740	141,590	\$222,440
2041	86,460	\$98,110	26,730	\$92,540	29,100	\$32,900	142,290	\$223,550
2042	86,890	\$98,600	26,860	\$93,000	29,240	\$33,060	142,990	\$224,660
2043	87,320	\$99,090	26,990	\$93,470	29,380	\$33,220	143,690	\$225,780
2044	87,760	\$99,590	27,120	\$93,940	29,530	\$33,390	144,410	\$226,920
2045	88,200	\$100,090	27,260	\$94,410	29,680	\$33,560	145,140	\$228,060
2046	88,640	\$100,590	27,400	\$94,880	29,830	\$33,720	145,870	\$229,190
2047	89,080	\$101,090	27,540	\$95,350	29,980	\$33,890	146,600	\$230,330
2048	89,530	\$101,600	27,680	\$95,830	30,130	\$34,060	147,340	\$231,490
2049	89,980	\$102,110	27,820	\$96,310	30,280	\$34,230	148,080	\$232,650
2050	90,430	\$102,620	27,960	\$96,790	30,430	\$34,400	148,820	\$233,810

## 6.4 TRANSACTION AND REVENUE IMPACT FROM REMOVAL OF THE WESTERN TURNPIKE TOLLS

The Western Turnpike tolls are assumed to be removed by the end of 2017 (mid-FY 2018) as the bonds will have matured. Since the cost of getting to the Boston Extension on the western end will be reduced, along with the toll plaza delays that may discourage some people, we expect to see a small positive increase in use of the Boston Extension.

Regionally, the removal of tolls on the Western Turnpike will have the most significant impacts on the Turnpike and parallel roadways from I-495 eastward to I-95 (Route 128). There are numerous viable parallel routes along this section of the Turnpike which, once chosen, would cause a driver to stay away from the Turnpike. If a driver chooses to use the Western Turnpike within this catchment area, they are more likely to stay on the Turnpike and use the Boston Extension for origins and destinations inside the Route 128 loop.

The toll removal improves the attractiveness of the Western Turnpike plus Boston Extension route in two ways. First, the toll is lower. Second, peak-period toll plaza delays are eliminated at the ramp toll plazas. This increase in attractiveness will be tempered, however, if traffic on the Western Turnpike increases such that there is additional congestion on the mainline (as opposed to the ramps).

We used the regional travel demand model to estimate the increased desirability of the Boston Extension as a result of Western Turnpike toll removal. We found that Western Turnpike toll removal would have the following effects in FY2018:

- Positive impact at the Interchange 15 Plaza (surcharge), where 5.1 percent more transactions would be expected due to the removal of the Western Turnpike tolls;
- Negative impact at Plaza 55 (to and from the east at Route 128) as more vehicles travel to the free Western Turnpike;
- An overall increase in traffic on the Extension as a combined result of the above two effects; and
- Increase in traffic to the Boston Extension at Plazas 18 and 19.

Overall revenue for the MHS is estimated to be increased by 0.6 percent when Western Turnpike tolls are removed. Our MHS forecasts of transactions and revenue for FY2018 have been adjusted to reflect these impacts (Table 6.4).

**Table 6.4 MHS Forecast of Annual Transactions and Revenue under Western Turnpike Toll Free Conditions**  
*In Thousands*

Fiscal Year	Boston Extension		Tunnels		Interchange 15 Surcharge		Total MHS	
	Annual Transactions	Annual Revenue	Annual Transactions	Annual Revenue	Annual Transactions	Annual Revenue	Annual Transactions	Annual Revenue
2009	66,018	\$75,326	19,486	\$68,141	22,004	\$24,876	107,507	\$168,344
2010	66,431	\$75,150	19,957	\$69,107	22,230	\$25,130	108,618	\$169,387
2011	67,100	\$75,900	20,240	\$70,070	22,470	\$25,400	109,810	\$171,370
2012	68,440	\$77,490	20,520	\$71,050	22,890	\$25,880	111,850	\$174,420
2013	69,810	\$79,120	20,810	\$72,040	23,320	\$26,360	113,940	\$177,520
2014	71,210	\$80,780	21,100	\$73,050	23,750	\$26,850	116,060	\$180,680
2015	71,920	\$81,590	21,370	\$74,000	24,000	\$27,130	117,290	\$182,720
2016	72,640	\$82,410	21,650	\$74,960	24,260	\$27,430	118,550	\$184,800
2017	73,370	\$83,230	21,930	\$75,930	24,520	\$27,720	119,820	\$186,880
2018a	73,570	\$83,460	22,220	\$76,920	26,040	\$29,440	121,830	\$189,820
2019	74,310	\$84,290	22,510	\$77,920	26,320	\$29,760	123,140	\$191,970
2020	75,050	\$85,130	22,800	\$78,930	26,600	\$30,070	124,450	\$194,130
2021	75,650	\$85,810	23,040	\$79,760	26,830	\$30,330	125,520	\$195,900
2022	76,260	\$86,500	23,280	\$80,600	27,060	\$30,590	126,600	\$197,690
2023	76,870	\$87,190	23,520	\$81,440	27,290	\$30,850	127,680	\$199,480
2024	77,480	\$87,890	23,770	\$82,290	27,520	\$31,110	128,770	\$201,290
2025	78,100	\$88,590	24,020	\$83,150	27,760	\$31,380	129,880	\$203,120
2026	78,720	\$89,300	24,270	\$84,020	28,000	\$31,660	130,990	\$204,980
2027	79,350	\$90,010	24,520	\$84,900	28,240	\$31,930	132,110	\$206,840
2028	79,980	\$90,730	24,780	\$85,790	28,480	\$32,200	133,240	\$208,720
2029	80,620	\$91,460	25,040	\$86,690	28,720	\$32,470	134,380	\$210,620
2030	81,260	\$92,190	25,300	\$87,600	28,960	\$32,740	135,520	\$212,530
2031	81,670	\$92,650	25,430	\$88,040	29,110	\$32,910	136,210	\$213,600
2032	82,080	\$93,110	25,560	\$88,480	29,260	\$33,080	136,900	\$214,670
2033	82,490	\$93,580	25,690	\$88,920	29,410	\$33,250	137,590	\$215,750
2034	82,900	\$94,050	25,820	\$89,360	29,560	\$33,420	138,280	\$216,830

Massachusetts Turnpike: Metropolitan Highway System

Fiscal Year	Boston Extension		Tunnels		Interchange 15 Surcharge		Total MHS	
	Annual Transactions	Annual Revenue	Annual Transactions	Annual Revenue	Annual Transactions	Annual Revenue	Annual Transactions	Annual Revenue
2035	83,310	\$94,520	25,950	\$89,810	29,710	\$33,590	138,970	\$217,920
2036	83,730	\$94,990	26,080	\$90,260	29,860	\$33,760	139,670	\$219,010
2037	84,150	\$95,460	26,210	\$90,710	30,010	\$33,930	140,370	\$220,100
2038	84,570	\$95,940	26,340	\$91,160	30,160	\$34,100	141,070	\$221,200
2039	84,990	\$96,420	26,470	\$91,620	30,310	\$34,270	141,770	\$222,310
2040	85,410	\$96,900	26,600	\$92,080	30,460	\$34,440	142,470	\$223,420
2041	85,840	\$97,380	26,730	\$92,540	30,610	\$34,610	143,180	\$224,530
2042	86,270	\$97,870	26,860	\$93,000	30,760	\$34,780	143,890	\$225,650
2043	86,700	\$98,360	26,990	\$93,470	30,910	\$34,950	144,600	\$226,780
2044	87,130	\$98,850	27,120	\$93,940	31,060	\$35,120	145,310	\$227,910
2045	87,570	\$99,340	27,260	\$94,410	31,220	\$35,300	146,050	\$229,050
2046	88,010	\$99,840	27,400	\$94,880	31,380	\$35,480	146,790	\$230,200
2047	88,450	\$100,340	27,540	\$95,350	31,540	\$35,660	147,530	\$231,350
2048	88,890	\$100,840	27,680	\$95,830	31,700	\$35,840	148,270	\$232,510
2049	89,330	\$101,340	27,820	\$96,310	31,860	\$36,020	149,010	\$233,670
2050	89,780	\$101,850	27,960	\$96,790	32,020	\$36,200	149,760	\$234,840

\* Tolls removed from the Western Turnpike.

# A. Historical Transactions, Toll Revenue, and Electronic Toll Collection

**Table A.1 Historical Transactions and Toll Revenue**  
*Boston Extension*

Year	Transactions			Gross Toll Revenue		
	Annual (in Millions)	Daily	Percent Change	Annual (in Millions)	Percent Change	Average Toll
1966	33.4	91,600		\$7.4		\$0.222
1967 <sup>a</sup>	37.4	102,300	11.7%	\$8.6	16.2%	\$0.230
1968	40.2	109,800	7.3%	\$10.0	16.3%	\$0.249
1969	42.7	117,100	6.6%	\$10.9	9.0%	\$0.255
1970	43.2	118,200	0.9%	\$11.6	6.4%	\$0.269
1971	44.6	122,300	3.5%	\$12.1	4.3%	\$0.271
1972	46.8	127,900	4.6%	\$12.7	5.0%	\$0.271
1973	48.1	131,700	3.0%	\$13.1	3.1%	\$0.272
1974	46.1	126,400	-4.0%	\$12.6	-3.8%	\$0.273
1975	47.9	131,300	3.9%	\$13.0	3.2%	\$0.271
1976	51.1	139,500	6.2%	\$13.9	6.9%	\$0.272
1977	53.8	147,400	5.7%	\$14.6	5.0%	\$0.271
1978	56.7	155,200	5.3%	\$15.3	5.2%	\$0.270
1979	58.4	159,900	3.0%	\$15.8	3.2%	\$0.271
1980 <sup>b</sup>	57.4	156,800	-1.9%	\$19.9	25.6%	\$0.347
1981	58.9	161,400	2.9%	\$21.2	6.7%	\$0.360
1982	62.0	169,900	5.3%	\$22.3	4.8%	\$0.360
1983	65.7	180,100	6.0%	\$23.6	6.1%	\$0.359
1984 <sup>c</sup>	56.1	153,200	-14.9%	\$20.1	-14.8%	\$0.358
1985	58.9	161,300	5.3%	\$21.1	4.8%	\$0.358
1986	61.6	168,600	4.5%	\$22.0	4.1%	\$0.357
1987	63.5	174,100	3.3%	\$22.6	3.0%	\$0.356
1988	66.1	180,700	3.8%	\$23.5	3.7%	\$0.356
1989	66.1	181,100	0.2%	\$23.4	-0.1%	\$0.354
1990 <sup>d</sup>	63.8	174,800	-3.5%	\$30.1	28.3%	\$0.472
1991	62.1	170,200	-2.6%	\$30.6	1.8%	\$0.493
1992	63.7	174,100	2.3%	\$31.4	2.6%	\$0.493
1993	64.9	177,900	2.2%	\$32.0	1.9%	\$0.493
1994	65.8	180,200	1.3%	\$32.5	1.4%	\$0.494
1995	66.5	182,200	1.1%	\$32.9	1.2%	\$0.495

Year	Transactions			Gross Toll Revenue		
	Annual (in Millions)	Daily	Percent Change	Annual (in Millions)	Percent Change	Average Toll
1996 <sup>e</sup>	66.5	181,700	-0.3%	\$33.2	1.0%	\$0.499
1997 <sup>f, g</sup>	64.3	176,300	-3.0%	\$32.9	-1.0%	\$0.512
1998 <sup>h</sup>	65.5	179,400	1.8%	\$33.3	1.4%	\$0.508
1999	65.7	180,000	0.3%	\$33.4	0.2%	\$0.508
2000	66.6	182,000	1.1%	\$33.8	1.2%	\$0.507
2001	66.0	180,800	-0.7%	\$33.5	-0.8%	\$0.507
2002 <sup>i</sup>	63.6	174,200	-3.7%	\$44.8	33.8%	\$0.705
2003	64.8	177,500	1.9%	\$59.1	31.8%	\$0.911
2004	67.5	184,400	3.9%	\$61.1	3.4%	\$0.905
2005	67.9	186,000	0.9%	\$61.3	0.3%	\$0.902
2006	67.9	186,000	0.0%	\$61.1	-0.2%	\$0.901
2007	71.0	194,500	4.6%	\$63.8	4.4%	\$0.899
2008 <sup>j</sup>	67.8	185,200	-4.8%	\$77.8	22.0%	\$1.148
2009	66.2	181,400	-2.1%	\$74.9	-3.8%	\$1.131

Source: MassDOT and March 2, 1999 MHS traffic and revenue report by URS.

<sup>a</sup> Toll increase October 1, 1967.

<sup>b</sup> Toll increase March 1, 1980.

<sup>c</sup> Accounting adjustment: Beginning in 1984 transactions and revenue collected at Interchange 15 of the Western Turnpike for travel on the Boston Extension was included in Western Turnpike Reports. Since October 1997 these revenues have been allocated to the MHS as a separate line item.

<sup>d</sup> Toll increase March 1, 1990.

<sup>e</sup> Reflects impact of toll removal at interchange 16 on September 26, 1996.

<sup>f</sup> Reflects full impact of toll removal at interchange 16 on 1996.

<sup>g</sup> Transactions and revenue associated with the surcharge at interchange 15 of the Western Turnpike are not included from this point forward.

<sup>h</sup> Includes nonrevenue vehicles.

<sup>i</sup> Toll increase July 1, 2002.

<sup>j</sup> Toll increase, January 1, 2008.

**Table A.2 Historical Transactions and Toll Revenue**  
*Tunnels*

Year	Transactions <sup>a</sup>			Gross Toll Revenue		
	Annual (in Millions)	Daily	Percent Change	Annual (in Millions)	Percent Change	Average Toll <sup>a</sup>
1966	9.3	25,400		\$4.6		\$0.49
1967	9.8	26,800	5.5%	\$4.8	4.3%	\$0.49
1968	10.5	28,600	6.7%	\$5.2	8.3%	\$0.50
1969	10.7	29,400	2.8%	\$5.3	1.9%	\$0.50
1970	11.2	30,600	4.1%	\$5.5	3.8%	\$0.49
1971	11.2	30,800	0.7%	\$5.6	1.8%	\$0.50
1972	11.6	31,700	2.9%	\$5.8	3.6%	\$0.50
1973	12.8	35,100	10.7%	\$6.4	10.3%	\$0.50
1974	12.3	33,700	-4.0%	\$6.1	-4.7%	\$0.50
1975	12.4	33,900	0.6%	\$6.1	0.0%	\$0.49
1976	12.9	35,300	4.1%	\$6.4	4.9%	\$0.50
1977	12.8	35,000	-0.8%	\$6.3	-1.6%	\$0.49
1978	13.2	36,200	3.4%	\$6.6	4.8%	\$0.50
1979	14.2	38,800	7.2%	\$7.0	6.1%	\$0.49
1980	13.8	37,800	-2.6%	\$7.9	12.9%	\$0.57
1981	14.0	38,500	1.9%	\$8.2	3.8%	\$0.59
1982	14.1	38,800	0.8%	\$8.3	1.2%	\$0.59
1983 <sup>b</sup>	14.6	40,100	3.4%	\$8.6	3.6%	\$0.59
1984	15.3	41,700	4.0%	\$9.0	4.7%	\$0.59
1985	15.6	42,700	2.4%	\$9.2	2.2%	\$0.59
1986	16.0	43,900	2.8%	\$9.5	3.3%	\$0.59
1987	16.3	44,700	1.8%	\$9.6	1.1%	\$0.59
1988	16.6	45,300	1.3%	\$9.8	2.1%	\$0.59
1989 <sup>c</sup>	16.7	45,800	1.1%	\$12.2	24.5%	\$0.73
1990	16.5	45,100	-1.5%	\$16.1	32.0%	\$0.98
1991	16.0	43,800	-2.9%	\$15.7	-2.5%	\$0.98
1992	16.3	44,400	1.4%	\$16.0	1.9%	\$0.98
1993	16.5	45,100	1.6%	\$16.2	1.3%	\$0.98
1994	16.5	45,300	0.4%	\$16.2	0.0%	\$0.98
1995 <sup>d</sup>	17.1	46,900	3.5%	\$17.0	4.9%	\$0.99
1996	18.6	51,000	8.7%	\$23.1	35.9%	\$1.24
1997 <sup>e</sup>	18.8	51,600	1.2%	\$31.5	36.4%	\$1.68
1998 <sup>f</sup>	18.7	51,300	-0.6%	\$40.3	27.9%	\$2.16
1999	18.8	51,507	0.4%	\$40.7	1.1%	\$2.17
2000	19.1	52,329	1.6%	\$41.4	1.6%	\$2.17
2001	18.1	49,589	-5.2%	\$38.7	-6.6%	\$2.14
2002 <sup>g</sup>	17.1	46,849	-5.5%	\$44.1	13.9%	\$2.58
2003	17.6	48,219	2.9%	\$53.0	20.4%	\$3.01
2004	19.6	53,699	11.4%	\$59.2	11.7%	\$3.02
2005	20.3	55,616	3.6%	\$61.8	4.3%	\$3.04

Year	Transactions <sup>a</sup>			Gross Toll Revenue		
	Annual (in Millions)	Daily	Percent Change	Annual (in Millions)	Percent Change	Average Toll <sup>a</sup>
2006	19.5	53,425	-3.9%	\$59.1	-4.3%	\$3.03
2007	21.0	57,534	7.7%	\$64.2	8.6%	\$3.06
2008 <sup>h</sup>	20.1	54,918	-4.5%	\$71.1	11.1%	\$3.55
2009	19.8	54,247	-1.2%	\$68.5	-3.9%	\$3.46

Source: MassDOT and March 2, 1999 MHS traffic and revenue report by URS.

<sup>a</sup> 1966-1982 adjusted to be comparable to post 1983 one-way toll collection.

<sup>b</sup> One-way toll collection began May 1, 1983.

<sup>c</sup> Toll increase August 1, 1989.

<sup>d</sup> Ted Williams Tunnel opened December 15, 1995 to commercial vehicles. Taxis became a separate vehicle class in both sets of Tunnels. Commercial vehicle toll rates increase 100 percent.

<sup>e</sup> Toll increase July 10, 1997.

<sup>f</sup> Includes nonrevenue vehicles.

<sup>g</sup> Toll increase on July 1, 2002.

<sup>h</sup> Toll increase on January 1, 2008.

**Table A.3 Electronic Toll Collection (ETC) Market Share**

Payment Type	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Boston Extension Transactions</b>									
ETC	28,708,350	31,705,918	36,831,090	39,846,499	41,462,447	42,701,724	45,359,042	46,865,644	49,533,694
Cash	37,319,996	31,854,554	27,975,975	27,633,164	26,405,149	25,154,752	25,594,936	20,895,350	16,692,358
<b>Total</b>	<b>66,028,346</b>	<b>63,560,472</b>	<b>64,807,065</b>	<b>67,479,663</b>	<b>67,867,596</b>	<b>67,856,476</b>	<b>70,953,978</b>	<b>67,760,994</b>	66,226,052
<b>Percent Market Share</b>									
ETC	43.5%	49.9%	56.8%	59.0%	61.1%	62.9%	63.9%	69.2%	74.8%
Cash	56.5%	50.1%	43.2%	41.0%	38.9%	37.1%	36.1%	30.8%	25.2%
<b>Total</b>	<b>100%</b>	100%							
<b>Tunnel Transactions</b>									
ETC	5,780,198	6,090,922	7,001,165	8,189,231	8,796,148	8,753,435	9,753,567	10,740,039	12,484,593
Cash	12,309,153	11,041,652	10,556,123	11,416,426	11,549,925	10,699,982	11,282,970	9,363,097	7,289,057
<b>Total</b>	<b>18,089,351</b>	<b>17,132,574</b>	<b>17,557,288</b>	<b>19,605,657</b>	<b>20,346,073</b>	<b>19,453,417</b>	<b>21,036,537</b>	<b>20,103,136</b>	19,773,650
<b>Percent Market Share</b>									
ETC	32.0%	35.6%	39.9%	41.8%	43.2%	45.0%	46.4%	53.4%	63.1%
Cash	68.0%	64.4%	60.1%	58.2%	56.8%	55.0%	53.6%	46.6%	36.9%
<b>Total</b>	<b>100%</b>	100%							
<b>MHS Transactions</b>									
ETC	34,488,548	37,796,840	43,832,255	48,035,730	50,258,595	51,455,159	55,112,609	57,605,683	62,018,287
Cash	49,629,149	42,896,206	38,532,098	39,049,590	37,955,074	35,854,734	36,877,906	30,258,447	23,981,415
<b>Total</b>	<b>84,117,697</b>	<b>80,693,046</b>	<b>82,364,353</b>	<b>87,085,320</b>	<b>88,213,669</b>	<b>87,309,893</b>	<b>91,990,515</b>	<b>87,864,130</b>	85,999,702
<b>Percent Market Share</b>									
ETC	41.0%	46.8%	53.2%	55.2%	57.0%	58.9%	59.9%	65.6%	72.1%
Cash	59.0%	53.2%	46.8%	44.8%	43.0%	41.1%	40.1%	34.4%	27.9%
<b>Total</b>	<b>100%</b>	100%							

Source: MassDOT.

## B. Data Supporting Conversion of Calendar Year to Fiscal Year

**Table B.1 Historical Transactions and Toll Revenue – Boston Extension**  
*FY 2008 through FY 2010*

Fiscal Year	Definition	Transactions	Gross Toll Revenue	Average Toll
2008 <sup>a</sup>	Jan07 to Jun08	105,319,602	\$99,868,143	\$0.95
2008 <sup>b</sup>	Jul07 to Jun08	70,140,264	\$68,302,074	\$0.97
2009	Jul08 to Jun09	66,017,570	\$75,326,003	\$1.14
2010 <sup>c</sup>	Jul09 to Dec09	33,603,852	\$37,962,684	\$1.13

Source: MassDOT.

<sup>a</sup> Per auditing period.

<sup>b</sup> Adjusted to 12-month basis for comparison purposes.

<sup>c</sup> Partial year, from July to December, 2009.

**Table B.2 Historical Transactions and Toll Revenue – Tunnels**  
*FY 2008 through FY 2010*

Fiscal Year	Definition	Transactions	Gross Toll Revenue	Average Toll
2008 <sup>a</sup>	Jan07 to Jun08	31,159,755	\$100,215,737	\$3.22
2008 <sup>b</sup>	Jul07 to Jun08	20,807,949	\$68,662,560	\$3.30
2009	Jul08 to Jun09	19,486,217	\$68,141,137	\$3.50
2010 <sup>c</sup>	Jul09 to Dec09	10,267,351	\$35,215,839	\$3.43

Source: MassDOT.

<sup>a</sup> Per auditing period.

<sup>b</sup> Adjusted to 12-month basis for comparison purposes.

<sup>c</sup> Partial year, from July to December, 2009.

**Table B.3 FY 2009<sup>a</sup> Monthly Toll Transactions**

Month	Year	Boston Extension		Tunnels	
		ADT	Daily Index	ADT	Daily Index
July	2008	182,100	1.00	57,000	1.06
August	2008	176,700	0.97	56,300	1.05
September	2008	189,300	1.04	54,800	1.02
October	2008	178,100	0.98	55,800	1.04
November	2008	179,000	0.99	51,700	0.96
December	2008	176,200	0.97	51,100	0.95
January	2009	168,500	0.93	47,500	0.88
February	2009	177,800	0.98	49,900	0.93
March	2009	182,000	1.00	52,900	0.98
April	2009	189,100	1.04	54,100	1.01
May	2009	188,700	1.04	55,500	1.03
June	2009	189,300	1.04	57,000	1.06
<b>Average Day</b>		<b>181,500</b>		<b>53,800</b>	

Source: MassDOT – Daily Traffic and Revenue Counts Report.

<sup>a</sup> FY 2009 = July 2008 through June 2009.

**Table B.4 FY 2009<sup>a</sup> Daily Transactions**  
*July 2008 to June 2009*

Day	Boston Extension		Tunnels	
	ADT	Daily Index	ADT	Daily Index
Monday	191,300	1.05	56,600	1.05
Tuesday	199,300	1.09	54,900	1.02
Wednesday	201,100	1.10	56,100	1.04
Thursday	207,900	1.14	59,000	1.10
Friday	202,800	1.11	59,100	1.10
Saturday	145,700	0.80	45,300	0.84
Sunday	128,500	0.70	45,800	0.85
<b>Average Day</b>	<b>182,400</b>	<b>1.00</b>	<b>53,800</b>	<b>1.00</b>
Average Weekday	200,500		57,100	
Average Weekend Day	137,100		45,600	
<b>Weekend to Weekday Ratio</b>	<b>0.68</b>		<b>0.80</b>	

Source: MassDOT – Daily Traffic and Revenue Counts Report.

<sup>a</sup> FY 2009 = July 2008 through June 2009.

**Table B.5 Vehicle Classification**  
*Boston Extension (FY 2008 through FY 2010)*

Class	FY2008 <sup>a</sup>	FY2008 <sup>b</sup>	FY2009	FY2010 <sup>c</sup>
	January 2007 to June 2008	July 2007 to June 2008	July 2008 to June 2009	July 2009 to December 2009
1. Two-Axle Noncommercial Vehicle	100,488,827	66,844,195	62,876,313	32,113,780
2. Two-Axle Commercial Vehicle	1,995,006	1,386,287	1,386,614	672,788
3. Three-Axle Vehicle	846,423	577,236	544,528	262,168
4. Four-Axle Vehicle	292,675	195,563	180,271	81,439
5. Fix-Axle Vehicle	1,140,517	760,558	695,551	317,532
6. Six-Axle Vehicle	42,592	28,687	23,849	10,394
7. Seven-Axle Vehicle	2,633	1,823	1,647	629
8. Eight-Axle Vehicle	2,428	1,656	525	231
9. Nine-Axle or More Vehicle	397	231	296	328
10. Nonrevenue	508,104	344,028	307,976	144,563
<b>Total</b>	<b>105,319,602</b>	<b>70,140,264</b>	<b>66,017,570</b>	<b>33,603,852</b>
<b>Subtotals</b>				
Two-Axle Vehicle	102,483,833	68,230,482	64,262,927	32,786,568
Trucks	2,327,665	1,565,754	1,446,667	672,721
Nonrevenue	508,104	344,028	307,976	144,563
<b>Percent Share</b>				
Two-Axle Vehicle	97.3%	97.3%	97.3%	97.6%
Trucks	2.2%	2.2%	2.2%	2.0%
Nonrevenue	0.5%	0.5%	0.5%	0.4%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: MassDOT – Traffic by Class Reports.

<sup>a</sup> Per auditing period.

<sup>b</sup> Adjusted to 12-month basis for comparison purposes.

<sup>c</sup> Partial year, from July to December, 2009.

**Table B.6 Vehicle Classification**  
Tunnels (FY 2008 through FY 2010)

Class	FY2008 <sup>a</sup>	FY2008 <sup>b</sup>	FY2009	FY2010 <sup>c</sup>
	January 2007 to June 2008	July 2007 to June 2008	July 2008 to June 2009	July 2009 to December 2009
1. Two-Axle Noncommercial Vehicle	20,163,686	13,527,358	12,947,753	6,910,103
2. Two-Axle Commercial Vehicle	7,548,591	5,004,139	4,277,937	2,164,690
3. Three-Axle Vehicle	296,273	206,852	227,787	118,676
4. Four-Axle Vehicle	66,802	45,725	44,914	22,695
5. Fix-Axle Vehicle	162,427	109,815	102,449	50,831
6. Six-Axle Vehicle	11,154	7,574	6,429	2,891
7. Seven-Axle Vehicle	742	494	392	203
9. Resident Program	2,697,904	1,765,461	1,753,014	929,800
10. Nonrevenue	212,176	140,531	125,542	67,462
<b>Total</b>	<b>31,159,755</b>	<b>20,807,949</b>	<b>19,486,217</b>	<b>10,267,351</b>
<b>Subtotals</b>				
Two-Axle Vehicle	27,712,277	18,531,497	17,225,690	9,074,793
Trucks	537,398	370,460	381,971	195,296
Resident Program	2,697,904	1,765,461	1,753,014	929,800
Nonrevenue	212,176	140,531	125,542	67,462
<b>Percent Share</b>				
Two-Axle Vehicle	88.9%	89.1%	88.4%	88.4%
Trucks	1.7%	1.8%	2.0%	1.9%
Resident Program	8.7%	8.5%	9.0%	9.1%
Nonrevenue	0.7%	0.7%	0.6%	0.7%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: MassDOT – Traffic by Class Reports.

<sup>a</sup> Per auditing period.

<sup>b</sup> Adjusted to 12-month basis for comparison purposes.

<sup>c</sup> Partial year, from July to November 2009.

**Table B.7 FY 2009 Toll Transactions and Toll Revenue by Plaza**

Toll Plaza	Toll Transactions	Average Toll	Toll Revenue
<b>Boston Extension</b>			
55	13,540,782	\$1.12	\$15,214,073
18	10,071,356	\$1.13	\$11,408,861
19	32,699,182	\$1.14	\$37,313,726
20	9,706,250	\$1.17	\$11,389,344
<b>Extension Total</b>	<b>66,017,570</b>	<b>\$1.14</b>	<b>\$75,326,003</b>
<b>Tunnels</b>			
Sumner	7,682,093	\$3.24	\$24,857,170
TWT	11,804,124	\$3.67	\$43,283,967
<b>Tunnels Total</b>	<b>19,486,217</b>	<b>\$3.50</b>	<b>\$68,141,137</b>
<b>MHS Total</b>			
I/C 15 Surcharge	22,003,547		\$24,876,468
<b>MHS Total</b>			<b>\$168,343,608</b>

Note: MHS total revenue does not include V-Tolls or accounting adjustments.

**Table B.8 FYs 2009 and 2010 Toll Transaction and Toll Revenue by Month**  
*July through December*

Month	Toll Transactions			Toll Revenue			Average Toll		
	FY 2009	FY 2010	Percent Change	FY 2009	FY 2010	Percent Change	FY 2009	FY 2010	Percent Change
<b>Boston Extension</b>									
July	5,634,641	5,655,532	0.4%	\$6,512,707	\$6,417,071	-1.5%	\$1.16	\$1.13	-1.8%
August	5,550,527	5,553,963	0.1%	\$6,425,689	\$6,313,145	-1.8%	\$1.16	\$1.14	-1.8%
September	5,689,641	5,628,847	-1.1%	\$6,545,288	\$6,361,542	-2.8%	\$1.15	\$1.13	-1.8%
October	6,018,436	5,948,223	-1.2%	\$6,910,569	\$6,707,969	-2.9%	\$1.15	\$1.13	-1.8%
November	5,344,727	5,443,998	1.9%	\$6,100,426	\$6,120,794	0.3%	\$1.14	\$1.12	-1.5%
December	5,157,398	5,373,289	4.2%	\$5,875,509	\$6,042,173	2.8%	\$1.14	\$1.12	-1.3%
<b>Tunnels</b>									
July	1,759,165	1,774,237	0.9%	\$6,233,407	\$6,129,171	-1.7%	\$3.54	\$3.45	-2.5%
August	1,757,576	1,775,579	1.0%	\$6,221,428	\$6,138,253	-1.3%	\$3.54	\$3.46	-2.3%
September	1,648,027	1,685,177	2.3%	\$5,857,393	\$5,861,652	0.1%	\$3.55	\$3.48	-2.1%
October	1,739,321	1,785,208	2.6%	\$6,177,475	\$6,245,454	1.1%	\$3.55	\$3.50	-1.5%
November	1,543,909	1,626,422	5.3%	\$5,401,681	\$5,630,699	4.2%	\$3.50	\$3.46	-1.0%
December	1,531,920	1,620,728	5.8%	\$5,324,455	\$5,543,142	4.1%	\$3.48	\$3.42	-1.6%

Source: MassDOT.

**Table B.9 Comparison of FYs 2009 and 2010 Toll Transactions and Revenue by Tolling Location**  
*July through December*

Month	Toll Transactions			Toll Revenue			Average Toll		
	FY 2009	FY 2010	Percent Change	FY 2009	FY 2010	Percent Change	FY 2009	FY 2010	Percent Change
<b>Boston Extension</b>									
55	6,851,639	6,824,639	-0.4%	7,744,790	7,597,937	-1.9%	\$1.13	\$1.11	-1.5%
18	5,048,535	5,134,256	1.7%	5,760,583	5,757,898	0.0%	\$1.14	\$1.12	-1.7%
19	16,527,601	16,785,037	1.6%	18,979,184	19,004,581	0.1%	\$1.15	\$1.13	-1.4%
20	4,967,595	4,859,920	-2.2%	5,885,631	5,602,268	-4.8%	\$1.18	\$1.15	-2.7%
Total	33,395,370	33,603,852	0.6%	38,370,188	37,962,684	-1.1%	\$1.15	\$1.13	-1.7%
<b>Tunnels</b>									
Sumner	3,905,708	3,995,795	2.3%	12,771,872	12,827,397	0.4%	\$3.27	\$3.21	-1.8%
TWT	6,074,210	6,271,556	3.2%	22,443,967	22,720,973	1.2%	\$3.69	\$3.62	-2.0%
Total	9,979,918	10,267,351	2.9%	35,215,839	35,548,370	0.9%	\$3.53	\$3.46	-1.9%
<b>MHS Total</b>	<b>43,375,288</b>	<b>43,871,203</b>	<b>1.1%</b>	<b>73,586,027</b>	<b>73,511,054</b>	<b>-0.1%</b>	<b>\$1.70</b>	<b>\$1.68</b>	<b>-1.2%</b>

Source: MassDOT.

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**Summary of Certain Provisions  
of the  
Trust Agreement**

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**Summary Of Certain Provisions  
of the  
Trust Agreement**

*The following is a summary of certain provisions of the Metropolitan Highway System Trust Agreement, as amended and supplemented, and as further amended and supplemented by the Eighth Supplemental Trust Agreement, including certain terms used in the Metropolitan Highway System Trust Agreement not elsewhere defined in this Official Statement. This summary does not purport to be complete and reference is made to the Metropolitan Highway System Trust Agreement and each Supplemental Trust Agreement, including the Eighth Supplemental Trust Agreement, for full and complete statements of its terms and provisions.*

**Definitions**

The following are definitions in summary form of certain terms contained in the Metropolitan Highway System Trust Agreement and used in this Official Statement:

*Accepted Metropolitan Highway System* shall mean the Boston Extension and the portions of the Tunnels and any other portions of the Metropolitan Highway System in which the Authority has an Ownership Interest as of the date of issuance of the Initial Bonds together with any other portions of the Metropolitan Highway System in which the Authority hereafter acquires an Ownership Interest and which it determines to accept for inclusion in the Accepted Metropolitan Highway System pursuant to the Metropolitan Highway System Trust Agreement, and upon satisfaction of the requirements of the Metropolitan Highway System Trust Agreement including without limitation the Central Artery and the Central Artery North Area.

*Accreted Value* shall mean with respect to any Capital Appreciation Bond (i) as of any Valuation Date, the amount set forth for such date in the Metropolitan Highway System Trust Agreement with respect to an Initial Bond or the Supplemental Trust Agreement with respect to an Additional Bond and (ii) as of any date other than a Valuation Date, the sum of (a) the Accreted Value on the preceding Valuation Date and (b) the product of (1) a fraction, the numerator of which is the number of days having elapsed from the preceding Valuation Date and the denominator of which is the number of days from such preceding Valuation Date to the next succeeding Valuation Date and (2) the difference between the Accreted Values for such Valuation Dates. For purposes of this definition, the number of days having elapsed from the preceding Valuation Date and the number of days from the preceding Valuation Date to the next succeeding Valuation Date shall be calculated on the basis of a three hundred sixty (360) day year of twelve (12) thirty (30) day months.

*Act* shall mean Chapter 81A of the Massachusetts General Laws, as amended and supplemented to the date of the Metropolitan Highway System Trust Agreement and from time to time.

*Additional Bonds* shall mean Additional Senior Bonds and Bonds issued to refund Bonds all pursuant to the Metropolitan Highway System Trust Agreement.

*Aggregate Debt Service* for any period shall mean, as of any date of calculation, the sum of the amounts of Debt Service for such period with respect to all Outstanding Senior Bonds and all Outstanding Subordinated Bonds, provided, however, that for purposes of estimating Aggregate Debt Service for any future period, (i) any Variable Interest Rate Bonds shall be deemed to bear at all times (for which the interest rate is not yet determined) to the maturity thereof the Estimated Average Interest Rate applicable thereto; and (ii) any Put Bonds Outstanding during such period shall be assumed to mature on the stated maturity date thereof, unless the Credit Facility or Liquidity Facility securing such Put Bonds expires within three months or less of the date of calculation and has not been renewed or replaced in which case such Put Bonds shall be assumed to mature on the expiration date of such Credit Facility or Liquidity Facility. For purposes of this definition, the principal and interest portions of the Accreted Value of any Capital Appreciation Bonds becoming due at maturity or by virtue of a Sinking Fund Installment and the principal and interest portions of the Appreciated Value of any Deferred Income Bonds becoming due at

maturity or by virtue of a Sinking Fund Installment shall be included in the calculations of accrued and unpaid and accruing interest or Principal Installments only during the year such amounts become due for payment unless otherwise provided in the Supplemental Trust Agreement authorizing Additional Bonds which are Capital Appreciation Bonds or Deferred Income Bonds, as the case may be.

*Amortized Value*, when used with respect to Investment Obligations purchased at a premium above or a discount below par, shall mean the value as of any given time obtained by dividing the total premium or discount at which such Investment Obligation was purchased by the number of months remaining between the purchase date and the maturity date of such Investment Obligation and deducting the amount thus calculated on the first day of each month after such purchase from the purchase price in the case of an Investment Obligation purchased at a premium or adding the amount thus calculated on the first day of each month after such purchase to the purchase price in the case of an Investment Obligation purchased at a discount.

*Annual Budget* shall mean the annual budget, as amended or supplemented, adopted or in effect for a particular Fiscal Year as described under the heading "Annual Budget."

*Appreciated Value* shall mean with respect to any Deferred Income Bond (i) as of any Valuation Date, the amount set forth for such date in the Supplemental Trust Agreement authorizing such Deferred Income Bond, (ii) as of any date prior to the Interest Commencement Date, other than a Valuation Date, the sum of (a) the Appreciated Value on the preceding Valuation Date and (b) the product of (1) a fraction, the numerator of which is the number of days having elapsed from the preceding Valuation Date and the denominator of which is the number of days from such preceding Valuation Date to the next succeeding Valuation Date and (2) the difference between the Appreciated Values for such Valuation Dates, and (iii) as of any date on and after the Interest Commencement Date, the Appreciated Value on the Interest Commencement Date. For purposes of this definition, the number of days having elapsed from the preceding Valuation Date and the number of days from the preceding Valuation Date to the next succeeding Valuation Date shall be calculated on the basis of a three hundred sixty (360) day year of twelve (12) thirty (30) day months.

*Authority* shall mean the Massachusetts Turnpike Authority, a body politic and corporate and a public instrumentality of the Commonwealth organized and existing under the Act.

*Authorized Officer* shall mean the Chairperson, the Chief Executive Officer, the Chief Financial Officer or the General Counsel of the Department, and when used with reference to an act or document of the Department also means any other person authorized by resolution of the Department to perform the act or sign the document in question.

*Bank Bonds* shall mean any Bonds issued to or acquired or held by any bank, insurance company or other provider of credit and/or liquidity support or any designee thereof for any Bonds or for any Bond Anticipation Notes as evidence of the obligations of the Authority arising under any letter of credit, revolving credit agreement, insurance policy, reimbursement agreement or any other agreement, instrument or document relating to such credit and/or liquidity support; provided, however, that Bank Bonds do not include any Bonds issued to or held by any such party or its designee in any other capacity.

