

NEW MONEY ISSUE — BOOK-ENTRY ONLY

In the opinion of Locke Lord LLP, Bond Counsel, based upon an analysis of existing law and assuming, among other matters, compliance with certain covenants, interest on the 2016 Notes is excluded from gross income for federal income tax purposes under the Internal Revenue Code of 1986. Interest on the 2016 Notes 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 2016 Notes and any profit made on the sale thereof are exempt from Massachusetts personal income taxes, and the 2016 Notes 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 2016 Notes. See TAX EXEMPTION herein.



\$125,410,000
THE COMMONWEALTH OF MASSACHUSETTS
Federal Highway Grant Anticipation Notes
(Accelerated Bridge Program)
2016 Series A



Dated: Date of Delivery

Due: As shown on the inside cover

The Federal Highway Grant Anticipation Notes (Accelerated Bridge Program), 2016 Series A (the “2016 Notes”) are being issued by The Commonwealth of Massachusetts (the “Commonwealth”) pursuant to Sections 7 through 9 of Chapter 233 of the Massachusetts Acts of 2008 and Sections 2O and 2ZZZ of Chapter 29 of the Massachusetts General Laws, as amended, and a Trust Agreement dated as of December 1, 2010 (as amended and supplemented, the “Trust Agreement”) and a Fourth Supplemental Trust Agreement dated as of October 1, 2016, by and between the Commonwealth and U.S. Bank National Association, as successor trustee (the “Trustee”).

As more fully described herein, the 2016 Notes are special limited obligations of the Commonwealth, secured by and payable solely from the Pledged Funds, as defined herein, and all Funds and Accounts, other than the Project Fund and the Rebate Fund, held under the Trust Agreement. The 2016 Notes are secured on parity with other federal highway grant anticipation notes issued pursuant to the Trust Agreement, and are subordinate to certain Senior Obligations as described herein. The Pledged Funds consist of reimbursements received or to be received by the Commonwealth from the federal government pursuant to the Federal-Aid Highway Program, any other monies from time to time deposited in the Federal Highway Grant Anticipation Note Trust Fund of the Commonwealth and certain monies credited to the Commonwealth Transportation Fund, including receipts from certain Motor Fuels Tax revenues, Registry Fees and certain other moneys, all as described herein, after payment of such Senior Obligations. See *Security and Sources of Payment for the Trust Agreement Notes under the Trust Agreement* herein.

The 2016 Notes shall be payable solely from the Pledged Funds as described herein. The 2016 Notes are not a general obligation of the Commonwealth and the full faith and credit of the Commonwealth is not pledged to the payment of the 2016 Notes.

The 2016 Notes will be issued only as fully registered notes, registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”). Purchases of beneficial interests in the 2016 Notes will be made in book-entry form in denominations of \$5,000 principal amount or whole multiples thereof. Purchasers will not be entitled to receive physical delivery of the 2016 Notes.

Principal and interest on the 2016 Notes (with interest accruing from the dated date and payable on December 15, 2016 and thereafter on June 15 and December 15 of each year) will be payable to DTC by the Trustee. So long as DTC or its nominee remains the registered owner, disbursements of such payments to DTC Participants, as defined herein, are the responsibility of DTC and disbursements of such payments to the purchasers of the 2016 Notes are the responsibility of DTC Participants, as described herein. The 2016 Notes will be subject to optional redemption prior to their stated maturity as more fully described herein.

The 2016 Notes are offered, subject to prior sale, when, as and if issued by the Commonwealth and accepted by the Underwriters, and to the approval of legality of the 2016 Notes and certain other matters by Locke Lord LLP, Boston, Massachusetts, Bond Counsel. Certain legal matters will be passed upon for the Underwriters by their counsel, McCarter & English, LLP, Boston, Massachusetts. Public Financial Management, Inc. is acting as financial advisor to the Commonwealth in connection with the issuance of the 2016 Notes. It is expected that the 2016 Notes will be available for delivery to DTC in New York, New York, or its custodial agent on or about October 6, 2016.

MORGAN STANLEY

J.P. MORGAN

BofA Merrill Lynch

Citigroup

**Mesirow Financial, Inc.
Rice Financial Products
Company**

**Ramirez & Co., Inc.
Siebert Cisneros Shank &
Co., L.L.C.**

**Raymond James
Stifel**

September 29, 2016

THE COMMONWEALTH OF MASSACHUSETTS
\$125,410,000
Federal Highway Grant Anticipation Notes
(Accelerated Bridge Program)
2016 Series A

Dated: Date of Delivery

Due: June 15, as shown below

<u>Year</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>Yield^C</u>	<u>CUSIP* Numbers</u>
2019	\$13,685,000	5.00%	0.850%	57583P GP8
2020	14,400,000	5.00	0.910	57583P GQ6
2021	15,150,000	5.00	1.000	57583P GR4
2022	15,920,000	5.00	1.080	57583P GS2
2023	10,845,000	5.00	1.180	57583P GT0
2024	11,995,000	5.00	1.290	57583P GU7
2025	13,515,000	5.00	1.420	57583P GV5
2026	14,455,000	5.00	1.510	57583P GW3
2027	15,445,000	5.00	1.620	57583P GX1

^C Priced at the stated yield to the June 15 call date immediately preceding each maturity date. See *The 2016 Notes – Redemption*.

* CUSIP is a registered trademark of the American Bankers Association. CUSIP data herein are provided by CUSIP Global Services, managed by Standard & Poor's Financial Services LLC on behalf of The American Bankers Association. The CUSIP numbers are included solely for the convenience of owners of the 2016 Notes and the Commonwealth is not responsible for the selection or 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.

No dealer, broker, salesperson or other person has been authorized by The Commonwealth of Massachusetts (the "Commonwealth") or the Underwriters of the 2016 Notes to give any information or to make any representations, 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 either of the foregoing. This Official Statement does not constitute an offer to sell or a solicitation of any offer to buy nor shall there be any sale of the 2016 Notes offered hereby by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The information set forth herein has been furnished by the Commonwealth and includes information obtained from other sources which are believed to be reliable, but is not guaranteed as to accuracy or completeness and is not to be construed as a representation by the Underwriters of the 2016 Notes or, as to information from other sources, the Commonwealth. 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 the Commonwealth, or its agencies, authorities and political subdivisions, since the date hereof, except as expressly set forth herein.

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 respective responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

In connection with this offering, the Underwriters may over-allot or effect transactions that stabilize or maintain the market price of the 2016 Notes at levels above those that might otherwise prevail on the open market. Such stabilizing, if commenced, may be discontinued at any time.

This Official Statement contains certain forward-looking statements that are subject to a variety of risks and uncertainties that could cause actual results to differ from the projected results, including without limitation general economic and business conditions, conditions in the financial markets, the financial condition of the Commonwealth and various state agencies and authorities, receipt of federal grants, litigation, arbitration, force majeure events and various other factors that are beyond the control of the Commonwealth and its various agencies and authorities. Because of the inability to predict all factors that may affect future decisions, actions, events or financial circumstances, what actually happens may be different from what is set forth in such forward-looking statements. Forward-looking statements are indicated by use of such words as "may," "will," "should," "intends," "expects," "believes," "anticipates," "estimates" and others.

TABLE OF CONTENTS

	Page		Page
INTRODUCTION	1	NET CTF PLEDGED FUNDS	25
General	1	COMMONWEALTH TRANSPORTATION	
Accelerated Bridge Program	1	SYSTEM.....	28
Summary of Pledged Funds.....	3	BOOK-ENTRY ONLY SYSTEM.....	30
Federal Highway Reimbursements.....	4	LITIGATION	32
Net CTF Pledged Funds	5	TAX EXEMPTION.....	32
Purpose and Content of Official		RATINGS.....	34
Statement	7	CERTAIN LEGAL MATTERS	34
THE 2016 NOTES.....	8	UNDERWRITING	35
General	8	CONTINUING DISCLOSURE.....	35
Redemption	8	FINANCIAL ADVISOR	36
Plan of Finance.....	9	MISCELLANEOUS	36
SOURCES AND USES OF FUNDS.....	9	AVAILABILITY OF OTHER	
DEBT SERVICE REQUIREMENTS	10	INFORMATION	38
DEBT SERVICE COVERAGE	11	APPENDIX A – THE FEDERAL-AID	
SECURITY AND SOURCES OF		HIGHWAY PROGRAM	A-1
PAYMENT FOR THE TRUST		APPENDIX B – SUMMARY OF CERTAIN	
AGREEMENT NOTES UNDER THE		PROVISIONS OF THE	
TRUST AGREEMENT	14	COMMONWEALTH	
General	14	TRANSPORTATION FUND ACT AND	
Funds and Accounts	16	THE SPECIAL OBLIGATION ACT	B-1
Funding of Trust Agreement Obligations.....	17	APPENDIX C - SUMMARY OF CERTAIN	
Limitations on Issuance of Additional		PROVISIONS OF THE TRUST	
Notes.....	18	AGREEMENT	C-1
GENERAL OVERVIEW OF THE		APPENDIX D - PROPOSED FORM OF	
FEDERAL-AID HIGHWAY PROGRAM.....	20	OPINION OF BOND COUNSEL	D-1
COMMONWEALTH PARTICIPATION IN		APPENDIX E - CONTINUING	
THE FEDERAL-AID HIGHWAY		DISCLOSURE UNDERTAKING	E-1
PROGRAM	21		
Funding History.....	22		
Future Utilization of Federal Highway			
Assistance	25		

THE COMMONWEALTH OF MASSACHUSETTS



CONSTITUTIONAL OFFICERS

Charles D. Baker Governor
Karyn E. Polito Lieutenant Governor
William F. Galvin Secretary of the Commonwealth
Maura T. Healey Attorney General
Deborah B. Goldberg Treasurer and Receiver-General
Suzanne M. Bump Auditor

LEGISLATIVE OFFICERS

Stanley C. Rosenberg President of the Senate
Robert A. DeLeo Speaker of the House

SUMMARY DESCRIPTION OF 2016 NOTES

Selected information is presented on this page for the convenience of the reader. To make an informed investment decision regarding the 2016 Notes, a prospective investor should read the entire Official Statement

Description:	The Commonwealth of Massachusetts Federal Highway Grant Anticipation Notes (Accelerated Bridge Program) 2016 Series A (the “2016 Notes”)
Principal Amount:	\$125,410,000
Denominations:	\$5,000 or integral multiples thereof
Date of Issue:	On or about October 6, 2016
Record Date:	The record date for payment on account of the 2016 Notes will be the last business day of the month next preceding an Interest Payment Date
Interest Payment Dates:	December 15 and June 15, beginning December 15, 2016
Maturities:	June 15, 2019 through 2027 – <i>See inside front cover</i>
Redemption:	Each maturity of the 2016 Notes is callable at par on and after the June 15 immediately preceding the applicable maturity date – <i>See pages 8-9</i>
Form:	Book-entry-only – <i>See pages 29-32</i>
Trustee:	U.S. Bank National Association
Security:	The 2016 Notes are special limited obligations of the Commonwealth and are payable solely from sources specified in the Trust Agreement (“Pledged Funds”). Pledged Funds include Federal-Aid Highway Reimbursements and amounts credited to the Commonwealth Transportation Fund (subject to a prior lien for Senior Obligations). The primary sources of revenues for the Commonwealth Transportation Fund are Motor Fuels Tax revenues and Registry Fees.) The 2016 Notes are not general obligations of the Commonwealth – <i>See pages 14-19</i>
Payment of Debt Service:	Semi-annual debt service payments on the 2016 Notes are due June 15 and December 15 and are generally funded one year in advance of the applicable due date – <i>See pages 17-18</i>
Additional Notes:	Federal Highway Reimbursements for any 12 consecutive months during the last 18 months must be at least 1.5 times maximum debt service on certain senior notes and the Trust Agreement Notes, including any Additional Notes and Net CTF Pledged Funds during the same 12 months must be at least 2.5 times maximum debt service on the Trust Agreement Notes, including any Additional Notes – <i>See pages 18-19</i>
Authority for Issuance:	The 2016 Notes are issued under Sections 2O and 2ZZZ of Chapter 29 of the General Laws (“Special Obligation Act”) and Chapter 233 of the Acts of 2008 (“Accelerated Bridge Program”)
Purpose:	Proceeds from the 2016 Notes will be used to fund additional costs of the Accelerated Bridge Program – <i>See page 9</i>
Tax Exemption:	Interest on the 2016 Notes is excluded from gross income of the holders thereof for federal income tax purposes. Interest on the 2016 Notes and any profit made on the sale thereof are exempt from Massachusetts personal income taxes, and the 2016 Notes are exempt from Massachusetts personal property taxes – <i>See pages 32-33</i>
Legal Opinion:	The 2016 Notes are offered when, as and if issued and received by the original purchasers and subject to the unqualified approving opinion as to legality of Locke Lord LLP, Bond Counsel – <i>See Appendix D</i>

OFFICIAL STATEMENT

\$125,410,000

**THE COMMONWEALTH OF MASSACHUSETTS
Federal Highway Grant Anticipation Notes
(Accelerated Bridge Program)
2016 Series A**

INTRODUCTION

This Official Statement, including the cover pages and the Appendices hereto, provides certain information in connection with the issuance by The Commonwealth of Massachusetts (the “Commonwealth”) of \$125,410,000 of its Federal Highway Grant Anticipation Notes (Accelerated Bridge Program), 2016 Series A (the “2016 Notes”). The 2016 Notes will be issued under the Trust Agreement dated as of December 1, 2010 between the Commonwealth and U.S. Bank National Association, as successor trustee (the “Trustee”), as supplemented by the Fourth Supplemental Trust Agreement dated as of October 1, 2016 (as supplemented and amended from time to time, the “Trust Agreement”). Previously, the Commonwealth issued its \$100.0 million Federal Highway Grant Anticipation Notes (Accelerated Bridge Program), 2010 Series A (Federally Taxable – Build America Bonds – Direct Pay to Issuer) (the “2010 Notes”), its \$252.545 million Federal Highway Grant Anticipation Notes (Accelerated Bridge Program) 2013 Series A (the “2013 Notes”), its \$347.310 million Federal Highway Grant Anticipation Notes (Accelerated Bridge Program) 2014 Series A (the “2014 Notes,” and collectively with the 2010 Notes, the 2013 Notes and other notes issued from time to time pursuant to the Trust Agreement, the “Trust Agreement Notes”) pursuant to the Trust Agreement.