*Bond or Bonds* shall mean any bond or bonds, including Initial Bonds and Additional Bonds, whether issued as Senior Bonds or Subordinated Bonds, and any Bond Anticipation Notes authenticated and delivered under the Metropolitan Highway System Trust Agreement, but not including General Fund Indebtedness.

*Bond Counsel* shall mean Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. or Krokidas & Bluestein or any other lawyer or firm of lawyers nationally recognized in the field of municipal finance and satisfactory to the Authority.

*Bondowner or Owner, or Owner of Bonds*, or any similar terms, shall mean any person who shall be the registered owner of any Outstanding Bond or Bonds.

*Boston Extension* shall mean all roadways and tunnels for vehicular traffic that constitute that portion of interstate highway route 90 beginning at and including the interchange of interstate highway route 90 and state highway 128 in the Town of Weston and ending in the City at the interchange of interstate highway route 90 and interstate highway route 93.

*Business Day* shall mean any day that is not a Saturday, Sunday or legal holiday in the Commonwealth or a day on which banks in the City are authorized or required by law or executive order to close.

*Capital Appreciation Bond* shall mean any Bond as to which interest is payable only at the maturity or prior redemption of such Bond. For the purposes of (i) receiving payment of the Redemption Price if a Capital Appreciation Bond is redeemed prior to maturity or (ii) computing the principal amount of Bonds held by the registered owner of a Capital Appreciation Bond in giving to the Authority or the Trustee any notice, consent, request, or demand pursuant to the Metropolitan Highway System Trust Agreement for any purpose whatsoever, unless otherwise provided in the Supplemental Trust Agreement authorizing such Capital Appreciation Bonds, the principal amount of a Capital Appreciation Bond shall be deemed to be its Accreted Value.

*Capital Reinvestment Requirement* shall mean the amount established by the Authority in its sole discretion to be deposited in the Capital Reinvestment Fund during the then current Fiscal Year to provide for capital improvements for the Accepted Metropolitan Highway System in accordance with the current Annual Budget.

*Central Artery* shall mean all roadways and tunnels for vehicular traffic that constitute that portion of interstate highway route 93 beginning at a point immediately south of the Southampton Street interchange and continuing to and including the interchange of interstate highway route 93 and Massachusetts Avenue in the South End section of the City and continuing and including the interchange of interstate highway route 90 and interstate highway route 93 in the South Bay section of the City and continuing to and including the interchange of State highway route 1 and interstate highway route 93 in the Charlestown section of the City including but not limited to the Charles River crossing portion of interstate highway route 93.

*Central Artery North Area* shall mean all roadways and tunnels for vehicular traffic consisting of a portion of state highway route 1 beginning at, but not including, the southern boundary of the Tobin Memorial Bridge and continuing to the interchange of interstate highway 93 and state highway route 1.

*City* shall mean the City of Boston in the Commonwealth.

*Code* shall mean the Internal Revenue Code of 1986, as amended to the date of adoption of the Metropolitan Highway System Trust Agreement, unless a later day shall be specified in a Supplemental Trust Agreement to be applicable to one or more Series of Bonds, and the applicable regulations thereunder, and any reference to the provisions of the Metropolitan Highway System Trust Agreement shall, to the extent the provisions of the Internal Revenue Code of 1986, as amended to the date of adoption of the Metropolitan Highway System Trust Agreement.

*Combined Net Debt Service* shall mean Subordinated Net Debt Service plus Senior Net Debt Service.

*Commonwealth* shall mean The Commonwealth of Massachusetts.

*Counsel's Opinion or Opinion of Counsel* shall mean an opinion signed by Bond Counsel or an attorney or firm of attorneys of recognized standing (who may be counsel to the Authority) selected by the Authority.

*Credit Facility* shall mean an irrevocable letter of credit, surety bond, loan agreement, Standby Purchase Agreement or other agreement, facility or insurance or guaranty arrangement issued or extended by a Qualified Institution, pursuant to which the Authority is entitled to obtain moneys to pay the principal, purchase price or Redemption Price of Bonds due in accordance with their terms or tendered for purchase or redemption, plus accrued interest thereon to the date of payment, purchase or redemption thereof, in accordance with the Metropolitan

Highway System Trust Agreement, whether or not the Authority is in default under the Metropolitan Highway System Trust Agreement.

*Date of Completion* shall mean (i) in the case of the construction of any vehicular road, bridge or tunnel, the date on which such road, bridge or tunnel is opened to vehicular traffic (as evidenced by a certificate of an Authorized Officer filed with the Trustee), and (ii) in the case of any other work, building or improvement, the date on which the acquisition, construction, improvement, reconstruction or rehabilitation thereof is completed (as evidenced by a certificate of an Authorized Officer filed with the Trustee).

*Debt Service* for any period shall mean, as of any date of calculation and with respect to the Outstanding Bonds of any Series, an amount equal to the sum of (i) interest accruing during such period on Outstanding Bonds of such Series and (ii) that portion of each Principal Installment for such Series which would accrue during such period if such Principal Installment were deemed to accrue daily in equal amounts from the next preceding Principal Installment due date for such Series or, if (a) there shall be no such preceding Principal Installment due date or (b) such preceding Principal Installment due date is more than one year prior to the due date of such Principal Installment, then, from a date one year preceding the due date of such Principal Installment or from the date of issuance of the Bonds of such Series, whichever date is later. Such interest and Principal Installments for such Series shall be calculated on the assumption that (1) no Bonds (except for Put Bonds actually tendered for payment and not purchased in lieu of redemption prior to the redemption date thereof) of such Series Outstanding at the date of calculation will cease to be Outstanding except by reason of the payment of each Principal Installment on the due date thereof and (2) the principal amount of Put Bonds tendered for payment and not purchased in lieu of redemption prior to the redemption date thereof shall be deemed to accrue on the date required to be paid pursuant to such tender. For purposes of this definition, the principal and interest portions of the Accreted Value of a Capital Appreciation Bond and the Appreciated Value of a Deferred Income Bond becoming due at maturity or by virtue of a Sinking Fund Installment shall be included in the calculations of accrued and unpaid and accruing interest or Principal Installments only during the year such amounts become due for payment unless otherwise provided in the Supplemental Trust Agreement authorizing Additional Bonds which are Capital Appreciation Bonds or Deferred Income Bonds. Debt Service on Senior Bonds and Subordinated Bonds with respect to which there is a Qualified Hedge Agreement shall be calculated consistent with the Metropolitan Highway System Trust Agreement. Debt Service shall include costs of Credit Facilities and Liquidity Facilities and reimbursement to Providers of Credit Enhancement, in each case if and to the extent payable from the applicable Debt Service Fund. Debt Service on Bond Anticipation Notes shall not include any Principal Installments thereon.

*Dedicated Payments* shall mean any revenues of the Authority which are not Revenues as defined in the Metropolitan Highway System Trust Agreement as initially adopted which the Authority subsequently pledges as additional security for its payment obligations on the Bonds pursuant to a Supplemental Trust Agreement, in each case which are specifically designated as Dedicated Payments by the Authority in accordance with the limitations of the Metropolitan Highway System Trust Agreement and, accordingly, are to be deposited in the Senior Debt Service Fund or the Subordinated Debt Service Fund upon receipt, including without limitation certain revenues described in clauses (iv), (v) or (vi) of the second sentence of the definition of "Revenues."

*Deferred Income Bond* shall mean any Bond (i) as to which interest accruing thereon prior to the Interest Commencement Date of such Bond is (a) compounded on each Valuation Date for such Deferred Income Bond and (b) payable only at the maturity or prior redemption of such Bonds and (ii) as to which interest accruing after the Interest Commencement Date is payable on the first interest payment date immediately succeeding the Interest Commencement Date and periodically thereafter on the dates set forth in the Supplemental Trust Agreement authorizing such Deferred Income Bond. For the purposes of (i) receiving payment of the Redemption Price if a Deferred Income Bond is redeemed prior to maturity or (ii) computing the principal amount of Bonds held by the registered owner of a Deferred Income Bond in giving to the Authority or the Trustee any notice, consent, request, or demand pursuant to the Metropolitan Highway System Trust Agreement for any purposes whatsoever, unless otherwise provided in the Supplemental Trust Agreement authorizing such Deferred Income Bond, the principal amount of a Deferred Income Bond shall be deemed to be its Appreciated Value.

*Department* means the Massachusetts Department of Transportation, as successor to the Authority, a body politic and corporate and a public instrumentality of the Commonwealth organized and existing under Chapter 6C of the Massachusetts General Laws, as amended and supplemented from time to time.

*Determination Date* shall have the meaning set forth under the heading “Extensions.”

*Eighth Supplemental Trust Agreement* shall mean the Eighth Supplemental Metropolitan Highway System Trust Agreement dated as of May 1, 2010 by and between the Department and the Trustee.

*Estimated Average Interest Rate* shall mean, as to any Variable Interest Rate Bond and as of any date of calculation, the “25-year revenue bond index” most recently published in The Bond Buyer or, if such index is no longer published, such other substantially comparable index as determined by the Authority.

*Extension* shall mean:

(1) An acquisition, improvement, betterment, enlargement or capital addition within the Commonwealth of any roadway, bridge, tunnel, overpass, interchange, parking facility or other similar facility, including any approaches, entrances, exits, acceleration and deceleration lanes relating thereto, whether or not connecting to the Accepted Metropolitan Highway System, which upon acquisition of an Ownership Interest therein or construction thereof is to be subject to a toll, rental or other charge for the use thereof within the control of the Authority or for which a Dedicated Payment not constituting on the Determination Date Dedicated Payments or Revenues is made available to or for the account of the Authority; and

(2) An acquisition, improvement, betterment, enlargement or capital addition within the Commonwealth of any roadway, bridge, tunnel, overpass, interchange, parking facility or other similar facility, including any approaches, entrances, exits, acceleration and deceleration lanes relating thereto, whether or not connecting to the Accepted Metropolitan Highway System, which upon acquisition of an Ownership Interest therein meets a necessary traffic management or safety purpose of the Metropolitan Highway System, in the determination of the Authority;

provided, however, that on the Determination Date the expenditure of Revenues with respect to the Extension complies with the provisions of the Metropolitan Highway System Trust Agreement.

*Fiduciary or Fiduciaries* shall mean the Trustee, any Paying Agent, or any or all of them, as may be appropriate, or any person appointed to act as a Fiduciary in a Supplemental Trust Agreement adopted pursuant to the Metropolitan Highway System Trust Agreement.

*First Supplemental Trust Agreement* shall mean the First Supplemental Metropolitan Highway System Trust Agreement dated as of March 1, 1999 by and between the Authority and the Trustee.

*Fiscal Year* shall mean that period beginning on the first day of January of any year and ending on the last day of December of that year or, at the option of the Authority, any other period of twelve consecutive calendar months selected by the Authority in a written instrument delivered to the Trustee as the Fiscal Year of the Authority.

*General Fund Expenses* shall mean, to the extent such expenses shall not have been otherwise provided for, (i) tourism grants payable by the Authority to the Commonwealth allocable, in the Authority’s determination, to the Metropolitan Highway System; (ii) the costs and expenses of the Metropolitan Highway System Advisory Board payable by the Authority pursuant to the Act; (iii) the costs of assistance programs for communities or neighborhoods which abut the Metropolitan Highway System; (iv) the net costs of any Hedge Agreements payable from the General Fund pursuant to the Metropolitan Highway System Trust Agreement; (v) all costs incurred under the Project Management Agreement and Transfer Agreements which are by the terms thereof or of any exhibit thereto to be reimbursed by the Commonwealth, including without limitation costs attributable to project management staff; and (vi) with respect to portions of the Metropolitan Highway System other than the Accepted Metropolitan Highway System, (a) the Authority’s expenses incurred in the normal course of business for administration, operation, maintenance, repair, ordinary replacements and ordinary reconstruction of such portions

of the Metropolitan Highway System or any part thereof and shall include, without limiting the generality of the foregoing: administrative expenses as determined by the Authority in its discretion, including the payment of a private operator or management company, insurance premiums, legal and engineering expenses, health and hospitalization payments, expenditures relating to advertisements or promotions by or for the Authority to promote or increase use of such portions of the Metropolitan Highway System, and any other expenses required to be paid by the Authority, all to the extent properly and directly attributable to the operation of such portions of the Metropolitan Highway System payable by the Authority, and (b) any extraordinary costs or expenses for reconstruction, rehabilitation, improvement or new construction.

*General Fund Indebtedness* shall mean any bond, note or other evidence of indebtedness issued by the Authority in accordance with the Metropolitan Highway System Trust Agreement which is secured by or payable from the Revenues and other amounts on deposit from time to time in the General Fund, provided that any such pledge shall not be prior or equal to the pledge thereof made for the benefit of Senior Bonds or Subordinated Bonds.

*Hedge Agreement* shall mean a payment exchange agreement, swap agreement, forward purchase agreement or any other hedge agreement entered into by the Authority providing for payments between the parties based on levels of, or changes in interest rates, stock or other indices or contracts to exchange cash flows or a series of payments or contracts, including without limitation, interest rate floors, or caps, options, puts or calls, which allows the Authority to manage or hedge payment, rate, spread or similar risk with respect to any Series of Bonds.

*Indebtedness* shall mean Bonds, Bond Anticipation Notes and General Fund Indebtedness.

*Independent Consultant* shall mean a consultant or consulting firm or corporation, financial or otherwise, or an engineer or engineering firm or corporation, of national reputation retained by the Authority to perform the acts and carry out the duties provided for such consultant in the Metropolitan Highway System Trust Agreement.

*Initial Bonds* shall mean the Authority's \$1,183,046,617 Metropolitan Highway System Revenue Bonds, 1997 Series A (Senior), the Authority's \$194,680,000 Metropolitan Highway System Revenue Bonds, 1997 Series B (Subordinated) and the Authority's \$89,136,005.95 Metropolitan Highway System Revenue Bonds, 1997 Series C (Senior), each issued pursuant to the Metropolitan Highway System Trust Agreement.

*Insurance Consultant* shall mean an insurance consultant of national reputation retained by the Authority to perform the acts and carry out the duties provided for such Insurance Consultant in the Metropolitan Highway System Trust Agreement.

*Insurer* shall mean any nationally recognized company engaged in the business of insuring municipal bonds which may from time to time insure the payment of the principal of and interest on all or any portion of the Bonds of any Series.

*Interest Commencement Date* shall mean, with respect to any particular Deferred Income Bond, the date prior to the maturity date thereof specified in the Supplemental Trust Agreement authorizing such Deferred Income Bond after which interest accruing on such Bond shall be payable on the first interest payment date immediately succeeding such Interest Commencement Date and periodically thereafter on the dates specified in the Supplemental Trust Agreement authorizing such Deferred Income Bond.

*Investment Agreement* shall mean an agreement for the investment of moneys with, or unconditionally guaranteed by, a Qualified Institution but shall not mean an obligation of the type described in clause (x) of the definition of Investment Obligation herein.

*Investment Income* shall mean income from Investment Obligations held in the Funds and Accounts established in the Metropolitan Highway System Trust Agreement, other than (i) with respect to the Initial Bonds and, if so determined in a Supplemental Trust Agreement authorizing the issuance of a Series of Additional Bonds, with respect to such Additional Bonds, income from Investment Obligations purchased from the proceeds of such Bonds held in the Bond Proceeds Fund and (ii) income from Investment Obligations held in the Rebate Fund.

*Investment Obligation* shall mean and include any of the following securities, to the extent investment in such securities by the Authority is authorized under applicable law:

(i) a bond or other obligation which as to principal and interest constitutes a direct obligation of, or is unconditionally guaranteed by, the United States of America, including an obligation of any of the Federal Agencies described in clause (iv) below to the extent unconditionally guaranteed by the United States of America;

(ii) a bond or other obligation of any state of the United States of America or of any agency, instrumentality or local governmental unit of any such state (a) which is not callable prior to maturity or as to which irrevocable instructions have been given to the trustee of such bond or other obligation by the obligor to give due notice of redemption and to call such bond or other obligation for redemption on the date or dates specified in such instructions, (b) which is secured as to principal and interest and redemption premium, if any, by a fund consisting only of cash or bonds or other obligations of the character described in clause (i) hereof which fund may be applied only to the payment of such principal of and interest and redemption premium, if any, on such bond or other obligation on the maturity date thereof or the redemption date specified in the irrevocable instructions referred to in subclause (a) of this clause (ii), as appropriate, and (c) as to which the principal of and interest on the bonds and obligations of the character described in clause (i) hereof which have been deposited in such fund, together with any cash on deposit in such fund are sufficient to pay principal of and interest and redemption premium, if any, on the bond or other obligation described in this clause (ii) on the maturity date thereof or on the redemption date specified in the irrevocable instructions referred to in subclause (a) of this clause (ii), as appropriate;

(iii) general obligations of the Commonwealth or obligations unconditionally guaranteed by the Commonwealth;

(iv) a bond, debenture, or other evidence of indebtedness issued or guaranteed at the time of the investment by the Student Loan Marketing Association, Federal Land Banks, Federal Intermediate Credit Banks, Banks for Cooperatives, Federal Home Loan Banks, the Tennessee Valley Authority, the United States Postal Service, Federal Farm Credit System Obligations, the Export Import Bank, the World Bank, the International Bank for Reconstruction and Developments and the Inter-American Development Bank or any other agency or corporation which has been or may hereafter be created pursuant to an Act of Congress as an agency or instrumentality of the United States of America;

(v) an obligation of any state of the United States of America or any political subdivision thereof or any agency, instrumentality or local government unit of any such state or political subdivision other than obligations described in clause (iii) above which shall be rated at the time of the investment in any of the three highest rating categories by any Rating Agency, without regard to any refinement or gradation of such rating;

(vi) a certificate or other instrument that evidences ownership of the right to payment of the principal of or interest on obligations of any state of the United States of America or any political subdivision thereof or any agency or instrumentality of any state or political subdivision, provided that such obligations shall be held in trust by a bank or trust company or a national banking association meeting the requirements for a successor Trustee under the Metropolitan Highway System Trust Agreement, and provided further that the payment of all principal of and interest on such certificate or such instrument shall be fully insured or unconditionally guaranteed by, or otherwise unconditionally payable pursuant to a credit support arrangement provided by, one or more financial institutions or insurance companies or associations which at the date of investment shall have an outstanding, unsecured, uninsured and unguaranteed debt issue rated in the three highest rating categories by any Rating Agency, without regard to any refinement or gradation of such rating, or, in the case of an Insurer providing municipal bond insurance policies insuring the payment, when due, of the principal of and interest on municipal bonds, such insurance policy shall result in such municipal bonds being rated in the highest rating category by any Rating Agency, without regard to any refinement or gradation of such rating;

(vii) time deposits, certificates of deposit or any other deposit with a bank, trust company, national banking association, savings bank, federal mutual savings bank, savings and loan association, federal savings and

loan association or any other institution chartered or licensed by any state or the U.S. Comptroller of the Currency to accept deposits in such state (as used herein, “deposits” shall mean obligations evidencing deposit liability which rank at least on a parity with the claims of general creditors in liquidation), which are (a) fully secured, to the extent not insured by the Federal Deposit Insurance Corporation, by any of the obligations described in clauses (i) or (iv) above having a market value (exclusive of accrued interest) of not less than the uninsured amount of such deposit or (b) (1) unsecured or (2) secured to the extent, if any, required by the Authority and in either case made with a Qualified Institution;

(viii) a certificate that evidences ownership of the right to payments of principal of or interest on obligations described in clause (i), provided that such obligations shall be held in trust by a bank or trust company or a national banking association meeting the requirements for a successor Trustee under the Metropolitan Highway System Trust Agreement;

(ix) a time deposit, certificate of deposit, whether negotiable or non-negotiable, and a banker’s acceptance of one or more of the 50 largest banks in the United States or commercial paper issued by the parent holding company of any such bank which at the time of investment has an outstanding unsecured, uninsured and unguaranteed debt issue rated in either of the two highest rating categories by any Rating Agency, without regard to any refinement or gradation of such rating (including the Trustee and its parent holding company, if any, if it otherwise qualifies);

(x) any repurchase agreement with any bank or trust company organized under the laws of any state of the United States of America or any national banking association or government bond dealer reporting to, trading with, and recognized as a primary dealer by the Federal Reserve Bank of New York which at the time of investment has an outstanding unsecured, uninsured and unguaranteed long-term debt issue or commercial paper issue rated at least in any of the three highest rating categories, without regard to refinement or gradation of such rating, by any Rating Agency (including the Trustee and its parent holding company, if any, if it otherwise qualifies), which agreement is secured by any one or more of the securities described in clause (i), (iv) or (viii) above which securities shall at all times have a market value (exclusive of accrued interest) of not less than the full amount of the repurchase agreement and be delivered to another bank or trust company organized under the laws of any state of the United States of America or any national banking association, as custodian;

(xi) an Investment Agreement;

(xii) money market funds registered under the Federal Investment Company Act of 1940, as amended, whose shares are registered under the Federal Securities Act of 1933, and having a rating in any of the two highest rating categories by any Rating Agency, without regard to refinement or gradation of such rating;

(xiii) commercial paper, notes, bonds or other obligations of any corporation rated, at the time of investment, in the two highest rating categories by any Rating Agency, without regard to refinement or gradation of such rating; and

(xiv) any other investment in which moneys of the Authority may be legally invested provided that at the time of such investment the Authority obtains written confirmation from each Rating Agency that such investment will not result in the reduction or suspension of the then existing rating on the Bonds by each such Rating Agency.

For the purposes of the provisions of the Metropolitan Highway System Trust Agreement summarized under the heading “Defeasance,” Investment Obligations shall mean and include only (x) such securities as are described in clauses (i), (v) (to the extent rated at the time of investment in the highest rating category, without regard to any refinement or gradation of such rating, by any Rating Agency), (vi) and (viii) of the definition of “Investment Obligations” which shall not be subject to redemption prior to their maturity other than at the option of the Owner thereof, (y) such securities as are described in clause (ii) of the definition of Investment Obligations which shall not be subject to redemption prior to their maturity other than at the option of the Owner thereof or as to which an irrevocable notice of redemption of such securities on a specified redemption date has been given and

such securities are not otherwise subject to redemption prior to such specified date other than at the option of the Owner thereof, or (z) upon compliance with the provisions under this heading, such securities as are described in clauses (i), (v) to the extent rated at the time of investment in the highest rating category, without regard to any refinement or gradation of such rating, by any Rating Agency, (vi) or (viii) of the definition of Investment Obligations which are subject to redemption prior to maturity at the option of the issuer thereof on a specified date or dates, all in accordance with the Metropolitan Highway System Trust Agreement.

*Liquidity Facility* shall mean an irrevocable letter of credit, surety bond, loan agreement, Standby Purchase Agreement, line of credit or other agreement or arrangement issued or extended by a Qualified Institution, pursuant to which the Authority is entitled to obtain moneys upon the terms and conditions contained therein for the purchase or redemption of Bonds tendered for purchase or redemption in accordance with the terms of the Metropolitan Highway System Trust Agreement.

*Metropolitan Highway System* shall mean the integrated system of roadways, bridges, tunnels, overpasses, interchanges, parking facilities, entrance plazas, approaches, connecting highways, service stations, restaurants, tourist information centers and administration, storage, maintenance and other buildings that the Authority owns, constructs or operates and maintains pursuant to the Act which consists of the Boston Extension, the Tunnels, the Central Artery, the Central Artery North Area and including in each case such real property and any improvements thereon, personal property, equipment, licenses, appurtenances and interests in land acquired or leased in connection with or incident to the construction, ownership, operation, rehabilitation, reconstruction, improvement, repair, maintenance or administration of such roadways and tunnels as are necessary for their safe and efficient operation and maintenance or which are otherwise convenient or desirable to carry out the purpose of the Act.

*Metropolitan Highway System Advisory Board* shall mean that advisory board created pursuant to section 28 of the Act.

*Net Revenues* shall mean, as of any date of calculation and for any period, the actual Revenues for any such past period or the projected Revenues for any such future period and any other amounts deposited or to be deposited in the Revenue Fund, less the actual Operating Expenses for any such past period or the projected Operating Expenses for any such future period; provided that in both cases the following shall be excluded from Revenues for this purpose: (i) Investment Income from the Senior Debt Service Reserve Fund and the Senior Debt Service Fund to the extent deposited or to be deposited or retained or to be retained, respectively, in the Senior Debt Service Fund and (ii) Investment Income from the Subordinated Debt Service Reserve Fund and the Subordinated Debt Service Fund to the extent deposited or to be deposited or retained or to be retained, respectively, in the Subordinated Debt Service Fund.

*1999 Series A Bonds or 1999 Bonds* means the Authority's \$808,975,000 Metropolitan Highway System Revenue Bonds, 1999 Series A (Subordinated) issued pursuant the Metropolitan Highway System Trust Agreement, as amended and supplemented by the First Supplemental Trust Agreement.

*1997 Series A Bonds* means the Authority's \$1,183,046,617 Metropolitan Highway System Revenue Bonds, 1997 Series A (Senior), issued pursuant to the Metropolitan Highway System Trust Agreement.

*1997 Series B Bonds* means the Authority's \$194,680,000 Metropolitan Highway System Revenue Bonds, 1997 Series B (Subordinated), issued pursuant to the Metropolitan Highway System Trust Agreement.

*1997 Series C Bonds* means the Authority's \$89,136,005.95 Metropolitan Highway System Revenue Bonds, 1997 Series C (Senior), issued pursuant to the Metropolitan Highway System Trust Agreement.

*1996 Notes* means the Authority's Guaranteed Bond Anticipation Notes, 1996 Series A dated January 15, 1996 and issued pursuant to the Guaranteed Bond Anticipation Note Resolution and the First Supplemental Guaranteed Bond Anticipation Note Resolution, each adopted by the Authority on January 5, 1996.

*Operating Expenses* shall mean the Authority's expenses (including deposits to the Operating and Maintenance Reserve Account for such expenses) incurred in the normal course of business for administration, operation, maintenance, repair, ordinary replacements and ordinary reconstruction of the Accepted Metropolitan Highway System or any part of it or any Extension or part of it and shall include, without limiting the generality of the foregoing: allocable overhead and administrative expenses as determined by the Authority in its discretion, including the payment of a private operator or management company, insurance premiums, legal and engineering expenses, pension, retirement, health and hospitalization payments, expenditures relating to advertisements or promotions by or for the Authority to promote or increase use of the Accepted Metropolitan Highway System or any Extension and any other expenses required to be paid by the Authority, all to the extent properly and directly attributable to the operation of the Accepted Metropolitan Highway System and any Extension and payable by the Authority, and the expenses, liabilities and compensation of the Fiduciaries required to be paid under the Metropolitan Highway System Trust Agreement. Operating Expenses shall not include (i) any extraordinary costs or expenses for reconstruction, rehabilitation, improvement or new construction, (ii) any provision for depreciation, amortization or similar charges, (iii) General Fund Expenses, or (iv) any costs or expenses in connection with any project which is not part of the Accepted Metropolitan Highway System or any Extension.

*Opinion of Bond Counsel* shall mean a legal opinion signed by Bond Counsel.

*Outstanding*, when used with reference to Bonds of a Series, shall mean, as of any date, Bonds or Bonds of such Series, theretofore or thereupon being authenticated and delivered, issued under the Metropolitan Highway System Trust Agreement except:

- (i) any Bonds canceled by any Fiduciary at or prior to such date;
- (ii) Bonds (or portions of Bonds) for the payment or redemption of which moneys, equal to the principal amount or Redemption Price thereof, as the case may be, with interest to the date of maturity or redemption date, shall be held in trust under the Metropolitan Highway System Trust Agreement and set aside for such payment or redemption (whether at or prior to the maturity or redemption date), provided that if such Bonds (or portions of Bonds) are to be redeemed, notice of such redemption shall have been given or provision satisfactory to the Trustee shall have been made for the giving of such notice as provided in Article IV of the Metropolitan Highway System Trust Agreement;
- (iii) Bonds in lieu of or in substitution for which other Bonds shall have been authenticated and delivered pursuant to the Metropolitan Highway System Trust Agreement unless proof satisfactory to the Trustee is presented that any such Bonds are held by a bona fide purchaser in due course;
- (iv) Bonds deemed to have been paid as provided under the heading "Defeasance"; and

*Ownership Interest* shall mean either fee title to any real property or a leasehold interest therein, a highway easement or other comparable easement thereupon provided that such leasehold interest or easement will not by the terms of the instrument creating the same terminate prior to the latest maturity date of Bonds then Outstanding.

*Parcel 7 Parking Garage* shall mean the facility having approximately 310 public parking spaces located on the second, third and fourth levels of the west side of a mixed-use building facility sited on Parcel 7 between Hanover, Congress and New Sudbury streets in Boston.

*Paying Agent* shall mean any paying agent for the Bonds of any Series, and its successor or successors and any other corporation which may at any time be substituted in its place pursuant to the Metropolitan Highway System Trust Agreement.

*Principal Installment* shall mean, as of any date of calculation and with respect to the Bonds of any Series, so long as any Bonds thereof are Outstanding, (i) the principal amount of Bonds (including the principal amount of any Put Bonds tendered for payment and not purchased in lieu of redemption prior to the redemption date thereof) of such Series due on a future date for which no Sinking Fund Installments have been established, or (ii) the

unsatisfied balance (determined as provided in the Metropolitan Highway System Trust Agreement) of any Sinking Fund Installments due on a future date for Bonds of such Series, plus the amount of the premium, if any, which would be applicable upon redemption of such Bonds on such future date in a principal amount equal to said unsatisfied balance of such Sinking Fund Installments, or (iii) if such future dates coincide as to different Bonds of such Series, the sum of such principal amount of Bonds and of such unsatisfied balance of Sinking Fund Installments due on such future date, plus such applicable redemption premium, if any.

*Project* shall mean and be limited to the Metropolitan Highway System, any Extension or any part thereof.

*Project Cost*, with respect to any Project, shall include among other things (i) the costs incurred or to be incurred by the Authority in connection with the acquisition, design, construction, improvement, or reconstruction of such Project except to the extent such costs are funded from the proceeds of any indebtedness of the Authority, the payment of which is included as a Project Cost under clause (iii) below, (ii) amounts, if any, required by the Metropolitan Highway System Trust Agreement to be paid into any Fund or Account upon the issuance of any Series, (iii) payments when due on any indebtedness of the Authority (other than the Bonds) incurred for such Project, (iv) costs of equipment and supplies and initial working capital and reserves required by the Authority for the commencement of operation of such Project, (v) costs of acquisition by the Authority of real or personal property or any interest therein, and (vi) any other costs properly attributable to the acquisition, design, construction, improvement, or reconstruction of such Project.

*Project Management Agreement* shall mean the Central Artery/Ted Williams Tunnel Project Management Agreement dated as of July 1, 1997 by and between the Commonwealth, acting by and through the Massachusetts Department of Highways, and the Authority, as amended from time to time.

*Provider* shall mean any person or entity providing a Credit Facility, a Liquidity Facility or a Qualified Hedge Agreement with respect to any one or more Series of Bonds, pursuant to agreement with or upon the request of the Authority.

*Put Bond* shall mean a Bond which by its terms may be tendered by and at the option of the Owner thereof for payment by the Authority prior to the stated maturity or redemption date thereof.

*Qualified Hedge Agreement* shall have the meaning set forth under the heading "Hedging Transactions."

*Qualified Institution* shall mean (i) a bank, a trust company, a national banking association, a federal branch pursuant to the International Banking Act of 1978 or any successor provisions of law, a domestic branch or agency of a foreign bank which branch or agency is duly licensed or authorized to do business under the laws of any state or territory of the United States of America, a savings bank, a savings and loan association, or an insurance company or association chartered or organized under the laws of any state of the United States of America, a corporation, a trust, a partnership, an unincorporated organization, or a government or an agency, instrumentality, program, account, fund, political subdivision or corporation thereof, in each case the unsecured or uncollateralized long-term debt obligations of which, or obligations secured or supported by a letter of credit, contract, agreement or surety bond issued by any such organization, at the time an Investment Agreement, Qualified Hedge Agreement, Credit Facility or Liquidity Facility is entered into by the Authority are rated, without regard to any refinement or gradation of such ratings, in the three highest categories of each Rating Agency which rates such obligations or (ii) the Government National Mortgage Association or any successor thereto, the Federal National Mortgage Association or any successor thereto, or any other federal agency or instrumentality.

*Rating Agency* shall mean each recognized rating service which maintains a rating on any Outstanding Bonds at the request of the Authority.

*Redemption Price* shall mean, with respect to any Bond, the principal amount thereof plus the applicable premium, if any, payable upon redemption thereof pursuant to the Metropolitan Highway System Trust Agreement, but excluding accrued interest.

*Revenues* shall mean all (i) all rates, fees, tolls, rentals or other charges and other earned income and receipts as derived in cash by or for the account of the Authority from the Accepted Metropolitan Highway System or any Extension, (ii) Investment Income, (iii) any Supplemental Revenues, (iv) the proceeds of use and occupancy insurance on any portion of the Accepted Metropolitan Highway System or any Extension and of any other insurance which insures against loss of revenues therefrom payable to or for the account of the Authority, and (v) all amounts received by the Trustee for the account of the Authority under a Hedge Agreement. Notwithstanding the preceding sentence, however, Revenues shall not include (i) Dedicated Payments, (ii) amounts received under a Qualified Hedge Agreement which are deposited in a Debt Service Fund and have been relied upon in calculating Debt Service in accordance with the Metropolitan Highway System Trust Agreement, (iii) receipts from extraordinary, non-recurring events or sources attributable to the Accepted Metropolitan Highway System or any Extension, such as sale of property or air rights, (iv) rental income from leases of or licenses to use property or air rights attributable to the Accepted Metropolitan Highway System or any Extension unless pledged by the Authority pursuant to Schedule 501 to the Metropolitan Highway System Trust Agreement or, in the Authority's discretion, as Supplemental Revenues pursuant to a Supplemental Trust Agreement, (v) operating assistance, subsidy or other similar funding received from a governmental or other entity which is attributable to the Accepted Metropolitan Highway System or any Extension, unless pledged by the Authority, in its discretion, as Supplemental Revenues pursuant to a Supplemental Trust Agreement, or (vi)(a) all rates, fees, tolls, rentals or other charges and other earned income and receipts as derived in cash by or for the account of the Authority, (b) operating assistance, subsidy or other similar funding received from a governmental or other entity, and (c) the proceeds of use and occupancy insurance and of any other insurance which insures against loss of revenues therefrom payable to or for the account of the Authority, in each case with respect to portions of the Metropolitan Highway System other than the Accepted Metropolitan Highway System and unless pledged by the Authority, in its discretion, as Supplemental Revenues pursuant to a Supplemental Trust Agreement.

*S&P* means Standard & Poor's Ratings Services or any successor rating agency.

*Senior Debt Service Reserve Requirement* shall mean as of any date of calculation, with respect to Senior Bonds, an amount equal to the sum of the following amounts for the 1997 Series A Bonds, the 1997 Series C Bonds and any Series of Additional Senior Bonds: the least of (i) 10% of the original net proceeds from the sale of such Series, (ii) 125% of average annual Debt Service for such Series and (iii) the maximum amount of Debt Service due on the Bonds of such Series in any future Fiscal Year; provided that in the case that two or more Series of Bonds are treated as one issue for federal tax purposes, (a) the aggregate Senior and Subordinated Debt Service Reserve Requirements for such Series shall not exceed the amount which would be applicable if such Series were treated as a single Series for purposes of calculating such Requirements and (b) any reduction in the aggregate Senior and Subordinated Debt Service Reserve Requirements resulting from the limitation in clause (a) of this proviso shall be allocated pro rata among the affected Series in accordance with the ratio of the Senior and Subordinated Debt Service Reserve Requirements which would have applied but for such clause (a). The Estimated Average Interest Rate as of the date of issue for any Senior Variable Interest Rate Bonds shall be used to establish Debt Service on such Bonds for the purpose of the Senior Debt Service Reserve Requirement.

*Senior Net Debt Service* shall mean Debt Service payable on Senior Bonds less (i) the sum of (a) interest accrued or to accrue on such Bonds which is to be paid from deposits in the Senior Debt Service Fund made from the proceeds of Bonds (including amounts, if any, transferred to the Senior Debt Service Fund from the Bond Proceeds Fund) in accordance with a certificate of an Authorized Officer to the Trustee, (b) amounts transferred to the Senior Debt Service Fund from the General Fund at the Authority's direction, (c) Investment Income from the Senior Debt Service Reserve Fund and the Senior Debt Service Fund transferred to or retained in the Senior Debt Service Fund and (d) Dedicated Payments deposited in the Senior Debt Service Fund pursuant to the Metropolitan Highway System Trust Agreement plus (ii) Debt Service payable on Bond Anticipation Notes issued in anticipation of Senior Bonds net of any amounts deposited from the proceeds of such notes available in the Senior Debt Service Fund or in another account established in connection with the issuance of such notes for the payment of such Debt Service.

*Series* shall mean all of the Bonds authenticated and delivered on original issuance and designated as such by the Authority in a simultaneous transaction pursuant to the Metropolitan Highway System Trust Agreement and any Bonds thereafter authenticated and delivered in lieu of or in substitution therefor pursuant to the Metropolitan

Highway System Trust Agreement, regardless of variations in maturity, interest rate, sinking fund, or other provisions.

*Series 2010 Bonds* shall mean, collectively, the 2010 Series A Bonds and the 2010 Series B Bonds.

*Seventh Supplemental Trust Agreement* shall mean the Seventh Supplemental Metropolitan Highway System Trust Agreement dated as of March 1, 2010 by and between the Department and the Trustee.

*Sinking Fund Installment* shall mean, as of any date of calculation and with respect to any Bonds of a Series, so long as any Bonds thereof are Outstanding, the amount of money required by the Metropolitan Highway System Trust Agreement or a Supplemental Trust Agreement, to be paid on a single future date for the retirement of any Outstanding Bonds of said Series (or of another Series, if authorized by each applicable Supplemental Trust Agreement) which mature after said date, but does not include any amount payable by the Authority by reason only of the maturity of a Bond.

*Standby Purchase Agreement* shall mean an agreement by and between the Authority and another entity pursuant to which such entity is obligated to purchase Put Bonds tendered for purchase or redeemed in lieu of purchase upon such tender.

*Subordinated Bonds* shall mean all Bonds authenticated and delivered pursuant to the provisions described under the heading “Additional Subordinated Bonds” below.

*Subordinated Debt Service Reserve Requirement* shall mean as of any date of calculation, with respect to Subordinated Bonds, an amount equal to the sum of the following amounts for the 1997 Series B Bonds, the 1999 Series A Bonds and any Series of Additional Subordinated Bonds: the least of (i) 10% of the original net proceeds from the sale of such Series, (ii) 125% of average annual Debt Service for such Series and (iii) the maximum amount of Debt Service due on the Bonds of such Series in any future Fiscal Year; provided that in the case that two or more Series of Bonds are treated as one issue for federal tax purposes, (a) the aggregate Senior and Subordinated Debt Service Reserve Requirements for such Series shall not exceed the amount which would be applicable if such Series were treated as a single Series for purposes of calculating such Requirements and (b) any reduction in the aggregate Senior and Subordinated Debt Service Reserve Requirements resulting from the limitation in clause (a) of this proviso shall be allocated pro rata among the affected Series in accordance with the ratio of the Senior and Subordinated Debt Service Reserve Requirements which would have applied but for such clause (a). The Estimated Average Interest Rate as of the date of issue for any Subordinated Variable Interest Rate Bonds shall be used to establish Debt Service on such Bonds for the purpose of the Subordinated Debt Service Reserve Requirement.