General

The 2016 Notes are being issued to finance the design, construction, reconstruction and repair of or improvements to bridges and approaches within the Commonwealth. See *The 2016 Notes – Plan of Finance*. The 2016 Notes are being issued pursuant to Chapter 233 of the Acts of 2008, as amended (the “Accelerated Bridge Program Act”), Section 20 of Chapter 29 of the Massachusetts General Laws, as amended (the “Special Obligation Act”) and Section 2ZZZ of Chapter 29, as amended (the “Commonwealth Transportation Fund Act”).

The Trust Agreement Notes are secured by and payable solely from the Pledged Funds (as defined below). The Trust Agreement Notes are subordinate to the Senior Obligations, as described herein. **The Trust Agreement Notes are not general obligations of the Commonwealth, and the full faith and credit of the Commonwealth is not pledged to the payment of principal of, and interest on, the Trust Agreement Notes.** In accordance with the Trust Agreement, the Commonwealth generally funds semiannual debt service payments on the Trust Agreement Notes one year in advance of each such payment to Noteholders. See *Security and Sources of Payment for the Trust Agreement Notes Under the Trust Agreement – Funding of Trust Agreement Obligations*.

Accelerated Bridge Program

Pursuant to the Accelerated Bridge Program Act, the Commonwealth commenced a program in 2010 to finance the accelerated capital improvement of bridges and related infrastructure, including the design, construction, reconstruction and repair of or improvements to bridges and approaches (the “Accelerated Bridge Program”). The Accelerated Bridge Program Act authorized the issuance of up to \$1.108 billion of federal highway grant anticipation notes (of which \$790 million (which amount includes net premium) have been issued as of the date hereof) secured by reimbursements received or to be received by the Commonwealth, acting through the Massachusetts Department of Transportation (“MassDOT”), from the federal government pursuant to the federal-aid highway program and any other monies from time to time deposited in the Federal Highway Grant Anticipation Note Trust Fund of the Commonwealth for such purposes.

The Accelerated Bridge Program Act also authorized the issuance of up to \$1.876 billion in special obligation bonds to be issued (of which \$1.633 billion (which amount includes net premium) have been issued as of

the date hereof) secured by revenues in the Commonwealth Transportation Fund to finance the Accelerated Bridge Program. Section 20 of the Chapter 79 of the Acts of 2014 authorized the issuance of approximately \$6.7 billion of bonds of the Commonwealth either as general obligation bonds or special obligation bonds (of which \$500 million (which amount includes net premium) have been issued as of the date hereof) to be secured by revenues in the Commonwealth Transportation Fund to finance certain capital expenditures of the MassDOT on behalf of Massachusetts Bay Transportation Authority (“MBTA”) and certain rail improvement projects across the Commonwealth.

Under the Accelerated Bridge Program Act, the Commonwealth may issue any portion of the therein authorized federal highway grant anticipation notes as special obligation bonds or special obligation bonds as federal highway grant anticipation notes, provided that the aggregate amount (including net premium) of such special obligation bonds and federal highway grant anticipation notes may not exceed \$2.984 billion, and provided that the Governor and State Treasurer determine that issuing such special obligation bonds or federal highway grant anticipation notes in such manner is necessary or is in the best financial interests of the Commonwealth, based on their consideration of: (i) the Commonwealth’s authority under federal law to issue federal highway grant anticipation notes; (ii) generally prevailing financial market conditions; (iii) the impact of each financing approach on the overall capital financing plans and needs of the Commonwealth; (iv) any ratings assigned to outstanding bonds of the Commonwealth and any ratings expected to be assigned by any nationally-recognized credit rating agency to the bonds or notes proposed to be issued; and (v) any applicable provisions of Chapter 29 of the General Laws.

The 2016 Notes are the Commonwealth’s fourth issuance of Trust Agreement Notes under the Trust Agreement pursuant to the Accelerated Bridge Program Act. The 2016 Notes, together with other Trust Agreement Notes, are being issued as federal highway grant anticipation notes, and are further secured by a pledge of the net revenues from the Commonwealth Transportation Fund. The aggregate principal amount of Trust Agreement Notes currently outstanding is \$657 million.

Additional federal highway grant anticipation notes are currently expected to be issued by the Commonwealth through state fiscal year (“SFY”) 2020 to finance the costs of the Accelerated Bridge Program.

Since the Accelerated Bridge Program commenced in 2008, 261 structures have been replaced, renovated or preserved. In addition, numerous scheduled and emergency repairs have been made to bridges across Massachusetts. Of the 199 projects that have been issued notices to proceed since the program began, 77% of the projects are trending on budget and 68% are trending on track to be completed by their original contract completion dates. The number of structurally deficient bridges in Massachusetts under Accelerated Bridge Program oversight has been reduced from 543 in July 2008, to 432 as of July 1, 2016, a reduction of 20% since the program began, which is ahead of the program’s target of 17%.

MassDOT has contracted all major projects currently under the program, including the following projects to be funded in part with proceeds of the 2016 Notes:

- The replacement of the Kenneth F. Burns Memorial Bridge is budgeted at \$110 million. The bridge serves as a major transportation link between Shrewsbury and Worcester, currently accommodates four lanes of two-way traffic, pedestrian sidewalks on either side and carries an estimated Average Daily Traffic (“ADT”) of 47,700 vehicles as well as a significant number of bicycles and pedestrians. The bridge opened for beneficial use in July 2016;
- The replacement of the temporary Fore River Bridge with a permanent bridge is budgeted at \$274 million and currently projected to be completed by January 2019. The bridge carries State Route 3A over the Fore River between Quincy and Weymouth, accommodates an estimated ADT of 32,000 vehicles, and serves significant commercial shipping traffic;
- The replacement of the John Greenleaf Whittier Memorial Bridge over the Merrimack River is budgeted at \$328 million and is currently projected to be completed in late summer or early fall 2017. The bridge currently provides six lanes of two-way traffic and accommodates an estimated ADT of 70,000

vehicles. The project will widen the bridge and approximately 4.25 miles of I-95 between Newburyport and Salisbury, providing for a consistent eight-lane cross section throughout the I-95 corridor;

- The rehabilitation of the Longfellow Bridge, which links Cambridge and Boston, is budgeted at \$298 million and is currently projected to be completed in February 2019. The bridge serves vehicular and pedestrian traffic with an estimated ADT of 28,600 vehicles, and serves the MBTA Red Line train with an estimated daily passenger load of 90,000;
- The reconstruction of the State Route 79 and I-195 interchange in Fall River is budgeted at \$136 million in GANs-eligible funds and reached beneficial use in July 2016. The project includes the replacement of bridges and roadways and the improvement of pedestrian and bicycle connections. The I-195 portion of the interchange accommodates an estimated ADT of 88,000 vehicles while Route 79 accommodates an estimated ADT of 40,000 vehicles. There is work related to the Braga Bridge being performed under the construction contract that is being funded by non-GANs funds, with completion scheduled for summer 2017;
- The replacement of the existing non-operating draw bridge (Woods Memorial Bridge) with a new fixed bridge between Everett and Medford and Revere Beach Parkway (Route 16) is budgeted at \$81 million and is currently projected to be complete by November 2019; and
- The replacement of a bridge in Millbury over West Main Street is budgeted at \$21 million and currently projected to be complete in June 2020. The work includes replacing the existing 3-span structure with a single span structure. Both the superstructure and substructure will be replaced. The bridge will be widened to accommodate four travel lanes along Route 146 and two acceleration lanes for the existing ramps. The bridge construction will need to be staged in order to maintain the existing four travel lanes on Route 146. The vertical profile along Route 146 may increase to improve the vertical clearance over West Main Street.

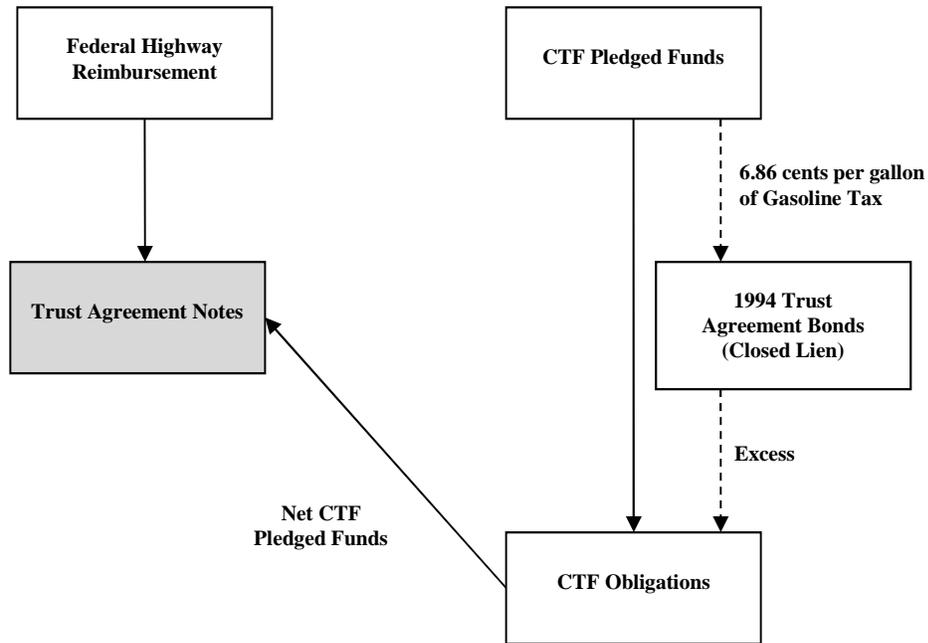
Summary of Pledged Funds

The Trust Agreement Notes are secured by and payable from two independent sources of funds, including (1) reimbursements from the federal government for highway construction and (2) motor fuels tax revenues and motor vehicle registry fees collected by the Commonwealth, subject in this case, to a prior pledge of such amounts to Senior Obligations as described herein. Specifically, the Trust Agreement Notes are payable solely from and secured by the following (collectively, the “Pledged Funds”):

- (a) all federal highway construction reimbursements and other federal highway assistance (“Federal Highway Reimbursements”) that the Commonwealth receives with respect to federally-aided highway construction projects under Title 23 of the United States Code or any successor program established under federal law (the “Federal-Aid Highway Program”); (See *Federal Highway Reimbursements* below)
- (b) Net CTF Pledged Funds (defined herein), including certain state motor fuels tax revenues and motor vehicle registry fees, as more fully described below, subject to the prior pledge of such amounts to the CTF Obligations (defined herein) and the 1994 Trust Agreement Bonds (defined herein); (See *Net CTF Pledged Funds* below)
- (c) Any tax credit paid to the Commonwealth by the federal government equal to a percentage of the taxable interest the Commonwealth pays (“Direct Payments”) with respect to any Trust Agreement Notes issued as Build America Bonds under the Trust Agreement;
- (d) amounts, securities and any investment earnings with respect thereto in all funds and accounts held under the Trust Agreement other than the Project Fund and the Rebate Fund; and

- (e) any amounts payable to the Commonwealth by a Hedge Provider pursuant to a Qualified Hedge Agreement relating to the Trust Agreement Notes. (There currently is no Qualified Hedge Agreement relating to any Trust Agreement Notes.)

The Trust Agreement Notes are subordinate to the Senior Obligations, consisting of the outstanding 1994 Trust Agreement Bonds, which have a final maturity of June 1, 2022 and the CTF Obligations, all as defined herein. See *Net CTF Pledged Funds* below.



Federal Highway Reimbursements

Pledged Funds include monies received by the Commonwealth from the federal government under existing and future federal highway construction assistance programs until paid at maturity. All such assistance received by the Commonwealth will be collected for the benefit of the holders of the Trust Agreement Notes in a trust fund established by law and, to the extent needed for such purpose, will be retained in trust to provide for debt service on the Trust Agreement Notes. Application of such funds to the payment of principal of and interest on the Trust Agreement Notes is permitted under federal law and may be made without legislative appropriation under Massachusetts law. Neither the Commonwealth nor the trust fund established to secure the Trust Agreement Notes is eligible for bankruptcy protection.

Federal highway construction assistance is paid to all states including the Commonwealth through the Federal-Aid Highway Program from revenues collected by the United States Treasury from certain federally imposed motor vehicle user fees, primarily fuel taxes, which revenues are deposited into the Federal Highway Trust Fund (“HTF”). Distribution of assistance from the HTF is subject to periodic authorization and annual appropriation by the United States Congress. Since such assistance was established by the Federal-Aid Highway Act of 1956, the Federal-Aid Highway Program has been reauthorized numerous times in various forms at generally increasing funding levels. Actual payments to states have continued without interruption since 1956.

The most recent authorization, the Fixing America’s Surface Transportation Act (the “FAST Act”), signed December 4, 2015, reauthorizes the Federal-Aid Highway Program through September 30, 2020. The FAST Act authorizes a \$500 million annual increase for the National Highway Performance Program, a first year increase of \$1 billion for the Surface Transportation Program and approximately \$200 million annually

thereafter for such program, and creates a new National Highway Freight Program funded with approximately \$1.2 billion annually. Additionally, the FAST Act provides continued funding for the programs previously funded by the Moving Ahead for Progress in the 21st Century Act (“MAP-21”), the most recent multi-year authorization of the Federal-Aid Highway Program prior to the FAST Act, and certain short-term authorizations that were enacted after the expiration of MAP-21 but before the FAST Act was enacted. Over the life of the legislation, the FAST Act increases overall highway funding by 15% and transit funding by 18%.

Federal highway construction assistance is paid to all states including the Commonwealth on a reimbursement basis. Access to all of the amounts of available federal highway assistance for Massachusetts will depend, in part, on its continued spending on federally-eligible projects. The Commonwealth expects that, as a result of its extensive statewide road and bridge program, it will have sufficient federally eligible project expenditures to be able to utilize all the federal highway assistance made available to it. In conjunction with the development of the Statewide Transportation Improvement Program (“STIP”) for FFY 2016-2019, the Federal Highway Administration (“FHWA”) provided the Commonwealth with guidance of annual Obligation Authority (“OA”) of \$600 million. The capital spending federal reimbursement estimates included in MassDOT’s cash flow forecast for SFY 2017 assumes continuation of the Federal-Aid Highway Program at FAST Act levels. If necessary, future cash flow forecasts will be updated to take into account any lapse of federal funding or delay in reimbursements.

In addition, the Commonwealth has made extensive use of Advance Construction (“A/C”) status under the Federal-Aid Highway Program. By utilizing A/C status, the Commonwealth may pre-qualify projects and expenditures thereon for federal reimbursement, subject only to the availability of future federal assistance. As of July 27, 2016, Massachusetts had an estimated \$1.17 billion in planned costs so qualified, which, when spent, should ensure that it will be able to draw down future federal assistance when available.

For additional detail on the Federal-Aid Highway Program, see *General Overview of Federal-Aid Highway Program* and *Appendix A*.

Commonwealth Transportation Fund

In 2009, the Commonwealth enacted comprehensive transportation reform legislation as Chapter 25 of the Acts of 2009, as amended (the “Transportation Reform Act”) to reorganize its transportation agencies and authorities and to revise certain transportation financing statutes. The Transportation Reform Act created the Commonwealth Transportation Fund (“CTF”) pursuant to Section 2ZZZ of Chapter 29 of the General Laws (the “Commonwealth Transportation Fund Act”). Pursuant to the Commonwealth Transportation Fund Act, receipts from the Commonwealth’s Motor Fuels Tax imposed under Chapters 64A, 64E and 64F of the General Laws (excluding 0.15% of the Gasoline Tax credited to the Inland Fisheries and Game Fund) are credited to the Commonwealth Transportation Fund. In addition, the Transportation Reform Act provided that a portion of Registry Fees imposed under Chapter 90 of the General Laws and other applicable law shall be deposited in the Commonwealth Transportation Fund as provided in Section 34(iii) of Chapter 90. See *Net CTF Pledged Funds*.

The Transportation Reform Act amended the Special Obligation Act to provide that the Commonwealth could pledge or assign all or any part of monies credited to the Commonwealth Transportation Fund to the payment of special obligation bonds. The effect of these statutory changes was to increase the sources and total amount of revenue available to be pledged to the Commonwealth’s special obligation bonds. The amendment to the Special Obligation Act enacted as part of the Transportation Reform Act expressly provided that a legislative authorization of special obligation bonds in effect as of July 1, 2009, such as the Accelerated Bridge Program Act, constitutes valid authorization to borrow under the provisions of the Special Obligation Act, as amended.

Net CTF Pledged Funds

Net CTF Pledged Funds represent amounts credited to the CTF following payment of debt service on the 1994 Trust Agreement Bonds and the CTF Obligations, all as further described herein. The primary sources of Net CTF Pledged Funds are the Motor Fuels Tax revenues and Registry Fees. These sources are described in greater detail below. Additional information on the CTF can be found in *Security and Sources of Payment for the Trust*

Agreement Notes under the Trust Agreement.

Motor Fuels Tax. The Commonwealth's Motor Fuels Tax revenues are derived from the excise imposed on fuel (other than aviation fuel) by the provisions of Chapters 64A, 64E, and 64F of the Massachusetts General Laws.

Chapter 64A currently imposes an excise tax of 24¢ per gallon on gasoline sold in the Commonwealth by distributors and unclassified exporters and importers ("Gasoline Tax"). Under state law, 99.85% of the Gasoline Tax (other than with respect to aviation fuel) (currently 23.964¢ per gallon) is credited to the CTF (of which, 6.86¢ per gallon is subject to the prior pledge for the benefit of the 1994 Trust Agreement Bonds, see *1994 Trust Agreement Bonds* below) and constitute Net CTF Pledged Funds under the Trust Agreement ("Pledged Gasoline Tax"). Fuel subject to the provisions of Chapter 64A consisting of cellulosic biofuel or a blend of gasoline and cellulosic biofuel is taxable in proportion to the percentage of the fuel content consisting of gasoline, as determined by the Commonwealth's Department of Energy Resources. All Gasoline Tax imposed with respect to aviation fuel under Chapter 64A is credited to the CTF and may be used only for airport development projects approved and carried out at airports and landing facilities, and revenue from the tax on aviation fuel is not included in Net CTF Pledged Funds.

Revenues from the Pledged Gasoline Tax collected by the Commonwealth representing the Prior Pledged Funds (6.86¢ per gallon of the current 24¢ per gallon Gasoline Tax) constitute a portion of the Net CTF Pledged Funds under the Trust Agreement but the lien thereon is subordinate to the prior lien of the 1994 Trust Agreement. The portion of the Prior Pledged Funds in excess of the amounts necessary to pay debt service on the 1994 Trust Agreement Bonds and to satisfy any other requirements under the 1994 Trust Agreement will be available to pay debt service on the Bonds and to satisfy other requirements under the Trust Agreement. The final maturity date of the 1994 Trust Agreement Bonds is June 1, 2022 and the Commonwealth has covenanted under the Trust Agreement not to issue any additional bonds under the 1994 Trust Agreement except in certain circumstances, refunding bonds. In addition, immediately upon the discharge and release of the lien of the 1994 Trust Agreement, all Prior Pledged Funds will be available to pay debt service on the Bonds.

Chapter 64E imposes a tax on all combustible gases and liquids used or sold for use in an internal combustion engine, other than those fuels which are subject to the provisions of Chapter 64A, including diesel fuel and liquefied gases, such as propane gas ("Special Fuels Tax"). Special fuels are currently taxed at a rate per gallon equal to the rate imposed by Chapter 64A, or 24¢ per gallon, except for liquefied gas, which is taxed at a rate of 19.1% of the average price per gallon. All of the Commonwealth's revenues from the Special Fuels Tax imposed under Chapter 64E are credited to the CTF and constitute Net CTF Pledged Funds under the Trust Agreement.

Chapter 64F currently imposes a tax on anyone who regularly operates motor vehicles on the highways of the Commonwealth which are propelled by gasoline or special fuels acquired outside the Commonwealth ("Motor Carrier Tax") equal to the rate imposed by Chapter 64A, or 24¢ per gallon. All of the Commonwealth's revenues from the Motor Carrier Tax imposed under Chapter 64F are credited to the CTF and constitute Net CTF Pledged Funds under the Trust Agreement. See *Net CTF Pledged Funds – Motor Fuels Tax*. The Gasoline Tax, the Special Fuels Tax and the Motor Carrier Tax are collectively referred to herein as the "Motor Fuels Tax" and the Pledged Gasoline Tax, Special Fuels Tax and Motor Carrier Tax are collectively referred to herein as "Pledged Motor Fuels Tax".

Registry Fees. The Registry of Motor Vehicles ("RMV"), a division of the MassDOT, also imposes various fees related to the use and operation of motor vehicles and trailers. Such fees are subject to approval of the Executive Office for Administration and Finance. Pursuant to Section 34(iii) of Chapter 90 of the General Laws, a portion of such fees (the "Registry Fees") are directed to be deposited in the CTF and are available to be used for transportation-related purposes, including debt service on special obligation revenue bonds issued under the Special Obligation Act. See *Net CTF Pledged Funds – Registry Fees*.

CTF Obligations. Pursuant to the Accelerated Bridge Program Act, the Commonwealth has previously issued special obligation bonds pursuant to a Trust Agreement dated as of December 1, 2010 (as amended and supplemented from time to time, the "CTF Trust Agreement") between the Commonwealth and The Bank of New York Mellon Trust Company, N.A., as trustee (the "CTF Trustee"). The Commonwealth's outstanding obligations under the CTF Trust Agreement include bonds issued in 2010 (the "2010 CTF Bonds"), in 2012 (the "2012 CTF

Bonds”), in 2013 (the “2013 CTF Bonds”), in 2014 (the “2014 CTF Bonds”), and in 2015 (the “2015 CTF Bonds”). Concurrently with the delivery of the 2016 Notes, the Commonwealth expects to issue approximately \$136.565 million of its Commonwealth Transportation Fund Revenue Bonds (Rail Enhancement & Accelerated Bridge Programs), 2016 Series A (the “2016 CTF New Money Bonds” and \$104.220 million of its Commonwealth Transportation Revenue Refunding Bonds, 2016 Series A (the “2016 CTF Refunding Bonds”, and collectively with the 2010 CTF Bonds, the 2012 CTF Bonds, the 2013 CTF Bonds, the 2014 CTF Bonds and the 2015 CTF Bonds, the “CTF Bonds”). The 2016 CTF New Money Bonds and 2016 CTF Refunding Bonds are being offered by the Commonwealth pursuant to a separate offering document. The 2016 CTF Refunding Bonds will be used to advance refund and thereby defease certain outstanding CTF Bonds. The principal amount to be so refunded will be determined at the time of sale of the 2016 CTF Refunding Bonds.

The Rail Enhancement Program (“REP” or “Rail Enhancement Program”) was authorized in 2014 pursuant to legislation that authorized approximately \$6.7 billion of Commonwealth bonds to fund capital expenditures of the MBTA and various rail improvement projects. This legislation further provided that such bonds could be issued either as general obligation bonds or as special obligation bonds (of which \$500 million (which amount includes net premium) have been issued to date) secured by revenues in the CTF pursuant to the Special Obligation Act (the “REP Bonds”). The Commonwealth’s current five-year capital plan projects the issuance of up to \$1.674 billion (not including the 2016 CTF Bonds and which amount includes net premium) of additional CTF Bonds by SFY 2021 for purposes of the Accelerated Bridge Program and Rail Enhancement Program. The REP Bonds, when issued by the Commonwealth pursuant to the Special Obligation Act, will be “CTF Obligations,” senior to the Trust Agreement Notes with respect to the Net CTF Pledged Funds.

The CTF Bonds and any other bonds issued from time to time under the CTF Trust Agreement or any other trust agreement secured by monies credited to the CTF, including REP Bonds, when and if issued by the Commonwealth pursuant to the Special Obligation Act, or subordinate CTF Bonds, if any, constitute CTF Obligations. The CTF Obligations are senior to the Trust Agreement Notes with respect to the Net CTF Pledged Funds (defined below) and are included in the definition of “Senior Obligations.” Additional bonds constituting CTF Obligations may be issued by the Commonwealth from time to time.

1994 Trust Agreement Bonds. The Commonwealth previously issued special obligation revenue bonds pursuant to a Trust Agreement dated as of June 1, 1994 between the Commonwealth and Shawmut Bank, N.A. as trustee (as amended and restated, the “1994 Trust Agreement”), including bonds issued in 1997, 2002 and 2005 (collectively, the “1994 Trust Agreement Bonds”). The 1994 Trust Agreement Bonds are secured by the Commonwealth’s pledge of 6.86¢ per gallon of revenues from the Gasoline Tax. The 1994 Trust Agreement Bonds are currently outstanding in the aggregate principal amount of \$171 million, with a final maturity of June 1, 2022. The lien on the 1994 Trust Agreement is closed and no additional bonds may be issued under such agreement, except for refunding bonds. The 1994 Trust Agreement Bonds are senior to the Trust Agreement Notes with respect to the pledge of receipts from the Gasoline Tax credited to the Commonwealth Transportation Fund equal to 6.86¢ per gallon and are included in the definition of “Senior Obligations.”

The above summary is intended only as a general introduction to the 2016 Notes and does not purport to be comprehensive or definitive. For more information concerning the 2016 Notes and the specific pledge and other provisions of the Trust Agreement and descriptions of the Federal-Aid Highway Program and the Commonwealth’s participation therein, prospective purchasers of the 2016 Notes should examine the entirety of this Official Statement.

Purpose and Content of Official Statement

This Official Statement describes the terms and use of the proceeds of and security for the 2016 Notes. This introduction is subject in all respects to the additional information contained in this Official Statement, including Appendices A through E. *Appendix A* contains a summary of the Federal-Aid Highway Program. *Appendix B* contains a summary of the Special Obligation Act and the Commonwealth Transportation Fund Act. *Appendix C* contains a summary of certain provisions of the Trust Agreement. Terms used in this Official Statement and not defined herein are defined in *Appendix C*. *Appendix D* contains the proposed form of legal opinion of Bond Counsel with respect to the 2016 Notes. *Appendix E* contains the proposed form of the Commonwealth’s continuing disclosure undertaking to be included in the 2016 Notes to facilitate compliance by the Underwriters with the

requirements of paragraph (b)(5) of Rule 15c2-12 of the Securities and Exchange Commission. See *Continuing Disclosure*. All descriptions of documents contained in this Official Statement are only summaries and are qualified in their entirety by reference to each such document.

THE 2016 NOTES

General

The 2016 Notes will be dated the date of delivery and will bear interest from such date payable semiannually on June 15 and December 15 of each year, commencing December 15, 2016 (each an “Interest Payment Date”), until the principal amount is paid. The 2016 Notes will mature on the dates and in the years and in the aggregate principal amounts, and shall bear interest at the rates per annum (calculated on the basis of a 360-day year of twelve 30-day months), as set forth on the inside cover page of this Official Statement. The Trustee will act as paying agent with respect to the 2016 Notes. In such capacity, the Trustee is sometimes referred to herein as the “Paying Agent.”

Book-Entry Only System. The 2016 Notes will be issued by means of a book-entry only system, with one note certificate for each maturity immobilized at The Depository Trust Company, New York, New York (“DTC”). The certificates will not be available for distribution to the public and will evidence ownership of the 2016 Notes in principal amounts of \$5,000, or whole multiples thereof. 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 2016 Notes will be paid to DTC or its nominee as registered owner of the 2016 Notes. The record date for payments on account of the 2016 Notes will be the last business day of the month preceding each June 15 and December 15. As long as the book-entry only system remains in effect DTC or its nominee will be recognized as the owner of the 2016 Notes for all purposes, including notices and voting. The Commonwealth will not be responsible or liable for maintaining, supervising or reviewing the records maintained by DTC, its participants or persons acting through such participants. See *Book-Entry Only System*.

Redemption

Optional Redemption of 2016 Notes. Each maturity of the 2016 Notes will be subject to redemption on and after the June 15 immediately preceding the applicable maturity date at the option of the Commonwealth from any monies legally available therefor, in whole or in part at any time, by lot, at 100% of the principal amount thereof, plus accrued interest to the redemption date.

Notice of Redemption. The Commonwealth shall provide the Trustee with written notice of its election to redeem the 2016 Notes and the Trustee shall give notice of redemption to the owners of the applicable 2016 Notes not less than 30 days prior to the date fixed for redemption. So long as the book-entry-only system remains in effect for such 2016 Notes, notices of redemption will be sent by the Trustee only to DTC or its nominee. Any failure on the part of DTC, any DTC participant or any nominee of a beneficial owner of any such 2016 Note (having received notice from a DTC participant or otherwise) to notify the beneficial owner so affected, shall not affect the validity of the redemption. A notice of redemption may state (i) that it is conditioned upon the deposit of monies in an amount equal to the amount necessary to effect the redemption not later than the redemption date, or (ii) that the Commonwealth may rescind such notice at any time prior to the scheduled redemption date if the Commonwealth delivers a notice thereof to the Noteholders. The redemption notice shall be of no effect if such monies are not so deposited or if the notice is rescinded, and the failure of the Commonwealth to make funds available in whole or in part on or before the redemption date shall not then constitute a default under the Trust Agreement.