*Subordinated Net Debt Service* shall mean Debt Service payable on Subordinated Bonds less (i) the sum of (a) interest accrued or to accrue on such Bonds which is to be paid from Deposits in the Subordinated Debt Service Fund made from the proceeds of Bonds (including amounts, if any, transferred to the Subordinated Debt Service Fund from the Bond Proceeds Fund) in accordance with a certificate of an Authorized Officer to the Trustee, (b) amounts transferred to the Subordinated Debt Service Fund from the General Fund at the Authority’s direction, (c) Investment Income from the Subordinated Debt Service Reserve Fund and the Subordinated Debt Service Fund transferred to or retained in the Subordinated Debt Service Fund and (d) Dedicated Payments deposited in the Subordinated Debt Service Fund pursuant to the Metropolitan Highway System Trust Agreement plus (ii) Debt Service payable on Bond Anticipation Notes issued in anticipation of Subordinated Bonds net of any amounts deposited from the proceeds of such notes available in the Subordinated Debt Service Fund or in another account established in connection with the issuance of such notes for the payment of such Debt Service.

*Supplemental Revenues* shall mean any revenues of the Authority which are not Revenues as defined in the Trust Agreement as initially adopted which the Authority, in its discretion, subsequently pledges as additional security for its obligations under the Metropolitan Highway System Trust Agreement pursuant to a Supplemental Trust Agreement, including without limitation revenues described in clauses (iv), (v) or (vi) of the second sentence of the definition of Revenues.

*Supplemental Trust Agreement* shall mean any trust agreement supplemental to or amendatory of the Metropolitan Highway System Trust Agreement, adopted by the Authority in accordance with Article VIII of the Metropolitan Highway System Trust Agreement.

*Ted Williams Tunnel* shall mean all or any segments of the roadways, bridges, viaducts and tunnels for vehicular traffic that constitute the interstate highway route 90 extension and its connecting roadways and tunnels including (i) the harbor tunnel crossing beneath Boston Harbor, beginning at and including the interchange of State highway route 1A and the Logan Airport access and egress roadways with interstate highway route 90 and continuing beneath Boston Harbor to and including the interchange of interstate highway route 90 and South Boston Bypass road but excluding the Logan Airport access and egress roadways owned or to be owned by the Massachusetts Port Authority, (ii) the seaport access highway beginning at the interchange of interstate highway routes 90 and 93 and continuing to the interchange of interstate highway route 90 and South Boston Bypass Road, and (iii) South Boston Bypass Road, a portion of which is also known as the South Boston Haul Road, beginning at the interchange of interstate highway route 93 and South Boston Bypass Road and continuing to the interchange of the seaport access highway in the South Boston section of the City.

*Tender Date* shall have the meaning given such term in the Seventh Supplemental Trust Agreement, or any other Supplemental Trust Agreement providing for the issuance of Variable Interest Rate Bonds, as applicable.

*Tender Price* shall have the meaning given such term in the Seventh Supplemental Trust Agreement, or any other Supplemental Trust Agreement providing for the issuance of Variable Interest Rate Bonds, as applicable.

*Transfer Agreements* shall mean the Third Harbor Tunnel Transfer Agreement dated December 13, 1995, as amended, by and between the Commonwealth acting by and through the Massachusetts Department of Highways and the Authority and any transfer agreement entered into by the Commonwealth and the Authority with respect to the transfer to the Authority of an Ownership Interest in the Central Artery, the Central Artery North Area or any other portion of the Metropolitan Highway System.

*Trust Agreement* shall mean the Metropolitan Highway System Trust Agreement as supplemented and amended, and as further supplemented and amended by the Eighth Supplemental Trust Agreement.

*Trustee* shall mean the trustee appointed under the Metropolitan Highway System Trust Agreement, and its successor or successors and any other corporation which may at any time be substituted in its place pursuant to the Metropolitan Highway System Trust Agreement.

*Tunnels* shall mean the Sumner Tunnel, the Callahan Tunnel and the Ted Williams Tunnel.

*Turnpike* shall mean, the limited access express toll highway, designated as interstate highway route 90, and all bridges, tunnels, overpasses, underpasses, interchanges, parking facilities, entrance plazas, approaches, connecting highways, service stations, restaurants, tourist information centers and administration, storage, maintenance and other buildings that the Authority may own, construct or operate and maintain pursuant to the Act, extending from the town of West Stockbridge on the Commonwealth's border with New York state to, but not including, the interchange of interstate highway route 90 and state highway route 128/I-95 in the town of Weston, and including in each case such real property and any improvements thereon, personal property, equipment, licenses, appurtenances and interests in land acquired or leased in connection with or incident to the construction, ownership, operation, rehabilitation, reconstruction, improvement, repair, maintenance or administration of such roadways and tunnels as are necessary for their safe and efficient operation and maintenance or which are otherwise convenient or desirable to carry out the purpose of the Act.

*Turnpike Revenues* shall mean (i) all rates, fees, tolls, rentals or other charges and other earned income and receipts derived from or with respect to the ownership, operation, lease, rent or other use or disposition of the Turnpike or any part thereof; and (ii) all other funds received by the Authority, from whatever source, relating to the Turnpike.

*2010 Series A Bonds* shall mean, collectively, the Department's Metropolitan Highway System Revenue Bonds (Subordinated), Commonwealth Contract Assistance Secured, Variable Rate Demand Obligations, 2010 Series A-1, 2010 Series A-2, 2010 Series A-3, 2010 Series A-4, 2010 Series A-5, 2010 Series A-6 and 2010 Series A-7, issued pursuant the Metropolitan Highway System Trust Agreement, as amended and supplemented, and as further amended and supplemented by the Seventh Supplemental Trust Agreement.

*2010 Series A Debt Service Reserve Requirement* shall mean (i) on the date of issuance of the 2010 Series A Bonds, \$36,013,968 and (ii) thereafter, an amount equal to 6.08% of the notional amount outstanding from time to time of the UBS Subordinated Swap Agreement.

*2010 Series B Bonds* shall mean the Department's Metropolitan Highway System Revenue Bonds (Subordinated), Commonwealth Contract Assistance Secured, 2010 Series B, issued pursuant the Metropolitan Highway System Trust Agreement, as amended and supplemented, and as further amended and supplemented by the Seventh Supplemental Trust Agreement.

*2010 Series B Debt Service Reserve Requirement* shall mean zero dollars.

*UBS Subordinated Swap Agreement* shall mean the ISDA Master Agreement dated as of May 22, 2001 and the Amended and Restated Schedule dated as of October 20, 2009, each by and between UBS AG and Massachusetts Turnpike Authority, as predecessor to the Department, and all Confirmations exchanged between the parties confirming the Transactions thereunder relating solely to Subordinated Bonds.

*Valuation Date* shall mean with respect to any Capital Appreciation Bond the date or dates set forth in the Metropolitan Highway System Trust Agreement with respect to the 1997 Series A Bonds and the 1997 Series C Bonds or in the First Supplemental Trust Agreement with respect to the 1999 Series A Bonds or in a Supplemental Trust Agreement authorizing such Bond on which specific Accreted Values are assigned to the Capital Appreciation Bond and (ii) with respect to any Deferred Income Bond, the date or dates on or prior to the Interest Commencement Date set forth in the Supplemental Trust Agreement authorizing such Bond on which specific Appreciated Values are assigned to the Deferred Income Bond.

*Variable Interest Rate* shall mean a variable interest rate to be borne by any Bond. The method of computing such variable interest rate shall be specified in the Supplemental Trust Agreement authorizing such Bond. Such Supplemental Trust Agreement shall also specify either (i) the particular period or periods of time for which each value of such variable interest rate shall remain in effect or (ii) the time or times upon which any change in such variable interest rate shall become effective.

*Variable Interest Rate Bond* shall mean a Bond which bears interest at a Variable Interest Rate.

### **The Pledge Effected by the Metropolitan Highway System Trust Agreement**

The Bonds are special obligations of the Authority payable solely from the items pledged to the payment thereof pursuant to the terms of the Metropolitan Highway System Trust Agreement.

The Metropolitan Highway System Trust Agreement provides that there is irrevocably pledged for the payment of the principal and Redemption Price of, interest on, and Sinking Fund Installments for Senior Bonds, in accordance with their terms and the provisions of the Metropolitan Highway System Trust Agreement, subject only to the provisions of the Metropolitan Highway System Trust Agreement permitting the application thereof for the purposes and on the terms and conditions set forth in the Metropolitan Highway System Trust Agreement: (i) the proceeds of the sale of the Senior Bonds, (ii) the Revenues, (iii) Dedicated Payments allocated to Senior Bonds and interest earnings thereon, (iv) the rental income from certain leases between the Authority and certain third parties specifically listed in Schedule 501 to the Metropolitan Highway System Trust Agreement, as amended by the First Supplemental Trust Agreement, the Seventh Supplemental Trust Agreement or added by any other Supplemental Trust Agreement, and (v) all Funds and Accounts established by the Metropolitan Highway System Trust

Agreement (other than the Rebate Fund, the Subordinated Debt Service Fund and the Subordinated Debt Service Reserve Fund), including the investments, if any, thereof.

Subject only to the prior pledge created for the payment of Senior Bonds above, and on the terms and conditions set forth therein with respect to such prior pledge, the property described in clauses (ii), (iv) and (v) above (except moneys or Investment Obligations in the Senior Debt Service Fund or the Senior Debt Service Reserve Fund) are further pledged, and the proceeds of the sale of Subordinated Bonds, Dedicated Payments allocated to Subordinated Bonds and interest earnings thereon, the Subordinated Debt Service Fund and the Subordinated Debt Service Reserve Fund are further pledged, to the payment of the Subordinated Bonds. (*Sections 201, 501*).

### **Provisions for Issuance of Bonds**

Senior Bonds of one or more Series may at any time or from time to time be authenticated and delivered upon original issuance (i) to pay or provide for the payment of the 1996 Notes, or any other Authority bonds, notes or other obligations issued in connection with the Metropolitan Highway System, (ii) to refund Outstanding Bonds, (iii) to make payments to the Commonwealth related to the transfer to the Authority of all or a portion of the Metropolitan Highway System, (iv) to pay Project Costs, (v) to make a deposit to the Bond Proceeds Fund, the Operating Fund, the Senior Debt Service Fund, the Senior Debt Service Reserve Fund, the Subordinated Debt Service Fund, the Subordinated Debt Service Reserve Fund, the Capital Reinvestment Fund or the General Fund, including any Accounts therein, and (vi) to pay or provide for the payment of the costs incurred in connection with the issuance of Bonds.

Subordinated Bonds of one or more Series may at any time or from time to time be authenticated and delivered upon original issuance (i) to refund Outstanding Subordinated Bonds, (ii) to make a deposit to the Subordinated Debt Service Fund or the Subordinated Debt Service Reserve Fund relating to such Refunding Bonds, including any Accounts therein, and (iii) to pay or provide for the payment of the costs incurred in connection with the issuance of such Refunding Bonds.

The Bonds of a Series authorized to be issued shall be executed by the Authority and delivered to the Trustee. Such Bonds shall from time to time and in such amounts as directed by the Authority be authenticated and delivered by the Trustee to or upon the order of the Authority upon receipt of the consideration therefor and upon delivery to the Trustee of:

(1) An Opinion of Bond Counsel to the effect that (i) the Authority has the right and power under the Act to enter into the Metropolitan Highway System Trust Agreement, and the Metropolitan Highway System Trust Agreement has been duly and lawfully approved by the Authority, and, assuming due authorization, execution and delivery by the Trustee, is in full force and effect and is valid and binding upon the Authority and enforceable in accordance with its terms, and no other authorization for the Metropolitan Highway System Trust Agreement is required; (ii) the Metropolitan Highway System Trust Agreement creates the valid pledge of the items which it purports to pledge to the payment of the Bonds pursuant to the Metropolitan Highway System Trust Agreement, subject to the application of certain provisions of the Metropolitan Highway System Trust Agreement to the purposes and on the conditions permitted by the Trust Agreement; and (iii) the Bonds of such Series are valid and binding special obligations of the Authority as provided in the Metropolitan Highway System Trust Agreement, enforceable in accordance with their terms and the terms of the Trust Agreement, and entitled to the benefit of the Trust Agreement and of the Act and such Bonds have been duly and validly authorized and issued in accordance with law, including the Act, and in accordance with the Metropolitan Highway System Trust Agreement; provided, that such Opinion may take exception as to the effect of, or for restrictions or limitations imposed by or resulting from, bankruptcy, insolvency, debt adjustment, moratorium, reorganization or other similar laws affecting creditors' rights generally and judicial discretion and may state that no opinion is being rendered as to the availability of any particular remedy;

(2) A written order as to the delivery of the Bonds of such Series, signed by an Authorized Officer;

(3) Copies of the Metropolitan Highway System Trust Agreement as amended and supplemented and of the Supplemental Trust Agreement authorizing such Series if such Series are Additional Bonds, each certified by an Authorized Officer;

(4) If any Bonds of such Series are Put Bonds, a Credit Facility or Liquidity Facility in such an amount as would provide sufficient moneys for the purchase or redemption of all Put Bonds of such Series if Owners thereof elected to tender for purchase or redemption the entire aggregate Outstanding principal amount of the Put Bonds of such Series;

(5) A certificate of an Authorized Officer setting forth (i) the aggregate principal amount of all Bonds of all Series to be Outstanding immediately after such authentication and delivery, (ii) the Debt Service for such Bonds for the then current and each future Fiscal Year, and (iii) the greatest amount of Debt Service for the then current or any future Fiscal Year; and stating that the amount on deposit in the applicable Debt Service Reserve Fund (after taking into account any surety bond, insurance policy, letter of credit or other similar obligation on deposit therein) immediately after the authentication and delivery of the Bonds of such Series (and in the event that any Outstanding Bonds are then being redeemed, after such redemption) will be at least equal to the applicable Debt Service Reserve Requirement; and

(6) A certificate of an Authorized Officer to the effect that, upon the authentication and delivery of the Bonds of such Series, the Authority will not be in default in the performance of the terms and provisions of the Metropolitan Highway System Trust Agreement or of any of the Bonds. (*Section 202*).

#### **Additional Senior Bonds**

One or more Series of Additional Senior Bonds may be authenticated and delivered upon original issue for any of the purposes set forth in the provisions to the Metropolitan Highway System Trust Agreement.

The Additional Senior Bonds of such Series shall be authenticated only upon receipt by the Trustee of one of the following (in addition to the documents required by the provisions of the Metropolitan Highway System Trust Agreement): (i) a certificate of an Independent Consultant estimating that in each of the Fiscal Years following the issuance of the Additional Senior Bonds during which Senior Bonds will be Outstanding, Net Revenues will be at least equal to 1.20 times Senior Net Debt Service and 1.15 times Combined Net Debt Service; or (ii) a certificate of an Authorized Officer estimating that for at least 12 consecutive months during the last 18 months, assuming that such Additional Senior Bonds had been issued, Net Revenues would have been at least equal to 1.20 times the maximum amount of Senior Net Debt Service and 1.15 times the maximum amount of Combined Net Debt Service in the then current or any future Fiscal Year; or (iii) a certificate of an Independent Consultant that (a) in each of the Fiscal Years following the issuance of the Additional Senior Bonds preceding a particular future Fiscal Year designated for the purpose by the Authority, Net Revenues will be at least equal to 1.20 times the amount of Senior Net Debt Service and 1.15 times the amount of Combined Net Debt Service in each such Fiscal Year and (b) in such designated future Fiscal Year, Net Revenues will be at least equal to 1.20 times the maximum amount of Senior Net Debt Service and 1.15 times the maximum amount of Combined Net Debt Service in the then current or any subsequent Fiscal Year. For purposes of any projections in any such certificate, the Independent Consultant or the Authority may include estimated toll increases and Operating Expenses which are projected by the Authority to occur during the applicable period of projection, which projections are reasonable in the opinion of the Independent Consultant and projections of Debt Service and Revenues which shall be consistent with the provisions of the Metropolitan Highway System Trust Agreement (see "Covenants Regarding Calculation of Projected Debt Service and Revenues").

In addition to the documents required by the provisions of the Metropolitan Highway System Trust Agreement, any Series of Additional Senior Bonds issued for any purpose other than refunding Bonds and paying termination amounts, if any, payable in respect of a Qualified Hedge Agreement, shall be authenticated only upon receipt by the Trustee of written confirmation from each Rating Agency that its rating of Outstanding Bonds will not be adversely affected by the issuance of such Additional Senior Bonds. (*Section 205*).

### **Additional Subordinated Bonds**

No Additional Subordinated Bonds may be issued under the Trust Agreement except: (i) Refunding Bonds issued pursuant to the Metropolitan Highway System Trust Agreement solely for the purpose of refunding any Subordinated Bonds, or (ii) Bonds pursuant to the Metropolitan Highway System Trust Agreement in lieu of or in substitution for Bonds previously issued. The provisions described in the following paragraph shall only apply in the event of the issuance of Refunding Bonds pursuant to the provisions described in clause (5)(b) under the heading “Special Provisions for Refunding Bonds” below.

The Additional Subordinated Bonds of such Series shall be authenticated only upon receipt by the Trustee of one of the following (in addition to the documents required by the provisions of the Metropolitan Highway System Trust Agreement): (i) a certificate of an Independent Consultant estimating that in each of the Fiscal Years following the issuance of the Additional Subordinated Bonds, Net Revenues will be at least equal to 1.15 times Combined Net Debt Service; or (ii) a certificate of an Authorized Officer estimating that for at least 12 consecutive months during the last 18 months, assuming that such Additional Subordinated Bonds had been issued, Net Revenues would have been at least equal to 1.15 times the maximum amount of Combined Net Debt Service in the then current or any future Fiscal Year; or (iii) a certificate of an Independent Consultant that (a) in each of the Fiscal Years following the issuance of the Additional Subordinated Bonds preceding a particular future Fiscal Year designated for the purpose by the Authority, Net Revenues will be at least equal to 1.15 times the amount of Combined Net Debt Service in each such Fiscal Year and (b) in such designated future Fiscal Year, Net Revenues will be at least equal to 1.15 times the maximum amount of Combined Net Debt Service in the then current or any subsequent Fiscal Year. For purposes of any projections in any such certificate, the Independent Consultant or the Authority may include estimated toll increases and Operating Expenses which are projected by the Authority to occur during the applicable period of projection, which projections are reasonable in the opinion of the Independent Consultant and projections of Debt Service and Revenues which shall be consistent with the requirements of the provisions of the Metropolitan Highway System Trust Agreement (see “Covenants Regarding Calculation of Projected Debt Service and Revenues”). (*Section 206*).

### **Special Provisions for Refunding Bonds**

One or more Series of Refunding Bonds may be authenticated and delivered upon original issuance to refund all or any portion of the Outstanding Bonds of a Series, in an aggregate principal amount which will provide funds, together with other moneys available therefor, to accomplish such refunding.

The Refunding Bonds of such Series shall be authenticated and delivered by the Trustee only upon receipt by the Trustee (in addition to the documents required the provisions of the Metropolitan Highway System Trust Agreement) of:

(1) If the Bonds to be refunded are to be redeemed, instructions to the Trustee, satisfactory to it, to give due notice of redemption of all the Bonds so to be refunded on a redemption date specified in such instructions;

(2) If the Bonds to be refunded are to be deemed paid within the meaning and with the effect expressed in the Metropolitan Highway System Trust Agreement relating to defeasance of Bonds, instructions to the Trustee, satisfactory to it;

(3) If the Bonds to be refunded are to be deemed paid within the meaning and with the effect expressed in the provisions of the Metropolitan Highway System Trust Agreement relating to defeasance of Bonds, (i) moneys and/or (ii) Investment Obligations as shall be necessary to comply with the Metropolitan Highway System Trust Agreement, which Investment Obligations and moneys shall be held in trust and used only as provided in the Metropolitan Highway System Trust Agreement;

(4) If the proceeds of such Series of Refunding Bonds are to be utilized by the Authority to purchase Bonds to be delivered to the Trustee in satisfaction of a Sinking Fund Installment or to defease a portion of the Bonds which are the subject of a Sinking Fund Installment in accordance with the Metropolitan Highway System Trust Agreement, a certificate of an Authorized Officer of the Authority specifying (i) the principal amount, Series,

maturity, interest rate and number of the Bonds to be so delivered, (ii) the date and Series of the Sinking Fund Installment in satisfaction of which such Bonds are to be so delivered, (iii) the aggregate principal amount of the Bonds to be so delivered, and (iv) the unsatisfied balance of each such Sinking Fund Installment after giving effect to the delivery of the Bonds to be so delivered; and

(5) Either (a) a certificate of an Authorized Officer of the Authority stating that (i) the final maturity of the Refunding Bonds is no later than the final maturity of the Bonds to be refunded and (ii) as a result of the issuance of the Refunding Bonds there shall be no increase in the amount of Senior Net Debt Service in any Fiscal Year and there shall be no increase in the amount of Combined Net Debt Service in any Fiscal Year; or (b) the certificates provided for in the Metropolitan Highway System Trust Agreement with respect to such Series of Refunding Bonds, considering for all purposes of such certificate that (i) such Series of Refunding Bonds is a Series of Senior Bonds issued pursuant to the Metropolitan Highway System Trust Agreement or Subordinated Bonds issued pursuant to the Metropolitan Highway System Trust Agreement, as applicable, and (ii) that the Bonds to be refunded are no longer Outstanding. (*Section 207*).

### **Bond Anticipation Notes**

Whenever the Authority shall have, by Supplemental Trust Agreement, authorized the issuance of a Series of Bonds, the Authority may by trust agreement, resolution or other action authorize the issuance of Bond Anticipation Notes in anticipation of the sale of such authorized Series of Bonds in a principal amount not exceeding the principal amount of the Bonds of such Series so authorized. No such Bond Anticipation Notes shall be issued unless at the time of issuance the Authority satisfies the requirements for the issuance of a Series of Bonds set forth in the provisions of the Metropolitan Highway System Trust Agreement assuming for the purposes of such requirements that (i) on the date of issuance of such Bond Anticipation Notes the Authority issues Bonds in an amount sufficient to pay the principal of and interest on such Bond Anticipation Notes, (ii) such Bonds were issued on the date of calculation, (iii) no such Bond matures later than the maturity date next preceding the fortieth anniversary of the assumed date of issuance, (iv) such Bonds bear interest at such rates as an Authorized Officer shall determine to be required to have sold such Bonds at a price equal to the principal amount thereof, (v) interest on such Bonds is payable on the interest payment date, commencing on the first such date next succeeding the assumed date of issuance, and (vi) the principal, Sinking Fund Installments and interest payable during any Fiscal Year after the assumed date of issuance is substantially equal to the principal, Sinking Fund Installments and interest payable during any other such Fiscal Year.

The principal of and interest on such Bond Anticipation Notes and any renewals of such Notes shall be payable only (i) from the proceeds of any renewals of such Bond Anticipation Notes issued to repay such Bond Anticipation Notes, (ii) from the proceeds of the sale of the Series of Bonds in anticipation of which such Notes are issued, (iii) from the proceeds of such Bond Anticipation Notes deposited in the Bond Proceeds Fund, (iv) from amounts available in the General Fund, or (v) from any moneys of the Authority available therefor and not pledged under the Metropolitan Highway System Trust Agreement. Such proceeds set forth in clauses (ii) and (iii) may be pledged for the payment of the principal of and interest on such Bond Anticipation Notes and any such pledge shall have priority over any other pledge created by the Metropolitan Highway System Trust Agreement. In any case, such Bond Anticipation Notes shall be retired or defeased not later than the date of authentication and delivery of the Bonds in anticipation of which they are issued.

The proceeds of the sale of Bond Anticipation Notes other than any renewals thereof shall be applied to the purposes for which the Bonds anticipated by such Bond Anticipation Notes are authorized and shall be deposited in the appropriate Fund or Account established by the Metropolitan Highway System Trust Agreement for such purposes and, if so provided in the trust agreement, resolution or other action authorizing the issuance of Bond Anticipation Notes to pay outstanding Bond Anticipation Notes, applied directly to such payment. (*Section 208*).

### **Additional Obligations**

The Authority reserves the right to issue bonds, notes or any other obligations or otherwise incur indebtedness pursuant to other and separate resolutions or agreements of the Authority, including without limitation

General Fund Indebtedness, so long as such bonds, notes or other obligations are not, or such other indebtedness is not, except as provided in the Metropolitan Highway System Trust Agreement, entitled to a charge or lien or right with respect to the Revenues or the Funds and Accounts created under the Metropolitan Highway System Trust Agreement or pursuant thereto. (*Section 209*).

### **Hedging Transactions**

Under the Metropolitan Highway System Trust Agreement, a Hedge Agreement is a Qualified Hedge Agreement if (i) the Provider of the Hedge Agreement is a Qualified Institution or the Provider's obligations under the Hedge Agreement are unconditionally guaranteed by a Qualified Institution, and (ii) the Authority designates it as such by Certificate of an Authorized Officer.

If the Authority shall enter into any Qualified Hedge Agreement with respect to any Bonds and the Authority has made a determination that the Qualified Hedge Agreement was entered into for the purpose of hedging or managing the interest due with respect to those Bonds then during the term of the Qualified Hedge Agreement and so long as the Provider of the Qualified Hedge Agreement is not in default:

(1) for purposes of any calculation of Debt Service, the interest rate on the Bonds with respect to which the Qualified Hedge Agreement applies shall be determined as if such Bonds had interest payments equal to the interest payable on those Bonds less any payments reasonably expected to be made to the Authority by the Provider and plus any payments reasonably expected to be made by the Authority to the Provider in accordance with the terms of the Qualified Hedge Agreement (other than fees or termination payments payable to such Provider for providing the Qualified Hedge Agreement);

(2) any such payments (other than fees and termination payments) required to be made by the Authority to the Provider pursuant to such Qualified Hedge Agreement shall be made from amounts on deposit in the Senior Debt Service Fund or Subordinated Debt Service Fund, as applicable;

(3) any such payments received by or for the account of the Authority from the Provider pursuant to such Qualified Hedge Agreement shall be deposited in the Senior Debt Service Fund or Subordinated Debt Service Fund, as applicable; and

(4) fees and termination payments, if any, payable to the Provider may be deemed to be Debt Service and paid from amounts on deposit in the Senior Debt Service Fund or the Subordinated Debt Service Fund if and to the extent expressly provided in the Qualified Hedge Agreement (otherwise such fees and termination payments shall be payable solely from amounts on deposit in the General Fund).

If the Authority shall enter into a Hedge Agreement that is not a Qualified Hedge Agreement, then:

(1) the interest rate adjustments or assumptions referred to in clause (1) under this heading shall not be made;

(2) any and all payments required to be made by the Authority to the Provider pursuant to such Hedge Agreement (including any fee and termination payments) shall be made only from amounts on deposit in the General Fund; and

(3) any payments received by the Authority from the Provider pursuant to such Hedge Agreement shall be treated as Revenues and shall be deposited in the Revenue Fund. (*Section 104*).

### **Redemption of Bonds**

Additional Bonds subject to redemption prior to maturity pursuant to a Supplemental Trust Agreement shall be redeemable, upon notice as provided in the Metropolitan Highway System Trust Agreement, at such times, at such Redemption Prices and upon such terms in addition to and consistent with the terms contained in the

Metropolitan Highway System Trust Agreement as may be specified in the Metropolitan Highway System Trust Agreement or in the Supplemental Trust Agreement authorizing such Series.

In the case of any redemption of Bonds otherwise than out of any Sinking Fund Installments, the Authority shall give written notice to the Trustee of its election so to redeem, of the redemption date, of the Series, and of the principal amounts of the Bonds of each maturity of such Series to be redeemed (which Series, maturities and principal amounts thereof to be redeemed shall be determined by the Authority in its sole discretion, subject to any limitations with respect thereto contained in the Metropolitan Highway System Trust Agreement or any Supplemental Trust Agreement).

In the case of any redemption of Bonds out of Sinking Fund Installments, the Authority shall, in the case of each Sinking Fund Installment, give written notice to the Trustee of the date of such Sinking Fund Installment, the unsatisfied balance of such Sinking Fund Installment, as provided in the Metropolitan Highway System Trust Agreement, the particular Series and maturity of the Bonds entitled to such Sinking Fund Installment, and the principal amount of such Bonds to be redeemed out of such Sinking Fund Installment. Such notice shall be given at least 45 days prior to the date of such Sinking Fund Installment, or such shorter period as shall be acceptable to the Trustee. The Authority covenants that it will, prior to the date of such Sinking Fund Installment, pay to the appropriate Paying Agent an amount in cash which will be sufficient to redeem all of the Bonds which are to be redeemed out of such Sinking Fund Installment, at the Redemption Price thereof, plus interest accrued and unpaid to the date of the Sinking Fund Installment.

Except as otherwise provided in a certificate of an Authorized Officer with respect to the Initial Bonds or in a Supplemental Trust Agreement authorizing the issuance of the Series of Additional Bonds, if fewer than all of the Bonds of like maturity of any Series shall be called for prior redemption, the particular Bonds or portions of Bonds to be redeemed shall be selected by the Trustee in such manner as the Trustee in its discretion may deem fair and appropriate subject to any limitation with respect thereto contained in any Supplemental Trust Agreement.

The Trustee shall give notice, in the name of the Authority, of the redemption of such Bonds, which shall specify the Series and maturities of the Bonds to be redeemed, the redemption date and the place or places where amounts due upon such redemption will be payable and, if less than all of the Bonds of any like Series and maturity are to be redeemed, the letters and numbers or other distinguishing marks of such Bonds so to be redeemed and the respective portions of the principal amount thereof to be redeemed. The notice shall further state that on the redemption date there shall become due and payable upon each Bond to be redeemed the Redemption Price thereof, or the Redemption Price of the specified portions of the principal thereof in the case of registered Bonds to be redeemed in part only, together with interest accrued to the redemption date, and that from and after such date interest thereon shall cease to accrue and be payable. The Trustee shall mail a copy of such notice not less than thirty (30) days nor more than sixty (60) days before the redemption date, to the registered owners of any Bonds or portions of Bonds which are to be redeemed. In addition, at the request of the Authority, the Trustee shall also mail a copy of any such notice of election to redeem pursuant to the Metropolitan Highway System Trust Agreement to the registered owners of the Bonds in the manner described in the preceding sentence on such earlier date or dates prior to the redemption date as the Authority may specify, which earlier notice may be conditional as specified by the Authority; provided that notice in accordance with the preceding sentence shall still be given when due. Failure of the registered Owner of Bonds which are to be redeemed to receive any such notice shall not affect the validity of the proceedings for the redemption of Bonds. If, at the time of mailing of the notice of optional redemption, moneys have not been deposited with the Trustee in an amount sufficient to redeem all of the Bonds called for redemption, such notice may state that it is conditional, i.e., subject to the deposit of sufficient moneys not later than the opening of business on the redemption date, and any such notice shall be of no effect unless such moneys are deposited. (*Article IV*).

#### **Establishment of Funds and Accounts**

The Metropolitan Highway System Trust Agreement establishes the following Funds and Accounts, which shall be held and administered by the Trustee:

- (1) Revenue Fund;
- (2) Senior Debt Service Fund;
- (3) Senior Debt Service Reserve Fund;
- (4) Subordinated Debt Service Fund; and
- (5) Subordinated Debt Service Reserve Fund.

The Metropolitan Highway System Trust Agreement establishes the following Funds and Accounts, which shall be held and administered by the Authority:

- (1) Bond Proceeds Fund, which shall include a Metropolitan Highway System Capital Account, a Commonwealth Payment Account, an Extension Account and such other Accounts as the Authority may create by Supplemental Trust Agreement;
- (2) Operating Fund, which shall include an Operations and Maintenance Account and an Operating and Maintenance Reserve Account;
- (3) Rebate Fund;
- (4) Capital Reinvestment Fund; and
- (5) General Fund.

*(Section 502).*

The Eighth Supplemental Trust Agreement establishes the following Funds and Accounts, which shall be held and administered by the Tender Agent:

- (1) Series A-1 Bond Purchase Fund, which shall include a Series A-1 Credit Facility Purchase Account, a Series A-1 Remarketing Account and a Series A-1 Department Purchase Account; and
- (2) Series A-2 Bond Purchase Fund, which shall include a Series A-2 Credit Facility Purchase Account, a Series A-2 Remarketing Account and a Series A-2 Department Purchase Account.

The Eighth Supplemental Trust Agreement establishes the following Accounts within the Senior Debt Service Fund, which shall be held and administered by the Trustee: Series A-1 Bank Payment Subaccount and Series A-2 Bank Payment Subaccount.

*(Section 401 of the Eighth Supplemental Trust Agreement).*

### **Bond Proceeds Fund**

The Authority shall deposit into the Metropolitan Highway System Capital Account the net proceeds of all Bonds, other than Refunding Bonds, issued for direct expenditures to be made by the Authority other than for Extensions, which net proceeds shall be in the amount and applied as set forth in the Metropolitan Highway System Trust Agreement with respect to the Initial Bonds or in the applicable Supplemental Trust Agreement authorizing the issuance of a Series of Additional Bonds.

The Authority shall deposit into the Commonwealth Payment Account the net proceeds of all Bonds, other than Refunding Bonds, issued for payments to be made to the Commonwealth under the Act or other law, which net proceeds shall be in the amount and applied as set forth in the Metropolitan Highway System Trust Agreement with

respect to the Initial Bonds or in the applicable Supplemental Trust Agreement authorizing the issuance of a Series of Additional Bonds.

The Authority shall deposit into the Extension Account the net proceeds of all Bonds issued for Extensions, which net proceeds shall be in the amount set forth in the applicable Supplemental Trust Agreement. Sub-accounts for each Series of Bonds may be established by the Authority within the Extension Account. Amounts on deposit in the Extension Account shall be applied to the payment of the Project Cost of the Extension for which such deposit was made in the manner and upon such conditions as the Authority may provide in such Supplemental Trust Agreement. Amounts remaining on deposit in the Extension Account upon the Date of Completion of the Extension or Extensions for which such deposit was made or if the acquisition, design, construction, improvement, reconstruction, renewal, rehabilitation or improvement of such Extension or Extensions is abandoned prior to completion, shall, at the discretion of the Authority (i) be transferred to the applicable Debt Service Fund and applied toward the purchase or redemption of Bonds, or (ii) be deposited in any other Account established within the Bond Proceeds Fund. (*Section 503*).

### **Revenue Fund and Application Thereof**

The Authority shall, immediately following the issuance and delivery of any Bonds under the Metropolitan Highway System Trust Agreement, transfer to the Trustee for payment into the Revenue Fund all Revenues as received, except Investment Income required by the terms of the Metropolitan Highway System Trust Agreement to be deposited in another Fund or Account. Amounts in the Revenue Fund shall be deposited in, or credited to, as appropriate, on the last Business Day of the month in which the first such amounts are deposited in the Revenue Fund and on or before the twenty-fifth (25th) day of each month thereafter, the following Funds and Accounts, in the amounts and in the order and priority, as follows:

(1) To the Authority for deposit into the Operating Fund, (i) for credit to the Operating and Maintenance Account, such amount as the Authority shall estimate is required consistent with the Annual Budget, together with amounts then on deposit therein, to provide for the payment of Operating Expenses (other than Operating Expenses for credit to the Operating and Maintenance Reserve Account) estimated to be paid through the next month, and (ii) for credit to the Operating and Maintenance Reserve Account, such amount, if any, as shall be required to bring the amount on deposit therein to the level required therefor by the then current Annual Budget;

(2) Into the Senior Debt Service Fund, the amount, if any, required so that the balance in said Fund shall equal the Debt Service for Senior Bonds and the fees and charges related to Credit Facilities, Liquidity Facilities, and Qualified Hedge Agreements entered into in connection with Senior Bonds accruing prior to the twenty-fifth day of the next succeeding month; provided that, for the purposes of computing the amount to be deposited in said Fund, there shall be excluded from the balance of said Fund the amount, if any, set aside in said Fund from the proceeds of Senior Bonds (including amounts, if any, transferred thereto from the Bond Proceeds Fund) or otherwise for the payment of interest on Senior Bonds which is to be applied in accordance with the instructions set forth in a certificate of an Authorized Officer of the Authority delivered to the Trustee to the payment of interest to accrue on Senior Bonds on or after the twenty-fifth day of the next succeeding month;

(3) Into the Senior Debt Service Reserve Fund, the amount, if any, required for such Fund, after giving effect to any surety bond, insurance policy, letter of credit or other similar obligation deposited in such Fund pursuant to the Metropolitan Highway System Trust Agreement and subject to the provisions thereto, to equal the Senior Debt Service Reserve Requirement as of the last day of the then current month (provided, however, that the provisions described under "Senior Debt Service Reserve Fund" shall govern any restoration required after a withdrawal from such Fund or as a result of a valuation of such Fund);

(4) Into the Subordinated Debt Service Fund, the amount, if any, required so that the balance in said Fund shall equal the Debt Service for Subordinated Bonds and the fees and charges related to Credit Facilities, Liquidity Facilities and Qualified Hedge Agreements entered into in connection with Subordinated Bonds accruing prior to the twenty-fifth day of the next succeeding month; provided that, for the purposes of computing the amount to be deposited in said Fund, there shall be excluded from the balance of said Fund the amount, if any, set aside in said Fund from the proceeds of Subordinated Bonds (including amounts, if any, transferred thereto from the Bond

Proceeds Fund) or otherwise for the payment of interest on Subordinated Bonds which is to be applied in accordance with the instructions set forth in a certificate of an Authorized Officer of the Authority delivered to the Trustee to the payment of interest to accrue on Subordinated Bonds on or after the twenty-fifth day of the next succeeding month;

(5) Into the Subordinated Debt Service Reserve Fund, the amounts, if any, after giving effect to any surety bond, insurance policy, letter of credit or other similar obligation deposited in such Fund pursuant to the Metropolitan Highway System Trust Agreement and subject to the provisions thereto, to equal the Subordinated Debt Service Reserve Requirement as of the last day of the then current month (provided, however, that the provisions described under "Subordinated Debt Service Reserve Fund" shall govern any replenishment required after a withdrawal from such Fund);

(6) To the Authority for credit to the Rebate Fund, notwithstanding any other provisions of Article V of the Metropolitan Highway System Trust Agreement, such Revenues at such times and in such amounts as shall be set forth in a certificate of an Authorized Officer;

(7) To the Authority for deposit into the Capital Reinvestment Fund, one-twelfth of the Capital Reinvestment Requirement established by the Authority for the Fiscal Year in the Authority's then current Annual Budget, or such greater portion of such Requirement as the Trustee may be directed to so deposit by a certificate of an Authorized Officer; and

(8) To the Authority for deposit into the General Fund, the moneys remaining on deposit in the Revenue Fund after making the foregoing deposits. (*Section 504*).

### **Operating Fund**

Amounts credited to the Operating and Maintenance Account shall be applied from time to time by the Authority to the payment of Operating Expenses of the Accepted Metropolitan Highway System and any Extensions.

Amounts credited to the Operating and Maintenance Account which the Authority at any time determines to be in excess of the requirements of such Account shall be applied to make up any deficiencies in the following Funds and Accounts in the order stated: Senior Debt Service Fund; Senior Debt Service Reserve Fund; Subordinated Debt Service Fund; Subordinated Debt Service Reserve Fund; Rebate Fund and Capital Reinvestment Fund. Any balance of such excess not so applied shall be credited to any Fund or Account specified by the Authority.

Amounts credited to the Operating and Maintenance Reserve Account shall, at the direction of the Authority, be applied to the payment of Operations Expenses to the extent unavailable from the Operating Fund.

Amounts credited to the Operating and Maintenance Reserve Account which the Authority at any time determines to be in excess of the requirements of such Account shall be applied to make up any deficiencies in the following Funds and Accounts in the order stated: Senior Debt Service Fund; Senior Debt Service Reserve Fund; Subordinated Debt Service Fund; Subordinated Debt Service Reserve Fund; Rebate Fund; and Capital Reinvestment Fund. Any balance of such excess shall be credited to any Fund or Account specified by the Authority. (*Section 505*).

### **Senior Debt Service Fund**

The Trustee shall pay out of the Senior Debt Service Fund to the respective Paying Agents (i) on or before each interest payment date for any of the Senior Bonds, the amount required for the interest payable on such date; (ii) on or before each Principal Installment due date, the amount required for the Principal Installment for Senior Bonds payable on such due date; and (iii) on or before any redemption date for the Senior Bonds, the amount required for the payment of the Redemption Price of and interest on the Senior Bonds then to be redeemed.

In the event of the refunding of any Senior Bonds, the Authority may direct the Trustee to withdraw from the Senior Debt Service Fund all, or any portion of, the amounts accumulated therein with respect to Debt Service on the Senior Bonds being refunded and deposit such amounts in a separate account with the Trustee to be held for the payment of the principal or Redemption Price, if applicable, of and interest on the Senior Bonds being refunded; provided that such withdrawal shall not be made unless (a) immediately thereafter Senior Bonds being refunded shall be deemed to have been paid pursuant to the Metropolitan Highway System Trust Agreement, and (b) the amount remaining in the Senior Debt Service Fund, after giving effect to the issuance of Refunding Bonds and the disposition of the proceeds thereof, shall not be less than the requirement of such Fund pursuant to the Metropolitan Highway System Trust Agreement. In the event of such refunding, the Authority may also direct the Trustee to withdraw from the Senior Debt Service Fund all, or any portion of, the amounts accumulated therein with respect to Debt Service on the Senior Bonds being refunded and deposit such amounts in any Fund or Account under the Metropolitan Highway System Trust Agreement; provided, however, that such withdrawal shall not be made unless clauses (a) and (b) referred to hereinabove have been satisfied and provided, further, that, at the time of such withdrawal, there shall exist no deficiency in any Fund or Account held under the Metropolitan Highway System Trust Agreement (other than the Fund or Account into which such amount is being transferred). (*Section 507*).

### **Senior Debt Service Reserve Fund**

If on the last Business Day of any month the amount in the Senior Debt Service Fund shall be less than the amount required to be in such Fund pursuant paragraph (2) under the heading “Revenue Fund and Application Thereof,”, the Trustee shall transfer to the Senior Debt Service Fund (in such order) amounts from the General Fund, the Senior Debt Service Reserve and the Capital Reinvestment Fund equal to the deficiency.

In lieu of the required deposits and transfers to the Senior Debt Service Reserve Fund or as a replacement or substitution for any moneys or Investment Obligations then on deposit in the Senior Debt Service Reserve Fund, the Authority may at any time cause to be deposited into the Senior Debt Service Reserve Fund for the benefit of the Owners of the Senior Bonds a surety bond, an insurance policy, a letter of credit or other similar obligation (and may replace such surety bond, insurance policy, letter of credit or similar obligation from time to time) providing for payments in an amount equal to the difference between the Senior Debt Service Reserve Requirement and the sums, if any, then on deposit in the Senior Debt Service Reserve Fund or being deposited in the Senior Debt Service Reserve Fund concurrently with such surety bond, insurance policy, letter of credit or other similar obligation.

In the event of the refunding of any Senior Bonds, the Authority may direct the Trustee to withdraw from the Senior Debt Service Reserve Fund all, or any portion of, the amounts accumulated therein with respect to the Senior Bonds being refunded and deposit such amounts with the Trustee in a separate account to be held for the payment of the principal or Redemption Price, if applicable, and interest on the Senior Bonds being refunded, subject to continued satisfaction of the Debt Service Reserve Requirement.

Regardless of any other provisions of the Metropolitan Highway System Trust Agreement, in the event that at any time the amount on deposit in the Senior Debt Service Reserve Fund, after giving effect to any surety bond, insurance policy, letter of credit or other similar obligation deposited in such Fund under this heading, shall be less than the Senior Debt Service Reserve Requirement as a result of any withdrawal from said Fund or as a result of the valuation of such fund performed in accordance with the Metropolitan Highway System Trust Agreement, the Authority shall restore the amount on deposit in the Senior Debt Service Reserve Fund, after giving effect to any surety bond, insurance policy, letter of credit or other similar obligation deposited in said Fund under this heading, to the Senior Debt Service Reserve Requirement, in the case of restoration after withdrawal in twelve (12) equal monthly installments commencing within ninety (90) days of such withdrawal, and in the case of restoration as a result of valuation in six (6) equal monthly installments commencing thirty (30) days after such valuation. (*Section 508*).

### **Subordinated Debt Service Fund**

The Trustee shall pay out of the Subordinated Debt Service Fund to the respective Paying Agents (i) on or before each interest payment date for any of the Subordinated Bonds, the amount required for the interest payable

on such date; (ii) on or before each Principal Installment due date, the amount required for the Principal Installment for Subordinated Bonds payable on such due date; and (iii) on or before any redemption date for the Subordinated Bonds, the amount required for the payment of the Redemption Price of and interest on the Subordinated Bonds then to be redeemed.

In the event of the refunding of any Subordinated Bonds, the Authority may direct the Trustee to withdraw from the Subordinated Debt Service Fund all, or any portion of, the amounts accumulated therein with respect to Subordinated Debt Service on the Subordinated Bonds being refunded and deposit such amounts in a separate account with the Trustee to be held for the payment of the principal or Redemption Price, if applicable, of and interest on the Subordinated Bonds being refunded; provided that such withdrawal shall not be made unless (a) immediately thereafter Subordinated Bonds being refunded shall be deemed to have been paid pursuant to the Metropolitan Highway System Trust Agreement, and (b) the amount remaining in the Subordinated Debt Service Fund, after giving effect to the issuance of Refunding Bonds and the disposition of the proceeds thereof, shall not be less than the requirement of such Fund pursuant to the Metropolitan Highway System Trust Agreement. In the event of such refunding, the Authority may also direct the Trustee to withdraw from the Subordinated Debt Service Fund all, or any portion of, the amounts accumulated therein with respect to Debt Service on the Subordinated Bonds being refunded and deposit such amounts in any Fund or Account under the Metropolitan Highway System Trust Agreement; provided, however, that such withdrawal shall not be made unless clauses (a) and (b) referred to hereinabove have been satisfied and provided, further, that, at the time of such withdrawal, there shall exist no deficiency in any Fund or Account held under the Metropolitan Highway System Trust Agreement (other than the Fund or Account into which such amount is being transferred). (*Section 509*).

#### **Subordinated Debt Service Reserve Fund**

If on the last Business Day of any month the amount in the Subordinated Debt Service Fund shall be less than the amount required to be in such Fund, the Trustee shall transfer to the Subordinated Debt Service Fund (in such order) amounts from the General Fund, the Subordinated Debt Service Reserve Fund and the Capital Reinvestment Fund equal to the deficiency.

In lieu of the required deposits and transfers to the Subordinated Debt Service Reserve Fund or as a replacement or substitution for any moneys or Investment Obligations then on deposit in the Subordinated Debt Service Reserve Fund, the Authority may at any time cause to be deposited into the Subordinated Debt Service Reserve Fund for the benefit of the Owners of the Subordinated Bonds a surety bond, an insurance policy, a letter of credit or other similar obligation (and may replace such surety bond, insurance policy, letter of credit or similar obligation from time to time) providing for payments in an amount equal to the difference between the Subordinated Debt Service Reserve Requirement and the sums, if any, then on deposit in the Subordinated Debt Service Reserve Fund or being deposited in the Subordinated Debt Service Reserve Fund concurrently with such surety bond, insurance policy, letter of credit or other similar obligation.

In the event of the refunding of any Subordinated Bonds, the Authority may direct the Trustee to withdraw from the Subordinated Debt Service Reserve Fund all, or any portion of, the amounts accumulated therein with respect to the Subordinated Bonds being refunded and deposit such amounts with the Trustee in a separate account to be held for the payment of the principal or Redemption Price, if applicable, and interest on the Subordinated Bonds being refunded, subject to continued satisfaction of the Debt Service Reserve Requirement.

Regardless of the provisions of the Metropolitan Highway System Trust Agreement, in the event that at any time the amount on deposit in the Subordinated Debt Service Reserve Fund, after giving effect to any surety bond, insurance policy, letter of credit or other similar obligation deposited in such Fund under this heading, shall be less than the Subordinated Debt Service Reserve Requirement as a result of any withdrawal from said Fund or as a result of the valuation of such Fund performed in accordance with the Metropolitan Highway System Trust Agreement, the Authority shall restore the amount on deposit in the Subordinated Debt Service Reserve Fund, after giving effect to any surety bond, insurance policy, letter of credit or other similar obligation deposited in said Fund pursuant to the provisions described in the second paragraph under this heading, to the Subordinated Debt Service Reserve Requirement, in the case of restoration after withdrawal in twelve (12) equal monthly installments

commencing within ninety (90) days of such withdrawal, and in the case of restoration as a result of valuation in six (6) monthly installments commencing thirty (30) days after such valuation.

Notwithstanding anything in the Trust Agreement to the contrary, with respect to the 2010 Series A Bonds, references to the Subordinated Debt Service Reserve Fund shall be deemed to refer to the 2010 Series A Account within the Subordinated Debt Service Reserve Fund and references to the Subordinated Debt Service Reserve Requirement shall be deemed to refer to the 2010 Series A Debt Service Reserve Requirement. Notwithstanding anything in the Trust Agreement to the contrary, with respect to the 2010 Series B Bonds, references to the Subordinated Debt Service Reserve Fund shall be deemed to refer to the 2010 Series B Account within the Subordinated Debt Service Reserve Fund and references to the Subordinated Debt Service Reserve Requirement shall be deemed to refer to the 2010 Series B Debt Service Reserve Requirement.

The amounts on deposit in the 2010 Series A Account within the Subordinated Debt Service Reserve Fund may be transferred to the Subordinated Debt Service Fund at any time at the direction of the Department, as evidenced by a certificate of an Authorized Officer delivered to the Trustee, to be applied to debt service on the 2010 Series A Bonds if said Authorized Officer has determined that the payments reasonably expected to be made to the Department by the Provider of any Qualified Hedge Agreement with respect to any 2010 Series A Bonds is less than the actual, accrued interest payments due on such 2010 Series A Bonds. The amounts on deposit in the 2010 Series A Account within the Subordinated Debt Service Reserve Fund may otherwise be applied in accordance with the other provisions of the Trust Agreement relating to the Subordinated Debt Service Reserve Fund without the delivery of the certificate of an Authorized Officer referenced above. As provided in the Trust Agreement, the income from any Investment Obligations in the 2010 Series A Account within the Subordinated Debt Service Reserve Fund shall be credited to the Subordinated Debt Service Fund, but only to the extent not needed to cause the balance in the 2010 Series A Account within the Subordinated Debt Service Reserve Fund to be equal to the 2010 Series A Debt Service Reserve Requirement. (*Section 510*).

### **Capital Reinvestment Fund**

Amounts in the Capital Reinvestment Fund shall be applied to payment of the costs of equipment, major renewals, replacements, repairs, rehabilitation, additions, betterments and improvements with respect to the Accepted Metropolitan Highway System and any Extensions necessary to keep the same in good operating condition or to prevent a loss of Revenues therefrom, or required by any governmental agency having jurisdiction over the Projects or any part thereof, including the prevention or correction of any unusual loss or damage, in connection with the Accepted Metropolitan Highway System and any Extensions, to the extent not provided from the proceeds of Bonds.

If and to the extent provided in the Metropolitan Highway System Trust Agreement with respect to the Initial Bonds or in a Supplemental Trust Agreement authorizing Additional Bonds, amounts from the proceeds of such Bonds may be credited to the Capital Reinvestment Fund and applied as specified in the Metropolitan Highway System Trust Agreement or the Supplemental Trust Agreement, as applicable, for any purpose of such Fund.

If at any time, the amount in the Senior Debt Service Fund shall be less than the amount then required to be on deposit in such Fund, the amount in the Senior Debt Service Reserve Fund shall be less than the Senior Debt Service Reserve Requirement, the amount in the Subordinated Debt Service Fund shall be less than the amount then required to be on deposit in such Fund, or the amount in the Subordinated Debt Service Reserve Fund shall be less than the Subordinated Debt Service Reserve Requirement, the Authority shall transfer from the Capital Reinvestment Fund to the credit of the respective Funds (in the order set forth in the Metropolitan Highway System Trust Agreement) the amount necessary (or all the moneys credited to the Capital Reinvestment Fund if less than the amount necessary) to make up such deficiency. (*Section 511*).

## **Application of General Fund**

If, on the last Business Day of any month, the amount in the Senior Debt Service Fund shall be less than the amount required to be deposited therein on such date, the amount in the Senior Debt Service Reserve Fund shall be less than the Senior Debt Service Reserve Requirement; the amount in the Subordinated Debt Service Fund shall be less than the amount then required to be on deposit in such Fund, or the amount in the Subordinated Debt Service Reserve Fund shall be less than the Subordinated Debt Service Reserve Requirement, the Authority shall transfer from any or all accounts within the General Fund to the credit of the respective Funds the amount necessary (or all the moneys credited to the General Fund if less than the amount necessary) to make up such deficiency.

To the extent not required to make up any deficiency as required above, amounts in the General Fund may, upon the direction of an Authorized Officer of the Authority, be transferred to any Fund or Account, transferred to the Authority free and clear of the lien of the Metropolitan Highway System Trust Agreement for any of its corporate purposes consistent with the Act, or applied to the payment of debt service on General Fund Indebtedness or the payment of any General Fund Expenses. (*Section 512*).

## **Investment of Funds**

Amounts in the Funds and Accounts established by the Metropolitan Highway System Trust Agreement may be invested by the Trustee at the direction of the Authority or by the Authority, as the case may be, only in Investment Obligations; except that (i) no moneys in the Revenue Fund, the Senior Debt Service Fund, the Subordinated Debt Service Fund, the Senior Debt Service Reserve Fund or the Subordinated Debt Service Reserve Fund shall be invested in any Investment Obligation described in clause (xiv) of the definition of Investment Obligations and (ii) no moneys in the Senior Debt Service Reserve Fund and Subordinated Debt Service Reserve Fund shall be invested in Investment Obligations of greater than a five year maturity, except for Investment Obligations described in clauses (x), (xi) or (xiv) of such definition which, if any Insured Bonds are outstanding, have been approved by the Insurer. To the extent not used to meet the requirement of such Funds and Accounts, income from such Investment Obligations shall be paid to the Trustee as received for deposit in the Revenue Fund; provided that (i) the income from any Investment Obligations in the Rebate Fund and in the Bond Proceeds Fund or in a separate account or sub-account therein, except as may be provided in a Supplemental Trust Agreement with respect to Additional Bonds, shall be held in such Fund, Account or sub-account for the purposes thereof, (ii) the income from any Investment Obligations in the Senior Debt Service Fund or the Subordinated Debt Service Fund shall be held in such Funds for the purposes thereof and (iii) the income from any Investment Obligations in the Senior Debt Service Reserve Fund and the Subordinated Debt Service Reserve Fund shall be credited to the Senior Debt Service Fund and the Subordinated Debt Service Fund, respectively. The Trustee and the Authority shall sell any Investment Obligations held in any Fund or Account to the extent required for payments from such Fund or Account. The proceeds of such sales, and of all payments at maturity or upon redemption of such investments, shall be held in the applicable Fund or Account to the extent required to meet the requirements of such Fund or Account. In computing the amount of such Funds and Accounts, investments shall be valued at par, or if purchased at other than par, shall be valued at Amortized Value; except that seventy-five percent (75%) of the investments in the Senior Debt Service Reserve Fund and Subordinated Debt Service Reserve Fund shall be valued at market annually on each January 1 beginning January 1, 1999. Accrued interest received upon the sale of any Investment Obligation shall be treated as income from such Investment Obligation. Notwithstanding any provision of the Trust Agreement to the contrary, for the period from January 1, 2037 to the last maturity date of all Subordinated Bonds then Outstanding, amounts held for the credit of the Subordinated Debt Service Reserve Fund shall only be invested in Investment Obligations permitted for the Subordinated Debt Service Reserve Fund and which shall be rated no lower than the rating, if any, then applicable to the Subordinated Bonds from Standard and Poor's Ratings Services, a division of The McGraw-Hill Companies, Inc.

However, the holders of the Series 2010 Bonds will be deemed to have consented to the following amendment to the Trust Agreement upon their purchase of the Series 2010 Bonds and such amendment shall take effect upon the issuance of the Series 2010 Bonds: The following sentence shall be inserted after the first sentence of the preceding paragraph:

“Notwithstanding clause (ii) of the immediately preceding sentence, moneys on deposit in the Senior Debt Service Reserve Fund may be invested in Investment Obligations in clause (i) of such definition with maturities of up to ten years from the date of deposit into such Fund.”

Each investment of any moneys in any Fund or Account established under the Metropolitan Highway System Trust Agreement shall permit the moneys so deposited or invested to be available for use at the times at which the Authority reasonably believes such moneys will be required for the purposes above. (*Section 513*).

### **Satisfaction of Sinking Fund Installments**

Any amount accumulated in the Senior Debt Service Fund or Subordinated Debt Service Fund up to the unsatisfied balance of each respective Sinking Fund Installment may be applied (together with amounts accumulated in the Senior Debt Service Fund or Subordinated Debt Service Fund with respect to interest on the Bonds for which such Sinking Fund Installment was established) by the Trustee at the direction of the Authority prior to the forty-fifth day preceding the due date of such Sinking Fund Installment to the purchase or the redemption of Bonds to be redeemed from such Sinking Fund Installment at prices (including any brokerage and other charges) not exceeding the principal amount of such Bonds plus unpaid interest accrued to the date of purchase.

Upon the purchase or redemption of any Series of Bonds for which Sinking Fund Installments shall have been established, an amount equal to the principal amount of the Bonds so purchased or redeemed shall be credited toward future Sinking Fund Installments in such order as the Authority shall determine. In satisfaction, in whole or in part, of any Sinking Fund Installment, the Authority may deliver to the Trustee at least forty-five days prior to the date of such Sinking Fund Installment, for cancellation, Bonds purchased or redeemed, except Bonds purchased or redeemed pursuant to the first paragraph under this heading, of the Series and maturity entitled to such Sinking Fund Installment. All Bonds so delivered to the Trustee in satisfaction of a Sinking Fund Installment shall reduce the amount thereof by the amount of the aggregate principal amount of such Bonds.

The Trustee shall pay out of the Senior Debt Service Fund or Subordinated Debt Service Funds as applicable, to the appropriate Paying Agents, on or before such redemption date (or maturity date), the amount required for the redemption of the Bonds so called for redemption (or for the payment of such Bonds then maturing), and such amount shall be applied by such Paying Agents to such redemption (or payment). (*Section 514*).

### **Particular Covenants of the Authority:**

#### **Payment of Bonds**

The Authority shall duly and punctually pay or cause to be paid the principal or Redemption Price of every Bond and the interest thereon, at the dates and places and in the manner mentioned in the Bonds, according to the true intent and meaning thereof, and shall duly and punctually satisfy all Sinking Fund Installments which may be established for any Series. Except as otherwise provided in the Metropolitan Highway System Trust Agreement, the principal or Redemption Price of such Bonds and the interest thereon are payable solely from Revenues which Revenues are pledged under the Metropolitan Highway System Trust Agreement to the payment thereof in the manner and to the extent particularly specified under this heading, and nothing in the Bonds or in the Metropolitan Highway System Trust Agreement shall be construed as obligating the Commonwealth or any political subdivision thereof to pay the Bonds or the interest thereon except from such Revenues or as pledging the faith and credit or taxing power of the Commonwealth or of any such political subdivision. (*Section 601*).

#### **Power to Construct and Operate Projects and Collect Tolls and Charges**

Pursuant to the Act, the Authority has and continues to have good right and lawful power to construct, reconstruct, maintain, repair and operate the Accepted Metropolitan Highway System, any Extension and any other Project for which it expends Revenues or incurs Indebtedness under the Metropolitan Highway System Trust

Agreement, and to fix and revise from time to time and charge and collect tolls, fees, rates, rents, or other charges for the use thereof as provided in the Metropolitan Highway System Trust Agreement and its covenants shall run to the Bondowners for so long as any Bonds are Outstanding. (*Section 605*).

### **Dedicated Payments**

In the Authority's discretion, revenues of the Authority which are not Revenues as defined in the Metropolitan Highway System Trust Agreement as initially adopted may be pledged and designated as Dedicated Payments by Supplemental Trust Agreement, provided the conditions in one of the three following sentences of this paragraph are satisfied. If such Dedicated Payments are to be received from the United States of America, (a) they must automatically recur without appropriation, approval or other similar action by the United States of America or any agency or instrumentality thereof for so long as the Authority is relying thereon for the purpose of issuing Bonds or demonstrating compliance with covenants of the Metropolitan Highway System Trust Agreement and (b) the manner of determining the amounts to be derived therefrom must not be subject to change or revision during such period. If such Dedicated Payments are to be received from the Commonwealth, they must consist of a payment obligation payable to the Authority pursuant to a statutory or contractual arrangement with the Commonwealth which, in the opinion of Bond Counsel, constitutes a general obligation of the Commonwealth; provided that at the time of entering into such arrangement (a) such arrangement, by its terms, will not terminate so long as the Authority is relying thereon for the purpose of issuing Bonds or demonstrating compliance with covenants under the Metropolitan Highway System Trust Agreement and (b) the manner of determining the amounts to be derived from such arrangement is not subject to change or revision during such period. Notwithstanding the source of funding, if the Authority has received a written confirmation from each Rating Agency that its rating of Outstanding Bonds will not be adversely affected, the Authority may, in its sole discretion, designate any revenues which are not Revenues, as defined in the Metropolitan Highway System Trust Agreement as initially adopted, described prior to the proviso in the first sentence of this paragraph as Dedicated Payments.

Any Supplemental Trust Agreement pledging and designating Dedicated Payments shall be supported by a Certificate of an Authorized Officer, demonstrating satisfaction of the requirements of the paragraph above. All Dedicated Payments shall be deposited upon receipt in the Senior Debt Service Fund or the Subordinated Debt Service Fund, as determined by such Certificate of an Authorized Officer. The Authority may in its discretion reverse or modify any pledge and designation of Dedicated Revenues by a further Supplemental Trust Agreement and any determination to deposit Dedicated Payments in a particular Debt Service Fund may be reversed or modified by Certificate of an Authorized Officer, in each case provided that a Certificate of an Authorized Officer shall establish that following any such reversal or modification the Authority will meet the test for incurring \$1 (one dollar) of Additional Senior Bonds and the Authority will be in compliance with the provisions of the Metropolitan Highway System Trust Agreement and receipt by the Authority and the Trustee prior to the effective date of any reversal or modification of a written confirmation from each Rating Agency that its rating of Outstanding Bonds will not be adversely affected. (*Section 606*).

### **Creation of Liens; Sale, Lease and Transfer of Property**

Until the pledge of the Metropolitan Highway System Trust Agreement shall be discharged and satisfied, as described under the heading "Defeasance," the Authority shall not, except as provided below, (i) issue any bonds or other evidences of indebtedness, other than Bonds secured by a pledge of the Revenues or other moneys, securities or funds and accounts held or set aside by the Authority or by the Fiduciaries under the Metropolitan Highway System Trust Agreement, nor create or cause to be created any lien or charge on the Revenues, or such moneys, securities or funds and accounts, (ii) at any time when the Authority is in default in making any payment required to be made under the Metropolitan Highway System Trust Agreement or maintaining any Fund or Account required to be maintained in the amount required therefor by the Metropolitan Highway System Trust Agreement, set apart or appropriate and pay any amount out of the General Fund except as required by the Metropolitan Highway System Trust Agreement, or (iii) issue any bonds or other evidences of indebtedness, other than Bonds secured by a pledge of any tolls, revenues, rates, fees, charges, rentals (other than rental payments or license payments not pledged as Revenues under the Metropolitan Highway System Trust Agreement) or other earned income or receipts, as derived in cash by or for the account of the Authority, from the Accepted Metropolitan

Highway System; provided, however, that nothing contained in the Metropolitan Highway System Trust Agreement shall prevent the Authority from at any time issuing Bond Anticipation Notes secured as provided in the Metropolitan Highway System Trust Agreement; provided further, however, that this heading shall not apply to, and shall not be construed to apply to, any right or interest of the Authority in any project which is not part of the Accepted Metropolitan Highway System unless and until the Authority designates such project as part of the Accepted Metropolitan Highway System in accordance with the terms of the Metropolitan Highway System Trust Agreement.

No part of the Accepted Metropolitan Highway System or any Extension shall be sold, mortgaged, leased or otherwise disposed of or encumbered, except that the Authority may (i) sell, exchange or otherwise dispose of at any time and from time to time any property or facilities constituting part of the Accepted Metropolitan Highway System or any Extension (a) not useful or no longer needed, in the opinion of the Authority, in the construction, maintenance or operation thereof or (b) if the Authority shall certify that following such sale exchange or disposition, the Authority will meet the test for incurring \$1 (one dollar) of Additional Senior Bonds and the Authority will be in compliance with the toll covenant described under the heading "Tolls and Charges"; (ii) lease or make contracts or grant licenses for the operation of, or grant easements or other rights, including, without limitation, air rights with respect to, any part of the Accepted Metropolitan Highway System or any Extension, if such lease, contract, license, easement or right does not, in the opinion of the Authority (a) impede or restrict the operation by the Authority of the Accepted Metropolitan Highway System or (b) materially adversely affect the ability of the Authority to comply with the covenants described under the heading "Tolls and Charges" or (c) otherwise run contrary to the best interests of the Authority; or (iii) sell or transfer to the Massachusetts Port Authority in furtherance of such authority's traffic management or safety purposes, at any time and from time to time, a portion of the Accepted Metropolitan Highway System which is not subject to a toll, rental or other charge for the use thereof.

The net proceeds of any award, condemnation or taking by eminent domain which are not deposited in the Capital Reinvestment Fund to be used for the repair and improvement of the applicable Project shall be deposited in the discretion of an Authorized Officer in the Senior Debt Service Fund or the Subordinated Debt Service Fund and applied to the purchase or redemption of Senior Bonds or Subordinated Bonds, respectively, or in the Revenue Fund.

Nothing contained in the Metropolitan Highway System Trust Agreement shall be used to prohibit the Authority from (i) entering into a purchase money mortgage, lease-purchase agreement or capitalized lease with respect to its property or equipment or (ii) creating or permitting to be created a lien, mortgage or other security interest in its property or equipment in connection with such purchase money mortgage, lease-purchase agreement or capitalized lease provided that such lien, mortgage or other security interest shall not be equal or prior to the pledge created by the Metropolitan Highway System Trust Agreement. (*Section 607*).

### **Acceptance of Metropolitan Highway System**

The Authority shall not accept additional portions of the Metropolitan Highway System for inclusion in the Accepted Metropolitan Highway System unless there has been submitted to the Trustee the following certificates:

(1) a certificate of an Authorized Officer setting forth (i) that the Authority has determined to accept for inclusion in the Accepted Metropolitan Highway System such portion of the Metropolitan Highway System, (ii) that, in the determination of the Authority, such portion of the Metropolitan Highway System meets the standards for travel as specified in the Act, (iii) that there are no material unmet capital expenditures with respect to such portion of the Metropolitan Highway System and (iv) that the Authority has an Ownership Interest in such portion of the Metropolitan Highway System; and

(2) a certificate of the Authority that following the inclusion of such portion of the Metropolitan Highway System in the Accepted Metropolitan Highway System, the Authority will meet the test for incurring \$1 (one dollar) of Additional Senior Bonds and the Authority will be in compliance with the provisions under the heading "Tolls and Charges" below. (*Section 607*).

In the First Supplemental Trust Agreement, the Authority determined to accept the Parcel 7 Parking Garage for inclusion in the Accepted Metropolitan Highway System.

### **Operation and Maintenance of Projects**

The Authority shall at all times operate or cause to be operated the Accepted Metropolitan Highway System, any Extension and any other Project, to the extent subject to the control of the Authority, properly and in a safe, sound and economical manner and shall maintain, preserve, reconstruct and keep the same or cause the same to be so maintained, preserved, reconstructed and kept, with the appurtenances and every part and parcel thereof, in good repair, working order and condition, and shall from time to time make, or cause to be made, all necessary and proper repairs, replacements and renewals so that at all times the operation of such Projects may be properly and efficiently conducted. Neither the Revenues nor the amounts in the Operating Fund shall be applied to the payment of any operating or maintenance expenses other than as permitted by the terms of the Metropolitan Highway System Trust Agreement. (*Section 609*).

### **Tolls and Charges**

The Authority shall at all times establish, levy, maintain and collect such tolls, rentals and other charges in connection with the Accepted Metropolitan Highway System, any Extension and other Projects as shall always be sufficient in the aggregate to provide Revenues in each Fiscal Year to satisfy the following requirements of paragraphs (1) and (2) below:

- (1) Revenues for each Fiscal Year shall be at least sufficient for the payment of the sum of:
  - (a) Operating Expenses for such Fiscal Year;
  - (b) An amount equal to the Aggregate Debt Service for such Fiscal Year less the amount of Debt Service, if any, payable from Dedicated Payments and any other amounts applied to the reduction of Debt Service, as set forth in the definition of Senior Net Debt Service and Subordinated Net Debt Service, as applicable, and not otherwise included in the definition of Revenues;
  - (c) The amount, if any, to be paid during such Fiscal Year into the Senior Debt Service Reserve Fund (other than amounts required to be paid into such Fund out of the proceeds of Senior Bonds);
  - (d) The amount, if any, to be paid during such Fiscal Year into the Subordinated Debt Service Reserve Fund (other than amounts required to be paid into such Fund out of the proceeds of Subordinated Bonds);
  - (e) The Capital Reinvestment Requirement for such Fiscal Year; and
  - (f) To the extent not otherwise provided for, the amount which, together with any other lawfully available funds received by the Authority, shall be sufficient to provide for the payment of all other obligations of the Authority allocable to the Accepted Metropolitan Highway System, or any Extension.
- (2) Net Revenues for such Fiscal Year shall equal at least the greater of (i) 1.20 times the Senior Net Debt Service for such Fiscal Year, (ii) 1.15 times the Combined Net Debt Service for such Fiscal Year, and (iii) 1.00 times the Combined Net Debt Service plus the Capital Reinvestment Requirement for the Fiscal Year.

The Authority may, to the extent permitted by law, with respect to Accepted Metropolitan Highway System, any Extension or any portion of the Metropolitan Highway System which is not part of the Accepted Metropolitan Highway System, at any time convert to methods of toll collection other than those presently utilized, provided that it shall comply with the above; provided that prior to instituting any commuter discount program or toll suspension during holidays (other than the toll suspension on Wednesday, November 26 and Thursday,

November 27, 1997 as required pursuant to Chapter 11 of the Acts of 1997 of the Commonwealth), the Authority shall deliver to the Trustee a certificate of an Independent Consultant estimating that in each of the Fiscal Years following the implementation of such discount program or toll suspension during which Senior Bonds will be Outstanding, Net Revenues will be at least equal to 1.20 times Senior Net Debt Service and 1.15 times Combined Net Debt Service; or (ii) a certificate of an Independent Consultant that (a) in each of the Fiscal Years following the implementation of the discount program or toll suspension preceding a particular future Fiscal Year designated for the purpose by the Authority, Net Revenues will be at least equal to 1.20 times the amount of Senior Net Debt Service and 1.15 times the amount of Combined Net Debt Service in each such Fiscal Year and (b) in such designated future Fiscal Year, Net Revenues will be at least equal to 1.20 times the maximum amount of Senior Net Debt Service and 1.15 times the maximum amount of Combined Net Debt Service in the then current or any subsequent Fiscal Year. For purposes of any projections in any such certificate, the Independent Consultant or the Authority may include estimated toll increases and Operating Expenses which are projected by the Authority to occur during the applicable period of projection, which projections are reasonable in the opinion of the Independent Consultant and projections of Debt Service and Revenues shall be consistent with the requirements of the covenant regarding projected calculations of Debt Service and Revenues under the Metropolitan Highway System Trust Agreement.

On or before the 180<sup>th</sup> and the 360<sup>th</sup> day of each Fiscal Year, the Authority shall determine whether the calculations required above (on an annualized basis) indicate that Revenues are reasonably expected to be at or above the required levels at such time. In the event that Revenues are not at or reasonably expected to be at or above the required levels, the Authority shall within 30 days retain an Independent Consultant for the purpose of estimating whether the Revenues in each of the two subsequent Fiscal Years will be sufficient, together with other moneys available therefor, to meet all requirements as specified above. Such review shall be evidenced by a certificate of an Independent Consultant which shall be filed with the Trustee on or before the 60<sup>th</sup> day after retention of the Independent Consultant and shall set forth a reasonably detailed statement of the actual and estimated Revenues, Operating Expenses, and other pertinent information for such year upon which such determination was made. If any such statement shows that such Revenues may not be sufficient to meet the requirements above, the Independent Consultant shall recommend and the Authority shall promptly fix and establish such tolls, rentals and other charges and take such other action as shall be necessary and sufficient to comply as nearly as practicable with the covenants above, as evidenced by a certificate of an Authorized Officer filed with the Trustee. Failure to comply with the above will not constitute a default if the Independent Consultant is of the opinion that a schedule of tolls, rentals and other charges which will comply with such covenants is impracticable at that time and the Authority establishes a schedule of tolls, rentals and other charges which is recommended by the Independent Consultant to comply as nearly as practicable with such covenants; for purposes of such opinion, "impracticable" shall mean that in the view of the Independent Consultant providing such opinion the level of tolls, rentals and other charges which will comply with such covenants would likely produce a lesser amount of collections than the level of tolls, rentals and other charges being recommended by such Independent Consultant.

In the event the Authority permits a reduction of more than ten percent (10%) per annum to occur in Turnpike Revenues resulting from a discretionary, permanent reduction or removal of tolls which goes into effect prior to December 31, 2016, the Authority shall not, prior to 2017, reallocate expenses in excess of \$100,000 per Fiscal Year from the Turnpike to the Accepted Metropolitan Highway System as Operating Expenses unless the Authority shall have delivered to the Trustee:

(1) A Certificate of an Authorized Officer estimating that for the prior Fiscal Year (assuming that such reduction in Turnpike Revenues and the maximum annual reallocation of expenses proposed to occur in any Fiscal Year prior to 2017 had occurred in such Fiscal Year) Net Revenues would have been at least equal to 1.40 times the amount of Senior Net Debt Service and 1.35 times the amount of Combined Net Debt Service; or

(2) A certificate of an Independent Consultant estimating that for each full Fiscal Year prior to 2017 following such reduction in Turnpike Revenues and proposed reallocation of expenses either (x) Net Revenues will be at least equal to 1.40 times the amount of Senior Net Debt Service and 1.35 times the amount of Combined Net Debt Service or (y) if regardless of such reallocation Net Revenues would have been less than the amounts described in clause (x), the ratios of Net Revenues to Senior Net Debt Service and Net Revenues to Combined Net Debt Service for each such Fiscal Year, respectively, will not decline from the ratios that would have been achieved

in each such Fiscal Year had such reduction and reallocation not occurred as a result of additional Revenues made available or Operating Expense reductions implemented by the Authority in order to provide for such reduction and reallocation. (*Section 610*).

### **Extensions**

The Authority may expend Revenues on the Operating Expenses or incur any Indebtedness to finance the Project Cost of:

(1) an Extension then subject to a toll, rent or other charge for the use thereof, upon the earliest of the date the Authority (a) acquires an Ownership Interest in, (b) incurs any Indebtedness with respect to or (c) enters in to a binding agreement for the acquisition, design, construction, improvement, reconstruction, renewal or rehabilitation with respect to such Extension; or

(2) an Extension not then, but expected to be, subject to a toll, rent or other charge for the use thereof, upon the earlier of (a) 12 months after the date the Authority acquires an Ownership Interest in, incurs any Indebtedness with respect to or enters into a binding agreement for the acquisition, design, construction, improvement, reconstruction, renewal or rehabilitation with respect to such Extension or (b) the Date of Completion of all work necessary to impose a toll, rent or other charge with respect to such Extension;

Each of the above dates is referred to as a “Determination Date.”

Notwithstanding the foregoing, the Authority shall not expend any Revenues on the Operating Expenses or incur any Indebtedness to finance the Project Cost of any Extension unless there has been submitted to the Trustee the following certificates and opinion:

(1) A certificate of an Independent Consultant setting forth that, in the opinion of such Independent Consultant, for each of two successive 12-month periods, the earliest of which begins on a quarterly date not more than 60 days immediately following the Determination Date, the revenues to be derived from the operation of such Extension, including revenues to be derived from any Dedicated Payments which are dedicated at the time of, but not earlier than, the Determination Date, will exceed the sum of the projected operating expenses and the projected renewal and replacement costs, if any, for such Extension during such period;

(2) A certificate of an Independent Consultant setting forth (A) the projected total Revenues and Operating Expenses of the Authority for the two 12-month periods described in paragraph (1); provided that in such certificate (a) the Revenues and Operating Expenses, respectively, shall be increased by the projected revenues and Operating Expenses of such Extension for such 12-month period, (b) if on the Determination Date the toll rate for any classification of vehicles using any vehicular toll Project shall be less than it was during any part of the periods covered by such certificate, the Revenues for such part of such period shall be decreased by an amount equal to the difference in such toll rate multiplied by the number of such vehicles which used such Project during such part of such period, and (c) the Revenues shall be increased to reflect any toll increase scheduled to be imposed during such periods and any increase in the number of vehicles using the Accepted Metropolitan Highway System projected for such periods and (B) that for each such 12-month period the Net Revenues, as calculated pursuant to clause (A) of this paragraph (2), are at least sufficient to comply with the requirement of the toll covenant described under the heading “Tolls and Charges” during each such period;

(3) A certificate of an Independent Consultant setting forth (A) the Revenues of the Authority for the two 12-month periods set forth in paragraph (1) calculated in the manner set forth in paragraph (2), (B) the sum of the amounts set forth in clauses (a) through (f), inclusive, of paragraph (1) under the heading “Tolls and Charges” above for each such 12-month period and (C) that for each such 12-month period the Revenues, as calculated pursuant to clause (A) of this paragraph (3), are at least equal to the amounts calculated pursuant to clause (B) of this paragraph (3).

(4) A certificate of the Authority that the Authority will meet the test for incurring \$1 (one dollar) of Additional Senior Bonds and the Authority will be in compliance with the toll covenant described under “Tolls and Charges” above. (*Section 611*).

### **Accounts and Reports**

The Authority shall keep proper books of record and account (separate from all other records and accounts) in which complete and correct entries shall be made of its transactions relating to the Accepted Metropolitan Highway System, any Extensions and any other Project undertaken under the Metropolitan Highway System Trust Agreement, Funds established by the Metropolitan Highway System Trust Agreement, and which, together with all other books and papers of the Authority, including insurance policies, relating to such property and such Funds, shall at all times be subject to the inspection of the Trustee and the Owners of an aggregate of not less than twenty-five percent (25%) in principal amount of the Senior Bonds then Outstanding and/or the Owners of an aggregate of not less than twenty-five percent (25%) in principal amount of Subordinated Bonds Outstanding or their respective representatives duly authorized in writing. The Authority shall cause such books and accounts to be audited annually after the end of its Fiscal Year by an independent public accountant selected by the Authority. Annually within thirty (30) days after receipt by the Authority of the report of such audit, a signed copy of such report shall be furnished to the Trustee.