On the specified redemption date, all 2016 Notes called for redemption shall cease to bear interest, provided the Commonwealth has monies on hand to pay such redemption in full.

Selection for Redemption. In the event that less than all of any maturity of any 2016 Note is to be redeemed, and so long as the book-entry-only system remains in effect for such 2016 Notes, the particular 2016 Notes or portion of any such 2016 Notes of a particular maturity to be redeemed will be selected by DTC by lot. If the book-entry-only system no longer remains in effect for the 2016 Notes, selection for redemption of less than all

of any one maturity of the 2016 Notes will be made by the Commonwealth by lot in such manner as in its discretion it shall deem appropriate and fair. For purposes of selection by lot within a maturity, each \$5,000 of principal amount of a 2016 Note will be considered a separate 2016 Note.

Plan of Finance

The 2016 Notes are being issued pursuant to the provisions of the Accelerated Bridge Program Act and the Trust Agreement for the purpose of financing the design, construction, reconstruction and repair of or improvements to bridges and approaches in the Commonwealth.

SOURCES AND USES OF FUNDS

The sources and uses of funds with respect to the 2016 Notes are as follows:

Sources of Funds	
Principal of the 2016 Notes	\$125,410,000.00
Original Issue Premium/(Discount)	24,941,519.10
Commonwealth Funds	<u>4,337,095.83</u>
Total:	\$154,688,614.93
Uses of Funds	
Deposit to Project Account	\$150,000,742.86*
Deposit to Debt Service Fund	4,337,095.83
Underwriters' Discount	<u>350,776.24</u>
Total:	\$154,688,614.93

*\$742.86 of this amount will be used to pay costs of issuance.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

DEBT SERVICE REQUIREMENTS

The following table sets forth the debt service requirements on the Trust Agreement Notes:

SFY Ending June 30	Debt Service on Existing Trust Agreement Notes⁽¹⁾	<u>Debt Service on 2016 Notes</u>			Total Debt Service on Trust Agreement Notes
		<u>Principal</u>	<u>Interest</u>	<u>Total</u>	
2017	\$76,021,586	-	\$4,337,096	\$4,337,096	\$80,358,682
2018	76,925,537	-	6,270,500	6,270,500	83,196,037
2019	76,906,353	\$13,685,000	6,270,500	19,955,500	96,861,853
2020	76,875,749	14,400,000	5,586,250	19,986,250	96,861,999
2021	76,849,121	15,150,000	4,866,250	20,016,250	96,865,371
2022	76,833,294	15,920,000	4,108,750	20,028,750	96,862,044
2023	82,706,170	10,845,000	3,312,750	14,157,750	96,863,920
2024	82,096,200	11,995,000	2,770,500	14,765,500	96,861,700
2025	81,180,500	13,515,000	2,170,750	15,685,750	96,866,250
2026	80,916,600	14,455,000	1,495,000	15,950,000	96,866,600
2027	80,647,750	15,445,000	772,250	16,217,250	96,865,000

(1) Existing Trust Agreement Notes consist of the 2010 Notes (not including Direct Payments), the 2013 Notes and 2014 Notes.

DEBT SERVICE COVERAGE

The following tables set forth estimated debt service coverage on the Trust Agreement Notes from both Federal Highway Reimbursements and Net CTF Pledged Funds.

Federal Highway Reimbursements. For coverage purposes, annual Federal Highway Reimbursements are assumed to be \$600 million, based on guidance provided to the Commonwealth by the FHWA for the FFY 2016-2019 STIP (See *General Overview of the Federal-Aid Highway Program* below). The FHWA notified the Commonwealth it should plan for \$600 million of annual OA during this timeframe.

Net CTF Pledged Funds. The Net CTF Pledged Funds on the following table includes estimated receipts for SFY 2017 and thereafter, based on the Commonwealth's actual receipts of Motor Fuels Tax and Registry Fees in SFY 2016 and assuming no growth in such receipts in future years.

Debt Service on the Trust Agreement Notes. The first table shows annual debt service for the 2010 Notes, the 2013 Notes, the 2014 Notes and the 2016 Notes, and the second table includes all future issuances described below.

Based on certain assumptions that are subject to change, including the assumptions for Pledged Funds specified in the following tables, debt service coverage on all anticipated Trust Agreement Notes, assuming the aggregate issuance of Trust Agreement Notes resulting in proceeds of approximately \$1.108 billion, is estimated to be no less than 14.5x and debt service coverage on the 2010 Notes, the 2013 Notes, the 2014 Notes and the 2016 Notes is estimated to be no less than 18.5x. All projections and estimates are subject to change. The actual debt service coverage will likely vary from the amounts shown as actual circumstances in the future will likely vary from the assumptions used for this Official Statement.

Future Issuance of CTF Obligations and Trust Agreement Notes. In addition to the 2016 CTF Bonds, the Commonwealth currently expects to issue up to \$1.674 billion (which amount includes net premium) of additional CTF Bonds by the end of SFY 2021 to finance costs of the Accelerated Bridge Program and Rail Enhancement Program. Any issuance of additional CTF Bonds is subject to compliance with certain debt service coverage tests established under the trust agreement pursuant to which the CTF Bonds are issued. The Commonwealth also expects to issue up to \$147.9 million (which amount includes net premium) of additional federal grant anticipation notes to be issued under the GAN Trust Agreement by the end of SFY 2020 to finance costs of the Accelerated Bridge Program. The actual amount and timing of the issuance of additional CTF Bonds and additional notes under the GAN Trust Agreement are subject to change. The current 5-year capital investment plan of the Commonwealth anticipates that other capital needs, including projects to repair structurally deficient bridges and other transportation infrastructure, will be funded from other sources.

The Commonwealth, to the extent authorized under other bond authorizations heretofore or hereafter enacted and subject to the Special Obligation Act, may issue additional CTF Obligations for other transportation purposes in addition to the Accelerated Bridge Program and the Rail Enhancement Program. Any such issuance is subject to compliance with the applicable debt service coverage tests. In order to issue additional Trust Agreement Notes, the Commonwealth will be required to comply with certain debt service coverage tests. See *Security and Sources of Payment for the Trust Agreement Notes Under the Trust Agreement – Limitations on Issuance of Additional Notes*.

Outstanding Trust Agreement Notes – Projected Debt Service Coverage
(\$ in thousands)

SFY Ending June 30	<u>Pledged Funds</u>				<u>Projected Debt Service Coverage</u>					
	<u>Federal Highway Reimbursements⁽¹⁾</u>	<u>Projected Net CTF Pledged Funds⁽²⁾</u>	<u>Total Projected Pledged Revenues</u>	<u>Existing Debt Service on Trust Agreement Notes⁽³⁾</u>	<u>Projected Debt Service on 2016 Notes</u>	<u>Total Projected Debt Service</u>	<u>Federal Highway Reimbursements Only</u>	<u>Net CTF Pledged Funds Only</u>	<u>Total Projected Debt Service Coverage</u>	
2017	\$601,212	\$1,180,906	\$1,782,118	\$76,022	\$4,337	\$80,359	7.5x	14.7x	22.2x	
2018	601,068	1,188,309	1,789,377	76,926	6,271	83,196	7.2x	14.3x	21.5x	
2019	600,906	1,188,315	1,789,220	76,906	19,956	96,862	6.2x	12.3x	18.5x	
2020	600,728	1,188,310	1,789,038	76,876	19,986	96,862	6.2x	12.3x	18.5x	
2021	600,537	1,188,313	1,788,850	76,849	20,016	96,865	6.2x	12.3x	18.5x	
2022	600,332	1,188,310	1,788,643	76,833	20,029	96,862	6.2x	12.3x	18.5x	
2023	600,113	1,218,130	1,818,243	82,706	14,158	96,864	6.2x	12.6x	18.8x	
2024	600,000	1,218,131	1,818,131	82,096	14,766	96,862	6.2x	12.6x	18.8x	
2025	600,000	1,217,781	1,817,781	81,181	15,686	96,866	6.2x	12.6x	18.8x	
2026	600,000	1,217,403	1,817,403	80,917	15,950	96,867	6.2x	12.6x	18.8x	
2027	600,000	1,216,970	1,816,970	80,648	16,217	96,865	6.2x	12.6x	18.8x	

(1) Annual Federal Highway Reimbursements assumed to equal \$600 million in SFY2017. Federal Highway Reimbursements through SFY2023 also include interest subsidy payments received by the Commonwealth from the U.S. Treasury (“Direct Payments”) with respect to the 2010 Notes issued as Build America Bonds, reduced for the 6.9% reduction in subsidy payments projected during federal fiscal year 2017 by the Department of Treasury as a result of sequestration.

(2) Net CTF Pledged Funds are net of amounts to be used for debt service payments on the 1994 Trust Agreement Bonds and the outstanding CTF Bonds, as well as debt service on the 2016 CTF Bonds. Net CTF Pledged Funds consist of monies in the Commonwealth Transportation Fund from the following sources, subject to the prior lien of the CTF Obligations: (i) Chapter 64A Gasoline Tax, (ii) Special Fuels Tax and Motor Carrier Tax, (iii) Registry Fees expected to be credited to the Commonwealth Transportation Fund pursuant to Section 34(iii) of Chapter 90, (iv) the portion of the Prior Pledged CTF Funds (6.86¢ per gallon of the Chapter 64A Gasoline Tax) in excess of the amounts necessary to pay debt service on the 1994 Trust Agreement Bonds and to satisfy any other requirements under the 1994 Trust Agreement, and (v) Direct Payments relating to the 2010 CTF Bonds, reduced for the 6.9% reduction in subsidy payments projected during federal fiscal year 2017 by the Department of Treasury as a result of sequestration. See “Net CTF Pledged Funds.”

(3) Represents gross debt service on the 2010 Notes, not including Direct Payments, and debt service on the 2013 Notes and the 2014 Notes.

Trust Agreement Notes – Projected Debt Service Coverage
(\$ in thousands)

<u>Pledged Funds</u>							<u>Projected Debt Service Coverage⁽⁴⁾</u>			
SFY Ending June 30	Federal Highway Reimbursements ⁽¹⁾	Projected Net CTF Pledged Funds ⁽²⁾	Total Projected Pledged Revenues	Existing Debt Service on Trust Agreement Notes ⁽³⁾	Projected Debt Service on 2016 Notes	Projected Debt Service on Future Trust Agreement Notes ⁽⁴⁾	Projected Total Debt Service ⁽⁴⁾	Federal Highway Reimbursements Only	Net CTF Pledged Funds Only	Total Projected Debt Service Coverage
2017	\$601,212	\$1,177,291	\$1,778,503	\$76,022	\$4,337	-	\$80,359	7.5x	14.7x	22.1x
2018	601,068	1,167,727	1,768,795	76,926	6,271	-	83,196	7.2x	14.0x	21.3x
2019	600,906	1,150,814	1,751,720	76,906	19,956	\$4,993	101,854	5.9x	11.3x	17.2x
2020	600,728	1,135,827	1,736,556	76,876	19,986	15,189	112,051	5.4x	10.1x	15.5x
2021	600,537	1,121,879	1,722,416	76,849	20,016	16,603	113,468	5.3x	9.9x	15.2x
2022	600,332	1,111,913	1,712,246	76,833	20,029	20,830	117,692	5.1x	9.4x	14.5x
2023	600,113	1,138,766	1,738,880	82,706	14,158	20,831	117,695	5.1x	9.7x	14.8x
2024	600,000	1,138,761	1,738,761	82,096	14,766	20,828	117,690	5.1x	9.7x	14.8x
2025	600,000	1,138,412	1,738,412	81,181	15,686	20,829	117,696	5.1x	9.7x	14.8x
2026	600,000	1,138,034	1,738,034	80,917	15,950	20,827	117,693	5.1x	9.7x	14.8x
2027	600,000	1,137,600	1,737,600	80,648	16,217	20,832	117,697	5.1x	9.7x	14.8x

- (1) Annual Federal Highway Reimbursements assumed to equal \$600 million in SFY2017. Federal Highway Reimbursements through SFY2023 also include interest subsidy payments received by the Commonwealth from the U.S. Treasury (“Direct Payments”) with respect to the 2010 Notes issued as Build America Bonds, reduced for the 6.9% reduction in subsidy payments projected during federal fiscal year 2017 by the Department of Treasury as a result of sequestration.
- (2) Net CTF Pledged Funds are net of amounts to be used for debt service payments on the 1994 Trust Agreement Bonds and the outstanding CTF Bonds, as well as debt service on the 2016 CTF Bonds and on projected future CTF Bonds. Net CTF Pledged Funds consist of monies in the Commonwealth Transportation Fund from the following sources, subject to the prior lien of the CTF Obligations: (i) Chapter 64A Gasoline Tax, (ii) Special Fuels Tax and Motor Carrier Tax, (iii) Registry Fees expected to be credited to the Commonwealth Transportation Fund pursuant to Section 34(iii) of Chapter 90, (iv) the portion of the Prior Pledged CTF Funds (6.86¢ per gallon of the Chapter 64A Gasoline Tax) in excess of the amounts necessary to pay debt service on the 1994 Trust Agreement Bonds and to satisfy any other requirements under the 1994 Trust Agreement, and (v) Direct Payments relating to the 2010 CTF Bonds, reduced for the 6.9% reduction in subsidy payments projected during federal fiscal year 2017 by the Department of Treasury as a result of sequestration. See “Net CTF Pledged Funds.”
- (3) Represents gross debt service on the 2010 Notes, not including Direct Payments, and debt service on the 2013 Notes and the 2014 Notes.
- (4) Assumes the aggregate issuance in fiscal years 2018 and 2020 of \$147.9 million (which amount includes net premium) of Additional Notes. Projected Debt Service on future issuance assumes current market rates.