The Authority shall annually, within one hundred twenty days (120) after the close of each Fiscal Year, deliver a Certificate of an Authorized Officer setting forth (i) a description in reasonable detail of the insurance then in effect pursuant to the requirements described under the heading “Insurance” below and that the Authority has complied in all material respects with the requirements described under said heading and (ii) whether or not to the knowledge of the signer, the Authority is in default with respect to any of the covenants, agreements or conditions on its part contained in the Metropolitan Highway System Trust Agreement and, if so, the nature of such default. (*Section 612*).

### **Insurance**

The Authority shall maintain or cause to be maintained with responsible insurers all required and reasonably obtainable insurance in such amount or amounts, if any, as shall be recommended by the Insurance Consultant to provide, with respect to the Metropolitan Highway System, any Extension and its interest in any other Projects, against (i) loss or damage and loss of revenues and (ii) public liability to the extent necessary to protect the interest of the Authority and the Bondowners.

No provision under this heading shall be construed to prohibit the Authority from self-insuring against any risk at the recommendation or approval of the Insurance Consultant; provided, however, that the Authority shall provide adequate funding of such self-insurance if and to the extent recommended by the Insurance Consultant. (*Section 613*).

### **Independent Consultant**

The Authority shall employ one or more independent consultants or consulting firms, financial or otherwise, independent engineers or engineering firms or corporations having favorable reputations for skill and experience in such work for the purposes of performing services of an Independent Consultant, intended under the Metropolitan Highway System Trust Agreement until the Bonds and the interest thereon shall have been paid or provision for such payment shall have been made. In rendering any report, certificate or opinion required pursuant to the Metropolitan Highway System Trust Agreement, an Independent Consultant may rely upon information, certificates, opinions or reports required to be provided by others pursuant to the Metropolitan Highway System Trust Agreement, and upon other sources which an Independent Consultant considers reliable, and other considerations and assumptions as deemed appropriate by the Independent Consultant, respectively.

The Authority shall cause an Independent Consultant, among such other duties as may be imposed upon them by the Authority or by the Metropolitan Highway System Trust Agreement, to make an inspection of the

Accepted Metropolitan Highway System and any Extension at least every three Fiscal Years, or more frequently, if required by law, on or before the first day of October in each Fiscal Year, to submit to the Authority a report setting forth (i) their findings whether the Accepted Metropolitan Highway System and any Extension have been maintained in safe and good repair, working order and condition and (ii) their recommendations as to the proper maintenance, repair and operation of the Accepted Metropolitan Highway System during the ensuing three Fiscal Years and an estimate of the amount of money necessary for such purposes.

The Authority shall, promptly after the receipt of each such report, file copies thereof with the Trustee. If any such report shall set forth that the Accepted Metropolitan Highway System or any Extension, or any part thereof, has not been maintained in safe and good repair, working order and condition, the Authority shall promptly restore the same to safe and good repair, working order and condition with all expedition practicable in accordance with the recommendations of an Independent Consultant. (*Section 614*).

### **Annual Budget**

No later than the beginning of each Fiscal Year, the Authority shall prepare and file with the Trustee an Annual Budget for such Fiscal Year which shall set forth in reasonable detail the estimated Revenues and Operating Expenses, capital expenditures and other expenditures of the Authority for such Fiscal Year and shall establish the Capital Reinvestment Requirement for such Fiscal Year. Such Annual Budget also may set forth such additional material as the Authority may determine. Following the end of the first half of its Fiscal Year, the Authority shall review its estimates set forth in the Annual Budget for such Fiscal Year, and in the event such estimates do not substantially correspond with actual Revenues, Operating Expenses, capital expenditures or other requirements, or if there are at any time during any such Fiscal Year extraordinary receipts or payments of unusual costs, the Authority shall, to the extent necessary or appropriate to assure compliance with the requirement of the rate covenant summarized under the heading "Tolls and Charges," prepare an amended Annual Budget for the remainder of such Fiscal Year. The Authority also may at any time adopt an amended Annual Budget for the remainder of the then current Fiscal Year. Any amended Annual Budget shall be filed with the Trustee promptly upon its adoption. (*Section 615*).

### **Covenants Regarding Calculation of Projected Debt Service and Revenues**

Anything in the Trust Agreement to the contrary notwithstanding, in making any calculation required under the Metropolitan Highway System Trust Agreement relating to certain Additional Bonds and the covenants described under the heading "Tolls and Charges" above:

1. Debt Service shall include:

(1) in the case of Projects funded from Bond proceeds which do or are projected to produce Revenues, the principal and Sinking Fund Installments of and interest on an aggregate principal amount of Bonds equal to the difference between (a) the total capital expenditures or costs projected to be made by the Authority from the proceeds of Bonds, and (b) the principal amount of Bonds issued to finance such expenditures or costs assuming that (i) such Bonds were issued on the date of calculation, (ii) no such Bond matures later than the maturity date calculated from the assumed date of issuance to the latest maturity date permitted under the Act, (iii) such Bonds bear interest at such rates as an Authorized Officer shall determine to be required to have sold such Bonds at a price equal to the principal amount thereof, (iv) interest on such Bonds is payable on interest payment dates of each year commencing on the first such date next succeeding the assumed date of issuance, and (v) the principal, Sinking Fund Installments and interest payable during any Fiscal Year after the assumed date of issuance is substantially equal to the principal, Sinking Fund Installments and interest payable during any other such Fiscal Year;

(2) the principal and Sinking Fund Installments of and interest on an aggregate principal amount of Bonds issued or expected to be issued in an amount sufficient to pay the principal of and interest on any Bond Anticipation Notes then Outstanding assuming with respect to such Bonds the assumptions set forth in the Metropolitan Highway System Trust Agreement;

(3) if at the time of calculation the Authority then has Outstanding any Variable Interest Rate Bonds secured by a Credit Facility the reimbursement obligation under which is payable on a subordinate basis to Debt Service on Bonds, Debt Service on such Variable Interest Rate Bonds assuming such Bonds bear interest at the Estimated Average Interest Rate; and

(4) if at the time of calculation the Authority then has Outstanding any Bank Bonds, Debt Service on such Bank Bonds assuming the principal amount of such Bonds is equal to the reimbursement obligation under the Credit Facility from which such Bonds are payable, the interest rate on such Bonds is the interest rate set forth in, or determined in the manner set forth in, such Credit Facility, and the principal of such Bonds will be payable at the time the reimbursement obligation comes due under such Credit Facility.

2. Projected Revenues shall not include:

(1) any operating assistance, subsidy and other similar funding from a governmental or other entity which may be pledged and designated as Supplemental Revenues after the date of adoption of the Metropolitan Highway System Trust Agreement unless such Supplemental Revenues have been received at the time of the projection or satisfy the conditions set forth in the Metropolitan Highway System Trust Agreement even though the Authority has not designated such Supplemental Revenues as Dedicated Payments. Any such Supplemental Revenues, together with any Dedicated Payments, may be projected to be available in accordance with the terms of any arrangements governing the same or, if applicable, the terms, if any, of each written confirmation from each Rating Agency received pursuant to the conditions set forth in the Metropolitan Highway System Trust Agreement (see "Dedicated Payments" above).

(2) any Revenues from leases, licenses or other similar agreements with third parties other than those required by the terms of written agreements which are in full force and effect; provided that in the case of any such agreements which expire during the period of the projection the Authority or an Independent Consultant may project continued Revenues (i) at the level in effect immediately prior to such expiration if the Authority certifies that it reasonably expects it will be able to achieve such Revenues under renewal or replacement agreements under then current market conditions or (ii) at such higher level as the Authority certifies that it expects and an Independent Consultant provides its opinion that the Authority's expectation is reasonable. (*Section 617*).

### **Certain Lease Payments**

Pursuant to the Metropolitan Highway System Trust Agreement, the rental payments under a certain Lease Agreement dated December 22, 1978, amended and restated as of January 1, 1980, as amended from time to time between the Authority and Urban Investment and Development Company (the "Copley Lease") are pledged as Revenues. Under the terms of the Copley Lease, certain amounts held in escrow for the benefit of the Authority in the principal amount of \$15,800,000 (the "Copley Lease Escrow") will become available to the Authority for any lawful purpose on and after February 15, 2002.

Unless the moneys in the Copley Lease Escrow are otherwise required to meet the Authority's obligations under the Metropolitan Highway System Trust Agreement, the Authority covenants to reinvest such moneys in Investment Obligations on or about February 15, 2002, in such manner as to provide, as nearly as practicable, level annual payments which will constitute Revenues in each of the Fiscal Years from and including 2003 through and including 2008. At all times, the Authority shall invest the Copley Lease Escrow in such manner, and make such payments to the Internal Revenue Service on account of such investment income as may be required under the Code, if any, to preserve the exclusion from gross income for federal income tax purposes of the interest on the Initial Bonds and any Additional Bonds. (*Section 618*).

## **Tax Covenant**

The Authority shall take, or require to be taken, such action as may from time to time be required to assure the continued exclusion from the federal gross income of holders of any Series of Bonds, the interest on which is not includable in the gross income of the holder thereof for Federal income tax purposes. The Authority shall not permit the investment or application of the proceeds of any Series of Bonds, the interest on which is not includable in the gross income of the holder thereof for Federal income tax purposes, including any funds considered proceeds within the meaning of section 148 of the Code, to be used to acquire any investment property the acquisition of which would cause such Bonds to be “arbitrage bonds” within the meaning of said section 148. (*Section 619*)

## **Trustee and Paying Agents**

The Metropolitan Highway System Trust Agreement appoints United States Trust Company of New York, New York, New York as Trustee under the Metropolitan Highway System Trust Agreement. United States Trust Company of New York, New York, New York is appointed Paying Agent for the Initial Bonds and the 1999 Series A Bonds. The Authority shall appoint one or more Paying Agents for Additional Bonds of any Series in the Supplemental Trust Agreement authorizing such Bonds, and may at any time or from time to time appoint one or more other Paying Agents having the qualifications set forth in the Metropolitan Highway System Trust Agreement for a successor Paying Agent. The Trustee may be appointed as Paying Agent. The Trustee may at any time resign and be discharged of the duties and obligations created by the Metropolitan Highway System Trust Agreement by giving not less than 30 days written notice. The Trustee may be removed at any time by an instrument signed by the Owners of a majority in principal amount of the Senior Bonds and the Subordinated Bonds then Outstanding and the Trustee may also be removed at any time, other than during the continuance of an event of default under the Metropolitan Highway System Trust Agreement, by the Authority, by an instrument in writing signed and acknowledged by an Authorized Officer of the Authority. Any successor shall be a bank or trust company organized under the laws of any state of the United States or a national banking association having a capital and surplus aggregating at least \$50,000,000. (*Sections 701, 702, 707, 708, 709*).

## **Supplemental Trust Agreements**

The Authority may adopt without the consent of the Trustee or Bondowners Supplemental Trust Agreements for, among other things:

- (1) To authorize Additional Bonds of a Series;
- (2) To designate or confirm the designation of any Project as part of the Accepted Metropolitan Highway System permitted under the Metropolitan Highway System Trust Agreement;
- (3) To pledge and designate any revenues of the Authority which are not Revenues as defined in the Metropolitan Highway System Trust Agreement as initially adopted as Supplemental Revenues or as Dedicated Payments and to reverse or modify any such pledge and designation of Dedicated Payments; provided that any such pledge and designation of Dedicated Payments, or reversal or modification thereof, shall be subject to the provisions of the Metropolitan Highway System Trust Agreement;
- (4) To establish for any Series of Additional Bonds a separate account in the Senior Debt Service Reserve Fund or Subordinated Debt Service Reserve Fund, as applicable, which shall be permitted to be applied solely to the payment of Senior Bonds or Subordinated Bonds, as applicable, of such Series provided that (i) the Bonds of such Series shall have no claim or lien on nor be payable from any other amounts in the Senior Debt Service Reserve Fund or Subordinated Debt Service Reserve Fund, as applicable, (ii) the Bonds of such Series shall be excluded from the calculation of the Senior Debt Service Reserve Requirement or Subordinated Debt Service Reserve Requirement, as applicable, and (iii) the amount required to be on deposit in such account shall be specified in the Supplemental Trust Agreement authorizing the Bonds of such Series; and

(5) To add to the Metropolitan Highway System Trust Agreement any provisions relating to the application of interest earnings in any Fund or account under the Metropolitan Highway System Trust Agreement required by law to preserve the exclusion from gross income for Federal income tax purposes of interest received on the Bonds then Outstanding or to be issued or the exemption of interest received on such Bonds from Commonwealth income taxation;

(6) To modify any of the provisions of the Metropolitan Highway System Trust Agreement in any respect whatsoever, provided that (i) such modification shall be, and be expressed to be, effective only after all Bonds of any Series Outstanding at the date of the adoption of such Supplemental Trust Agreement shall cease to be Outstanding, and (ii) such Supplemental Trust Agreement shall be specifically referred to in the text of all Bonds of any Series authenticated and delivered after the date of the adoption of such Supplemental Trust Agreement and of Bonds issued in exchange therefor or in place thereof.

The Authority may adopt with the consent of the Trustee a Supplemental Trust Agreement:

(1) To cure any ambiguity, supply any omission, or cure or correct any defect or inconsistent provision in the Metropolitan Highway System Trust Agreement;

(2) To insert such provisions clarifying matters or questions arising under the Metropolitan Highway System Trust Agreement as are necessary or desirable and are not contrary to or inconsistent with the Metropolitan Highway System Trust Agreement as theretofore in effect; or

(3) To make any other modification or amendment of the Metropolitan Highway System Trust Agreement which the Trustee shall in its sole discretion determine will not have a material adverse affect on the interest of Bondowners. (*Sections 801, 802*).

### **Amendments**

Any modification or amendment of the Metropolitan Highway System Trust Agreement and of the rights and obligations of the Authority and of the Owners of the Bonds and coupons thereunder may be made by a Supplemental Trust Agreement, with the written consent given as provided in the Metropolitan Highway System Trust Agreement, (i) of the Owners of at least a majority in principal amount of the Senior Bonds Outstanding or, if no Senior Bonds are Outstanding, at least a majority in principal amount of the Subordinated Bonds Outstanding at the time such consent is given, and (ii) in case less than all of the Senior Bonds, or if no Senior Bonds are Outstanding, less than all of the Subordinated Bonds, then Outstanding are affected by the modification or amendment, of the Owners of at least a majority in principal amount of the Senior Bonds, or if no Senior Bonds are Outstanding, Subordinated Bonds, of each Series so affected and Outstanding at the time such consent is given; provided, however, that if such modification or amendment will, by its terms, not take effect so long as any Bonds remain Outstanding, the consent of the Owners of such Bonds shall not be required and such Bonds shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Bonds under this heading. No such modification or amendment shall (a) permit a change in the terms of redemption or maturity of the principal of any Outstanding Senior Bond or any Outstanding Subordinated Bond or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereon without the consent of the Owner of such Bond, (b) permit the creation of any pledge, lien, charge or encumbrance of or upon any of the items purported to be pledged pursuant to the Metropolitan Highway System Trust Agreement, which pledge, lien, charge or encumbrance would be prior to, or of equal rank with, the pledge or source of payment for the Bonds created by the Metropolitan Highway System Trust Agreement, without the consent of the Owners of all Outstanding Bonds affected by such change, or deprive any Owner of any Outstanding Bond of the benefit of such pledge or source of payment for the Bonds, without the consent of such Owner, (c) create, with respect to the pledge of the Metropolitan Highway System Trust Agreement, a preference or priority of any Senior Bond over any other Senior Bond without the consent of each Owner of a Senior Bond affected by such change, (d) reduce the percentages or otherwise affect the classes of Bonds the consent of the Owners of which is required to effect any such modification or amendment, or (e) change or modify any of the rights or obligations of any Fiduciary without its written assent thereto. (*Section 902*).

## Events of Default

Each of the following events are declared an “Event of Default” with respect to Senior Bonds and Subordinated Bonds under the Metropolitan Highway System Trust Agreement.

- (1) (1) Payment of the principal and redemption premium, if any, of any of the Bonds shall not be made when the same shall become due and payable, either at maturity or by proceedings for redemption or otherwise; or
- (2) Failure to pay the Tender Price of any Bond when due and payable; provided, however, that if a Liquidity Facility or Credit Facility is in effect and the Provider thereof defaults in its obligation to provide money to purchase any tendered Bond, no Event of Default under this subsection (2) shall be deemed to have occurred or to exist if the Tender Price of such Bond is paid within 365 days after the Tender Date; or
- (2) Payment of any installment of interest on any of the Bonds shall not be made within five (5) days after the same shall become due and payable; or
- (3) Any part of the Accepted Metropolitan Highway System or any Extension shall be destroyed or damaged to the extent of impairing its efficient operation and materially adversely affecting the Revenues and the Authority shall not have taken reasonable steps to promptly repair, replace, reconstruct, or provide a reasonable substitute for the damaged or destroyed part of the Accepted Metropolitan Highway System or Extensions (whether such failure promptly to repair, replace or reconstruct or provide a substitute for the same be due to the impracticability of such repair, replacement, reconstruction or substitution or to lack of funds therefor or for any other reason); or
- (4) an order or decree shall be entered, with the consent or acquiescence of the Authority, appointing a receiver or receivers of all or any portion of the Accepted Metropolitan Highway System or any Extension or of the tolls or other revenues thereof, or if such order or decree, having been entered without the consent or acquiescence of the Authority, shall not be vacated or discharged or stayed on appeal within sixty (60) days after the entry thereof; or
- (5) any proceeding shall be instituted, with the consent or acquiescence of the Authority, for the purpose of effecting a composition between the Authority and its creditors or for the purpose of adjusting the claims of such creditors, pursuant to any federal or state statute now or hereafter enacted, if the claims of such creditors are under any circumstances payable from the revenues of the Accepted Metropolitan Highway System or any Extension; or
- (6) the Authority shall default in the due and punctual performance of any other of the covenants, conditions, agreements and provisions contained in the Bonds or in the Metropolitan Highway System Trust Agreement on the part of the Authority to be performed, and such default shall continue for sixty (60) days after written notice specifying such default and requiring the same to be remedied shall have been given to the Authority by the Trustee, which may give such notice in its discretion and shall give such notice at the written request of the Owners of not less than twenty-five percent (25%) in aggregate principal amount of the Bonds then Outstanding. (*Section 1001*).

## Remedies

Upon the happening of any Event of Default, then and in every such case the Trustee may proceed, and upon the written request of the Owners of not less than twenty-five percent (25%) in aggregate principal amount of Senior Bonds or Subordinated Bonds then Outstanding under the Metropolitan Highway System Trust Agreement shall proceed to protect and enforce its rights and the rights of the Bondowners under the laws of the Commonwealth or under the Metropolitan Highway System Trust Agreement by such suits, actions or special

proceedings in equity or at law, or by proceedings in the office of any board of officer having jurisdiction, either for the specific performance of any covenant or agreement contained in the Metropolitan Highway System Trust Agreement or in aid or execution of any power granted or for the enforcement of any proper legal or equitable remedy, as the Trustee, being advised by counsel, shall deem most effectual to protect and enforce such rights. The Trustee shall not be required to take any remedial action (other than the giving of notice) unless indemnity satisfactory to the Trustee is furnished for any liability to be incurred thereby. (*Section 1002*).

### **Trustee for Subordinated Bondowners**

During any period in which an Event of Default shall have occurred and is continuing if there are Outstanding Subordinated Bonds and Senior Bonds, the registered owners of the Subordinated Bonds shall be entitled to the appointment of a trustee to act on their behalf in any suit, action or proceeding and to otherwise exercise on their behalf any of their rights under the Metropolitan Highway System Trust Agreement; provided, however, that such trustee shall not be entitled to hold any Funds or Accounts which shall continue to be held under the Metropolitan Highway System Trust Agreement by the Trustee. During such period the Trustee shall then act exclusively on behalf of the registered owners of Senior Bonds Outstanding; provided, however, the Trustee shall continue to bear its fiduciary obligation to all Bondowners as provided in the Metropolitan Highway System Trust Agreement with respect to any Funds or Accounts or any other amounts held in trust. Any such trustee may be appointed with the consent of a majority in principal amount Outstanding of Subordinated Bonds. Notice of the appointment of any such trustee shall be given to the Trustee and the Authority promptly upon such appointment and to all registered owners of Subordinated Bonds. To the extent applicable, such trustee's duties shall be governed by Article VII of the Metropolitan Highway System Trust Agreement. (*Section 1003*).

### **Priority of Payments After Default**

If the funds held by the Fiduciaries are insufficient for the payment of interest and principal or Redemption Price then due on the Bonds, such funds (excluding funds held for the payment or redemption of particular Bonds which have theretofore become due at maturity or by call for redemption) and any other moneys received or collected by the Fiduciaries after making provision for the payment of any expenses necessary in the opinion of the Trustee to preserve the continuity of the Revenues, or otherwise to protect the interests of the Owners of the Bonds, and for the payment of the charges and expenses and liabilities incurred and advances made by the Fiduciaries in the performance of their duties under the Metropolitan Highway System Trust Agreement, shall be in the following order: (i) to the payment to the persons entitled thereto of all installments of interest then due on any Senior Bonds in the order of the maturity of such installments; (ii) to the payment to the persons entitled thereto of the unpaid principal or Redemption Price of any Senior Bonds which shall have become due, whether at maturity or by call for redemption, in the order of their due dates; (iii) to the payment to the persons entitled thereto of all installments of interest then due on Subordinated Bonds in the order of the maturity of such installments; and (iv) to the payment to the persons entitled thereto of unpaid principal or Redemption Price of any Subordinated Bonds which shall have become due, whether at maturity or by call for redemption, in the order of their due dates. (*Section 1004*).

### **Defeasance**

If the Authority shall pay or cause to be paid, or there shall otherwise be paid, to the Owners of all Bonds then Outstanding, the principal and interest and Redemption Price to become due thereon, at the times and in the manner stipulated therein and in the Metropolitan Highway System Trust Agreement, then, at the option of the Authority, expressed in an instrument in writing signed by an Authorized Officer and delivered to the Trustee, the covenants, agreements and other obligations of the Authority to the Bondowners shall be discharged and satisfied. In such event, the Fiduciaries shall pay over or deliver to the Authority all money, securities and funds held by them pursuant to the Metropolitan Highway System Trust Agreement which are not required for the payment or redemption of Bonds not theretofore surrendered for such payment or redemption. If the Authority shall pay or cause to be paid, to the Owners of any Outstanding Bonds the principal or Redemption Price and interest due or to become due thereon, at the times and in the manner stipulated therein and in the Metropolitan Highway System Trust Agreement, such Bonds shall cease to be entitled to any lien, benefit or security under the Metropolitan Highway System Trust Agreement, and all covenants, agreements and obligations of the Authority to the Owners of

such Bonds shall thereupon cease, terminate and become void and be discharged and satisfied. Notwithstanding any other provisions of the Metropolitan Highway System Trust Agreement, certain provisions, including those related to the redemption of Bonds, execution and authentication of Bonds, negotiability, transfer and registry of Bonds, satisfaction of Sinking Fund Installments, appointment of Trustee and Paying Agents, appointment of successor Trustee and Paying Agents and compensation of Fiduciaries, shall, within limits, survive the defeasance of the Bonds.

Bonds or interest installments for the payment or redemption of which moneys shall have been set aside and shall be held in trust by the Paying Agents (through deposit by the Authority of funds for such payment or redemption or otherwise) at the maturity or redemption date thereof shall be defeased. Subject to the provisions of the fifth and ninth paragraphs under this heading, any Outstanding Bond shall prior to the maturity or redemption date thereof be defeased if (a) in case any of said Bonds are to be redeemed on any date prior to their maturity, the Authority shall have given to the Trustee instructions accepted in writing by the Trustee to mail notice of redemption of such Bonds (other than Bonds which have been purchased by the Trustee at the direction of the Authority or purchased or otherwise acquired by the Authority and delivered to the Trustee as hereinafter provided prior to the mailing of such notice of redemption) on said date, (b) there shall have been deposited with the Trustee either moneys in an amount which shall be sufficient, or Investment Obligations the principal of and interest on which when due will provide moneys which, together with the moneys, if any, deposited with the Trustee at the same time, shall be sufficient to pay when due the principal or Redemption Price, if applicable, and interest due and to become due on said Bonds on and prior to the redemption date or maturity date thereof, as the case may be, and (c) in the event said Bonds are not by their terms subject to redemption within the next succeeding sixty (60) days, the Authority shall have given the Trustee irrevocable instructions to mail, as soon as practicable, a notice to the Owners of such Bonds at their last addresses appearing upon the registry books at the close of business on the last Business Day on the month preceding the month for which notice is mailed that the deposit required by (b) above has been made with the Trustee and that said Bonds are defeased and stating such maturity or redemption date upon which moneys are expected, subject to the provisions under this heading, to be available for the payment of the principal or Redemption Price, if applicable, on said Bonds (other than Bonds which have been purchased by the Trustee at the direction of the Authority or purchased or otherwise acquired by the Authority and delivered to the Trustee as hereinafter provided prior to the mailing of the notice of redemption referred to in clause (a) under this paragraph). The Trustee shall, as and to the extent necessary, apply moneys held by it under this heading to the retirement of said Bonds in amounts equal to the unsatisfied balances of any Sinking Fund Installments with respect to such Bonds, all in the manner provided in the Metropolitan Highway System Trust Agreement. The Trustee shall, if so directed by the Authority (i) prior to the maturity date of defeased Bonds which are not to be redeemed prior to their maturity date or (ii) prior to the time of the mailing of the notice referred to in clause (a) above with respect to any defeased Bonds which are to be redeemed on any date prior to their maturity, apply moneys deposited with the Trustee in respect to such Bonds and redeem or sell Investment Obligations so deposited with the Trustee and apply the proceeds thereof to the purchase of such Bonds as arranged and directed by the Authority and the Trustee shall immediately thereafter cancel all such Bonds so purchased; provided, however, that the moneys and Investment Obligations remaining on deposit with the Trustee after the purchase and cancellation of such Bonds shall be sufficient to pay when due the Principal Installment or Redemption Price, if applicable, and interest due or to become due on all remaining Bonds, in respect of which such moneys and Investment Obligations are being held by the Trustee on or prior to the redemption date or maturity date thereof, as the case may be.

If, at any time (i) prior to the maturity date of defeased Bonds which are not to be redeemed prior to their maturity date or (ii) prior to the mailing of the notice of redemption referred to in clause (a) with respect to any defeased Bonds which are to be redeemed on any date prior to their maturity, the Authority shall purchase or otherwise acquire any such Bonds and deliver such Bonds to the Trustee prior to their maturity date or redemption date, as the case may be, the Trustee shall immediately cancel all such Bonds so delivered; such delivery of Bonds to the Trustee shall be accompanied by directions from the Authority to the Trustee as to the manner in which such Bonds are to be applied against the obligation of the Trustee to pay or redeem defeased Bonds; all in accordance with the Metropolitan Highway System Trust Agreement.

In the event that on any date as a result of any purchases, acquisitions and cancellations of Bonds, the total amount of moneys and Investment Obligations remaining on deposit with the Trustee is in excess of the total

amount which would have been required to be deposited with the Trustee on such date in respect of the remaining Bonds in order to defease such Bonds, the Trustee shall, if requested by the Authority, pay the amount of such excess to the Authority free and clear of any trust, lien, security, interest, pledge or assignment securing said Bonds or otherwise existing under the Metropolitan Highway System Trust Agreement. Except as otherwise provided under this heading, neither Investment Obligations nor moneys deposited with the Trustee pursuant to the provisions described under this heading nor principal or interest payments on any such Investment Obligations shall be withdrawn or used for any purpose other than, and shall be held in trust for, the payment of the principal or Redemption Price, if applicable, and interest on said Bonds; provided that any cash received from such principal or interest payment on such Investment Obligations deposited with the Trustee, (A) to the extent such cash will not be required at any time for such purpose, shall be paid over to the Authority as received by the Trustee, free and clear of any trust, lien or pledge securing said Bonds or otherwise existing under the Metropolitan Highway System Trust Agreement, and (B) to the extent such cash will be required for such purpose at a later date, shall, to the extent practicable, be reinvested in Investment Obligations maturing at times and in amounts sufficient to pay when due the principal or Redemption Price, if applicable, and interest to become due on said Bonds on or prior to such redemption date or maturity date thereof, as the case may be, and interest earned from such reinvestment shall be paid over to the Authority, as received by the Trustee, free and clear of any trust, lien, security interest, pledge or assignment securing said Bonds or otherwise existing under the Metropolitan Highway System Trust Agreement. For purposes of determining whether Variable Interest Rate Bonds are defeased, the interest to come due on such Variable Interest Rate Bonds on or prior to the maturity or redemption date thereof, as the case may be, shall be calculated at the maximum rate permitted by the terms thereof; provided, however, in accordance with the Metropolitan Highway System Trust Agreement if such Variable Interest Rate Bonds have borne interest at less than such maximum rate for any period, the excess amount deposited with the Trustee in order to defease such Bonds for such period shall, if requested, by the Authority, be paid to the Authority free and clear of any trust, lien, security interest, pledge or assignment securing the Bonds or otherwise existing under the Metropolitan Highway System Trust Agreement.

For purposes of determining whether Variable Interest Rate Bonds are defeased, the interest to come due on such Variable Interest Rate Bonds on or prior to the maturity or redemption date thereof, as the case may be, shall be calculated at the maximum rate permitted by the terms thereof; provided, however, that in accordance with the Metropolitan Highway System Trust Agreement if such Variable Interest Rate Bonds have borne interest at less than such maximum rate for any period, the excess amount deposited with the Trustee in order to defease such Bonds for such period shall, if requested by the Authority, be paid to the Authority free and clear of any trust, lien, security interest, pledge or assignment securing the Bonds or otherwise existing under the Metropolitan Highway System Trust Agreement.

Put Bonds shall be deemed to have been defeased only if, in addition to satisfying the other requirements, there shall have been deposited with the Trustee moneys in an amount which shall be sufficient to pay when due the maximum amount of principal of and premium, if any, and interest on such Bonds which could become payable to the Owners of such Bonds upon the exercise of any options provided to the Owner of such Bonds unless the options originally exercisable by the Owner of a Put Bond are no longer exercisable. If any portion of the moneys deposited with the Trustee for the payment of the principal of and premium, if any, and interest on Put Bonds is not required for such purpose, the Trustee shall, if requested by the Authority, pay the amount of such excess to the Authority free and clear of any trust, lien, security interest, pledge or assignment securing said Bonds or otherwise existing under the Metropolitan Highway System Trust Agreement.

In the event that after compliance with the provisions under this heading the Investment Obligations described under this heading are included in the Investment Obligations deposited with the Trustee in order to satisfy the requirements of the provisions under this heading, then any notice of redemption to be mailed by the Trustee and any set of instructions relating to a notice of redemption given to the Trustee may provide, at the option of the Authority, that any redemption date or dates in respect of all or any portion of the Bonds to be redeemed on such date or dates may at the option of the Authority be changed to any other permissible redemption date or dates and that redemption dates may be established for any Bonds deemed to have been paid in accordance with the provisions under this heading upon their maturity date or dates at any time prior to the actual mailing of any applicable notice of redemption in the event that all or any portion of any Investment Obligations described in the provisions under this heading have been called for redemption pursuant to an irrevocable notice of redemption or

have been redeemed by the issuer thereof prior to the maturity date thereof; no such change of redemption date or dates or establishment of redemption date or dates may be made unless taking into account such changed redemption date or dates or newly established redemption date or dates the moneys and Investment Obligations on deposit with the Trustee including any Investment Obligations deposited with the Trustee in connection with any reinvestment of redemption proceeds in accordance with the provisions under this heading would be sufficient to pay when due the principal and Redemption Price, if applicable, and interest on all Bonds deemed to have been paid in accordance with the provisions under this heading which have not as yet been paid.

Unless waived by the Authority at the time Bonds are defeased at any time prior to the actual mailing of any applicable notice of redemption any redemption date or dates, in respect of all or any portion of the Bonds to be redeemed on such date or dates may at the option of the Authority be changed to any other permissible redemption date or dates and redemption dates may be established for any Bonds deemed to have been defeased upon their maturity date or dates, in both cases in accordance with the Metropolitan Highway System Trust Agreement.

The Authority agrees that it will take no action in connection with any of the transactions referred to under this heading which will cause any Bonds to be "Arbitrage Bonds."

Any moneys held by a Fiduciary in trust for the payment and discharge of any of the Bonds which remain unclaimed for three years (or such other period as may from time to time be prescribed by the laws of the Commonwealth) after the date when such Bonds have become due and payable, either at their stated maturity dates or by call for earlier redemption, if such moneys were held by the Fiduciary at such date, or for three years after the date of deposit of such moneys if deposited with the Fiduciary after the said date when such Bonds became due and payable, shall automatically revert from the Fiduciary to the Commonwealth once the Fiduciary has complied with the publication and reporting requirements as prescribed in accordance with the laws of the Commonwealth; provided, however, if no provision of Commonwealth law shall require that such funds be paid to the Commonwealth, such moneys shall, at the written request of the Authority, be repaid by the Fiduciary to the Authority, as its absolute property and free from trust, and the Fiduciary shall thereupon be released and discharged with respect thereto and the Bondowners shall look only to the Commonwealth, if paid to the Commonwealth, or the Authority, if paid to the Authority, for the payment of such Bonds; provided, however, that before being required to make any such payment to the Authority, the Fiduciary shall cause to be published at least twice, at an interval of not less than 7 days between publications, in an Authorized Newspaper, a notice that said moneys remain unclaimed and that, after a date named in said notice, which date shall be not less than 30 days after the date of the first publication of such notice, the balance of such moneys then unclaimed will be returned to the Authority.

Anything in the Trust Agreement to the contrary notwithstanding, in case any 2010 Series A Bonds are to be defeased in accordance with the provisions described in this section, such 2010 Series A Bonds shall not be deemed to be defeased unless (i) the other applicable requirements described in this section shall have been satisfied and (ii) the Trustee shall have received written confirmation from S&P, if S&P then maintains a rating on the 2010 Series A Bonds, that the proposed defeasance will not in and of itself cause a reduction or withdrawal of the rating then in effect on such 2010 Series A Bonds. (*Section 1005*).

### **Bond Insurance**

Certain of the Initial Bonds (the "Initial Insured Bonds") are insured as to the timely payment of principal and interest thereon under a financial guaranty insurance policy (the "Initial Insurance Policy") issued by MBIA Insurance Corporation (the "Initial Bond Insurer"). The Metropolitan Highway System Trust Agreement provides that the Initial Bond Insurer's consent is required for any Supplemental Trust Agreement requiring the consent of the Trustee or the consent of the Bondowners. The Initial Bond Insurer is deemed to be the Owner of the Initial Insured Bonds for the purpose of giving any approval or consent to the execution and delivery of any Supplemental Trust Agreement which requires the written approval or consent of the Owners of at least a majority in the aggregate principal amount of Bonds Outstanding. In the event of a claim against the Initial Insurance Policy, the Initial Bond Insurer shall be designated to act as agent for the Owners of the Initial Insured Bonds in any legal proceeding related to claims for the payment of principal and/or interest on such Bonds. (*Section 907 and Article XI*).

**Proposed Form of Opinion  
of  
Bond Counsel**

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**Proposed Form of Opinion  
of  
Bond Counsel**

[Date of Delivery]

Massachusetts Department of Transportation  
Boston, Massachusetts

\$207,665,000  
Massachusetts Department of Transportation  
Metropolitan Highway System Revenue Bonds (Senior)  
Variable Rate Demand Obligations  
2010 Series A-1 and 2010 Series A-2  
and  
\$882,310,000  
Massachusetts Department of Transportation  
Metropolitan Highway System Revenue Bonds (Senior)  
2010 Series B

Dated the Date of Delivery

We have acted as bond counsel to the Massachusetts Department of Transportation (the “Department”) in connection with the issuance by the Department of the above-referenced bonds (the “Bonds”) pursuant to Chapter 6C of the General Laws of The Commonwealth of Massachusetts, as amended (the “Act”), the Metropolitan Highway System Trust Agreement dated as of September 1, 1997 by and between the Massachusetts Turnpike Authority, predecessor to the Department, and The Bank of New York Mellon, as successor Trustee, as amended and supplemented to date (the “Trust Agreement”), and as further amended and supplemented by the Eighth Supplemental Metropolitan Highway System Trust Agreement dated as of May 1, 2010 by and between the Department and The Bank of New York Mellon, as Trustee (the “Eighth Supplemental Agreement” and together with the Trust Agreement, the “Agreement”). In such capacity, we have examined the law and such certified proceedings and other papers as we have deemed necessary to render this opinion.

As to questions of fact material to our opinion we have relied upon representations and covenants of the Department contained in the Agreement, and in the certified proceedings and other certifications of public officials furnished to us, without undertaking to verify the same by independent investigation.

Based on our examination, we are of the opinion, under existing law, as follows:

1. The Department is duly created and validly existing under the Act as a body politic and corporate and a public instrumentality of The Commonwealth of Massachusetts (the “Commonwealth”) and has the right and power under the Act to adopt the Eighth Supplemental Agreement and to authorize, issue and deliver the Bonds.
2. The Eighth Supplemental Agreement has been duly and lawfully authorized, executed and delivered by the Department, is in full force and effect and is a valid and binding agreement of the Department enforceable in accordance with its terms.
3. The Bonds have been duly authorized, executed, issued and delivered by the Department in accordance with the Act and the Agreement and constitute valid and binding special obligations of the Department, which has no taxing power, enforceable in accordance with their terms and the terms of the Agreement and entitled to the benefits of the Act and the Agreement. The Bonds are secured by the Agreement and a pledge of the

Revenues (as defined therein) received by or for the account of the Department and moneys on deposit in the funds and accounts pledged as security therefor under the Agreement. The Agreement creates the valid pledge and lien which it purports to create for the benefit of the holders of the Bonds, subject to the application of such pledged Revenues and moneys to the purposes and on the conditions permitted by the Trust Agreement.

4. Interest on the Bonds is excluded from the gross income of the owners of the Bonds for federal income tax purposes. In addition, interest on the Bonds is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes. However, such interest is included in adjusted current earnings when calculating corporate alternative minimum taxable income. In rendering the opinions set forth in this paragraph, we have assumed compliance by the Department with all requirements of the Internal Revenue Code of 1986 that must be satisfied subsequent to the issuance of the Bonds in order that interest thereon be, and continue to be, excluded from gross income for federal income tax purposes. The Department has covenanted to comply with all such requirements. Failure by the Department to comply with certain of such requirements may cause interest on the Bonds to become included in gross income for federal income tax purposes retroactive to the date of issuance of the Bonds. We express no opinion regarding any other federal tax consequences arising with respect to the Bonds.

5. Interest on the Bonds and any profit made on the sale thereof are exempt from Massachusetts personal income taxes and the Bonds are exempt from Massachusetts personal property taxes. We express no opinion regarding any other Massachusetts tax consequences arising with respect to the Bonds or any tax consequences arising with respect to the Bonds under the laws of any state other than Massachusetts.

This opinion is expressed as of the date hereof, and we neither assume nor undertake any obligation to update, revise, supplement or restate this opinion to reflect any action taken or omitted, or any facts or circumstances or changes in law or in the interpretation thereof, that may hereafter arise or occur, or for any other reason.

The rights of the holders of the Bonds and the enforceability of the Bonds may be subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights heretofore or hereafter enacted to the extent constitutionally applicable, and their enforcement may also be subject to the exercise of judicial discretion in appropriate cases.