SECURITY AND SOURCES OF PAYMENT FOR THE TRUST AGREEMENT NOTES UNDER THE TRUST AGREEMENT

General

The principal of and premium, if any, and interest on the Trust Agreement Notes and other obligations of the Commonwealth from time to time owing under the Trust Agreement (collectively, the “Trust Agreement Obligations”) are secured by a pledge of, and are payable solely from, the Pledged Funds, which consist of two independent sources of funds, including (1) reimbursements from the federal government for highway construction and (2) motor fuels tax revenues and motor vehicle registry fees collected by the Commonwealth, subject in both cases, to a prior pledge of such amounts to Senior Obligations. The Pledged Funds consist of the following:

- (a) the Pledged Federal Highway Revenues;
- (b) Net CTF Pledged Funds;
- (c) Direct Payments received by the Commonwealth with respect to Trust Agreement Notes issued as Build America Bonds (the “2010 Notes”);
- (d) amounts, securities and any investment earnings with respect thereto in all funds and accounts held under the Trust Agreement other than the Project Fund and the Rebate Fund; and
- (e) any amounts payable to the Commonwealth by a Hedge Provider pursuant to a Qualified Hedge Agreement relating to the Trust Agreement Notes (currently, none).

The Pledged Federal Highway Revenues consist of Federal Highway Reimbursements and any other monies deposited to or held for the credit of the Federal Highway Grant Anticipation Note Fund.

The Net CTF Pledged Funds include the following revenues and monies, after the application thereof in accordance with the provisions of the 1994 Trust Agreement and the CTF Trust Agreement:

- (f) all monies received or to be received by the Commonwealth from: (i) the portion equal to 17.104¢ per gallon of the Gasoline Tax, (ii) equal to 24¢ per gallon with respect to the excise tax imposed on fuel (other than liquefied gas) by the provisions of Chapters 64E and 64F, and (iii) equal to 19.1% of the average price per gallon (computed to the nearest tenth of one percent) with respect to the excise tax imposed on liquefied gas by the provisions of Chapter 64E;
- (g) all Registry Fees including all (i) motor vehicle registration fees imposed under Chapter 90; (ii) motor vehicle license fees imposed under Chapter 90; and (iii) miscellaneous fees and other revenues relating to the operation and use of motor vehicle transportation;
- (h) all other monies received or to be received by the CTF Trustee from the 1994 Trustee pursuant to the 1994 Trust Agreement;
- (i) subject to the prior lien of the 1994 Trust Agreement, 6.86¢ per gallon (other than aviation fuel) of the Gasoline Tax;
- (j) any tax credit paid to the Commonwealth by the federal government equal to a percentage of the taxable interest on any CTF Obligations issued as Build America Bonds under the CTF Trust Agreement; and
- (k) to the extent permitted in the CTF Trust Agreement, such Additional Pledged Funds (as therein defined) as the Commonwealth may by a subsequent supplemental trust agreement pledge to the CTF Trustee as security for the CTF Obligations.

Under the CTF Trust Agreement, the Commonwealth may change the rates of the Motor Fuels Tax or Registry Fees, in any respect, including lowering such rates, upon the delivery of certain certifications, including a certificate demonstrating that CTF Pledged Funds would equal at least 400% of the maximum aggregate debt service due in the then current or any future fiscal year on CTF Obligations outstanding. See *Net CTF Pledged Funds*.

The Trust Agreement Notes and the other Trust Agreement Obligations are not general obligations of the Commonwealth, and the full faith and credit of the Commonwealth is not pledged to the payment of the Trust Agreement Notes or the other Trust Agreement Obligations. The Commonwealth is not obligated to make any payments with respect to the Trust Agreement Notes or the other Trust Agreement Obligations except as specified in the Trust Agreement Notes and in the Trust Agreement, and the Commonwealth is not obligated to impose any taxes to satisfy the Trust Agreement Notes or the other Trust Agreement Obligations.

The Special Obligation Act provides that the lien of the Trust Agreement on the Pledged Funds will be perfected by filing the Trust Agreement in the records of the State Treasurer. The Trust Agreement has been so filed. In the opinion of Bond Counsel, as the result of such filing the lien of the Trust Agreement is valid and binding as against all persons or entities of any kind having claims of any kind in tort, contract or otherwise, irrespective of whether such persons or entities have notice thereof. Pledged Funds may be pledged to secure other obligations of the Commonwealth provided that the pledge of the Pledged Funds securing such other obligations is subordinate to the pledge of the Pledged Funds securing the Trust Agreement Notes.

The lien of the Trust Agreement on the Federal Highway Reimbursements is limited to such monies when received by the Commonwealth and does not include a pledge of the right to receive such reimbursements or other assistance from the federal government. No person or entity, other than the Commonwealth, will be entitled to assert any claim against the federal government with respect to such reimbursements or other assistance.

As required by the Senior Federal Highway Note Act (as defined herein), the Trust Agreement contains a covenant to the effect that, except to the extent necessary to pay Trust Agreement Obligations due and payable in any SFY (as originally scheduled), no more than fifty percent (50%), or such other percentage as may be permitted by Massachusetts law (\$308.5 million in SFY 2017), of the amount apportioned by law to the Commonwealth in any FFY with respect to the Federal-Aid Highway Program shall be applied in the SFY ending on June 30 of such FFY or in the SFY commencing on July 1st of such FFY to the payment of Trust Agreement Obligations, including without limitation, the payment, redemption or defeasance prior to maturity of the principal of and interest on 2010 Trust Agreement Notes Outstanding. Any such use of Federal Highway Reimbursements also requires the concurrence of the Secretary of Administration and Finance and the Secretary of Transportation (collectively, the "Secretaries"). This provision limits the amount of Federal Highway Reimbursements that may be available in any year for any optional redemption or defeasance of 2016 Notes, although the percentage limitation may be modified or eliminated by future action of the Massachusetts Legislature without Noteholder consent. Moreover, the Commonwealth makes no representation as to the likelihood of any optional redemption or defeasance of the 2016 Notes or that it will not utilize other available funds, if any, for such purposes.

The Commonwealth has waived its sovereign immunity and consented to be sued on contractual obligations, including the Trust Agreement Notes and the Trust Agreement, and all claims with respect thereto. However, the property of the Commonwealth is not generally subject to attachment or levy to pay a judgment, and the satisfaction of any judgment generally requires a legislative appropriation. The application of the Pledged Funds other than the Net CTF Pledged Funds to satisfy the Trust Agreement Obligations, including satisfaction of any judgment enforcing the Trust Agreement Obligations, will not be subject to appropriation by the Massachusetts Legislature. However, application of the Net CTF Pledged Funds to pay Trust Agreement Obligations will require appropriation. If Net CTF Pledged Funds are required to pay Trust Agreement Obligations and no appropriation of Net CTF Pledged Funds for such purpose is made, the Net CTF Pledged Funds shall be held by the Trustee in the Holding Account established under the Trust Agreement, and may not be applied by the Commonwealth to any other use to the extent needed to pay debt service on the Trust Agreement Notes and other Trust Agreement Obligations. Enforcement of a claim for payment of the Trust Agreement Obligations may also be subject to the provisions of federal or state statutes, if any, hereafter enacted extending the time for payment or imposing other constraints upon enforcement, insofar as the same may be constitutionally applied. Under Massachusetts law, the 2016 Notes have all of the qualities and incidents of negotiable instruments under the Uniform Commercial Code. The Trust Agreement

Notes are not subject to acceleration.

The Legislature has previously amended and may in the future amend the Special Obligation Act, the Commonwealth Transportation Fund Act and other statutes that govern the Pledged Funds. Any future amendments of the Special Obligation Act, the Commonwealth Transportation Fund Act and other statutes that govern Pledged Funds are subject to the covenant of the Commonwealth that it shall not take any action that would impair the rights and remedies of the owners of the Trust Agreement Notes.

Neither the Commonwealth nor the Federal Highway Grant Anticipation Note Trust Fund is eligible for protection from its creditors pursuant to Title 11 of the United States Code.

Funds and Accounts

The Federal Highway Grant Anticipation Note Trust Fund was established by Section 10 of Chapter 11 of the Acts of 1997, as amended by Chapter 121 of the Acts of 1998, as amended (the “Senior Federal Highway Note Act”). The Trust Agreement establishes within the Federal Highway Grant Anticipation Note Trust Fund a Revenue Account and a Project Fund. The Revenue Account is held and administered by the Trustee and constitutes part of the security for the Trust Agreement Notes. Pursuant to the Trust Agreement, all Pledged Federal Highway Revenues received by the Commonwealth and any other monies deposited with or paid to the Trustee for application in accordance with the Trust Agreement, including any Direct Payments related to the Trust Agreement Notes, are required to be deposited within two business days of receipt by the Commonwealth into the Revenue Account of the Federal Highway Grant Anticipation Note Trust Fund. Such monies may be expended without further appropriation for payment of Trust Agreement Obligations. The Trust Agreement also establishes the following Funds and Accounts, which are separate from the Federal Highway Grant Anticipation Note Trust Fund:

- (i) Redemption Fund;
- (ii) Debt Service Fund, including a June 15 Debt Service Payment Account, a December 15 Debt Service Payment Account, a Holding Account and a Defeasance Account;
- (iii) Note Related Costs Fund; and
- (iv) Rebate Fund.

All these Funds and Accounts are held and administered by the Trustee. All these Funds and Accounts are included in the Pledged Funds securing the Trust Agreement Obligations except for the Rebate Fund. Monies and securities held in the Rebate Fund are not available to pay the Trust Agreement Obligations and do not constitute security therefor.

The *Redemption Fund* provides a depository for any funds, including Pledged Funds, not otherwise required by the Trust Agreement to be deposited or applied with respect to the Trust Agreement Notes, so that such funds may be used for the purposes of purchasing or optionally redeeming Trust Agreement Notes of a particular series. Such use of Federal Highway Reimbursements without appropriation is limited by a provision of the Senior Federal Highway Note Act described above. See *General*. In the event of a deficiency in the Debt Service Fund, any funds held in the Redemption Fund, other than monies held for Trust Agreement Notes with respect to which a notice of redemption has been given, shall be transferred to the applicable Account of the Debt Service Fund to the extent necessary to make up such deficiency.

The *Debt Service Fund* contains two accounts, the June 15 Debt Service Account and the December 15 Debt Service Account, for the accumulation of Pledged Funds for the purpose of paying scheduled principal and interest on the Trust Agreement Notes when due. Deposits to such Accounts are to be made as described below in “Funding of Trust Agreement Obligations”. The Debt Service Fund also contains a Holding Account, which account shall be deemed to be part of the Commonwealth Transportation Fund, for the purpose of holding Net CTF Pledged Funds received from the Commonwealth and needed to pay debt service on the Trust Agreement Obligations. The Debt Service Fund also contains a Defeasance Account for the retention of funds and securities

held for the purpose of paying defeased Trust Agreement Notes.

The *Note Related Costs Fund* holds Pledged Funds to be used to pay fees, costs and other amounts included in the Trust Agreement Obligations, other than debt service on the Trust Agreement Notes. Funds held in the Note Related Costs Fund are available to pay debt service on the Trust Agreement Notes in the event of a deficiency in the Debt Service Fund.

The *Rebate Fund* holds amounts, if any, payable by the Commonwealth to the United States Treasury with respect to the Trust Agreement Notes pursuant to the arbitrage rebate requirements of Section 148 of the Internal Revenue Code of 1986, as amended. Amounts deposited in the Rebate Fund are not included in the Pledged Funds and are not available to pay debt service on the Trust Agreement Notes.

Funding of Trust Agreement Obligations

Under the Trust Agreement, the Commonwealth will fund the June 15 and December 15 debt service payments on the Trust Agreement Notes *up to one year in advance of each payment to Noteholders*, using the following procedure:

- No later than October 10 of each FFY, the State Treasurer will deliver to the Trustee a “Statement of Available Revenues” setting forth the following:
 - amount of Federal Highway Reimbursements expected to be received during current FFY;
 - existing deficiencies in Funds and Accounts under the Trust Agreement due and payable in current FFY; and
 - Trust Agreement Obligations expected to be due and payable during next FFY.
 - The State Treasurer will revise the Statement of Available Revenues throughout the FFY based upon material revisions in the projections set forth therein.
- If there are any existing deficiencies in the Funds and Accounts, Federal Highway Reimbursements will be retained by the Trustee to the extent of such deficiencies to replenish such Funds and Accounts.
- Once the deficiencies, if any, have been replenished, if the amount of expected Federal Highway Reimbursements during the current FFY shown in the Statement of Available Revenues is equal to or greater than 120% of the sum of projected Trust Agreement Obligations for the next FFY, then the Trustee will apply such monies as follows:
 - the Trustee will transfer the Federal Highway Reimbursements to the Commonwealth for any lawful purposes until the earlier of either December 15 or the date (the “December 15 Shortfall Date”) when the expected Federal Highway Reimbursements for the current FFY less amounts received to date falls below 120% of the sum of projected Trust Agreement Obligations for the next FFY;
 - beginning on the earlier of December 15 or the December 15 Shortfall Date, the Trustee shall retain an amount equal to next year’s December 15 Debt Service Requirement;
 - once next year’s December 15 Debt Service Requirement is satisfied, the Trustee will transfer the Federal Highway Reimbursements to the Commonwealth for any lawful purposes until the earlier of either June 15 or the date (the “June 15 Shortfall Date”) when the expected Federal Highway Reimbursements for the current FFY as set forth in the Statement of Available Revenues, less amounts received to date, falls below 120% of the

- sum of projected Trust Agreement Obligations expected to be paid after December 15 for the next FFY;
- beginning on the earlier of June 15 or the June 15 Shortfall Date, the Trustee shall retain an amount equal to next year's June 15 Debt Service Requirement; and
 - once next year's June 15 Debt Service Requirement is satisfied, the Trustee will transfer the Federal Highway Reimbursements to the Commonwealth for any lawful purposes.
- Once the deficiencies, if any, have been replenished, if the amount of expected Federal Highway Reimbursements during the current FFY shown in the Statement of Available Revenues is less than 120% of the sum of projected Trust Agreement Obligations for the next FFY, then the Trustee will apply such monies as follows:
 - the Trustee will retain the Federal Highway Reimbursements thereafter received first in an amount equal to next year's December 15 Debt Service Requirement, second in an amount equal to next year's June 15 Debt Service Requirement, and thereafter to pay all other projected Trust Agreement Obligations in accordance with the Statement of Available Revenues.
 - If the Statement of Available Revenues shows that projected Federal Highway Reimbursements are not expected to be sufficient to pay projected Trust Agreement Obligations during the following Commonwealth Fiscal Year, the Governor, after notice from the State Treasurer not later than December 15, shall include in the annual operating budget a recommendation to appropriate from Net CTF Pledged Funds an amount equal to the Trust Agreement Obligations due in such Commonwealth Fiscal Year not provided from other sources. Immediately upon recognition of a deficiency, Net CTF Pledged Funds will be retained in the Holding Account. Funds will be dispensed from the Holding Account to the June 15 Debt Service Account and the December 15 Debt Service Account upon receipt of an appropriation. Funds in the Holding Account will be retained in an amount sufficient to ensure that Federal Highway Reimbursements plus Net CTF Pledged Funds will be available to pay next year's Trust Agreement Obligations, and are unavailable for other purposes should no appropriation be received. See *Net CTF Pledged Funds* and *Appendix C – Summary of Certain Provisions of the Trust Agreement – Net CTF Pledged Funds*.
 - Notwithstanding the foregoing, upon the occurrence and during the continuance of an Event of Default under the Trust Agreement, all Federal Highway Reimbursements will be retained by the Trustee.

For a more complete description of the foregoing, see *Appendix C - Summary of Certain Provisions of the Trust Agreement – Revenue Account* and *– Covenants as to Pledged Funds and Federal Highway Grant Anticipation Note Trust Fund*.

Limitations on Issuance of Additional Notes

Under the Trust Agreement, Additional Notes may be issued on a parity basis with the Trust Agreement Notes for the purpose of providing for the costs of the projects authorized by the Accelerated Bridge Program Act and any other projects hereafter authorized, and for refunding Outstanding Trust Agreement Notes. The Trust Agreement provides that no Additional Notes may be issued unless:

- (a) as of the delivery of such Additional Notes, no Event of Default will have happened and will then be continuing;

- (b) the Commonwealth delivers a certificate setting forth the amount of (1) Federal Highway Reimbursements and (2) Net CTF Pledged Funds received by the Commonwealth for each month for the eighteen (18) month period ending with the last full month immediately preceding the date of issuance of the Additional Notes (or, if the information for such last full month is not then available, the last month for which such information is available);
- (c) the amount of Federal Highway Reimbursements received by the Commonwealth during any twelve (12) consecutive months out of such eighteen (18) month period referred to in clause (b) above was not less than one hundred fifty percent (150%) of the maximum amount due in the then current or any future Commonwealth with respect to the Adjusted Note Debt Service Requirement with respect to the Trust Agreement Notes Outstanding including the proposed Additional Notes;
- (d) the amount of Net CTF Pledged Funds received by the Commonwealth during the same twelve (12) consecutive months referred to in clause (c) above was not less than two hundred fifty percent (250%) of the maximum annual aggregate Adjusted Note Debt Service Requirement in the then current or any future Commonwealth Fiscal Year on Trust Agreement Notes Outstanding including the proposed Additional Notes;
- (e) Federal Highway Reimbursements expected to be received by the Commonwealth during the remainder of the FFY in which such Additional Notes are issued will be at least 120% of the Trust Agreement Obligations due with respect to such Additional Notes in the next succeeding FFY (minus any portion of such Trust Agreement Obligations to be paid from proceeds of the Additional Trust Agreement Notes or other available amounts deposited with the Trustee for such purpose);
- (f) all interest and principal, if any, payable on the Additional Notes during the FFY in which such Additional Notes are issued shall be provided for from portions of the proceeds of such Additional Notes or by other available funds deposited with the Trustee as of the date of issuance of such Additional Notes; and
- (g) the aggregate amount of bonds and notes, including the Trust Agreement Notes, the CTF Bonds and the REP Bonds, other than any Refunding Notes and refunding CTF Bonds, does not exceed the limit imposed by law.

The Commonwealth may issue Refunding Notes without regard to the conditions specified above so long as (a) no Event of Default shall exist under the Trust Agreement and (b) the Adjusted Note Debt Service Requirement for each Commonwealth Fiscal Year in which Trust Agreement Notes are or will be Outstanding (i) computed immediately prior to the delivery of such Refunding Notes and (ii) computed immediately after the delivery of such Refunding Notes, and showing either that (x) the Adjusted Note Debt Service Requirement for each Commonwealth Fiscal Year in which Trust Agreement Notes will be Outstanding as computed in (ii) of this paragraph will not be greater than the Adjusted Note Debt Service Requirement in each such Commonwealth Fiscal Year as computed in (i) of this paragraph or (y) the net present value of the Adjusted Note Debt Service Requirement as computed in paragraph (ii) of this paragraph is less than the net present value of the Adjusted Note Debt Service Requirement as computed in paragraph (i) of this paragraph. In lieu of the requirements set forth in clause (b) of this paragraph, the Commonwealth may deliver to the Trustee certificates satisfying the conditions of clauses (b)-(f) of the preceding paragraph and in each case treating the Refunding Notes to be issued as Additional Notes thereunder.

Prior to the issuance of any Additional Notes or Refunding Notes, the Trustee also shall have received any other documents required by the Trust Agreement or the Applicable Supplemental Trust Agreement. The Trust Agreement permits the Commonwealth to issue obligations that are secured by a subordinate pledge of the Pledged Funds.

GENERAL OVERVIEW OF THE FEDERAL-AID HIGHWAY PROGRAM

The process of financing the Federal-Aid Highway Program begins with congressional approval of a federal highway act, the most recent reauthorization of which is the FAST Act, signed into law on December 4, 2015, which authorizes funding for the Federal-Aid Highway Program through September 30, 2020. See *Appendix A – The Federal-Aid Highway Program – Reauthorization*.

The amounts authorized in the federal highway acts serve as notice to the states of the size of the Federal-Aid Highway Program, which gives the states the ability to start their planning process through the life of the reauthorization. It permits the states to assign the funds to particular projects for planning purposes without the funds having yet been annually appropriated. Subsequent appropriations acts are necessary for the actual payment of the monies to the states.

Annually, Congress sets the upper limits on that year's authorizations from the Federal-Aid Highway Program, and the FHWA, after making certain administrative deductions and set asides, apportions, or distributes, the program funds to the states using federally mandated formulas and procedures. The annual federal apportionment generally occurs on the first day of the FFY (October 1) and cannot be taken away except by lapsing (generally, after approximately four years) or through a congressional action. As more particularly detailed herein under Commonwealth Participation in the Federal-Aid Highway Program, since 2005, annual apportionments to the Commonwealth have not been less than \$577 million.

Because of the typical multi-year authorization and multi-year availability of funds associated with the Federal-Aid Highway Program, federal limitations are placed on the amount of funds that a state can obligate within a given FFY – OA – which applies to the total obligations of apportioned funds within a given year, regardless of the year in which the funds were apportioned and carry-forward amounts from previous years' unused amounts. The ceiling on annual OA does not take back authorized funds already apportioned to the states, it only limits the annual rate of obligation. As more particularly detailed herein under Commonwealth Participation in the Federal-Aid Highway Program, since 2005, annual OA to the Commonwealth has not been less than \$593 million.

The amount of the OA is included in the federal annual appropriations act for payment purposes. Historically, FHWA has reimbursed the states for all appropriations, using other federal monies during recent periods when the federal HTF did not have sufficient funds to cover the reimbursements. Since 1999, the Commonwealth has received not less than \$449.6 million annually in Federal Highway Reimbursements.

States can seek approval from FHWA of A/C status for a project, which allows the state to begin a project and pay it from the state's own funding sources, subject to later reimbursement when the OA becomes available. A/C approval allows the states to further leverage their future expected receipt of Federal-Aid Highway Program funds. As of July 27, 2016, the Commonwealth's A/C balance was \$1.45 billion.

Generally, projects are required to be included in the STIP before work can be authorized and initiated using Federal-Aid Highway Program funds. The Commonwealth and its ten metropolitan transportation planning organizations ("MPOs") have a STIP for FFY 2016-2019 covering approximately \$600 million annually in projects, approximately 77% of which are statewide projects and the remaining approximately 23% of which are local. The assumed \$600 million of annual OA is based on guidance provided by the FHWA.

Annually, when the Commonwealth receives its FHWA apportionment, it first sets aside the projected debt service payments on outstanding debt secured by Federal Highway Reimbursements, then the amount of A/C projects' cash flow, and is able to obligate, or contractually commit, to other projects the remaining apportionment. As a matter of policy, the Commonwealth currently uses grant anticipation note proceeds for A/C projects, leaving remaining monies for other projects.

For additional detail on the Federal-Aid Highway Program, see *Appendix A*.

COMMONWEALTH PARTICIPATION IN THE FEDERAL-AID HIGHWAY PROGRAM

The flow of Federal Highway Reimbursements into the Federal Highway Grant Anticipation Note Trust Fund will depend on several factors, most notably, the amount of funding provided to Massachusetts by the federal government under the Federal-Aid Highway Program and the Commonwealth's ability to use such funding. The sections below summarize the implementation and management of the Federal-Aid Highway Program in the Commonwealth, the recent history of funding levels provided to the Commonwealth, the Commonwealth's use of such funding, and the anticipated funding levels that could be made available to Massachusetts under the FAST Act.

Program Implementation and Management

Implementation of the Federal-Aid Highway Program involves three key steps: (i) budgeting; (ii) planning and programming; and (iii) federal aid reimbursement.

Budgeting. In Massachusetts, MassDOT's Federal Aid Programming and Reimbursement Office, under the Office of the Chief Financial Officer, (the "FAPRO") and Office of Transportation Planning ("OTP") have primary responsibility for budgeting federally-aided transportation needs.

Planning and Programming. FAPRO and OTP coordinate transportation planning and programming activities for MassDOT. At the state level, MassDOT and the Massachusetts Port Authority prepare plans. The Commonwealth's plans are then reviewed by U.S. Environmental Protection Agency ("EPA") and the FHWA at the federal level.

The long-range planning requirements are followed in Massachusetts in both a state and a regional planning process. In 1995, Massachusetts released its 25-year long-range plan, titled *Accessing the Future*. This document identifies the Commonwealth's transportation policies, goals and initiatives through 2020, based on anticipated levels of state and federal transportation funding, and is not intended to provide a project-by-project description of the state's future transportation investments. The plan was prepared by Mass Highway (predecessor to MassDOT) and OTP, in coordination with several agencies and organizations including the FHWA, the Executive Office of Environmental Affairs (predecessor to the Executive Office of Energy and Environmental Affairs) and the Massachusetts Association of Regional Planning Authorities ("MARPA").

The Massachusetts STIP is developed annually. The FFY 2016-2019 STIP covers a four year period but the proposed FFY 2017-2021 covers a five year period. STIP development is coordinated by FAPRO and OTP. Initially, FAPRO and OTP project available state and federal funding for the next five years, based on anticipated federal apportionments and anticipated state transportation funding. This total is then reduced to account for regionally significant projects and programs. After such needs have been determined, formulas established by MARPA are applied to the remaining balance in order to calculate programming targets for each Regional Planning Association. Only after this process is complete can a project formally be considered part of the Commonwealth's transportation funding plan.

Federal Aid Reimbursement. In Massachusetts, FAPRO manages the reimbursement process.

The Office of the Chief Financial Officer within MassDOT has day-to-day responsibility for paying project bills and for securing prompt reimbursement for the federal share of those bills. A computer-based project accounting, reporting and billing system is used to track encumbrances and expenditures for all projects, including highway projects, administered by the Commonwealth. This system is called the Massachusetts Management Accounting and Reporting System ("MMARS"). Within MMARS, an initial encumbrance for each project is established, based on the total amount of revenues specified in the project agreement. As the project is implemented, MMARS is used to track all expenditures and remaining encumbrance amounts. For federal-aid highway projects for which the Commonwealth must seek reimbursement for expenditures, MMARS generates federal billing information, and tracks the federal and Commonwealth sources of funding in detail. The federal-aid billing capabilities of MMARS are designed specifically for the needs of MassDOT, while satisfying the cost accumulation and billing requirements of the FHWA.

Reimbursement requests are submitted weekly and reimbursements are made by wire transfer generally within four days. The Commonwealth's system and management are highly automated, leading to a routine, weekly flow of Federal Highway Reimbursements based on actual spending on approved projects. To the best of its knowledge, the Commonwealth has never failed to receive Federal Highway Reimbursements that have been requested.

Funding History

Role of Obligation Authority. As noted in the previous section, the culmination of the federal authorization and appropriation process for the Federal-Aid Highway Program is the provision of OA to a state. OA, which is apportioned to states on an annual basis, sets the upper limit on the federal government's commitment to pay, through reimbursements, its share of eligible expenditures on approved projects. Thus, current year OA plus prior years' OA obligated but not yet expended determines the maximum amount of federal highway assistance that a state may receive under the Federal-Aid Highway Program. Although annual OA is not a direct representation of the amount of reimbursements a state will receive under the Federal-Aid Highway Program in a given year (e.g., due to lags in spending), OA levels will determine over time the amount of reimbursements that a state may receive.

OA Provided to Massachusetts. Since the advent of the multi-year federal authorization acts in 1982, Massachusetts has received substantial funding through the Federal-Aid Highway Program. The table below details the amount of OA made available to the Commonwealth from FFY 2005 through FFY 2015 and the amount of such OA actually obligated by the Commonwealth. As shown, the amount of annual OA provided to Massachusetts under the Federal-Aid Highway Program averaged \$634.5 million per year during this period, not including federal stimulus funds pursuant to the American Recovery and Reinvestment Act of 2009 ("ARRA") in FFY 2009. The amount of OA made available remained relatively consistent during the period, ranging from \$593.1 million to \$678.0 million, with the exception of \$1.1 billion made available in FFY 2009, which included \$437.9 million of federal stimulus funds pursuant to the ARRA. The funding level available to Massachusetts in FFY 2009 is not indicative of future levels.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

**The Commonwealth of Massachusetts
History of OA and Actual Obligations
(in millions)**

FFY	Formula OA ⁽¹⁾	Non-Formula OA ⁽²⁾	Total OA	Actual Obligations
2005	\$507.2	\$97.7	\$604.9	\$550.9
2006	531.0	102.2	633.2	567.9
2007	554.0	77.9	631.9	585.0
2008	548.1	75.2	623.3	590.0
2009	569.4	527.7 ⁽³⁾	1,097.1 ⁽³⁾	883.2
2010	625.1	29.9	655.0	813.4
2011	641.9	36.1	678.0	653.1
2012	585.7	24.3	610.0	597.5
2013	619.0	9.0	628.0	606.5
2014	617.9	4.0	621.9	621.9
2015	590.4	2.8	593.1	593.1
Average	\$580.9	\$49.9 ⁽⁴⁾	\$630.8 ⁽⁴⁾	\$602.2

SOURCE: MassDOT FAPRO.