EDWARDS ANGELL PALMER & DODGE LLP

**Summary of Continuing Disclosure Undertakings**

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## Summary of Continuing Disclosure Undertakings

### MassDOT Continuing Disclosure Agreement

Prior to the issuance of the Bonds, MassDOT and the Trustee will enter into a continuing disclosure agreement (the "MassDOT Disclosure Agreement") setting forth the undertakings of MassDOT regarding continuing disclosure with respect to the Bonds. In the MassDOT Disclosure Agreement, MassDOT will undertake for the benefit of the Bondowners to provide to the Municipal Securities Rulemaking Board (the "MSRB") through its Electronic Municipal Market Access ("EMMA") system, pursuant to Rule 15c2-12 of the Securities and Exchange Commission (the "Rule"), no later than 270 days after the end of each fiscal year of MassDOT, commencing with the fiscal year ending June 30, 2010: (i) the annual financial information described below relating to such fiscal year; (ii) the audited financial statements of MassDOT for such fiscal year; provided, however, that if audited financial statements of MassDOT are not then available, such audited financial statements shall be delivered to EMMA when they become available (but in no event later than 350 days after the end of such fiscal year); or (iii) notice of MassDOT's failure, if any, to provide such information. The annual financial information to be provided shall consist of financial information and operating data, in each case updated through the last day of such fiscal year unless otherwise noted, relating to the following information contained in the Official Statement, and in each case substantially in the same level of detail as is found in the referenced section of the Official Statement:

<b>Financial Information and Operating Data Category</b>	<b>Reference to Official Statement for Level of Detail</b>
1. Amount of the unfunded accrued actuarial liability with respect to MassDOT's retirement system as of the date of the most recently available actuarial valuation.	"MASSACHUSETTS DEPARTMENT OF TRANSPORTATION – Retirement Plans and Other Employee Benefits," pages 8-9.
2. Amount of the accrued actuarial post-employment benefits liability on a pre-funded basis or an unfunded basis, as applicable, and the unfunded actuarial liability, as of the most recently available actuarial evaluation.	"MASSACHUSETTS DEPARTMENT OF TRANSPORTATION – Retirement Plans and Other Employee Benefits," page 9.
3. Summary presentation of current toll rates in effect for vehicles using the Metropolitan Highway System and a description of any changes to MassDOT's toll discount program, if any.	"HISTORICAL OPERATING RESULTS – Toll Collections, Transactions and Rates – Selected Current Toll Rates," page 36.
4. Summary presentation for the two most recently completed fiscal years of operating revenues, expenses and debt service coverage for the Metropolitan Highway System, on a GAAP basis and a Trust basis.	"HISTORICAL OPERATING RESULTS," tables entitled "Summary of Operating Revenues and Expenses" and "Summary of Revenues, Expenses and Debt Service Coverage," pages 41 and 42.
5. Discussion of selected key operating results of the Metropolitan Highway System for the prior fiscal year.	"HISTORICAL OPERATING RESULTS – 2009 Operating Results," pages 43-44.
6. Description of the capital investment plan for the Metropolitan Highway System for the current fiscal year and based on the current MassDOT 5-Year Capital Plan.	"CAPITAL INVESTMENTS – Fiscal 2010 Capital Budget" and the table entitled "Preliminary Estimated Needs Assessment," pages 51-52 and 53.

The information described above may be included by reference to other documents, including official statements pertaining to debt issued by MassDOT, which have been submitted to EMMA. If the document incorporated by reference is a Final Official Statement within the meaning of the Rule, it will also be available from the MSRB. MassDOT's annual financial statements for each fiscal year shall consist of the balance sheet of MassDOT and the related statements of revenue and expenses and cash flows prepared in accordance with generally accepted accounting principles in effect from time to time. Such financial statements shall be audited by a firm of certified public accountants appointed by MassDOT.

In the MassDOT Disclosure Agreement, MassDOT also will undertake for the benefit of the owners of the Bonds to provide in a timely manner to EMMA notice of any of the following events with respect to the Bonds (numbered in accordance with the provisions of the Rule), if material:

- (i) principal and interest payment delinquencies;
- (ii) non-payment related defaults;
- (iii) unscheduled draws on debt service reserves reflecting financial difficulties;
- (iv) scheduled draws on credit enhancements reflecting financial difficulties;
- (v) substitution of credit or liquidity providers, or their failure to perform;
- (vi) adverse tax opinions or events affecting the tax-exempt status of the security;
- (vii) modifications to rights of security holders;
- (viii) bond calls;
- (ix) defeasances;
- (x) release, substitution or sale of property securing repayment of the securities; and
- (xi) rating changes.

Nothing in the MassDOT Disclosure Agreement shall preclude MassDOT from disseminating any information in addition to that required under the MassDOT Disclosure Agreement. If MassDOT disseminates any such additional information, nothing in the MassDOT Disclosure Agreement shall obligate MassDOT to update such information or include it in any future materials disseminated.

To the extent permitted by law, the provisions of the MassDOT Disclosure Agreement shall be enforceable against MassDOT in accordance with the terms thereof by any owner of a Bond, including any beneficial owner acting as a third-party beneficiary (upon proof of its status as a beneficial owner-reasonably satisfactory to the Trustee). To the extent permitted by law, any such owner shall have the right, for the equal benefit and protection of all owners of the Bonds, by mandamus or other suit or proceeding at law or in equity, to enforce its rights against MassDOT and to compel MassDOT and any of its officers, agents or employees to perform and carry-out-their duties under the foregoing provisions as aforesaid; provided, however, that the sole remedy in connection with such undertakings shall be limited to an action to compel specific performance of the obligations of MassDOT in connection with such undertakings and shall not include any rights to monetary damages. MassDOT's obligations in respect of the MassDOT Disclosure Agreement shall terminate if no Bonds remain outstanding (without regard to an economic defeasance) or if the provisions of the Rule concerning continuing disclosure are no longer effective; whichever occurs first. The provisions of the MassDOT Disclosure Agreement may be amended by MassDOT and the Trustee without the consent of, or notice to, any owners of the Bonds, (a) to comply with or conform to the provisions of the Rule or any amendments thereto or authoritative interpretations thereof by the Securities and Exchange Commission or its staff (whether required or optional), (b) to add a dissemination agent for the information required to be provided by such undertakings and to make any necessary or desirable provisions with respect thereto, (c) to add to the covenants of MassDOT for the benefit of the owners of the Bonds, (d) to modify the contents presentation and format of the annual financial information from time to time as a result of change in circumstances that arises from a change in legal requirements, or (e) to otherwise modify the undertakings in a manner responding to the requirements of the Rule concerning continuing disclosure; provided, however, that in the case of any amendment pursuant to clause (d) or (e), (i) the undertaking, as amended, would have complied with the requirements of the Rule at the time of the offering of the Bonds, after taking into account any amendments or authoritative interpretations of the Rule, as well as any change in circumstances, and (ii) the amendment does not materially impair the interests of the owners of the Bonds, as determined either by a party unaffiliated with MassDOT (such as MassDOT bond counsel or disclosure counsel) or by the vote or consent of owners of a majority in outstanding principal amount of the Bonds affected thereby at or prior to the time of such amendment.

**The Commonwealth Continuing Disclosure Agreement**

Prior to the issuance of the Bonds, MassDOT and the Commonwealth, acting by and through the Treasurer and Receiver-General of the Commonwealth, will undertake for the benefit of the owners of the Bonds to provide to the MSRB through EMMA pursuant to the Rule, no later than 270 days after the end of each fiscal year of the Commonwealth, commencing with the fiscal year ending June 30, 2010, (i) the annual financial information described below relating to such fiscal year, together with audited financial statements of the Commonwealth for such fiscal year if audited financial statements are then available, provided, however, that if audited financial statements of the Commonwealth are not then available, such audited financial statements shall be delivered to EMMA when they become available (but in no event later than 350 days after the end of such fiscal year) or (ii) notice of the Commonwealth’s failure, if any, to provide any such information. The annual financial information to be provided as aforesaid shall include financial information and operating data, in each case updated through the last day of such fiscal year unless otherwise noted, relating to the following information contained in the Commonwealth’s Information Statement dated March 26, 2009 (the “Information Statement”), as it appears as Appendix A in the Official Statement dated May 20, 2009 of the Commonwealth with respect to its \$378,440,000 General Obligation Bonds, Consolidated Loan of 2009, Series B, its \$250,000,000 General Obligation Bonds, Consolidated Loan of 2009, Series C and its \$71,430,000 General Obligation Bonds, Consolidated Loan of 2009, Series D, and in each case substantially in the same level of detail as is found in the referenced section of the Information Statement, as described below. The Information Statement has been filed with EMMA as required by the Rule.

<b>Financial Information and Operating Data Category</b>	<b>Reference to Information Statement for Level of Detail</b>
1. Summary presentation on statutory accounting and five-year comparative basis of selected budgeted operating funds operations, concluding with prior fiscal year, plus estimates for current fiscal year	“SELECTED FINANCIAL DATA – Statutory Basis”
2. Summary presentation on GAAP and five-year comparative basis of governmental funds operations, concluding with prior fiscal year	“SELECTED FINANCIAL DATA – GAAP Basis”
3. Summary presentation of actual revenues in budgeted operating funds on five-year comparative basis, concluding with prior fiscal year, plus estimates for current fiscal year	“COMMONWEALTH REVENUES – Statutory Basis Distribution of Budgetary Revenues”
4. So long as Commonwealth statutes impose limits on tax revenues, information as to compliance therewith in the prior fiscal year	“COMMONWEALTH REVENUES – Limitations on Tax Revenues”
5. Summary presentation of budgeted expenditures by selected, then-current major categories on five-year comparative basis and estimated expenditures for current fiscal year	“COMMONWEALTH EXPENDITURES”
6. Summary presentation of the then-current, statutorily imposed funding schedule for future Commonwealth pension liabilities, if any	“COMMONWEALTH EXPENDITURES – Pension”
7. If and to the extent otherwise updated in the prior fiscal year, summary presentation of the size of the state workforce	“STATE WORKFORCE”
8. Five-year summary presentation of actual capital project expenditures	“COMMONWEALTH CAPITAL INVESTMENT PLAN – Capital Investment Plan”

<b>Financial Information and Operating Data Category</b>	<b>Reference to Information Statement for Level of Detail</b>
9. Statement of Commonwealth debt and debt related to general obligation contract liabilities as of the end of the prior fiscal year	“LONG-TERM LIABILITIES – General Authority to Borrow - Commonwealth Debt and General Obligation Contract Assistance Liabilities”
10. Annual fiscal year debt service requirements for Commonwealth general obligation and special obligation bonds, beginning with the current fiscal year	“LONG-TERM LIABILITIES – Debt Service Requirements”
11. Annual fiscal year contract assistance requirements for Commonwealth general obligation contract assistance, beginning with the current fiscal year	“LONG-TERM LIABILITIES – General Obligation Contract Assistance Liabilities”
12. Annual fiscal year budgetary contractual assistance liabilities for Commonwealth, beginning with the current fiscal year	“LONG-TERM LIABILITIES – Budgetary Contractual Assistance Liabilities”
13. Five-year summary presentation of authorized but unissued general obligation debt	“LONG-TERM LIABILITIES – Authorized But Unissued Debt”
14. So long as Commonwealth statutes impose a limit on the amount of outstanding “direct” bonds, information as to compliance therewith as of the end of the prior fiscal year	“LONG-TERM LIABILITIES – General Authority to Borrow”
15. Summary presentation of the then-current, Commonwealth interest rate swaps agreements	“LONG-TERM LIABILITIES – Interest Rate Swaps”

Any or all of the items listed above may be included by reference to other documents, including official statements pertaining to debt issued by the Commonwealth, which have been submitted to EMMA. The Commonwealth’s annual financial statements for each fiscal year shall consist of (i) combined financial statements prepared in accordance with a basis of accounting that demonstrates compliance with the Massachusetts General Laws and other applicable state finance laws, if any, in effect from time to time and (ii) general purpose financial statements prepared in accordance with generally accepted accounting principles in effect from time to time and audited by a firm of certified public accountants appointed by the Commonwealth.

The Commonwealth Disclosure Agreement also will provide that the Treasurer and Receiver-General of the Commonwealth on behalf of the Commonwealth, undertakes for the benefit of the registered owners and Beneficial Owners of the Bonds to provide in a timely manner to EMMA notice of any change in the credit rating of outstanding general obligation bonds of the Commonwealth.

To the extent permitted by law, the provisions of the Commonwealth Disclosure Agreement shall be enforceable against the Commonwealth in accordance with the terms thereof by any owner of a Bond, including any beneficial owner acting as a third-party beneficiary (upon proof of its status as a beneficial owner reasonably satisfactory to the Treasurer and Receiver-General). To the extent permitted by law, any such owner shall have the right, for the equal benefit and protection of all owners of the Bonds, by mandamus or other suit or proceeding at law or in equity, to enforce its rights against the Commonwealth and to compel the Commonwealth and any of its officers, agents or employees to perform and carry out their duties under such provisions of the Commonwealth Disclosure Agreement; provided, however, that the sole remedy in connection with violation of the Commonwealth Disclosure Agreement shall be limited to an action to compel specific performance of the obligations of the Commonwealth under the Commonwealth Disclosure Agreement and shall not include any rights to monetary damages. The Commonwealth Disclosure Agreement shall terminate if no Bonds remain outstanding (without regard to an economic defeasance) or if the provisions of the Rule concerning continuing disclosure are no longer in effect, whichever occurs first. The Commonwealth Disclosure Agreement may be amended, changed or modified without the consent of, or notice to, any owners of the Bonds, (a) to comply with or conform to the provisions of the

Rule or any amendments thereto or authoritative interpretations thereof by the Securities and Exchange Commission or its staff (whether required or optional), (b) to add a dissemination agent for the information required to be provided by such Commonwealth Disclosure Agreement and to make any necessary or desirable provisions with respect thereto, (c) to add to the covenants of the Commonwealth for the benefit of the owners of the Bonds, (d) to modify the contents, presentation and format of the annual financial information from time to time as a result of a change in circumstances that arises from a change in legal requirements, or (e) to otherwise modify the Commonwealth Disclosure Agreement in a manner consistent with the requirements of the Rule concerning continuing disclosure; provided, however, that in the case of any amendment pursuant to clause (d) or (e), (i) the undertaking, as amended, would have complied with the requirements of the Rule at the time of the offering of the Bonds, after taking into account any amendments or authoritative interpretations of the Rule, as well as any change in circumstances, and (ii) the amendment does not materially impair the interests of the owners of the Bonds, as determined either by a party unaffiliated with the Commonwealth (such as Commonwealth disclosure counsel or Commonwealth bond counsel) or by the vote or consent of owners of a majority in outstanding principal amount of the Bonds affected thereby at or prior to the time of such amendment.

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**Information Concerning the Bank**

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### Certain Information Concerning the Banks

The information contained in this Appendix relates to and has been obtained from each of the Banks. The delivery of the Official Statement shall not create any implication that there has been no change in the affairs of the Banks since the date hereof, or that the information contained or referred to in this Appendix F is correct as of any time subsequent to its date.

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#### CITIBANK

Citibank was originally organized on June 16, 1812, and now is a national banking association organized under the National Bank Act of 1864. Citibank is an indirect wholly owned subsidiary of Citigroup Inc. (“Citigroup”), a Delaware holding company. As of December 31, 2009, the total assets of Citibank and its consolidated subsidiaries represented approximately 63% of the total assets of Citigroup and its consolidated subsidiaries.

The long-term ratings of Citibank and its consolidated subsidiaries are “A1,” “A+” and “A+” by Moody’s, S&P and Fitch, respectively. The short-term ratings of Citibank and its consolidated subsidiaries are “P-1,” “A-1” and “F1+” by Moody’s, S&P and Fitch, respectively.

Citibank is a commercial bank that, along with its subsidiaries and affiliates, offers a wide range of banking and trust services to its customers throughout the United States and the world. As a national bank, Citibank is a regulated entity permitted to engage only in banking and activities incidental to banking. Citibank is primarily regulated by the Office of the Comptroller of the Currency (the “Comptroller”), which also examines its loan portfolios and reviews the sufficiency of its allowance for credit losses.

Citibank’s deposits at its U.S. branches are insured by the Federal Deposit Insurance Corporation (the “FDIC”) and are subject to FDIC insurance assessments. The Letter of Credit is not insured by the FDIC or any other regulatory agency of the United States or any other jurisdiction. Citibank may, under certain circumstances, be obligated for the liabilities of its affiliates that are FDIC insured depository institutions.

Legislation enacted as part of the Omnibus Budget Reconciliation Act of 1993 provides that deposits in U.S. offices and certain claims for administrative expenses and employee compensation against a U.S. insured depository institution which has failed will be afforded a priority over other general unsecured claims, including deposits in non-U.S. offices and claims under non-depository contracts in all offices, against such an institution in the “liquidation or other resolution” of such an institution by any receiver. Such priority creditors (including the FDIC, as the subrogee of insured depositors) of such FDIC insured depository institution will be entitled to priority over unsecured creditors in the event of a “liquidation or other resolution” of such institution.

For further information regarding Citibank, reference is made to the Annual Report on Form 10-K of Citigroup and its subsidiaries for the year ended December 31, 2009, and the Quarterly Report on Form 10-Q of Citigroup and its subsidiaries for the quarter ended December 31, 2009, filed by Citigroup with the Securities and Exchange Commission (the “SEC”). Further information regarding Citibank subsequent to December 31, 2009, will be included in the Form 10-Qs (quarterly) and Form 10-Ks (annually) subsequently filed by Citigroup with the SEC. Copies of such material may be obtained, upon payment of a duplicating fee, by writing to the SEC at 100 F Street, N.E., Washington, D.C. 20549. In addition, such reports are available at the SEC’s web site (<http://www.sec.gov>).

In addition, Citibank submits quarterly to the Comptroller certain reports called “Consolidated Reports of Condition and Income for a Bank With Domestic and Foreign Offices” (“Call Reports”). The Call Reports are on file with and publicly available at the Comptroller’s offices at 250 E Street, SW, Washington, D.C. 20219 and are also available on the web site of the FDIC (<http://www.fdic.gov>). Each Call Report consists of a Balance Sheet, Income Statement, Changes in Equity Capital and other supporting schedules at the end of and for the period to which the report relates.

Any of the reports referenced above are available upon request, without charge, by writing or calling Citigroup Document Services, 140 58<sup>th</sup> Street, Brooklyn, New York 11220, (718) 765-6514.

The information contained under “CITIBANK” in this Appendix relates to and has been obtained from Citibank. The information concerning Citibank contained herein is furnished solely to provide limited introductory information regarding Citibank and does not purport to be comprehensive. Such information is qualified in its entirety by the detailed information appearing in the documents and financial statements referenced above.

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## WELLS FARGO BANK, NATIONAL ASSOCIATION

Wells Fargo Bank, National Association (“Wells Fargo Bank”) is a national banking association organized under the laws of the United States of America with its main office at 101 North Phillips Avenue, Sioux Falls, South Dakota 57104, and engages in retail, commercial and corporate banking, real estate lending and trust and investment services. Wells Fargo Bank is an indirect, wholly owned subsidiary of Wells Fargo & Company, a diversified financial services company, a financial holding company and a bank holding company registered under the Bank Holding Company Act of 1956, as amended, with its principal executive offices located in San Francisco, California (“Wells Fargo”).

Effective at 11:59 p.m. on December 31, 2008, Wells Fargo acquired Wachovia Corporation and its subsidiaries in a stock-for-stock merger transaction. Information about this merger has been included in filings made by Wells Fargo with the Securities and Exchange Commission (“SEC”). Copies of these filings are available free of charge on the SEC’s website at [www.sec.gov](http://www.sec.gov). or by writing to Wells Fargo’s Corporate Secretary at the address given below.

Each quarter, Wells Fargo Bank files with the FDIC financial reports entitled “Consolidated Reports of Condition and Income for Insured Commercial Banks with Domestic and Foreign Offices,” commonly referred to as the “Call Reports.” Wells Fargo Bank’s Call Reports are prepared in accordance with regulatory accounting principles, which may differ from generally accepted accounting principles. The publicly available portions of the Call Reports contain the most recently filed quarterly reports of Wells Fargo Bank, which include Wells Fargo Bank’s total consolidated assets, total domestic and foreign deposits, and total equity capital. These Call Reports, as well as the Call Reports filed by Wells Fargo Bank with the FDIC after the date of this Offering Memorandum, may be obtained from the FDIC, Disclosure Group, Room F518, 550 17<sup>th</sup> Street, N.W., Washington, D.C. 20429 at prescribed rates, or from the FDIC on its Internet site at <http://www.fdic.gov>, or by writing to the Wells Fargo Corporate Secretary’s Office, Wells Fargo Center, Sixth and Marquette, MAC N9305-173, Minneapolis, MN 55479.

**The Series A-2 Letter of Credit will be solely an obligation of Wells Fargo Bank and will not be an obligation of, or otherwise guaranteed by, Wells Fargo & Company, and no assets of Wells Fargo & Company or any affiliate of Wells Fargo Bank or Wells Fargo & Company will be pledged to the payment thereof. Payment of the Series A-2 Letter of Credit will not be insured by the FDIC.**

The information contained under “WELLS FARGO BANK, NATIONAL ASSOCIATION” in this Appendix relates to and has been obtained from Wells Fargo Bank, and is furnished solely to provide limited introductory information regarding Wells Fargo Bank and does not purport to be comprehensive. Any financial information provided in this Appendix is qualified in its entirety by the detailed information appearing in the Call Reports referenced above. The delivery hereof shall not create any implication that there has been no change in the affairs of Wells Fargo Bank since the date hereof.

**Definitions and Summary of Certain Provisions of the Bonds  
Relating to Variable Rate Demand Features,  
the Reimbursement Agreements and the Series A Letter of Credit**

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**DEFINITIONS AND SUMMARY OF CERTAIN PROVISIONS OF THE BONDS RELATING TO  
VARIABLE RATE DEMAND FEATURES, THE REIMBURSEMENT AGREEMENTS AND  
THE SERIES A LETTER OF CREDIT**

The following is a summary of certain provisions of the Series 2010 Bonds and the Eighth Supplemental Trust Agreement relating to the variable rate demand features, the Reimbursement Agreements and the Series A Letter of Credit. The summary is not to be regarded as a full statement of the terms of the Series 2010 Bonds, the Eighth Supplemental Trust Agreement, the Reimbursement Agreements or the Series A Letter of Credit and, accordingly, is qualified by reference to the Series 2010 Bonds, the Eighth Supplemental Trust Agreement, the Reimbursement Agreements and the Series A Letter of Credit and is subject to the full text thereof.

**Definitions**

*Alternate Credit Facility* means a letter of credit, insurance policy, line of credit, surety bond, standby purchase agreement or other security or liquidity instrument, as the case may be, issued in accordance with the terms of the Eighth Supplemental Trust Agreement as a replacement or substitute for any Series 2010 A Credit Facility then in effect; provided, however, that any amendment, extension, renewal or substitution of any Series 2010 A Credit Facility then in effect for the purpose of extending the expiration date of such Series 2010 A Credit Facility or modifying such Series 2010 A Credit Facility pursuant to its terms shall not be deemed to be an Alternate Credit Facility for purposes of the Eighth Supplemental Trust Agreement.

*Authorized Denominations* means (a) with respect to 2010 Series A Bonds which are subject to a Long Term Interest Rate Period, \$5,000 or any integral multiple thereof, and (b) with respect to 2010 Series A Bonds which are not described in the preceding clause (a), \$100,000 or any integral multiple of \$5,000 in excess of \$100,000, and (c) with respect to the 2010 Series B Bonds, \$5,000 or any integral multiple thereof.

*Available Moneys* means, with respect to any series of 2010 Series A Bonds for which a Series 2010 A Credit Facility is in effect, (i) moneys drawn under the applicable Series 2010 A Credit Facility which at all times since their receipt by the Trustee or the Tender Agent were held in a separate segregated account or accounts or subaccount or subaccounts in which no moneys (other than those drawn under the applicable Series 2010 A Credit Facility) were at any time held, (ii) moneys which have been paid to the Trustee or the Tender Agent by the Department and have been on deposit with the Trustee or the Tender Agent for at least 124 days (or, if paid to the Trustee or the Tender Agent by an “affiliate,” as defined in Bankruptcy Code §101(2), of the Department 366 days) during and prior to which no Event of Bankruptcy shall have occurred, (iii) any other moneys, if, in the opinion of nationally recognized counsel experienced in bankruptcy matters (which opinion shall be acceptable to each Rating Agency then rating the 2010 Series A Bonds other than S&P), the application of such moneys will not constitute a voidable preference in the event of the occurrence of an Event of Bankruptcy, and (iv) investment earnings on any of the moneys described in clauses (i), (ii) and (iii) of this definition; otherwise, “Available Moneys” means any moneys deposited with the Trustee or the Tender Agent.

*Bank or Banks* means (i) with respect to the 2010 Series A-1 Bonds, Citibank, N.A., and (ii) with respect to the 2010 Series A-2 Bonds, Wells Fargo Bank, National Association, and their respective successors and permitted assigns.

*Bank Bond Interest Differential Amount* means, as to any Bank Bond for any period for which interest on such Bank Bond has not been paid, the difference between the amount of accrued interest on such Bank Bond at the Bank Bond Rate during such period and the amount of accrued interest on such Bond included in the sales price therefor.

*Bank Bond Rate* means the interest rate, if any, specified in and determined in accordance with the applicable Credit Provider Agreement then in effect as the rate at which Bank Bonds shall bear interest, such rate not to exceed the Maximum Bank Bond Interest Rate as provided for under such Credit Provider Agreement; provided, however, that if no such rate is specified in the applicable Credit Provider Agreement then in effect, then Bank Bonds shall continue to bear interest and such interest shall accrue and be payable as specified in the Eighth Supplemental Trust Agreement as if such Bank Bonds were not Bank Bonds.

*Bank Bonds* means 2010 Series A Bonds purchased by the applicable Credit Provider pursuant to a drawing under the Series 2010 A Credit Facility during the period beginning on the date such 2010 Series A Bonds are purchased until the earlier of (i) the date on which such 2010 Series A Bonds are remarketed to a purchaser identified by the Remarketing Agent, or (ii) the date on which the Credit Provider elects pursuant to the Eighth Supplemental Trust Agreement not to sell such 2010 Series A Bonds to a purchaser identified by the Remarketing Agent.

*Bankruptcy Code* means Title 11 of the United States Code, as amended, and any successor statute.

*Bond Interest Term* means, with respect to any 2010 Series A Bond, each period established in accordance with the Eighth Supplemental Trust Agreement during which such 2010 Series A Bond bears interest at a Bond Interest Term Rate.

*Bond Interest Term Rate* means, with respect to each 2010 Series A Bond, a non-variable interest rate on such 2010 Series A Bond established periodically in accordance with the Eighth Supplemental Trust Agreement.

*Bond Purchase Fund* means each such trust fund established pursuant to the Eighth Supplemental Trust Agreement.

*Borrower Bonds* means any 2010 Series A Bonds held by the Tender Agent for and on behalf of the Department or any of its affiliates or any nominee for (or any Person who owns such 2010 Series A Bonds for the sole benefit of) the Department or any of its affiliates pursuant to the Eighth Supplemental Trust Agreement.

*Business Day* means (i) so long as any Letter of Credit remains in effect, any day other than (a) a Saturday or Sunday or a day on which commercial banks located in New York, New York or the city where the Trustee is located are authorized or required to close, (b) a day on which the office of the applicable Bank at which drawings under the Letters of Credit are to be honored is authorized or required to close, or (c) a day on which the New York Stock Exchange is closed, and (ii) otherwise, as set forth in the Metropolitan Highway System Trust Agreement.

*Conversion* means a conversion of any series of 2010 Series A Bonds from one Interest Rate Period to another Interest Rate Period (including the establishment of a new interest period within the Long Term Interest Rate Period) as provided in the Eighth Supplemental Trust Agreement.

*Conversion Date* means the effective date of a Conversion of the 2010 Series A Bonds.

*Counsel* means an attorney or a firm of attorneys admitted to practice law in the highest court of any state in the United States of America or in the District of Columbia.

*Credit Facility Failure* means a failure of the Credit Provider to honor a properly presented and conforming draw under the related Series 2010 A Credit Facility, or the filing or commencement of any receivership or insolvency proceedings by or against the Credit Provider or the Credit Provider shall declare a moratorium on the payment of its unsecured debt obligations or shall repudiate the applicable Series 2010 A Credit Facility.

*Credit Facility Purchase Account* means the account with that name established within the Bond Purchase Fund pursuant to the Eighth Supplemental Trust Agreement.

*Credit Provider* means initially, with respect to the 2010 Series A-1 Bonds, Citibank, N.A., and with respect to the 2010 Series A-2 Bonds, Wells Fargo Bank, National Association, as the providers of the initial Series 2010 A Credit Facility, and their successors and permitted assigns, and, upon the effectiveness of an Alternate Credit Facility for the 2010 Series A-1 Bonds or the 2010 Series A-2 Bonds, the issuer of such Alternate Credit Facility.

*Credit Provider Agreement* means any agreement between the Department and a Credit Provider, pursuant to which a Series 2010 A Credit Facility is issued by the Credit Provider, as the same may be amended or supplemented, initially the Reimbursement Agreements.

*Daily Interest Rate* means a variable interest rate for the 2010 Series A Bonds established in accordance with the Eighth Supplemental Trust Agreement.

*Daily Interest Rate Period* means each period during which a Daily Interest Rate is in effect for the 2010 Series A Bonds.

*Department* means the Massachusetts Department of Transportation, as successor to the Authority, a body politic and corporate and a public instrumentality of the Commonwealth organized and existing under Chapter 6C of the Massachusetts General Laws, as amended and supplemented from time to time.

*Department Purchase Account* means each account with that name established within the Bond Purchase Fund pursuant to the Eighth Supplemental Trust Agreement.

*DTC* means The Depository Trust Company, New York, New York.

*Eighth Supplemental Trust Agreement* shall mean the Eighth Supplemental Metropolitan Highway System Trust Agreement by and between the Department and the Trustee, dated as of May 1, 2010, which supplements and amends the Metropolitan Highway System Trust Agreement.

*Electronic Means* means facsimile transmission, email transmission or other similar electronic means of communication providing evidence of transmission, including a telephone communication confirmed by any other method set forth in this definition.

*Event of Bankruptcy* means any of the following events:

(i) the Department shall (a) apply for or consent to the appointment of, or the taking of possession by, a receiver, custodian, trustee, liquidator or the like of the Department or of all or any substantial part of its property, (b) commence a voluntary case under the Bankruptcy Code, or (c) file a petition seeking to take advantage of any other law relating to bankruptcy, insolvency, reorganization, winding-up or composition or adjustment of debts; or

(ii) a proceeding or case shall be commenced, without the application or consent of the Department in any court of competent jurisdiction, seeking (a) the liquidation, reorganization, dissolution, winding-up, or composition or adjustment of debts, of the Department, (b) the appointment of a trustee, receiver, custodian, liquidator or the like of the Department or of all or any substantial part of their respective property, or (c) similar relief in respect of Department under any law relating to bankruptcy, insolvency, reorganization, winding-up or composition or adjustment of debts.

*Expiration Date* means the termination date of any Series 2010 A Credit Facility then in effect, as extended from time to time in accordance with the terms thereof.

*Favorable Opinion of Bond Counsel* means, with respect to any action relating to the 2010 Series A Bonds, the occurrence of which requires such an opinion, a written legal opinion of Bond Counsel addressed to the Trustee, the Department and the Remarketing Agent, as applicable, to the effect that such action is permitted under the Eighth Supplemental Trust Agreement and will not impair the exclusion of interest on the 2010 Series A Bonds from gross income for purposes of federal income taxation or the exemption of interest on the 2010 Series A Bonds from personal income taxation under the laws of the Commonwealth (subject to customary exceptions).

*Funding Amount* means an amount equal to the difference between (1) the aggregate Tender Price of 2010 Series A Bonds with respect to which a notice was received pursuant to the Eighth Supplemental Trust Agreement and to be purchased pursuant to the Eighth Supplemental Trust Agreement, and (2) the Tender Price of 2010 Series A Bonds to be purchased pursuant to the Eighth Supplemental Trust Agreement that are remarketed by the Remarketing Agent and for which funds have been transferred by the Remarketing Agent to the Tender Agent.

*Interest Accrual Date* means:

- (a) for any Weekly Interest Rate Period, the first day thereof and, thereafter, each January 1 and July 1 during such Weekly Interest Rate Period;
- (b) for any Daily Interest Rate Period, the first day thereof and, thereafter, the first day of each month;
- (c) for any Long Term Interest Rate Period, the first day thereof and, thereafter, each Interest Payment Date during that Long Term Interest Rate Period, other than the last such Interest Payment Date; and
- (d) for each Bond Interest Term within a Short Term Interest Rate Period, the first day thereof.

*Interest Payment Date* means:

- (a) for any Weekly Interest Rate Period, January 1 and July 1, commencing July 1, 2010, or if such day is not a Business Day, the next succeeding Business Day;
- (b) for any Daily Interest Rate Period, the fifth Business Day of the next succeeding calendar month;
- (c) for any Long Term Interest Rate Period, each January 1 and July 1, or if any January 1 or July 1 is not a Business Day, the next succeeding Business Day;
- (d) for any Bond Interest Term, the day next succeeding the last day of that Bond Interest Term;
- (e) for each Interest Rate Period, the day next succeeding the last day such Interest Rate Period is in effect; and
- (f) for Bank Bonds, as set forth in the applicable Credit Provider Agreement.

*Interest Rate Period* means each Daily Interest Rate Period, Weekly Interest Rate Period, Short Term Interest Rate Period or Long Term Interest Rate Period.

*Letters of Credit* means, collectively, the \$106,509,590 irrevocable letter of credit issued by Citibank, N.A., with respect to the 2010 Series A-1 Bonds and the \$114,673,550 irrevocable letter of credit issued by Wells Fargo Bank, National Association, with respect to the 2010 Series A-2 Bonds, each for the benefit of the Trustee.

*Long Term Interest Rate* means a term, non-variable interest rate established in accordance with the Eighth Supplemental Trust Agreement.

*Long Term Interest Rate Period* means each period during which a Long Term Interest Rate is in effect.

*Maximum Bank Bond Interest Rate* means the lesser of (a) the rate of 20% per annum and (b) the Maximum Lawful Rate.

*Maximum Bond Interest Rate* means the lesser of 12% per annum and the Maximum Lawful Rate.

*Maximum Lawful Rate* means the maximum rate of interest on the relevant obligation permitted by applicable law.

*Participant* means, with respect to DTC or another Securities Depository, a member of or participant in DTC or such other Securities Depository, respectively.

*Paying Agent* means, initially, The Bank of New York Mellon, and any successor paying agent, provided that so long as a Series 2010 A Credit Facility is in effect, the paying agent shall be the same Person as the Tender Agent.

*Payment Date* means each Interest Payment Date or any other date on which any principal of, premium, if any, or interest on any 2010 Series A Bond is due and payable for any reason, including without limitation upon any redemption of Bonds pursuant to the Eighth Supplemental Trust Agreement.

*Person* means a corporation, association, partnership, limited liability company, joint venture, trust, organization, business, individual or government or any governmental agency or political subdivision thereof.

*Refunding Trust Agreement* means the Refunding Trust Agreement dated as of May 1, 2010 by and between the Department and The Bank of New York Mellon, as refunding trustee.

*Reimbursement Agreements* means, collectively, that certain Reimbursement Agreement dated as of May 1, 2010 between the Department and Citibank, N.A. with respect to the 2010 Series A-1 Bonds and that certain Reimbursement Agreement dated as of May 1, 2010 between the Department and Wells Fargo Bank, National Association with respect to the 2010 Series A-2 Bonds.

*Reimbursement Obligations* means obligations of the Department under a Credit Provider Agreement to reimburse the related Credit Provider for drawings under the related Series 2010A Credit Facility, including any accrued interest thereon.

*Remarketing Account* means each account with that name established within the Bond Purchase Fund pursuant to the Eighth Supplemental Trust Agreement.

*Remarketing Agent* means each Person qualified under the Eighth Supplemental Trust Agreement to act as Remarketing Agent for the 2010 Series A Bonds and appointed by the Department from time to time.

*Remarketing Agreement* means a Remarketing Agreement between the Department and the Remarketing Agent whereby the Remarketing Agent undertakes to perform the duties of the Remarketing Agent under the Eighth Supplemental Trust Agreement, as amended from time to time.

*Request* means a request by the Tender Agent under a Series 2010 A Credit Facility for the payment of the Tender Price of Bonds in accordance with the terms of the Eighth Supplemental Trust Agreement.

*Securities Act* means the Securities Act of 1933, as amended, and any successor thereto.

*Securities Depository* means DTC or, if applicable, any successor securities depository.

*Series 2010 Bonds* means, collectively, the 2010 Series A Bonds and the 2010 Series B Bonds.

*Series 2010 A Credit Facility* means (i) initially, the Letters of Credit, and all amendments, extensions, renewals or substitutions thereof pursuant to their terms, and upon the effectiveness of any Alternate Credit Facility, such Alternate Credit Facility, and (ii) any other direct-pay letter of credit, insurance policy, surety bond, line of credit or other instrument then in effect which secures or guarantees the payment of principal of and purchase price and interest on the 2010 Series A-1 Bonds or the 2010 Series A-2 Bonds.

*Short Term Interest Rate Period* means each period, consisting of Bond Interest Terms, during which the 2010 Series A Bonds bear interest at one or more Bond Interest Term Rates.

*SIFMA Index* means, on any date, a rate determined on the basis of the seven-day high grade market index of tax-exempt variable rate demand obligations, as produced by Municipal Market Data and published or made available by the Securities Industry & Financial Markets Association (formerly the Bond Market Association) (“SIFMA”) or any Person acting in cooperation with or under the sponsorship of SIFMA and acceptable to the Trustee and effective from such date.

*Tender Agent* means each Person qualified under the Eighth Supplemental Trust Agreement to act as Tender Agent with respect to the 2010 Series A Bonds and so appointed by the Department and so acting from time to time, and its successors.

*Tender Date* means the date on which 2010 Series A Bonds are required to be purchased pursuant to the Eighth Supplemental Trust Agreement.

*Tender Price* means the purchase price to be paid to the Owners of 2010 Series A Bonds purchased pursuant to the Eighth Supplemental Trust Agreement, which shall be equal to the principal amount thereof tendered for purchase, without premium, plus accrued interest from the immediately preceding Interest Accrual Date to the Tender Date (if the Tender Date is not an Interest Accrual Date); provided, however, that in the case of a Conversion or attempted Conversion from a Long Term Interest Rate Period on a date on which the 2010 Series A Bonds being converted would otherwise be subject to optional redemption pursuant to the Eighth Supplemental Trust Agreement if such Conversion did not occur, the Tender Price shall also include the optional redemption premium, if any, provided for such date under the Eighth Supplemental Trust Agreement.

*Trust Indenture Act* means the Trust Indenture Act of 1939, as amended, and any successor thereto.

*2010 Series A Bonds* means, collectively, the 2010 Series A-1 Bonds and the 2010 Series A-2 Bonds, each issued pursuant to the Eighth Supplemental Trust Agreement.

*2010 Series A-1 Bonds* means \$100,000,000 Metropolitan Highway System Revenue Bonds (Senior), Variable Rate Demand Obligations, 2010 Series A-1, dated the date of delivery thereof.

*2010 Series A-2 Bonds* means \$107,665,000 Metropolitan Highway System Revenue Bonds (Senior), Variable Rate Demand Obligations, 2010 Series A-2, dated the date of delivery thereof.

*2010 Series B Bonds* means \$882,310,000 Metropolitan Highway System Revenue Bonds (Senior), 2010 Series B, dated the date of delivery thereof.

*Undelivered Bond* means any 2010 Series A Bond which constitutes an Undelivered Bond under the provisions of the Eighth Supplemental Trust Agreement.

*Underwriter* means, collectively or individually, as the context requires, Citigroup Global Markets Inc. and J.P. Morgan Securities Inc.