- (1) Includes amounts attributable to Redistribution.
- (2) Includes amounts attributable to Minimum Guarantee and High Priority Funds.
- (3) FFY 2009 Non-Formula OA includes \$437.9 million attributable to ARRA.
- (4) Average for Non-Formula OA was computed using FFY 2009 figure excluding the \$437.9 million attributable to ARRA.

Actual Obligations. Since FFY 2004, the Commonwealth has used virtually all of the formula OA provided by the federal government, including redistribution/bonuses of OA resulting from under-utilization in other states. This is, in large part, the result of funding requirements for the Commonwealth's extensive statewide road and bridge program. Going forward, the Commonwealth anticipates continuing to use its full formula OA.

Reimbursements. The amount of Federal Highway Reimbursements received by the Commonwealth has averaged approximately \$598 million per year since FFY 2005. As noted, cash reimbursements tend to lag behind the commitment of OA. Reimbursements received by the Commonwealth during the period shown tend to track the use of OA, albeit on a delayed basis.

SAFETEA-LU. The total apportionments which Massachusetts received during the SAFETEA-LU period (FFY 2005 through 2012), not including any future redistribution funds, was \$5.013 billion, including ARRA funds, for an annual average of \$626.6 million. The following chart shows the SAFETEA-LU apportionments for Massachusetts:

**SAFETEA-LU Apportionments
(in millions)**

FFY	2005	2006	2007	2008	2009	2010	2011	2012	Total	Average*
Apportionments-Formula	\$522.7	\$520.5	\$561.6	\$552.1	\$563.6	\$621.5	\$579.6	\$578.0	\$4,499.6	\$562.5
Minimum Guarantee/ Equity Bonus	\$28.6	\$28.6	\$13.2	\$10.9	\$11.8	\$11.8	\$11.6	\$11.8	\$128.3	\$16.0
High Priority/ DEMO/Other	\$77.1	\$89.4	\$70.4	\$68.2	\$64.6	\$6.7	\$4.4	\$3.8	\$384.6	\$48.1
ARRA	-	-	-	-	\$437.9	-	-	-	\$437.9	\$437.9
Total Apportionments	\$628.4	\$638.5	\$645.2	\$631.2	\$1,077.9	\$640.0	\$595.6	\$593.6	\$5,450.4	\$626.6

SOURCE: MassDOT FAPRO.

* The Average column does not include amounts received pursuant to ARRA.

MAP-21. The following table sets forth the total apportionment that Massachusetts received for FFYs 2013, 2014 and 2015, not including any future redistribution funds:

**MAP-21 Apportionments
(in millions)**

FFY	2013	2014	2015
Apportionments-Formula	\$586.30	\$586.8	\$597.4
DEMO/Other Allocations	\$23.90	\$0.8	\$0.6
Total Funding	\$610.20	\$587.6	\$598.0

SOURCE: MassDOT FAPRO.

The FAST Act. The following table sets forth the total apportionment that Massachusetts received for FFY 2016 and the total apportionments which Massachusetts expects to receive for the period FFY 2017-2020, not including any future redistribution funds:

**FAST Act Apportionments
(in millions)**

FFY	2016	2017* (projected)	2018* (projected)	2019* (projected)	2020* (projected)
Apportionments-Formula	\$617.0	\$628.8	\$642.4	\$656.9	\$672.6
DEMO/Other Allocations	\$0.3	\$13.4	-	-	-
Total Funding	\$617.3	\$642.2	\$642.4	\$656.9	\$672.6

SOURCE: MassDOT FAPRO.

* Projected amounts represent the anticipated Federal-Aid Highway Program Apportionments for FFYs 2017, 2018, 2019, and 2020 before post-apportionment set asides, penalties and sequestration.

While the Commonwealth believes that sufficient Federal Highway Reimbursements will be received during the term of the Trust Agreement Notes to pay the principal of and interest due on the Trust Agreement Notes and all other Trust Agreement Obligations, various factors beyond the control of the Commonwealth may affect its ability to do so, including, without limitation, subsequent reauthorizations of the FAST Act, federal budgetary limitations and other possible changes in the Federal-Aid Highway Program that cannot now be anticipated. However, in the case that Federal Highway Reimbursements are not sufficient, Net CTF Pledged Funds are available to pay debt service on the Trust Agreement Notes, subject to appropriation. See *Appendix A - The Federal-Aid Highway Program – Reauthorization History*.

Apportionment Formulas. The FAST Act maintains the majority of MAP-21’s process for apportioning formula funds, but makes a few modifications. As under MAP-21, the FAST Act authorizes an annual lump sum for all of the apportioned federal highway programs combined. Of this lump sum, certain specified supplemental amounts will be reserved for the National Highway Performance Program in FFY 2019-20 and for the Surface Transportation Block Grant Program (formerly the Surface Transportation Program) for each FFY 2016-2020. The remaining amounts form the base apportionment. The FHWA calculates an initial amount for each State for each of the base apportionment, the Surface Transportation Block Grant Program, and the National Highway Performance Program. For FFY 2016, this initial amount is based on such state’s share of apportionments in 2015. The initial amounts are then adjusted to ensure that each state’s combined amount of apportionments is not less than 95% of the estimated tax payments attributable to highway users in that state paid into the HTF (other than the Mass Transit Account) in the most recent fiscal year for which data are available. As under MAP-21, states are allowed to transfer up to 50% of most apportioned funds to another federal program, with limited restrictions, to allow for flexibility.

If future Federal-Aid Highway Program authorization acts provide funding levels for Massachusetts similar to those authorized under the FAST Act, such assistance, if fully utilized, would substantially exceed the anticipated maximum annual debt service on the Trust Agreement Notes of approximately \$117.7 million. Similarly, if the

equity provisions noted above remain in place, the level of Massachusetts contributions into the Highway Account of the HTF should ensure that funding provided to Massachusetts under the Federal-Aid Highway Program would exceed the debt service requirements of the Trust Agreement Notes. However, future funding and the continuance of the equity provisions will be subject to future Congressional action, and there can be no assurance as to the level of such funding or the continuation of the equity provisions. See *Debt Service Coverage*.

Future Utilization of Federal Highway Assistance

Under the Federal-Aid Highway Program, as projects are approved by the FHWA, the aggregate dollar amount of each state contract relating thereto is obligated against the remaining annual amount of OA still available to that state. The state then pays the amounts owed under each contract as the work progresses and receives reimbursement from the federal government for the federal share of the total costs. The aggregate amount of reimbursements received by a state in any year is not necessarily equal to the state's apportionment for such year. Many projects and contracts extend over a number of years; the aggregate amount made available to a state in any one year, if fully obligated, may be received as reimbursement over a longer period of time relating to the actual pace of construction. The Commonwealth expects that, as a result of its extensive statewide road and bridge program and the Accelerated Bridge Program, it will have sufficient federally-eligible project expenditures to be able to utilize all the federal highway assistance that will be made available to the state.

In addition, the Commonwealth has made extensive use of A/C status under the Federal-Aid Highway Program. By utilizing A/C status, the Commonwealth may pre-qualify projects and expenditures thereon for federal reimbursement, subject to the availability of future OA and the continued inclusion of the relevant projects on the STIP. The Commonwealth estimates that as of July 27, 2016, approximately \$1.17 billion in Commonwealth project costs were so qualified. Such costs, when spent, should ensure that the Commonwealth will be able to draw down future federal reimbursements when available.

NET CTF PLEDGED FUNDS

Although the Commonwealth anticipates repaying the Trust Agreement Notes from Federal Highway Reimbursements, Net CTF Pledged Funds are available to pay debt service on the Trust Agreement Notes, if necessary. Net CTF Pledged Funds consist of revenues and monies in the CTF from the following sources, subject to the prior lien of the CTF Obligations:

Motor Fuels Tax. The Commonwealth's Motor Fuels Tax revenues are derived from the excise imposed on fuel (other than aviation fuel) by the provisions of Chapters 64A, 64E, and 64F of the Massachusetts General Laws.

Chapter 64A currently imposes an excise tax of 24¢ per gallon on gasoline sold in the Commonwealth by distributors and unclassified exporters and importers. Gasoline Tax, for purposes of the Trust Agreement, does not include the excise on aviation fuel imposed by Chapter 64A. Under state law, a portion of receipts from the Gasoline Tax equal to 99.85% (currently 23.964¢ per gallon) is credited to the CTF (of which 6.86¢ per gallon is subject to the prior pledge for the benefit of the 1994 Trust Agreement Bonds) and constitutes CTF Pledged Funds under the CTF Trust Agreement ("Pledged Gasoline Tax"). Fuel subject to the provisions of Chapter 64A consisting of cellulosic biofuel or a blend of gasoline and cellulosic biofuel is taxable in proportion to the percentage of the fuel content consisting of gasoline, as determined by the Commonwealth's Department of Energy Resources. All Gasoline Tax imposed with respect to aviation fuel under Chapter 64A is credited to the CTF and may be used only for airport development projects approved and carried out at airports and landing facilities, and revenue from the tax on aviation fuel is not included in CTF Pledged Funds.

Revenues from the Pledged Gasoline Tax collected by the Commonwealth representing the Prior Pledged CTF Funds (6.86¢ of the current 24¢ per gallon Gasoline Tax) constitute a portion of the CTF Pledged Funds under the CTF Trust Agreement but the lien thereon is subordinate to the prior lien of the 1994 Trust Agreement. The portion of the Prior Pledged CTF Funds in excess of the amounts necessary to pay debt service on the 1994 Trust Agreement Bonds and to satisfy any other requirements under the 1994 Trust Agreement will be available to pay debt service on the CTF Obligations and to satisfy other requirements under the CTF Trust Agreement. Such excess is projected to be at least 5.01¢ per gallon, upon the issuance of the 2016 CTF Bonds. The final maturity of the 1994 Trust Agreement Bonds is June 1, 2022 and the Commonwealth has covenanted under the Trust Agreement to

not issue any additional bonds under the 1994 Trust Agreement except in the case of refunding bonds. In addition, immediately upon the discharge and release of the lien of the 1994 Trust Agreement, all Prior Pledged CTF Funds will be available to pay debt service on the CTF Obligations, and will be part of the CTF Pledged Funds.

Chapter 64E imposes a tax on all combustible gases and liquids used or sold for use in an internal combustion engine, other than those fuels which are subject to the provisions of Chapter 64A, including diesel fuel and liquefied gases, such as propane gas (“Special Fuels Tax”). Special fuels are currently taxed at a rate per gallon equal to the rate imposed by Chapter 64A, or 24¢ per gallon, except for liquefied gas, which is taxed at a rate of 19.1% of the average price per gallon. All of the Commonwealth’s revenues from the Special Fuels Tax imposed under Chapter 64E are credited to the CTF and constitute CTF Pledged Funds.

Chapter 64F currently imposes a tax on anyone who regularly operates motor vehicles on the highways of the Commonwealth which are propelled by gasoline or special fuels acquired outside the Commonwealth (“Motor Carrier Tax”) equal to the rate imposed by Chapter 64A, or 24¢ per gallon. All of the Commonwealth’s revenues from the Motor Carrier Tax imposed under Chapter 64F are credited to the CTF and constitute CTF Pledged Funds. The Gasoline Tax, the Special Fuels Tax and the Motor Carrier Tax are collectively referred to herein as the “Motor Fuels Tax” and the Pledged Gasoline Tax, Special Fuels Tax and Motor Carrier Tax are collectively referred to herein as “Pledged Motor Fuels Tax”.

Pursuant to legislation effective July 31, 2013, the rates of the Gasoline Tax, the Special Fuels Tax and the Motor Carrier Tax were increased (generally, from 21¢ to 24¢ per gallon). Under the same legislation enacted in 2013, the rates of the Gasoline Tax, the Special Fuels Tax and the Motor Carrier Tax were to be adjusted for increases in the consumer price index, commencing January 1, 2015. However, on November 4, 2014, the voters at the statewide general election approved an initiative petition that repeals the indexing provision. Accordingly, absent future legislative action, the indexing provision will not take effect.

Registry Fees. The Registry of Motor Vehicles (“RMV”), a division of the MassDOT, also imposes various fees related to the use and operation of motor vehicles and trailers. Such fees are subject to approval of the Executive Office for Administration and Finance. Pursuant to Section 34(iii) of Chapter 90 of the General Laws, a portion of such fees (the “Registry Fees”) are directed to be deposited in the CTF and are available to be used for transportation-related purposes, including debt service on special obligation revenue bonds issued under the Special Obligation Act.

Changes to Pledged Funds. To the extent permitted in the CTF Trust Agreement, any Additional CTF Pledged Funds as the Commonwealth may pledge to the CTF Obligations in a supplemental trust agreement may be used as security for the CTF Obligations.

The CTF Trust Agreement does permit the Commonwealth to change the rate of the Registry Fees or the Motor Fuels Tax credited to the CTF, or both, in any respect, including lowering any rates or eliminating any fees or taxes, provided that prior to the effective date of any such change, the State Treasurer shall deliver a certificate to the trustee for the CTF Obligations demonstrating the amount of CTF Pledged Funds received by the State Treasurer during any 12 consecutive months of the 18-month period ending with the last full month immediately preceding the effective date of any such change, as adjusted, as set forth in such certificate, to reflect the proposed change in rates to be at least equal to 400% of the maximum aggregate debt service due in the then current or any future fiscal year on the CTF Obligations (other than subordinated CTF Obligations, if any). To the extent that the revenues and monies constituting CTF Pledged Funds are amended or revised in accordance with the CTF Trust Agreement, the definition of “Net CTF Pledged Funds” shall be likewise amended or revised to reflect the new revenues and monies constituting CTF Pledged Funds.

The table below shows actual CTF Pledged Funds since the inception of the CTF Trust Agreement. Net CTF Pledged Funds represent CTF Pledged Funds following payment of debt service on the 1994 Trust Agreement Bonds and CTF Obligations.