*Weekly Interest Rate* means a variable interest rate for the 2010 Series A Bonds established in accordance with the Eighth Supplemental Trust Agreement.

*Weekly Interest Rate Period* means each period during which a Weekly Interest Rate is in effect for the 2010 Series A Bonds. (Section 101 of the Eighth Supplemental Trust Agreement)

## **Interest Rate Periods**

The terms of the 2010 Series A Bonds shall be divided into consecutive Interest Rate Periods during each of which the 2010 Series A Bonds shall bear interest at the Daily Interest Rate, Weekly Interest Rate, Bond Interest Term Rates or Long Term Interest Rate. However, at any given time, all 2010 Series A Bonds shall bear interest at a Daily Interest Rate, a Weekly Interest Rate or a Long Term Interest Rate or at Bond Interest Term Rates. Each sub-series of 2010 Series A Bonds may bear interest in an Interest Rate Period different from that of the other sub-

series of 2010 Series A Bonds provided that, except when bearing interest at Bond Interest Term Rates, all 2010 Series A Bonds of a single sub-series shall bear the same interest rate at any one time. (Section 204 of the Eighth Supplemental Trust Agreement)

### **Determination of Interest Rates**

***Weekly Interest Rate.*** During each Weekly Interest Rate Period, the 2010 Series A Bonds shall bear interest at the Weekly Interest Rate, which shall be determined by the Remarketing Agent by 5:00 p.m. on Tuesday of each week during the Weekly Interest Rate Period, or if such day is not a Business Day, then on the next succeeding Business Day. The first Weekly Interest Rate for each Weekly Interest Rate Period shall be determined on or prior to the first day of such Weekly Interest Rate Period and shall apply to the period commencing on the first day of such Weekly Interest Rate Period and ending on and including the next succeeding Tuesday. Thereafter, each Weekly Interest Rate shall apply to the period commencing on and including Wednesday and ending on and including the next succeeding Tuesday, unless such Weekly Interest Rate Period ends on a day other than Tuesday, in which event the last Weekly Interest Rate for such Weekly Interest Rate Period shall apply to the period commencing on and including the Wednesday preceding the last day of such Weekly Interest Rate Period and ending on and including the last day of such Weekly Interest Rate Period. Each Weekly Interest Rate with respect to the 2010 Series A Bonds shall be the rate of interest per annum determined by the Remarketing Agent (based on an examination of tax exempt obligations comparable, in the judgment of the Remarketing Agent, to the 2010 Series A Bonds and known by the Remarketing Agent to have been priced or traded under then prevailing market conditions) to be the minimum interest rate which, if borne by the 2010 Series A Bonds, would enable the Remarketing Agent to sell all of the 2010 Series A Bonds on the effective date of that rate at a price (without regard to accrued interest) equal to the principal amount thereof.

***Daily Interest Rate.*** During each Daily Interest Rate Period, the 2010 Series A Bonds shall bear interest at the Daily Interest Rate, which shall be determined by the Remarketing Agent on each Business Day for such Business Day. The Daily Interest Rate shall be the rate of interest per annum determined by the Remarketing Agent (based on an examination of tax exempt obligations comparable, in the judgment of the Remarketing Agent, to the 2010 Series A Bonds and known by the Remarketing Agent to have been priced or traded under then prevailing market conditions) on or before 9:30 a.m. on a Business Day to be the minimum interest rate which, if borne by such 2010 Series A Bonds, would enable the Remarketing Agent to sell all of such 2010 Series A Bonds on such Business Day at a price (without regard to accrued interest) equal to the principal amount thereof. The Daily Interest Rate for any day which is not a Business Day shall be the same as the Daily Interest Rate for the immediately preceding Business Day.

***Long Term Interest Rate.*** During each Long Term Interest Rate Period, the 2010 Series A Bonds shall bear interest at a Long Term Interest Rate. The Long Term Interest Rate for each Long Term Interest Period shall be determined by the Remarketing Agent on a Business Day no later than the effective date of such Long Term Interest Rate Period. The Long Term Interest Rate shall be the rate of interest per annum determined by the Remarketing Agent (based on an examination of tax exempt obligations comparable, in the judgment of the Remarketing Agent, to the 2010 Series A Bonds and known by the Remarketing Agent to have been priced or traded under then prevailing market conditions) to be the minimum interest rate at which the Remarketing Agent will agree to purchase such 2010 Series A Bonds on such effective date for resale at a price (without regard to accrued interest) equal to the principal amount thereof; provided, however, in the case of a Long-Term Interest Rate Period effective to the maturity date, the Long-Term Interest Rate may be the rate of interest determined by the Remarketing Agent, with the consent of the Department, which will enable the Remarketing Agent to resell the 2010 Series A Bonds at a price (without regard to accrued interest) which will result in the lowest net interest cost for the 2010 Series A Bonds, after taking into account any premium or discount at which the 2010 Series A Bonds are to be sold.

***Bond Interest Term Rate.*** During each Short Term Interest Rate Period, each 2010 Series A Bond shall bear interest during each Bond Interest Term at the Bond Interest Term Rate for that 2010 Series A Bond. The Bond Interest Term and the Bond Interest Term Rate for each 2010 Series A Bond need not be the same for any two 2010 Series A Bonds, even if determined on the same date. Each Bond Interest Term and Bond Interest Term Rate shall be determined by the Remarketing Agent no later than the first day of each Bond Interest Term. Except for any 2010 Series A Bond purchased on behalf of the Department and remaining unsold by the Remarketing Agent at the close of business on the first day of the Bond Interest Term, each Bond Interest Term shall be for a period of days

within the range or ranges announced by the Remarketing Agent as possible Bond Interest Terms no later than 9:00 a.m. on the first day of each Bond Interest Term. Each Bond Interest Term shall be a period of not more than 180 days, determined by the Remarketing Agent in its reasonable judgment to be the period which, together with all other Bond Interest Terms for all 2010 Series A Bonds bearing interest at Bond Interest Term Rates then Outstanding, will result in the lowest overall interest expense on such 2010 Series A Bonds.

The Bond Interest Term Rate for each Bond Interest Term for each 2010 Series A Bond in a Short Term Interest Rate Period shall be the rate of interest per annum determined by the Remarketing Agent (based on an examination of tax exempt obligations comparable, in the reasonable judgment of such Remarketing Agent, to the 2010 Series A Bonds and known by the Remarketing Agent to have been priced or traded under then prevailing market conditions) to be the minimum interest rate which, if borne by such 2010 Series A Bond for such Bond Interest Term, would enable the Remarketing Agent to sell such 2010 Series A Bond on the effective date of such Bond Interest Term at a price equal to the principal amount thereof. (Section 204 of the Eighth Supplemental Trust Agreement)

### **Notice of Interest Rate**

The Remarketing Agent shall determine the rate of interest for 2010 Series A Bonds during each Interest Rate Period and each Bond Interest Term relating thereto and the Bond Interest Terms for 2010 Series A Bonds during each Short Term Interest Rate Period relating thereto as provided in the Eighth Supplemental Trust Agreement and shall furnish to the Trustee and the Department no later than the Business Day next succeeding the date of determination each rate of interest and Bond Interest Term so determined by telephone or telecopy, promptly confirmed in writing; provided that during a Daily Interest Rate Period such information need be provided only once a week. In lieu of the notification provided in the preceding sentence, the Remarketing Agent may make such information available by readily accessible electronic means. (Section 318 of the Eighth Supplemental Trust Agreement)

### **Conversion**

At the direction of the Department from time to time, any series of the 2010 Series A Bonds may be converted, in whole, from an Interest Rate Period to another Interest Rate Period.

***Conversion to Weekly Interest Rate.*** The Department may, by written direction to the Trustee, the Tender Agent (if any), the Credit Provider (if any) and the Remarketing Agent (if any), elect that the 2010 Series A Bonds shall bear interest at a Weekly Interest Rate. The direction of the Department shall specify (A) the proposed effective date of the Conversion to a Weekly Interest Rate, which shall be (1) in each case, a Business Day not earlier than the 10th day following the second Business Day after receipt by the Trustee of such direction, (2) in the case of a Conversion from a Long Term Interest Rate Period, the day immediately following the last day of the then current Long Term Interest Rate Period or a day on which the 2010 Series A Bonds would otherwise be subject to optional redemption pursuant to the Eighth Supplemental Trust Agreement if such Conversion did not occur and (3) in the case of a Conversion from a Short Term Interest Rate Period, the day immediately following the last day of the Short Term Interest Rate Period determined in accordance with the Eighth Supplemental Trust Agreement, and (B) the Tender Date for the 2010 Series A Bonds to be purchased, which shall be the proposed effective date of the Conversion to a Weekly Interest Rate.

The Trustee shall give notice by first class mail of a Conversion to a Weekly Interest Rate Period to the Owners of the 2010 Series A Bonds not less than 10 days prior to the proposed effective date of such Weekly Interest Rate Period. Such notice shall state (A) that the interest rate shall be converted to a Weekly Interest Rate unless the Department rescinds its election to convert the interest rate to a Weekly Interest Rate as provided in the Eighth Supplemental Trust Agreement; (B) the proposed effective date of the Weekly Interest Rate Period; (C) that the 2010 Series A Bonds are subject to mandatory tender for purchase on the proposed effective date and setting forth the Tender Price and the place of delivery for purchase of the 2010 Series A Bonds; and (D) the information set forth in the notice of mandatory tender as described under the heading "Mandatory Tender" below.

***Conversion to Daily Interest Rate.*** The Department may, by written direction to the Trustee, the Tender Agent (if any), the Credit Provider (if any) and the Remarketing Agent (if any), elect that the 2010 Series A Bonds

shall bear interest at a Daily Interest Rate. The direction of the Department shall specify (A) the proposed effective date of such Conversion to a Daily Interest Rate, which shall be (1) in each case, a Business Day not earlier than the 10th day following the second Business Day after receipt by the Trustee of such direction, (2) in the case of a Conversion from a Long Term Interest Rate Period, the day immediately following the last day of the then current Long Term Interest Rate Period or a day on which the 2010 Series A Bonds would otherwise be subject to optional redemption pursuant the Eighth Supplemental Trust Agreement if such Conversion did not occur and (3) in the case of a Conversion from a Short Term Interest Rate Period, the day immediately following the last day of the Short Term Interest Rate Period determined in accordance with the Eighth Supplemental Trust Agreement, and (B) the Tender Date for the 2010 Series A Bonds to be purchased, which shall be the proposed effective date of the Conversion to a Daily Interest Rate.

The Trustee shall give notice by first class mail of a Conversion to a Daily Interest Rate Period to the Owners of the 2010 Series A Bonds not less than 10 days prior to the proposed effective date of such Daily Interest Rate Period. Such notice shall state (A) that the interest rate shall be converted to a Daily Interest Rate unless the Department rescinds its election to convert the interest rate to a Daily Interest Rate as provided in the Eighth Supplemental Trust Agreement; (B) the proposed effective date of the Daily Interest Rate Period; (C) that the 2010 Series A Bonds are subject to mandatory tender for purchase on the proposed effective date and setting forth the Tender Price and the place of delivery for purchase of such 2010 Series A Bonds and (D) the information set forth in the notice of mandatory tender as described under the heading "Mandatory Tender" below.

***Conversion to Long Term Interest Rate.*** The Department by written direction to the Trustee, the Tender Agent (if any), the Credit Provider (if any) and the Remarketing Agent (if any), may elect that the 2010 Series A Bonds shall bear, or continue to bear, interest at a Long Term Interest Rate. The direction of the Department (1) shall specify the duration of the Long Term Interest Rate Period; (2) shall specify the proposed effective date of the Long Term Interest Rate Period, which date shall be (x) in each case, a Business Day not earlier than the 10th day following the second Business Day after receipt by the Trustee of such direction and (y) in the case of a Conversion from a Short Term Interest Rate Period, the day immediately following the last day of the Short Term Interest Rate Period determined in accordance with the Eighth Supplemental Trust Agreement; (3) shall specify the last day of the Long Term Interest Rate Period (which last day shall be either the day immediately prior to the maturity date, or a day which both immediately precedes a Business Day and is at least 181 days after the effective date thereof); and (4) shall specify a Tender Date on which Owners of the 2010 Series A Bonds are required to deliver their Bonds to be purchased.

If, by the second Business Day preceding the 9th day prior to the last day of any Long Term Interest Rate Period with respect to the 2010 Series A Bonds, the Trustee has not received notice of the Department's election that, during the next succeeding Interest Rate Period, such 2010 Series A Bonds shall bear interest at a Weekly Interest Rate, a Daily Interest Rate, a Long Term Interest Rate or at Bond Interest Term Rates, the next succeeding Interest Rate Period shall be a Weekly Interest Rate Period until such time as the interest rate shall be adjusted to a Daily Interest Rate or Long Term Interest Rate or Bond Interest Term Rates as provided in the Eighth Supplemental Trust Agreement, and the 2010 Series A Bonds shall be subject to mandatory purchase as provided in the Eighth Supplemental Trust Agreement on the first day of such Weekly Interest Rate Period.

The Trustee shall give notice by first class mail of a Conversion to a (or the establishment of another) Long Term Interest Rate Period to the Owners of the 2010 Series A Bonds not less than 10 days prior to the effective date of the Long Term Interest Rate Period. Such notice shall state (A) that the interest rate shall be converted to, or continue to be, a Long Term Interest Rate unless (1) the Department rescinds its election to convert the interest rate to a Long Term Interest Rate as provided in the Eighth Supplemental Trust Agreement or (2) all the 2010 Series A Bonds are not remarketed at a Long Term Interest Rate; (B) the proposed effective date, duration and last day of the Long Term Interest Rate Period; (C) that the 2010 Series A Bonds are subject to mandatory tender for purchase on such proposed effective date and setting forth the Tender Price and the place of delivery for purchase of the 2010 Series A Bonds; and (D) the information set forth in the notice of mandatory tender as described under the heading "Mandatory Tender" below.

***Conversion to Bond Interest Term Rate.*** The Department may, by written direction to the Trustee, the Tender Agent (if any), the Credit Provider (if any), and the Remarketing Agent (if any), elect that the 2010 Series A Bonds shall bear interest at Bond Interest Term Rates. The direction of the Department shall specify (A) the

proposed effective date of the Short Term Interest Rate Period (during which the 2010 Series A Bonds shall bear interest at Bond Interest Term Rates), which shall be (1) in each case, a Business Day not earlier than the 10th day following the second Business Day after receipt by the Trustee of such direction and (2) in the case of a Conversion from a Long Term Interest Rate Period, the day immediately following the last day of such Long Term Interest Rate Period or a day on which the 2010 Series A Bonds would otherwise be subject to optional redemption pursuant to the Eighth Supplemental Trust Agreement if such Conversion did not occur, and (B) the Tender Date for the 2010 Series A Bonds to be purchased, which shall be the proposed effective date of the Short Term Interest Rate Period.

The Trustee shall give notice by first class mail of a Conversion to a Short Term Interest Rate Period to the Owners of the 2010 Series A Bonds not less than 10 days prior to the proposed effective date of such Short Term Interest Rate Period. Such notice shall state (A) that the 2010 Series A Bonds shall bear interest at Bond Interest Term Rates unless the Department rescinds its election to convert the interest rate to Bond Interest Term Rates as provided in the Eighth Supplemental Trust Agreement; (B) the proposed effective date of the Short Term Interest Rate Period; (C) that the 2010 Series A Bonds are subject to mandatory tender for purchase on the proposed effective date of the Short Term Interest Rate Period and setting forth the applicable Tender Price and the place of delivery for purchase of such 2010 Series A Bonds; and (D) the information set forth in the notice of mandatory tender as described under the heading "Mandatory Tender" below.

***Maximum Bond Interest Rate to Apply Under Certain Circumstances.*** Notwithstanding anything in the Eighth Supplemental Trust Agreement to the contrary, if the 2010 Series A Bonds are bearing interest at a Weekly Interest Rate, a Daily Interest Rate or Bond Interest Term Rates and the Remarketing Agent resigns and no successor has been appointed as of the effective date of such resignation, then the 2010 Series A Bonds shall bear interest at the Maximum Bond Interest Rate until a successor Remarketing Agent has been appointed and begins determining the Weekly Interest Rate, Daily Interest Rate or Bond Interest Term Rates. Notwithstanding anything in the Eighth Supplemental Trust Agreement to the contrary, if a Series 2010 A Credit Facility is required to be maintained with respect to any series of 2010 Series A Bonds pursuant to the Eighth Supplemental Trust Agreement and no Series 2010 A Credit Facility is in effect, then such 2010 Series A Bonds shall bear interest at the Maximum Bond Interest Rate until an Alternate Credit Facility is delivered to the Trustee and accepted pursuant to the Eighth Supplemental Trust Agreement. (Section 204 of the Eighth Supplemental Trust Agreement)

#### **Other Conditions to Conversion**

No Conversion from one Interest Rate Period to another shall take effect under the Eighth Supplemental Trust Agreement unless each of the following conditions, to the extent applicable, shall have been satisfied.

- (i) With respect to the new Interest Rate Period, there shall be in effect a Series 2010 A Credit Facility if and as required under the Eighth Supplemental Trust Agreement.
- (ii) The Trustee shall have received a Favorable Opinion of Bond Counsel with respect to such Conversion dated the effective date of such Conversion.
- (iii) In the case of any Conversion with respect to which there shall be no Series 2010 A Credit Facility in effect to provide funds for the purchase of the applicable 2010 Series A Bonds on the Conversion Date, the remarketing proceeds available on the Conversion Date shall not be less than the amount required to purchase all of the 2010 Series A Bonds at the Tender Price (not including any premium).
- (iv) Such Conversion is not prohibited by the related Series 2010 A Credit Facility.

In the event that any condition to the Conversion of any series of 2010 Series A Bonds shall not have been satisfied as provided in this section or otherwise under the Eighth Supplemental Trust Agreement, then the applicable 2010 Series A Bonds shall bear interest at a Weekly Interest Rate commencing on the date which would have been the effective date of the Conversion unless the applicable 2010 Series A Bonds were in a Daily Interest Rate Period immediately prior to such proposed Conversion. If the 2010 Series A Bonds proposed to be converted were in a Daily Interest Rate Period immediately prior to such proposed Conversion, then such 2010 Series A Bonds shall continue to bear interest at the Daily Interest Rate as in effect immediately prior to such proposed Conversion.

The applicable 2010 Series A Bonds shall continue to be subject to mandatory tender for purchase on the date which would have been the effective date of the Conversion as provided in the Eighth Supplemental Trust Agreement. (Section 205 of the Eighth Supplemental Trust Agreement)

### **Optional Tender**

***During Weekly Interest Rate Period.*** During any Weekly Interest Rate Period, any 2010 Series A Bond (other than a Bank Bond or Borrower Bond) bearing interest at a Weekly Interest Rate shall be purchased in an Authorized Denomination (provided that the amount of any such 2010 Series A Bond not to be purchased shall also be in an Authorized Denomination) from its Bondowner at the option of the Bondowner on any Business Day at a purchase price equal to the Tender Price, payable in immediately available funds, upon delivery to the Tender Agent and to the Trustee and with a copy to the Remarketing Agent of an irrevocable written notice which states the series and principal amount of such 2010 Series A Bond, the principal amount thereof to be purchased and the date on which the same shall be purchased, which date shall be a Business Day not prior to the seventh day after the date of the delivery of such notice to the Tender Agent, the Trustee and the Remarketing Agent. Any notice delivered to the Tender Agent after 4:00 p.m. shall be deemed to have been received on the next succeeding Business Day. Bank Bonds and Borrower Bonds may not be tendered for purchase at the option of the Owner thereof. For payment of the Tender Price on the Tender Date, such 2010 Series A Bond must be delivered at or prior to 10:00 a.m. on the Tender Date to the Tender Agent accompanied by an instrument of transfer, in form satisfactory to the Tender Agent executed in blank by the Bondowner or its duly authorized attorney, with such signature guaranteed by a commercial bank, trust company, or member firm of the New York Stock Exchange.

***During Daily Interest Rate Period.*** During any Daily Interest Rate Period, any 2010 Series A Bond (other than a Bank Bond) bearing interest at a Daily Interest Rate shall be purchased in an Authorized Denomination (provided that the amount of any such 2010 Series A Bond not to be purchased shall also be in an Authorized Denomination) from its Bondowner at the option of the Bondowner on any Business Day at a purchase price equal to the Tender Price, payable in immediately available funds, upon delivery to the Tender Agent and to the Trustee and with a copy to the Remarketing Agent, by no later than 10:00 a.m. on such Business Day, of an irrevocable written notice or an irrevocable telephonic notice, promptly confirmed by telecopy or other writing, which states the series and principal amount of such 2010 Series A Bonds to be purchased on such Business Day. Bank Bonds may not be tendered for purchase at the option of the Owner thereof. For payment of the Tender Price on the Tender Date, such 2010 Series A Bonds must be delivered, at or prior to 11:00 a.m., on the Tender Date, to the Tender Agent, accompanied by an instrument of transfer thereof, in form satisfactory to the Tender Agent, executed in blank by the Bondowner thereof or its duly authorized attorney, with such signature guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange. (Section 305 of the Eighth Supplemental Trust Agreement)

### **Mandatory Tender**

***Mandatory Tender for Purchase on Day Next Succeeding Last Day of Each Bond Interest Term.*** On the first day following the last day of each Bond Interest Term unless such day is the first day of a new Interest Rate Period (in which case a 2010 Series A Bond shall be subject to mandatory purchase pursuant to the following paragraph), a 2010 Series A Bond shall be subject to mandatory tender for purchase at the Tender Price, payable by wire transfer in immediately available funds, if such 2010 Series A Bond is delivered to the Tender Agent on or prior to 12:00 noon on the Tender Date, or if delivered after 12:00 noon, on the next succeeding Business Day. Interest shall cease to accrue on such 2010 Series A Bond on the last day of each Bond Interest Term. The Tender Price shall be payable only upon surrender of such 2010 Series A Bond to the Tender Agent, accompanied by an instrument of transfer, in form satisfactory to the Tender Agent, executed in blank by the Bondowner or its duly authorized attorney, with such signature guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange.

***Mandatory Tender for Purchase on First Day of Each Interest Rate Period.*** The 2010 Series A Bonds shall be subject to mandatory tender for purchase on the first day of each Interest Rate Period (or on the day which would have been the first day of an Interest Rate Period had the Department not rescinded its election to make a Conversion or had one of the conditions necessary for a Conversion not occurred which resulted in the interest rate on such 2010 Series A Bonds not being converted) at the Tender Price, payable in immediately available funds. The

2010 Series A Bonds shall be subject to mandatory tender for purchase pursuant to the provisions described in this paragraph on the first day following the last day of each Long-Term Interest Rate Period (because such day will be, or would have been, the first day of a new Interest Rate Period). For payment of the Tender Price on the Tender Date, a 2010 Series A Bond must be delivered at or prior to 10:00 a.m. on the Tender Date. If delivered after that time, the Tender Price shall be paid on the next succeeding Business Day. The Tender Price shall be payable only upon surrender of such 2010 Series A Bond to the Tender Agent, accompanied by an instrument of transfer, in form satisfactory to the Tender Agent, executed in blank by the Bondowner or its duly authorized attorney, with such signature guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange.

***Mandatory Tender for Purchase upon Termination, Replacement or Expiration of Series 2010 A Credit Facility.*** If at any time the Trustee gives notice, in accordance with the Eighth Supplemental Trust Agreement, that 2010 Series A Bonds tendered for purchase shall, on the date specified in such notice, cease to be subject to purchase pursuant to the related Series 2010 A Credit Facility then in effect as a result of the termination, replacement or expiration of the term, as extended, of such Series 2010 A Credit Facility, including but not limited to termination at the option of the Department in accordance with the terms of such Series 2010 A Credit Facility, then the 2010 Series A Bonds shall be subject to mandatory tender for purchase at the Tender Price, payable in immediately available funds. The mandatory purchase of 2010 Series A Bonds pursuant to the provisions described in this paragraph shall occur: (1) on the fifth Business Day preceding any such expiration or termination of such Series 2010 A Credit Facility without replacement by an Alternate Credit Facility, and (2) on the proposed date of the replacement of a Series 2010 A Credit Facility, in any case where a Series 2010 A Credit Facility or an Alternate Credit Facility is to be delivered to the Trustee pursuant to the Eighth Supplemental Trust Agreement. In the case of any replacement of an existing Series 2010 A Credit Facility, the existing Series 2010 A Credit Facility will be drawn upon to pay the Tender Price, if necessary, rather than the Alternate Credit Facility. No mandatory tender pursuant to the provisions described in this paragraph will be effected upon the replacement of a Series 2010 A Credit Facility in the case where the related Credit Provider has failed to honor a properly presented and conforming drawing or demand for purchase under the related facility. The assignment of any Series 2010 A Credit Facility which relieves the Credit Provider of its obligation to purchase the related 2010 Series A Bonds shall be considered a replacement for the purposes of the provisions described in this paragraph.

For payment of the Tender Price on the Tender Date, a 2010 Series A Bond must be delivered at or prior to 10:00 a.m. on the Tender Date. If delivered after that time, the Tender Price shall be paid on the next succeeding Business Day. The Tender Price shall be payable only upon surrender of such 2010 Series A Bond to the Tender Agent at its principal office for delivery of 2010 Series A Bonds, accompanied by an instrument of transfer, in form satisfactory to the Tender Agent, executed in blank by the Owner or its duly authorized attorney, with such signature guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange. If, as a result of any expiration, termination with notice or replacement of a Series 2010 A Credit Facility, any 2010 Series A Bond is no longer subject to purchase pursuant to a Series 2010 A Credit Facility, the Tender Agent (upon receipt from the Owner thereof in exchange for payment of the Tender Price thereof) shall present such 2010 Series A Bond to the Trustee for notation of such fact thereon.

***Mandatory Tender for Purchase at the Direction of the Department or the Credit Provider.***

(i) During any Daily Interest Rate Period or Weekly Interest Rate Period, the 2010 Series A Bonds are subject to mandatory tender for purchase on any Business Day designated by the Department, with the written consent of the Remarketing Agent and the related Credit Provider, if any, at the Tender Price, payable in immediately available funds. Such purchase date shall be a Business Day not earlier than the 10th day following the second Business Day after receipt by the Trustee of such designation.

(ii) Any series of 2010 Series A Bonds for which a Series 2010 A Credit Facility is in effect is subject to mandatory tender for purchase at the Tender Price, payable in immediately available funds, on the fourth Business Day after receipt by the Trustee of a written notice from the related Credit Provider of a non-reinstatement of the related Series 2010 A Credit Facility or that an “Event of Default” under the related Credit Provider Agreement has occurred and is continuing, and a written request from such Credit Provider that all of such 2010 Series A Bonds be required to be tendered for purchase.

(iii) For payment of the Tender Price on the Tender Date, 2010 Series A Bonds must be delivered at or prior to 10:00 a.m. on the Tender Date. If delivered after that time, the Tender Price shall be paid on the next succeeding Business Day. The Tender Price shall be payable only upon surrender of such 2010 Series A Bonds to the Tender Agent at its principal office for delivery of 2010 Series A Bonds, accompanied by an instrument of transfer, in form satisfactory to the Tender Agent, executed in blank by the Bondowner or its duly authorized attorney, with such signature guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange.

***Notice of Mandatory Tender for Purchase.*** In connection with any mandatory tender for purchase of 2010 Series A Bonds in accordance with the provisions described in the second and third subsections of this section, the Trustee shall give the notice required by this paragraph. In connection with any mandatory tender for purchase of 2010 Series A Bonds in accordance with the provisions described in clause (i) of the preceding subsection, the Trustee shall give notice of a mandatory tender for purchase by first-class mail to the Owners, with a copy to the Department, the Tender Agent, the Remarketing Agent and the Credit Provider, not less than 10 days prior to the Tender Date. In connection with any mandatory tender for purchase of 2010 Series A Bonds in accordance with the provisions described in clause (ii) of the preceding subsection, the Trustee shall give notice of a mandatory tender for purchase by first-class mail to the Owners, with a copy to the Department, the Tender Agent and the Remarketing Agent, not less than three days prior to the Tender Date. Such notice shall state (i) in the case of a mandatory tender for purchase pursuant to the second subsection of this section, the type of Interest Rate Period to commence on such mandatory purchase date; (ii) in the case of a mandatory tender for purchase pursuant to the third subsection of this section, that the Series 2010 A Credit Facility will expire, terminate or be replaced and that the Tender Price of the affected 2010 Series A Bonds will no longer be payable from the Series 2010 A Credit Facility then in effect and that any rating applicable to such 2010 Series A Bonds may be reduced or withdrawn; (iii) that the Tender Price of any 2010 Series A Bond subject to mandatory tender for purchase shall be payable only upon surrender of that 2010 Series A Bond to the Tender Agent at its principal office for delivery of 2010 Series A Bonds, accompanied by an instrument of transfer, in form satisfactory to the Tender Agent, executed in blank by the Bondowner or its duly authorized attorney, with such signature guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange; (iv) that, provided that moneys sufficient to effect such purchase shall have been provided through the remarketing of such 2010 Series A Bonds by the Remarketing Agent, through the Series 2010 A Credit Facility or funds provided by the Department, all 2010 Series A Bonds subject to mandatory tender for purchase shall be purchased on the mandatory Tender Date; and (v) that if any Owner of a 2010 Series A Bond subject to mandatory tender for purchase does not surrender that 2010 Series A Bond to the Tender Agent for purchase on the mandatory Tender Date, then that 2010 Series A Bond shall be deemed to be an Undelivered Bond, that no interest shall accrue on that 2010 Series A Bond on and after the mandatory Tender Date and that the Owner shall have no rights under the Eighth Supplemental Trust Agreement other than to receive payment of the Tender Price. (Section 305 of the Eighth Supplemental Trust Agreement)

### **Delivery of 2010 Series A Bonds**

2010 Series A Bonds purchased with money derived from the remarketing of the 2010 Series A Bonds shall be made available by the Tender Agent to the Remarketing Agent for delivery to the purchasers thereof against payment therefor.

2010 Series A Bonds purchased with money furnished by a Credit Provider shall be registered in the name of the Credit Provider and delivered in certificated form to the Credit Provider as soon as practical following their purchase or held by the Tender Agent as agent for the Credit Provider, as directed by the Credit Provider; provided, however, if a book-entry system is in effect with respect to the 2010 Series A Bonds, the Tender Agent and the Trustee shall follow any procedures required by the Securities Depository relating to Bank Bonds (including but not limited to the April 4, 2008 notice from DTC entitled “Variable Rate Demand Obligation Failed Remarketings and the Issuance of Bank Bonds”).

2010 Series A Bonds purchased with money furnished by the Department shall be held in escrow by the Tender Agent for the account of the Department until the Tender Agent receives further instructions from the Department regarding disposition of those Borrower Bonds.

2010 Series A Bonds delivered as provided in this section shall be registered in the manner directed by the recipient thereof.

When any Bank Bonds are remarketed, the Tender Agent shall not release 2010 Series A Bonds so remarketed to the Remarketing Agent until the Tender Agent has received and paid to the applicable Credit Provider the proceeds of such remarketing and (unless the Series 2010 A Credit Facility is no longer to remain in effect) the applicable Series 2010 A Credit Facility has been reinstated in an amount equal to the principal and corresponding interest coverage of the Bank Bonds so remarketed and the Tender Agent has received written notice of such reinstatement. (Section 319 of the Eighth Supplemental Trust Agreement)

### **Tender Agent**

By acceptance of its appointment under the Eighth Supplemental Trust Agreement, the Tender Agent agrees:

(i) to hold all money in the Bond Purchase Fund and each of the accounts therein in trust for the benefit of the Owners who are required to tender 2010 Series A Bonds for purchase and to apply such moneys in accordance with the Eighth Supplemental Trust Agreement;

(ii) to hold all 2010 Series A Bonds delivered to it pursuant to the Eighth Supplemental Trust Agreement as agent and bailee of, and in escrow for the benefit of, the respective Owners which have delivered such 2010 Series A Bonds until money representing the Tender Price of such 2010 Series A Bonds shall have been delivered to or for the account of or to the order of such Owners;

(iii) to hold all 2010 Series A Bonds registered in the name of the new Owners thereof which have been delivered to it by the Trustee for delivery to the Remarketing Agent in accordance with the Eighth Supplemental Trust Agreement;

(iv) to hold Bank Bonds for the account of the applicable Credit Provider as stated in the Eighth Supplemental Trust Agreement and 2010 Series A Bonds for the account of the Department as stated in the Eighth Supplemental Trust Agreement; and

(v) to keep such books and records as shall be consistent with prudent industry practice and to make such books and records available for inspection by the Trustee, the Department, the Credit Provider and the Remarketing Agent at all reasonable times.

***Determination by Tender Agent; Notice of Tender.*** For purposes of the Eighth Supplemental Trust Agreement, the Tender Agent shall determine timely and proper delivery of 2010 Series A Bonds pursuant to the Eighth Supplemental Trust Agreement and the proper endorsement of 2010 Series A Bonds delivered. That determination shall be binding on the Owners of those 2010 Series A Bonds, the Department, the applicable Credit Provider and the Remarketing Agent, absent manifest error.

In the case of a 2010 Series A Bond bearing interest at a Weekly Interest Rate, as soon as practicable upon receipt from a Bondowner or Participant of a notice pursuant to the provisions described in the first subsection under the heading "Optional Tender" above, but not later than 12:00 Noon, New York, New York time, on the day following receipt of such notice, the Tender Agent shall notify the Remarketing Agent, the applicable Credit Provider, the Trustee, and the Department by telephone, promptly confirmed in writing, or by telecopy, of receipt of such notice, the name of such Bondowner or Participant, the principal amount of 2010 Series A Bonds to be purchased and the date on which such 2010 Series A Bonds are to be purchased in accordance therewith.

In the case of a 2010 Series A Bond bearing interest at a Daily Interest Rate, as soon as practicable upon receipt from a Bondowner or Participant of a notice pursuant to the provisions described in the second subsection under the heading "Optional Tender" above, but not later than 11:15 a.m., New York, New York time, on the day of receipt of such notice, the Tender Agent shall notify the Remarketing Agent, the Credit Provider, the Trustee, and the Department by telephone, promptly confirmed in writing, or by telecopy, of receipt of such notice, the name of

such Bondowner or Participant, the principal amount of 2010 Series A Bonds to be purchased and the date on which such 2010 Series A Bonds are to be purchased in accordance therewith.

The Tender Agent shall notify the Remarketing Agent of a mandatory tender for purchase pursuant to the provisions described in the first subsection under the heading “Mandatory Tender” above not later than 3:00 p.m., New York, New York time, on the last Business Day prior to the Tender Date, and of a mandatory tender for purchase pursuant the provisions described in the second, third and fourth subsections under the heading “Mandatory Tender” above not later than 11:00 a.m., New York, New York time, on the last Business Day prior to the Tender Date.

***Purchase of 2010 Series A Bonds; Sources and Deposits of Tender Price.*** 2010 Series A Bonds required to be purchased in accordance with the Eighth Supplemental Trust Agreement shall be purchased from the Owners thereof, on the Tender Date and at the Tender Price. Funds for the payment of the Tender Price shall be received by the Tender Agent from the following sources and used in the order of priority indicated:

(i) proceeds of the sale of 2010 Series A Bonds remarketed pursuant to the Eighth Supplemental Trust Agreement and the Remarketing Agreement and furnished to the Tender Agent by the Remarketing Agent for deposit into the Remarketing Account of the Bond Purchase Fund;

(ii) money furnished by a Credit Provider to the Tender Agent for deposit into the applicable Credit Facility Purchase Account of the Bond Purchase Fund from a draw on the Series 2010 A Credit Facility, if any (provided that moneys from draws on the Series 2010 A Credit Facility shall not be used to purchase Bank Bonds or Borrower Bonds); and

(iii) money, if any, furnished by the Department to the Tender Agent for deposit into the Department Purchase Account of the Bond Purchase Fund for the purchase of 2010 Series A Bonds by the Department.

Money held in the Bond Purchase Fund shall be held uninvested by the Tender Agent.

***Undelivered Bonds; Tender Price.*** If any Owner of a 2010 Series A Bond who has given notice of tender of purchase pursuant to the Eighth Supplemental Trust Agreement or any Owner of a 2010 Series A Bond subject to mandatory tender for purchase pursuant to the Eighth Supplemental Trust Agreement, shall fail to deliver that 2010 Series A Bond to the Tender Agent at the place and on the Tender Date and at the time specified, or shall fail to deliver that 2010 Series A Bond properly endorsed, that 2010 Series A Bond shall constitute an Undelivered Bond. If funds in the amount of the Tender Price of the Undelivered Bond are available for payment to the Owner thereof on the Tender Date and at the time specified, then from and after the Tender Date and time of that required delivery (A) the Undelivered Bond shall be deemed to be purchased and shall no longer be deemed to be Outstanding under the Eighth Supplemental Trust Agreement; (B) interest shall no longer accrue on the Undelivered Bond; and (C) funds in the amount of the Tender Price of the Undelivered Bond shall be held uninvested by the Tender Agent for the benefit of the Owner thereof (provided that the Owner shall have no right to any investment proceeds derived from such funds), to be paid on delivery (and proper endorsement) of the Undelivered Bond to the Tender Agent at its principal office for delivery of 2010 Series A Bonds. Any money which the Tender Agent segregates and holds in trust for the payment of the Tender Price of any 2010 Series A Bond which remains unclaimed for five years after the date of purchase shall be paid to the Department. After the payment of such unclaimed money to the Department, the former Owner of such 2010 Series A Bond shall look only to the Department for the payment thereof. The Department shall not be liable for any interest on unclaimed money and shall not be regarded as a trustee of such money. (Sections 315 and 317 of the Eighth Supplemental Trust Agreement)

### **Remarketing Agent**

The Remarketing Agent shall signify its acceptance of the duties and obligations imposed upon it under the Eighth Supplemental Trust Agreement by a written instrument of acceptance (which may be the Remarketing Agreement) delivered to the Department, the Trustee, the Tender Agent, and the Credit Provider, under which the Remarketing Agent shall agree, particularly, to keep such books and records related to the remarketing of the 2010

Series A Bonds as shall be consistent with prudent industry practice and to make such books and records related to the remarketing of the 2010 Series A Bonds available for inspection by the Department, the Trustee, and the Tender Agent and the Credit Provider at all reasonable times. Promptly upon receipt of such acceptance by a Remarketing Agent, the Trustee shall give notice by first-class mail to the Owners of the 2010 Series A Bonds of the appointment of such Remarketing Agent, except the initial Remarketing Agent(s).

Upon receipt of a notice of tender from the Tender Agent pursuant to the Eighth Supplemental Trust Agreement (other than a mandatory tender as a result of the expiration or termination of the applicable Series 2010 A Credit Facility without replacement by an Alternate Credit Facility), the Remarketing Agent shall offer for sale and use its best efforts to sell such 2010 Series A Bonds (including Bank Bonds) on the same date designated for purchase thereof in accordance with the Eighth Supplemental Trust Agreement and, if not remarketed on such date, thereafter until sold, at a price equal to par plus accrued interest, at the interest rate necessary to facilitate remarketing, up to the Maximum Bond Interest Rate. 2010 Series A Bonds shall not be remarketed to the Department. 2010 Series A Bonds shall not be remarketed unless a Series 2010 A Credit Facility is in place when required under the Eighth Supplemental Trust Agreement unless the Remarketing Agent agrees, in its sole discretion, but with the consent of the Department, to remarket the Bonds. Notwithstanding anything to the contrary provided in the Eighth Supplemental Trust Agreement, the 2010 Series A Bonds shall not be remarketed following a Mandatory Purchase Date occurring at the Credit Provider's direction pursuant to the Eighth Supplemental Trust Agreement unless and until the Remarketing Agent has received the written consent of the Credit Provider to such remarketing. Notwithstanding anything to the contrary provided in the Eighth Supplemental Trust Agreement, the Department, with the written consent of the applicable Credit Provider, if any, may direct the Remarketing Agent to suspend its efforts to remarket 2010 Series A Bonds to be purchased pursuant to the Eighth Supplemental Trust Agreement and, upon receipt of such a written direction and consent, the Remarketing Agent shall immediately suspend its remarketing efforts for the period of time specified in such direction.

The Remarketing Agent shall give notice by Electronic Means to the Trustee and the Tender Agent of the aggregate principal amount of 2010 Series A Bonds tendered for purchase which have not been remarketed. By 11:45 a.m., New York, New York time, on the Tender Date, the Remarketing Agent shall cause the Tender Price of the 2010 Series A Bonds to be delivered to the Tender Agent for deposit into the Remarketing Account of the Bond Purchase Fund and shall give notice by Electronic Means to the Trustee and the Tender Agent on each date on which 2010 Series A Bonds have been purchased pursuant to the provisions described in clause (i) under the subsection "Purchase of 2010 Series A Bonds; Sources and Deposits of Tender Price" above, specifying the principal amount of such 2010 Series A Bonds, if any, sold by it pursuant to the Eighth Supplemental Trust Agreement along with a list of the purchasers showing the names and denominations in which such Bonds shall be registered, and the addresses and social security or taxpayer identification numbers of such purchasers. Upon receipt from the Remarketing Agent of such information, the Trustee shall prepare 2010 Series A Bonds in accordance with such information received from the Remarketing Agent for registration of transfer and redelivery to the Remarketing Agent. Promptly upon receipt of such latter notice from the Remarketing Agent, the Tender Agent shall notify the Credit Provider and the Department as to the projected Funding Amount, if any. (Sections 315 and 318 of the Eighth Supplemental Trust Agreement)

#### **Qualifications of Remarketing Agent and Tender Agent; Resignation and Removal of Remarketing Agent and Tender Agent**

**Remarketing Agent.** Each Remarketing Agent shall be a member of the National Association of Securities Dealers, having a combined capital stock, surplus and undivided profits of at least \$100,000,000 and authorized by law to perform all the duties imposed upon it by the Eighth Supplemental Trust Agreement and the Remarketing Agreement. A Remarketing Agent may at any time resign and be discharged of the duties and obligations created by the Eighth Supplemental Trust Agreement by giving notice to the Department, the Trustee, the Tender Agent and the Credit Provider. Such resignation shall take effect on the 60th day after the receipt by the Department of the notice of resignation. A Remarketing Agent may be removed at any time on 15 days prior written notice, by an instrument signed by the Department, approved in writing by the related Credit Provider, if any, and delivered to such Remarketing Agent, the Trustee and the Tender Agent. Notwithstanding the provisions of this paragraph, such removal shall not take effect prior to the date that a successor Remarketing Agent acceptable to the related Credit Provider, if any, has been appointed by the Department and has accepted such appointment. Notwithstanding the provisions of this paragraph, the Remarketing Agent may not be removed unless it consents to such removal or the

successor Remarketing Agent agrees to purchase any 2010 Series A Bonds owned by the Remarketing Agent as of the effective date of such removal at a purchase price equal to the principal amount thereof plus accrued interest from the immediately preceding Interest Accrual Date to the effective date of such removal.

***Tender Agent.*** Each Tender Agent shall be a commercial bank with trust powers or a trust company duly organized under the laws of the United States of America or any state or territory thereof having a combined capital stock, surplus and undivided profits of at least \$50,000,000 and authorized by law to perform all the duties imposed upon it by the Eighth Supplemental Trust Agreement. A Tender Agent may at any time resign and be discharged of the duties and obligations created by the Eighth Supplemental Trust Agreement by giving at least 60 days' notice to the Trustee, the Department, Credit Provider and the Remarketing Agent. A Tender Agent may be removed at any time by an instrument signed by the Department, and delivered to such Tender Agent, the Trustee, the Remarketing Agent and the Credit Provider. Notwithstanding the provisions of this paragraph, such resignation or removal shall not take effect prior to the date that a successor Tender Agent has been appointed by the Department and approved in writing by the related Credit Provider, if any, and has accepted such appointment. (Section 316 of the Eighth Supplemental Trust Agreement)

### **Series 2010 A Credit Facility**

If a Series 2010 A Credit Facility for the 2010 Series A Bonds is in effect, the Trustee shall, on or before each Interest Payment Date and each other date on which a payment of principal is due either at maturity or as a result of any mandatory or optional redemption of such 2010 Series A Bonds or otherwise, make a drawing under such Series 2010 A Credit Facility, in accordance with the terms of the Series 2010 A Credit Facility, no later than the time provided in such Series 2010 A Credit Facility for presentations of drawings in order to receive payment in immediately available funds by 12:30 p.m. on such date, equal to the interest on 2010 Series A Bonds then payable from such Series 2010 A Credit Facility due on such date (other than such interest representing a portion of the Tender Price of any 2010 Series A Bonds required to be purchased on such date and other than any interest due on Bank Bonds) and shall use such drawing to pay such interest due on the related 2010 Series A Bonds on such date. In determining the amount of any such interest then due, the Trustee shall not take into consideration any interest due on any 2010 Series A Bond for any period when such 2010 Series A Bond is a Bank Bond or for any Borrower Bonds, and no drawings under such Series 2010 A Credit Facility shall be made, or be used, to pay interest on any 2010 Series A Bond for any period when such 2010 Series A Bond is a Bank Bond or for any Borrower Bonds.

If a Series 2010 A Credit Facility for the 2010 Series A Bonds is in effect, on or before each date on which a payment of principal or redemption premium (if covered by such Series 2010 A Credit Facility) is due either at maturity or as a result of any mandatory or optional redemption of such 2010 Series A Bonds or otherwise (in each case, other than an amount representing the principal portion of the Tender Price of any such 2010 Series A Bonds required to be purchased on such date and other than any principal due on Bank Bonds or Borrower Bonds), the Trustee shall make a drawing under such Series 2010 A Credit Facility, in accordance with the terms of such Series 2010 A Credit Facility, no later than the time provided in such Series 2010 A Credit Facility for presentations of drawings in order to receive payment in immediately available funds by 12:30 p.m. on the date such principal or redemption premium (if covered by such Series 2010 A Credit Facility) is payable, equal to the amount of such principal or redemption premium payment and to use such drawing to make such payment. In determining the amount of such principal and redemption premium then due, the Trustee shall not take into consideration any principal or redemption premium required on Bank Bonds or for any Borrower Bonds, and no drawings under such Series 2010 A Credit Facility shall be made or be used to pay any principal of or redemption premium on Bank Bonds or for any Borrower Bonds.

If a Series 2010 A Credit Facility for the 2010 Series A Bonds is in effect, and if by 10:45 a.m., New York, New York time, on a Tender Date on which 2010 Series A Bonds are required to be purchased pursuant to the Eighth Supplemental Trust Agreement there is not a sufficient amount of money available to pay the Tender Price pursuant to the Eighth Supplemental Trust Agreement, then by 11:00 a.m., New York, New York time on such Tender Date (i) the Tender Agent shall notify the Department and the Trustee by telephone, promptly confirmed in writing, as to the aggregate Tender Price of 2010 Series A Bonds to be purchased and as to the Funding Amount, and (ii) the Trustee shall make a drawing under such Series 2010 A Credit Facility, in accordance with the terms of the Series 2010 A Credit Facility, no later than the time provided in such Series 2010 A Credit Facility for presentation of drawings in order to receive payment in immediately available funds by 2:00 p.m. on the Tender

Date sufficient to pay the balance of the Tender Price. In determining the amount of the Tender Price then due, the Tender Agent shall not take into consideration any Bank Bonds or any Borrower Bonds, and no drawings under the Series 2010 A Credit Facility shall be made or be used to pay the Tender Price of any Bank Bonds or of any Borrower Bonds.

The Trustee shall give notice to the Owners of the 2010 Series A Bonds on or before the 10th day preceding the expiration or termination of a Series 2010 A Credit Facility in accordance with its terms or the proposed replacement of such Series 2010 A Credit Facility. Such notice shall comply with the requirements of the Eighth Supplemental Trust Agreement.

The Trustee shall promptly notify the Department and Remarketing Agent if the Credit Provider has failed to transfer all or any portion funds in accordance with the Series 2010 A Credit Facility upon a properly presented and conforming drawing. In such event, the Trustee shall pay the amount of any deficiency of interest and principal or redemption premium, if any, then due and payable on the applicable Series 2010 A Bonds from the Senior Debt Service Fund. (Section 311 of the Eighth Supplemental Trust Agreement)

#### **Alternate Credit Facility; Surrender of Series 2010 A Credit Facility.**

Prior to the expiration or termination of a Series 2010 A Credit Facility in accordance with the terms of that Series 2010 A Credit Facility, the Department may provide for the delivery to the Trustee of an Alternate Credit Facility which has a term of at least 364 days. Any Alternate Credit Facility delivered to the Trustee pursuant to the Eighth Supplemental Trust Agreement shall be delivered and become effective not later than 10 days prior to the date on which the former Series 2010 A Credit Facility terminates or expires and shall contain administrative provisions reasonably acceptable to the Trustee and the Remarketing Agent; provided, however, during any Short-Term Interest Rate Period, no Alternate Credit Facility shall be delivered or become effective except on a day that would otherwise be an Interest Payment Date for all of the 2010 Series A Bonds; provided, further, no Alternate Credit Facility shall be delivered or become effective on any day during a Long-Term Interest Rate Period except the first day of such Long-Term Interest Rate Period. If there is delivered to the Trustee an Alternate Credit Facility covering the 2010 Series A Bonds, together with items specified in the Eighth Supplemental Trust Agreement, then the Trustee shall accept such Alternate Credit Facility.

If an Alternate Credit Facility is delivered to the Trustee and accepted pursuant to the Eighth Supplemental Trust Agreement, then the Trustee shall surrender the existing Series 2010 A Credit Facility for cancellation, provided that no Series 2010 A Credit Facility shall be surrendered until after the date on which 2010 Series A Bonds required to be purchased pursuant to the Eighth Supplemental Trust Agreement have been purchased or deemed purchased in accordance with the Eighth Supplemental Trust Agreement. If a Series 2010 A Credit Facility terminates or is no longer required to be maintained under the Eighth Supplemental Trust Agreement, the Trustee shall surrender such Series 2010 A Credit Facility to the Credit Provider for cancellation in accordance with the terms of the Series 2010 A Credit Facility. Upon the defeasance of the 2010 Series A Bonds pursuant to the Eighth Supplemental Trust Agreement and if, at such time, the 2010 Series A Bonds are no longer subject to tender for purchase, the Trustee shall surrender the Series 2010 A Credit Facility, if any, to the Credit Provider for cancellation in accordance with the terms of the Series 2010 A Credit Facility. (Section 312 of the Eighth Supplemental Trust Agreement)

#### **Rights and Duties Under Series 2010 A Credit Facility**

If a Series 2010 A Credit Facility is in effect, the Trustee shall, without further direction, draw amounts under the Series 2010 A Credit Facility in accordance with the terms and conditions set forth in the Eighth Supplemental Trust Agreement at the times, in the manner and for the purposes set forth in the Eighth Supplemental Trust Agreement and such Series 2010 A Credit Facility. So long as the Series 2010 A Credit Facility remains in effect with respect to any 2010 Series A Bonds, the Trustee may not waive an Event of Default with respect to the 2010 Series A Bonds unless a Credit Facility Failure shall have occurred and be continuing. The Trustee in its name or in the name of the Department may enforce all rights of the Trustee and of the Department and all obligations of the Credit Provider (including the obligation of the Credit Provider to honor drawings properly presented and conforming in accordance with the terms and conditions of the Series 2010 A Credit Facility) under and pursuant to

the Series 2010 A Credit Facility, for the benefit of the Owners of the 2010 Series A Bonds. (Section 313 of the Eighth Supplemental Trust Agreement)

### **Subrogation Rights of Credit Provider**

To the extent any amount of principal or interest or Tender Price owed with respect to any 2010 Series A Bond is paid with amounts drawn under the applicable Series 2010 A Credit Facility, then if and to the extent the affected Credit Provider is not reimbursed for such amount by the Department, the affected Credit Provider shall succeed to and be subrogated to the rights of the holder of such 2010 Series A Bond to the extent of such payment.

Unless a Credit Facility Failure shall have occurred and be continuing, the Credit Provider shall be deemed to be the holder of the applicable 2010 Series A Bonds for the purpose of exercising any voting right or privilege, giving any consent or direction or taking any other action that the holders of the applicable 2010 Series A Bonds are entitled to take pursuant to the Trust Agreement. (Section 325 of the Eighth Supplemental Trust Agreement)

### **Amendments**

**General.** Except as provided below, the Eighth Supplemental Trust Agreement may be amended or supplemented in accordance with the provisions of the Trust Agreement (as defined in Appendix C to this Official Statement).

**Amendment Upon Mandatory Tender.** Provisions of the Eighth Supplemental Trust Agreement may also be amended by the Department without Bondowner consent, but only with respect to the applicable series of 2010 Series A Bonds, on the date of any mandatory tender of the 2010 Series A Bonds, provided that notice of any such amendment is included in the notice of mandatory tender for purchase described in the Eighth Supplemental Trust Agreement, and provided further that the Department shall have received written confirmation from each Rating Agency then rating the 2010 Series A Bonds that such amendment will not in and of itself cause a reduction or withdrawal of the rating then in effect on the 2010 Series A Bonds.

**During Daily Interest Rate Period or Weekly Interest Rate Period.** Except as set forth below, while any series of 2010 Series A Bonds are in the Daily Interest Rate Period or Weekly Interest Rate Period, the Department may amend provisions of the Eighth Supplemental Trust Agreement concerning such series of 2010 Series A Bonds in such Interest Rate Periods by obtaining the consent of a majority of registered owners of the series of 2010 Series A Bonds in such Interest Rate Periods. The Department may also amend the definition of Maximum Bond Interest Rate, without Bondowner consent (but with at least 20 days' notice to the Bondowners if the amendment is to reduce the Maximum Bond Interest Rate), provided that, if a Series 2010 A Credit Facility (with a liquidity component) is then in effect, it entitles the Trustee to draw upon or demand and receive in immediately available funds an amount equal to the principal amount of the 2010 Series A Bonds then outstanding plus a number of days of accrued interest at such amended Maximum Bond Interest Rate at least equal to the number of days required to be covered under the Eighth Supplemental Trust Agreement, and provided further that if the amendment is to increase the Maximum Bond Interest Rate, the Department shall have received written confirmation from each Rating Agency then rating the 2010 Series A Bonds that such increase will not in and of itself cause a reduction or withdrawal of the rating then in effect on the 2010 Series A Bonds. (Section 611 of the Eighth Supplemental Trust Agreement)

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## THE LETTERS OF CREDIT AND THE REIMBURSEMENT AGREEMENTS

*The Letters of Credit will be issued pursuant to two separate Reimbursement Agreements. The following summarizes certain provisions of each Letter of Credit and the applicable Reimbursement Agreement. Reference is made to the entire documents for the complete provisions thereof. Capitalized terms used below without definition shall have the meanings ascribed to them in the applicable Reimbursement Agreement. Investors should obtain and review a copy of the respective Letter of Credit and Reimbursement Agreement in order to understand all of the terms of those documents.*

### **The Letters of Credit**

Each Letter of Credit will be the irrevocable transferable obligation of the related Bank to pay the Trustee, upon request in accordance with the terms thereof, an amount sufficient to pay the outstanding principal amount of the applicable 2010 Series A Bonds, plus up to 198 days of interest thereon at a rate of twelve percent (12%) per annum, calculated on a year of 365 days for the actual number days elapsed. The Trustee, upon compliance with the terms of the applicable Letter of Credit, is authorized to draw up to an amount sufficient (i) to pay accrued interest on the applicable 2010 Series A Bonds as provided in the Supplemental Agreement (an “*Interest Drawing*”), (ii) to pay the principal amount of and accrued interest on the applicable 2010 Series A Bonds in respect of certain redemptions of such 2010 Series A Bonds as provided in the Supplemental Agreement (a “*Redemption Drawing*”), (iii) to allow the Trustee to pay the purchase price (including accrued interest to the purchase date) of the applicable 2010 Series A Bonds tendered for purchase as provided for in the Supplemental Agreement (a “*Liquidity Drawing*”), or (iv) to pay the principal amount of the applicable 2010 Series A Bonds at maturity (a “*Stated Maturity Drawing*”). No Drawings (as defined in the applicable Letter of Credit) shall be made under the applicable Letter of Credit for (i) the applicable 2010 Series A Bonds bearing interest at a rate other than the Weekly Interest Rate (“*Converted Bonds*”), (ii) the applicable 2010 Series A Bonds purchased with the proceeds of a Liquidity Drawing and registered in the name of the Bank or its nominee (the “*Bank Bonds*”), or (iii) the applicable 2010 Series A Bonds owned by or on behalf of MassDOT (“*Department Bonds*,” and together with the Converted Bonds and the Bank Bonds, collectively referred to herein as the “*Ineligible Bonds*”).

Each Letter of Credit will terminate on the earliest of (i) May 27, 2013 (such date, as it may be extended from time to time in accordance with the applicable Letter of Credit, the “*Stated Expiration Date*”), (ii) the earlier of (A) the date which is fifteen (15) calendar days following the date on which all of the applicable 2010 Series A Bonds bear an interest rate other than the Weekly Interest Rate, as such date is specified in a certificate from the Trustee to the Bank (the “*Conversion Date*”) or (B) the date on which the Bank honors a drawing under the applicable Letter of Credit on or prior the Conversion Date, (iii) the date of receipt by the Bank of notice from the Trustee that (A) no Bonds remain outstanding or (B) all drawings required to be made under the Supplemental Agreement have been made and honored under the applicable Letter of Credit or (C) an Alternate Credit Facility (as defined in the applicable Reimbursement Agreement) has been provided, (iv) the date on which an Stated Maturity Drawing is honored by the Bank, and (v) the date which is ten (10) days following receipt by the Trustee of a written notice from the Bank specifying the occurrence of an Event of Default under the applicable Reimbursement Agreement and directing the Trustee to cause a mandatory tender of the applicable 2010 Series A Bonds.

The obligation of the Bank under the applicable Letter of Credit will be reduced automatically by the amount of any drawing thereunder, subject to reinstatement as described below. With respect to any Interest Drawing, the obligation of the Bank to honor demands for payment under the applicable Letter of Credit with respect to the payment of interest on the Bonds will be automatically reinstated effective five (5) calendar days after the date such Interest Drawing is honored by the applicable Bank unless the Trustee shall have received written notice from the related Bank by 5:00 P.M. New York time, on the fourth (4th) calendar day after such date that the related Bank has not been reimbursed in full for any such Interest Drawing or any other Event of Default has occurred and as a result thereof the applicable Letter of Credit will not be so reinstated. With respect to any Liquidity Drawing, upon a remarketing of the applicable subseries of the 2010 Series A Bonds (or portions thereof) previously purchased with the proceeds of a Liquidity Drawing, the related Bank’s obligation to honor drawings under the related Letter of Credit will be automatically reinstated in the amount indicated in a certificate concurrently upon receipt by the related Bank of such certificate and the related Bank’s receipt of funds.

The “*Available Amount*” means the Original Stated Amount (as defined in the applicable Letter of Credit) (i) less the amount of all prior reductions pursuant to Interest Drawings, Redemption Drawings, or Liquidity Drawings, (ii) less the amount of any reduction thereof pursuant to a reduction certificate, (iii) plus the amount of all reinstatements as above provided.

### **The Reimbursement Agreements**

Under each Reimbursement Agreement, MassDOT agrees to reimburse the Bank for each drawing (other than liquidity drawings made available to MassDOT pursuant to the applicable Reimbursement Agreement for the purchase of the applicable subseries of 2010 Series A Bonds, subject to satisfaction of certain conditions precedent (each a “*Liquidity Advance*”) made under the applicable Letter of Credit immediately upon payment by the Bank of each such drawing and on the date of each such payment.

With respect to each Reimbursement Agreement, MassDOT promises to repay to the Bank for each Liquidity Advance upon the earliest to occur of (i) the date on which the Letter of Credit is replaced by an Alternate Credit Facility (as defined in the applicable Reimbursement Agreement), (ii) the date on which any of the applicable 2010 Series A Bonds purchased with funds disbursed under the applicable Letter of Credit in connection with such Liquidity Drawing are redeemed, prepaid or canceled pursuant to the Supplemental Agreement, (iii) the date on which any of the applicable subseries of 2010 Series A Bonds purchased with funds disbursed under the applicable Letter of Credit in connection with such Liquidity Advance are remarketed pursuant to the Supplemental Agreement, (iv) the date which is the Conversion Date, and (v) the related Amortization Commencement Date (as defined in the applicable Reimbursement Agreement), but only if the Amortization Conditions (as defined in the applicable Reimbursement Agreement) are not satisfied on such Amortization Commencement Date.

### **Events of Default**

The occurrence and continuance of any of the following events shall be an “Event of Default” under each Reimbursement Agreement:

(a) MassDOT shall fail to pay when due and payable (whether by scheduled maturity, required prepayment, or otherwise) any Obligation (as defined in the applicable Reimbursement Agreement), any amounts payable by MassDOT under the Fee Letter (as defined in the applicable Reimbursement Agreement), or any principal of, or interest on, the applicable 2010 Series A Bonds or Purchased Bond (as defined in the applicable Reimbursement Agreement) or any other amount required to be paid by MassDOT under the applicable Reimbursement Agreement; or

(b) (i) MassDOT shall fail to pay when due and payable (whether by scheduled maturity, required prepayment, acceleration, demand or otherwise) any Debt (as defined in the applicable Reimbursement Agreement) of the Department, including obligations owing pursuant to any Swap Contract (as defined in the applicable Reimbursement Agreement), or default under any mortgage, agreement or other instrument under or pursuant to which such Debt is incurred or issued, and continuance of such default beyond the period of grace, if any, allowed with respect thereto, or the occurrence of any act or omission by MassDOT under any such mortgage, agreement or other instrument which results in such Debt becoming, or being capable of becoming, immediately due and payable (or, with respect to any Swap Contract, which results in such Swap Contract being terminated early or being capable of being terminated early); or (ii) the Commonwealth shall fail to pay when due and payable (whether by scheduled maturity, required prepayment, acceleration, demand or otherwise) any general obligation Debt of the Commonwealth aggregating in excess of \$10,000,000, including obligations owing pursuant to any Swap Contract, or default under any mortgage, agreement or other instrument under or pursuant to which such general obligation Debt is incurred or issued, and continuance of such default beyond the period of grace, if any, allowed with respect thereto, or the occurrence of any act or omission by the Commonwealth under any such mortgage, agreement or other instrument which results in such general obligation Debt becoming, or being capable of becoming, immediately due and payable (or, with respect to any Swap Contract, which results in such Swap Contract being terminated early or being capable of being terminated early); or

(c) (i) MassDOT or the Commonwealth shall commence any case, proceeding or other action (A) under any existing or future law of any jurisdiction, domestic or foreign, relating to bankruptcy, insolvency, reorganization or relief of debtors, seeking to have an order for relief entered with respect to it, or seeking to adjudicate it a bankrupt or insolvent, or seeking reorganization, arrangement, adjustment, winding-up, liquidation, dissolution, composition or other relief with respect to it or (1) with respect to MassDOT, its Debts (as defined in the applicable Reimbursement Agreement), or (2) with respect to the Commonwealth, its general obligation Debt, or (B) seeking appointment of a receiver, trustee, custodian or other similar official for it or for all or any substantial part of its assets, or MassDOT or the Commonwealth shall make a general assignment for the benefit of its creditors; or (ii) there shall be commenced against MassDOT or the Commonwealth any case, proceeding or other action of a nature referred to in clause (i) above which (x) results in an order for such relief or in the appointment of a receiver or similar official or (y) remains undismissed, undischarged or unbonded for a period of sixty (60) days; or (iii) there shall be commenced against MassDOT or the Commonwealth, any case, proceeding or other action seeking issuance of a warrant of attachment, execution, distraint or similar process against all or any substantial part of its assets, which results in the entry of an order for any such relief which shall not have been vacated, discharged, or stayed or bonded pending appeal within sixty (60) days from the entry thereof; or (iv) MassDOT or the Commonwealth shall take any action in furtherance of, or indicating its consent to, approval of, or acquiescence in, any of the acts set forth in clause (i), (ii) or (iii) above; or (v) MassDOT or the Commonwealth shall generally not, or shall be unable to, or so admit in writing its inability to, pay its Debts; or (vi) MassDOT or the Commonwealth or any Governmental Authority (as defined in the applicable Reimbursement Agreement) having jurisdiction over MassDOT or the Commonwealth imposes a debt moratorium with respect to repayment when due and payable of the principal of or interest on any Debt of MassDOT or the Commonwealth; or

(d) (i) the long-term unenhanced rating by any of Moody's, Fitch or S&P on the applicable 2010 Series A Bonds is withdrawn, suspended, or reduced below certain levels, or (ii) the long-term unenhanced rating by any of Moody's, Fitch or S&P on any general obligation indebtedness of the Commonwealth is withdrawn, suspended, or reduced below "A2" (or its equivalent), "A" (or its equivalent) or "A" (or its equivalent), respectively; or

(e) a final, nonappealable judgment, levy, writ of attachment or order for the payment of money in excess of \$5,000,000, payable from Revenues (as defined in the applicable Reimbursement Agreement) shall be rendered against MassDOT with respect to which, in the reasonable opinion of the Bank, adequate cash reserves have not been established, or other means of satisfying or otherwise funding the judgment have not been undertaken, satisfactory to the Bank and such judgment or order shall continue unsatisfied and unstayed for a period of sixty (60) days, or (ii) a final, nonappealable judgment, levy, writ of attachment or order for the payment of money in excess of \$5,000,000, payable as a general obligation of the Commonwealth which shall be rendered against the Commonwealth with respect to which, in the reasonable opinion of the Bank, adequate cash reserves have not been established, or other means of satisfying or otherwise funding the judgment have not been undertaken, satisfactory to the Bank and such judgment or order shall continue unsatisfied and unstayed for a period of sixty (60) days; or

(f) (i) the Commonwealth shall fail to make any payment required to be made by the Commonwealth under the Contract for Financial Assistance (as defined in the applicable Reimbursement Agreement) when the same is required to be made thereunder, (ii) any provision of the Contract for Financial Assistance, the Trust Agreement or the Supplemental Agreement relating to the payments to be made by the Commonwealth pursuant to the Contract for Financial Assistance, or designating such payments as Dedicated Payments (as defined in the applicable Reimbursement Agreement) under the Trust Agreement to be deposited in the Senior Debt Service Fund after deposits, if any, required to be made to the Subordinated Debt Service Fund (as defined in the applicable Reimbursement Agreement), or relating to the pledge of and lien on the payments to be made by the Commonwealth under the Contract for Financial Assistance shall at any time for any reason cease to be valid and binding on, or fully enforceable against, the Commonwealth and MassDOT, as applicable, as determined by any court or Governmental Authority having appropriate jurisdiction in a final nonappealable judgment, (iii) any provision of the Contract for Financial Assistance, the Trust Agreement or the Supplemental Agreement relating to the payments to be

made by the Commonwealth pursuant to the Contract for Financial Assistance, or designating such payments as Dedicated Payments under the Trust Agreement to be deposited in the Senior Debt Service Fund after deposits, if any, required to be made to the Subordinated Debt Service Fund, or relating to the pledge of and lien on the payments to be made by the Commonwealth under the Contract for Financial Assistance shall at any time for any reason be terminated or otherwise modified by the Legislature of the Commonwealth or by any court or Governmental Authority having appropriate jurisdiction in a final non-appealable judgment, which termination or other modification reduces the amount of any payment under the Contract for Financial Assistance below the amount necessary to provide for the timely payment of the applicable 2010 Series A Bonds, or (iv) the Commonwealth repudiates, in writing, in a judicial or administrative proceeding that it has any further liability or obligation under the Contract for Financial Assistance, shall have taken or permitted to be taken any action, or has duly enacted any statute, which causes the Contract for Financial Assistance to no longer be a valid and binding obligation of the Commonwealth, or contests, in a judicial or administrative proceeding, the validity or enforceability of any material provision of the Contract for Financial Assistance relating to or otherwise affecting the Commonwealth's obligation to make payments thereunder; or

(g) (i) the Commonwealth shall fail to pay when due and payable any general obligation Debt of the Commonwealth, and such failure shall continue beyond any applicable period of grace specified in any underlying resolution, indenture, contract or instrument providing for the creation of or concerning such general obligation Debt, or (ii) pursuant to the provisions of any resolution, indenture, contract or instrument providing for the creation of or concerning any general obligation Debt of the Commonwealth, such Debt matures, or such Debt is or may be accelerated, or such Debt may be required to be prepaid prior to the stated maturity thereof, in each case, as a result of the occurrence of any default in the payment of the principal of or interest on such Debt by the Commonwealth under such resolution, indenture, contract or instrument and the continuance of such default beyond any applicable period of grace set forth therein; or

(h) any representation or warranty made by MassDOT to the Bank in the applicable Reimbursement Agreement, any Related Document (as defined in the applicable Reimbursement Agreement) or in any certificate or statement delivered under the applicable Reimbursement Agreement shall be incorrect or untrue in any material respect when made or deemed to have been made; or

(i) MassDOT shall default in the due performance or observance of certain covenants set forth in the applicable Reimbursement Agreement; or

(j) MassDOT shall default in any material respect in the due performance or observance of any other term, covenant or agreement contained or incorporated by reference in the applicable Reimbursement Agreement and such default shall remain unremedied for a period of thirty (30) days or more; or

(k) any "Event of Default" under the Trust Agreement or any "Event of Default" which is not cured within any applicable cure period under any of the other Related Documents shall occur, or any event of default shall have occurred and be continuing under or with respect to any other agreement providing credit enhancement or liquidity support for any other subseries of MassDOT's Metropolitan Highway System Revenue Bonds (Senior), Variable Rate Demand Obligations 2010 Series A; or

(l) any provision of the applicable Reimbursement Agreement, the applicable 2010 Series A Bonds, the Trust Agreement, the Supplemental Agreement or any other Related Document, shall at any time for any reason cease to be valid and binding on or fully enforceable against, MassDOT or the Commonwealth, as applicable, or shall be declared in a final nonappealable judgment by any court or Governmental Authority having jurisdiction over MassDOT or the Commonwealth, as applicable, to be null and void, invalid, or unenforceable, or the validity or enforceability thereof shall be contested in writing by an Authorized Officer of MassDOT or an official of the Commonwealth, as applicable, or MassDOT or the Commonwealth, as applicable, or any agent or trustee on behalf of MassDOT or the

Commonwealth, as applicable, shall deny it has any further liability under the applicable Reimbursement Agreement or any of the other Related Documents; or

(m) any law, order, administrative directive or other pronouncement by any Governmental Authority, or amendment or modification thereto, shall be enacted, given, made or otherwise become effective, which, in the sole discretion of the Bank, has a material adverse effect on the ability of MassDOT to meet its obligations with respect to the applicable 2010 Series A Bonds, the applicable Purchased Bonds, or any other obligation of MassDOT under the applicable Reimbursement Agreement; or

(n) the Maximum Lawful Rate (as defined in the applicable Reimbursement Agreement) shall at any time be reduced below the Maximum Lawful Rate in effect on the Effective Date (as defined in the applicable Reimbursement Agreement); or

(o) any Governmental Authority shall declare a financial emergency with respect to MassDOT, which, in the sole discretion of the Bank, has a material adverse effect on the ability of MassDOT to meet its obligations with respect to the applicable 2010 Series A Bonds, the Purchased Bonds, or any other obligation of MassDOT under the applicable Reimbursement Agreement; or

(p) any material fraud, in the reasonable judgment of the Bank, shall be perpetrated by or against MassDOT or with respect to the System (as defined in the applicable Reimbursement Agreement).

## Remedies

If an Event of Default shall have occurred under the applicable Reimbursement Agreement, the Bank may exercise any one or more of the following rights and remedies in addition to any other remedies provided in the applicable Reimbursement Agreement or by law provided:

(a) by notice to MassDOT require that MassDOT immediately prepay to the Bank in immediately available funds an amount equal to the Stated Amount (as defined in the applicable Reimbursement Agreement) (such amounts to be held by the Bank as collateral security for the Obligations), *provided, however*, that in the case of an Event of Default described in paragraph (c) under the subheading "*Events of Default*" above such prepayment obligation shall automatically become immediately due and payable without any notice;

(b) declare all Obligations to be, and such amounts shall thereupon become, immediately due and payable without presentment, demand, protest or other notice of any kind, all of which are hereby waived by MassDOT, *provided* that upon the occurrence of an Event of Default described in paragraph (c) under the subheading "*Events of Default*" hereof such acceleration shall automatically occur without notice;

(c) give notice of the occurrence of an Event of Default to the Trustee, directing the Trustee to cause a mandatory tender of the Bonds, thereby causing the applicable Letter of Credit to expire ten (10) days thereafter;

(d) pursue any rights and remedies it may have under the Related Documents; or

(e) pursue any other action available at law or in equity.

**BOOK-ENTRY-ONLY SYSTEM**

The Depository Trust Company (“DTC”), New York, New York, will act as securities depository for the Bonds. The Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered bond certificate will be issued for each series of the Bonds in the aggregate principal amount of such maturity and will be deposited with DTC. Transfers of ownership will be effected on the records of DTC and its participants pursuant to rules and procedures established by DTC and its participants. Interest and principal due on the Bonds will be paid to DTC or its nominee as registered owner of the Bonds. As long as the book-entry-only system remains in effect, DTC or its nominee will be recognized as the owner of the Bonds for all purposes, including notices and voting. The Issuer will not be responsible or liable for maintaining, supervising or reviewing the records maintained by DTC, its participants or persons acting through such participants.

Unless otherwise noted, the description which follows of the procedures and record-keeping with respect to beneficial ownership interests in the Bonds, payment of interest and other payments on the Bonds to DTC Participants or Beneficial Owners of the Bonds, confirmation and transfer of beneficial ownership interests in the Bonds and other bond-related transactions by and between DTC, the DTC Participants and Beneficial Owners of the Bonds is based solely on information furnished by DTC to the Issuer for inclusion in this Official Statement. Accordingly, the Issuer and the Underwriters do not and cannot make any representations concerning these matters.

For so long as the Bonds are registered in the name of Cede & Co., as nominee for DTC, the tender option rights of Bondholders described herein may be exercised only by a DTC Participant acting directly or indirectly on behalf of a Beneficial Owner of Bonds by giving notice of its election to tender Bonds or portions thereof at the times and in the manner described above. Beneficial Owners will not have any rights to tender Bonds directly to the Tender Agent. Procedures under which a Beneficial Owner may direct a DTC Participant or an Indirect Participant of DTC acting through a DTC Participant to exercise a tender option right in respect of any Bonds or portions thereof shall be governed by standing instructions and customary practices determined by such DTC Participant or Indirect Participant.

For so long as the Bonds are registered in the name of Cede & Co., as nominee for DTC, notices of mandatory tender for purchase of Bonds shall be given to DTC only, and neither the Issuer, the Tender Agent nor the applicable Remarketing Agent shall have any responsibility for the delivery of any of such notices by DTC to any DTC Participants, by any DTC Participants to any Indirect Participants of DTC or by any DTC Participants or Indirect Participants to Beneficial Owners of the Bonds.

For so long as the Bonds are registered in the name of Cede & Co., as nominee for DTC, delivery of Bonds required to be tendered for purchase shall be effected by the transfer by a DTC Participant on the applicable Tender Date of a book entry credit to the account of the Tender Agent of a beneficial interest in such Bonds or portions thereof required to be tendered for purchase on that date.

For so long as the Bonds are registered in the name of Cede & Co., as nominee for DTC, payment of the Tender Price shall be paid directly to DTC. Disbursement of such payments to the DTC Participants is the responsibility of DTC and disbursement of such payments to the Beneficial Owners is the responsibility of the DTC Participants and the Indirect Participants.

DTC, the world’s largest depository, is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both

U.S. and non-U.S. securities brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). DTC has Standard & Poor’s highest rating: AAA. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at [www.dtcc.com](http://www.dtcc.com) and [www.dtc.org](http://www.dtc.org).

Purchases of Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Bonds on DTC’s records. The ownership interest of each actual purchaser of each Bond (“Beneficial Owner”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in Bonds, except in the event that use of the book-entry system for the Bonds is discontinued.

To facilitate subsequent transfers, all Bonds deposited by Direct Participants with DTC are registered in the name of DTC’s partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Bonds. DTC’s records reflect only the identity of the Direct Participants to whose accounts such Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of the Bonds may wish to take certain steps to augment transmission to them of notices of significant events with respect to the Bonds, such as redemptions, defaults, and proposed amendments to the security documents. For example, Beneficial Owners of the Bonds may wish to ascertain that the nominee holding the Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of the notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the Bonds within a maturity are being redeemed, DTC’s practice is to determine by lot the amount of the interest of each Direct Participant in such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor such other DTC nominee) will consent or vote with respect to Bonds unless authorized by a Direct Participant in accordance with DTC’s MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Issuer as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.’s consenting or voting rights to those Direct Participants to whose accounts the Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Redemption proceeds, distributions, and dividend payments on the Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC’s practice is to credit Direct Participants’ accounts, upon DTC’s receipt of funds and corresponding detail information from the Issuer or Issuing and Paying Agent on payable date in accordance with their respective holdings shown on DTC’s records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in “street name,” and will be the responsibility of such Participant and not of DTC, the Trustee, or the Issuer, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, distributions and dividend payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Issuer or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

A Beneficial Owner shall give notice to elect to have its Bonds purchased or tendered, through its Participant, to the applicable Remarketing Agent, and shall effect delivery of such Bonds by causing the Direct

Participant to transfer the Participant's interest in the Bonds, on DTC's records, to the applicable Remarketing Agent. The requirement for physical delivery of Bonds in connection with an optional tender or a mandatory purchase will be deemed satisfied when the ownership rights in the Bonds are transferred by Direct Participants on DTC's records and followed by a book-entry credit of tendered Bonds to the applicable Remarketing Agent's DTC account.

DTC may discontinue providing its services as securities depository with respect to the Bonds at any time by giving reasonable notice to the Issuer or the Trustee. Under such circumstances, in the event that a successor securities depository is not obtained, Bond certificates are required to be printed and delivered.

The Issuer may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, bond certificates will be required to be printed and delivered to DTC.

The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that the Issuer believes to be reliable, but none of the Issuer or the Underwriters takes responsibility for the accuracy thereof.

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**Table of Refunded Senior Bonds**

**Massachusetts Turnpike Authority  
Metropolitan Highway System Revenue Bonds**

<b>Maturity Date</b>	<b>Interest Rate</b>	<b>Par Amount</b>	<b>Call Date</b>	<b>Call Price</b>	<b>CUSIP</b>
<b>1997 Series A (Senior)</b>					
January 1, 2011	5.000%	\$ 23,920,000	June 28, 2010	100%	576018AB1
January 1, 2012	5.000%	25,375,000	June 28, 2010	100%	576018AC9
January 1, 2013	5.000%	26,870,000	June 28, 2010	100%	576018AD7
January 1, 2017	5.125%	83,770,000	June 28, 2010	100%	576018AE5
January 1, 2023	5.125%	120,310,000	June 28, 2010	100%	576018AF2
January 1, 2027	5.000%	178,440,000	June 28, 2010	100%	576018AJ4
January 1, 2037	5.000%	659,900,000	June 28, 2010	100%	576018AM7
<b>Total:</b>		<b>\$1,118,585,000</b>			

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