Historical CTF Pledged Funds⁽¹⁾
(in thousands)

SFY Ending June 30	CTF Pledged Funds⁽²⁾	Less: Debt Service on 1994 Trust Agreement Bonds	Less: Debt Service on CTF Obligations⁽³⁾	Net CTF Pledged Funds
2016	\$1,345,542	\$50,906	\$96,200	\$1,198,436
2015	1,336,078	52,225	81,054	1,202,799
2014	1,263,834	52,466	69,921	1,141,447
2013	1,171,978	58,922	58,108	1,054,948
2012	1,168,784	58,939	32,623	1,077,222
2011	1,155,217	58,932	14,318	1,081,967

- (1) SFY 2011-2015 figures are audited; SFY 2016 figures are preliminary, unaudited and subject to change. Does not include Direct Payments related to the 2010 Bonds, which are included in Pledged Funds.
- (2) For SFY 2011-2013, consists of: (i) 20.9685¢ per gallon of 21¢ per gallon Gasoline Tax then in effect, (ii) 100% of the remaining Motor Fuels Tax, (iii) Registry Fees expected to be credited to the CTF pursuant to Section 34(iii) of Chapter 90 and (iv) Direct Payments relating to 2010 CTF Bonds issued as Build America Bonds. For SFY 2014-2016, consists of (i) 23.964¢ per gallon of the 24¢ per gallon Gasoline Tax, (ii) 100% of the remaining Motor Fuels Tax and (iii) Registry Fees expected to be credited to the CTF pursuant to Section 34(iii) of Chapter 90.
- (3) Outstanding Debt Service on CTF Obligations represents gross debt service on the Commonwealth's CTF Bonds.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

COMMONWEALTH TRANSPORTATION SYSTEM

Overview

MassDOT was created in 2009 pursuant to the Transportation Reform Act. 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's Office of the Secretary houses the central administrative functions of the organization, including the General Counsel, Office of Chief Financial Officer, Information and Technology, Human Resources, Communications, Performance Management and Innovation, Diversity and Civil Rights and Transportation Planning.

MassDOT comprises the following four divisions:

- The Highways Division includes the roadways, bridges, and tunnels of the former MHD and the former Massachusetts Turnpike 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 Rail & Transit Division is responsible for all transit, freight and intercity rail initiatives and oversees the Regional Transit Authorities ("RTA") of the Commonwealth.
- 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 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.

Chapter 46 of the Acts of 2015, which is the Commonwealth's fiscal year 2016 budget (the "2016 Budget Act"), amended certain provisions governing MassDOT and the MBTA. Effective July 1, 2015, MassDOT is governed by an eleven-member board (the "Board of Directors" or the "Board") appointed by the Governor with expertise in transportation, finance, engineering and municipal government with temporary oversight by the FMCB, as described in the following paragraph. A representative of a labor organization is also appointed to the Board. The Board oversees the organization, while serving as the governing body of both MassDOT and MBTA. MassDOT is administered by the Secretary of Transportation, appointed by the Governor to serve as the Chief Executive Officer and the Secretary serves as an ex-officio member of the Board. The Enabling Act does not provide for MassDOT to be a debtor under the federal bankruptcy code.

Financing the Transportation System

Massachusetts Bay Transportation Authority Fiscal and Management Control Board. A five-member FMCB to oversee the MBTA was appointed by Governor Baker on July 17, 2015, pursuant to the 2016 Budget Act. The FMCB is within MassDOT and reports to the Secretary of Transportation. The FMCB is afforded all powers, responsibilities and obligations relative to the MBTA that are vested in the MBTA Board of Directors, with certain limited exceptions. The FMCB will continue until 2018, although it may be extended until 2020. At the dissolution of the FMCB, the MBTA Board of Directors will resume governance of the MBTA. In addition, the FMCB may (i) establish separate operating and capital budgets each with clearly designated revenue sources and uses and establish policies and procedures to ensure that no funds are commingled between operating and capital budgets; (ii) establish one-year and five-year operating budgets beginning with fiscal year 2017, which are balanced primarily through a combination of internal cost controls and increased own-source revenues and which facilitate the transfer of all MBTA employees from the capital budget to the operating budget; (iii) establish five-year and 20-year capital plans that include a phased program for the complete restoration of the physical assets of the MBTA including its vehicle fleet, a plan to address failings within the existing capital program and funding recommendations to meet the region's transit

needs; (iv) establish a rigorous performance management system and performance metrics and targets that address, among other things, maximizing of own-source revenues, increasing ridership, reducing absenteeism, addressing vacancies and attrition, improving employee morale, achieving procurement and contracting improvements and improving customer focus and orientation; (v) review any contract for the provision of services entered into by the MBTA, including contracts entered into before the establishment of the FMCB, including, but not limited to, commuter rail and paratransit service contracts, and amend those contracts, as necessary, in accordance with their terms; and (vi) establish, increase, or decrease any fare, fee, rate, or charge for any service, license or activity within the scope of the MBTA. The FMCB may: (i) reorganize or consolidate MBTA departments, divisions or entities, in whole or in part, except the Metropolitan Boston Transit Parking Corporation; (ii) establish any new departments, divisions, or entities as it considers necessary; and (iii) transfer the duties, powers, functions and appropriations of a department, division or entity, except the duties, powers, functions and appropriations of the Metropolitan Boston Transit Parking Corporation to another. Any reorganization or consolidation that affects MassDOT shall be approved by the Board.

Constitutional Limitations. Article 78 of the Articles of Amendment to the Massachusetts Constitution, as amended, requires that any fees, duties, excises or license taxes relating to the registration, operation or use of vehicles on public highways, or to fuels used for propelling such vehicles (as previously defined, “Article 78 Revenues”), be expended only for the following purposes: (1) the cost of administration of laws providing for such revenue, (2) the making of refunds and adjustments relating to such revenue; (3) the payment of highway obligations; (4) the cost of construction, reconstruction, maintenance and repair of public highways, bridges and mass transportation lines; (5) the cost of enforcing state traffic laws; and (6) the cost of other mass transportation purposes. Article 78 Revenues may be expended by the Commonwealth and its counties, cities and towns for these purposes only in such manner as the Legislature may direct.

The Motor Fuels Tax imposed under Chapters 64A, 64E and 64F and the Registry Fees are classified as Article 78 Revenues.

Funding Process. Prior to the Transportation Reform Act, transportation policy, planning and financing were segregated into separate silos of quasi-independent authorities and state agencies. One primary goal of the Transportation Reform Act was to better coordinate the Commonwealth’s transportation programs while finding economies of scale and best practices to reduce costs and manage a world class transportation network. Within the new streamlined MassDOT, jurisdiction over the operations and maintenance of the transportation system is shared among state, regional transit agencies and local governments.

The annual operating and capital budgets for transportation are developed through a collaborative process that encompasses many different organizations and individuals. These include:

- **Governor:** Establishes overall policies and spending priorities for MassDOT, including recommending the amount of funds that should be transferred to MassDOT within the annual operating budget. The Governor also determines the amount and timing of any authorized borrowing to fund capital investments. At the request of the Governor, the Treasurer issues bonds to borrow funds for authorized and budgeted capital projects at MassDOT.
- **Legislature:** Appropriates funds through the annual budget consistent with state law and the Massachusetts Constitution for transportation programs and projects. The Legislature also authorizes bond bills, or statutory authorizations to borrow money, to fund the capital budget.
- **MassDOT:** The Secretary of Transportation develops an annual operating and five-year capital budget for the department. MassDOT forecasts, plans and monitors financing for capital improvement projects on the state highway system and publically accessible airports, coordinates with the MBTA and RTAs on bus and rail funding, and works with the Metropolitan Planning Organizations (“MPO”) to finance local road projects.
- **MassDOT Board of Directors:** The 11-member MassDOT board, appointed by the Governor, reviews and adopts the annual operating and capital budgets for the department and MBTA. The Board further recommends policy and funding priorities to the Secretary, the Governor and Legislature.

- **MBTA Fiscal and Management Control Board:** The five-member board establishes separate operating and capital budgets, including one and five-year operating budgets and five-year and 20-year capital plans.
- **Metropolitan Planning Organizations & Regional Transit Authorities:** MPOs and RTAs are responsible for planning, coordinating and, in the case of RTAs, operating regional transportation systems. In the Commonwealth, the thirteen MPOs develop transit and roadway reinvestment plans which identify projects for funding in the STIP.

BOOK-ENTRY ONLY SYSTEM

The Depository Trust Company (“DTC”), New York, New York will act as securities depository for the 2016 Notes. The 2016 Notes 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 2016 Note certificate will be issued for each maturity of the 2016 Notes as set forth on the inside cover page hereof, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world’s largest securities 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, as amended. DTC holds and provides asset servicing for over 3.5 million issued of U.S. and non-U.S. equity issues, 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 a Standard & Poor’s rating of AA+. 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.

Purchases of 2016 Notes under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2016 Notes on DTC’s records. The ownership interest of each actual purchaser of each 2016 Note (the “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 2016 Notes are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of the Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the 2016 Notes, except in the event that use of the book-entry system for the 2016 Notes is discontinued.

To facilitate subsequent transfers, all 2016 Notes 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 the 2016 Notes 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 2016 Notes; DTC’s records reflect only the identity of the Direct Participants to whose accounts such 2016 Notes 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 2016 Notes may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the 2016 Notes, such as redemptions, defaults, and proposed amendments to the 2016 Note documents. For example, Beneficial Owners of 2016 Notes may wish to ascertain that the nominee holding the 2016 Notes for their benefit has agreed to obtain and transmit notices to Beneficial Owners.

Redemption notices shall be sent to DTC. If less than all of the 2016 Notes within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the 2016 Notes unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Commonwealth 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 2016 Notes are credited on the record date (identified in a listing attached to the Omnibus Proxy).

NEITHER THE UNDERWRITERS NOR THE COMMONWEALTH WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO THE DIRECT PARTICIPANTS, THE INDIRECT PARTICIPANTS OR THE BENEFICIAL OWNERS WITH RESPECT TO THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC OR BY ANY DIRECT OR INDIRECT PARTICIPANT, THE PAYMENT OF OR THE PROVIDING OF NOTICE TO THE DIRECT PARTICIPANTS, THE INDIRECT PARTICIPANTS OR THE BENEFICIAL OWNERS OR WITH RESPECT TO ANY OTHER ACTION TAKEN BY DTC AS BONDOWNER.

The principal of and interest and premium, if any, on the 2016 Notes will be paid to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC, as registered owner of the 2016 Notes. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Commonwealth or the Trustee on the 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 municipal 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 Commonwealth, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of the principal of and interest and premium, if any, to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Commonwealth 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.

The Commonwealth cannot give any assurances that Direct Participants or others will distribute payments of principal of and interest on the 2016 Notes paid to DTC or its nominee, as the registered owner, to the Beneficial Owners, or that they will do so on a timely basis or that DTC will serve and act in a manner described in this document.

Beneficial Owners of the 2016 Notes will not receive or have the right to receive physical delivery of such 2016 Notes and will not be or be considered to be the registered owners thereof. So long as Cede & Co. is the registered owner of the 2016 Notes, as nominee of DTC, references herein to the holders or registered owners of the 2016 Notes shall mean Cede & Co. and shall not mean the Beneficial Owners of the 2016 Notes, except as otherwise expressly provided herein.

DTC may discontinue providing its services as depository with respect to the 2016 Notes at any time by giving reasonable notice to the Commonwealth or the Trustee. Under such circumstances, in the event that a successor depository is not obtained, 2016 Notes will be delivered and registered as designated by the Beneficial Owners. The Beneficial Owner, upon registration of 2016 Notes held in the Beneficial Owner's name, will become the Bondowner. 2016 Note certificates are required to be printed and delivered.

The Commonwealth may decide to discontinue use of the system of book-entry only transfers through DTC

(or a successor securities depository). In such event, 2016 Note certificates will be printed, delivered and registered as designated by the Beneficial Owners.

The information in this section concerning DTC and DTC's book-entry system has been furnished by DTC. Such information is believed to be reliable, but the Commonwealth does not take any responsibility for the accuracy thereof.

Neither the Commonwealth nor the Trustee will have any responsibility or obligation to the Direct or Indirect Participants or the Beneficial Owners with respect to the accuracy of any records maintained by DTC or by any Direct or Indirect Participant; the payment of, or the providing of notice to, the Direct or Indirect Participants or the Beneficial Owners; or with respect to any other action taken by DTC as registered owner of the 2016 Notes.

THE INFORMATION IN THIS SECTION CONCERNING DTC AND DTC'S BOOK-ENTRY-ONLY SYSTEM HAS BEEN OBTAINED FROM SOURCES THAT THE COMMONWEALTH AND THE UNDERWRITERS BELIEVE TO BE RELIABLE, BUT NEITHER THE COMMONWEALTH NOR THE UNDERWRITERS TAKE RESPONSIBILITY FOR THE ACCURACY THEREOF.

Transfer

So long as Cede & Co., as nominee for DTC, is the holder of record of the 2016 Notes, beneficial ownership interests in the 2016 Notes may be transferred only through a Direct Participant or Indirect Participant, as defined herein, and recorded on the book-entry system operated by DTC. In the event the book-entry only system is discontinued, Note certificates will be delivered to the Beneficial Owners, which shall be transferable only upon the register for the 2016 Notes maintained by the Paying Agent. Thereafter, the 2016 Notes, upon surrender thereof at the Boston office of the Paying Agent with a written instrument of transfer satisfactory to the Paying Agent, duly executed by the holder thereof or such holder's duly authorized attorney, may be exchanged for an equal aggregate principal amount of 2016 Notes of the same maturity and of authorized denominations.

In all cases in which the privilege of exchanging or transferring 2016 Notes is exercised, the Commonwealth shall execute the 2016 Notes and (if the Trust Agreement applies) the Trustee shall authenticate and deliver the 2016 Notes in accordance with the provisions of the Trust Agreement. For every such exchange or transfer of 2016 Notes, the Paying Agent may make a charge sufficient to reimburse it for any tax, fee or other governmental charge required to be paid with respect to such exchange or transfer. The Paying Agent shall not be required to make any such exchange or transfer of 2016 Notes during the period beginning on the record date next preceding an interest or principal payment date and the interest or principal payment date.

LITIGATION

No litigation is pending or, to the knowledge of the Attorney General of the Commonwealth threatened against or affecting the Commonwealth seeking to restrain or enjoin the execution and delivery of the Trust Agreement or the issuance, sale or delivery of the 2016 Notes or in any way contesting or affecting the validity of the 2016 Notes, the right of the Commonwealth to receive Federal Highway Reimbursements or to collect the Net CTF Pledged Funds or the pledge of the Pledged Funds to secure any of the 2016 Notes as provided in the Trust Agreement.

TAX EXEMPTION

In the opinion of Locke Lord LLP, 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 2016 Notes 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 further opinion that interest on the 2016 Notes 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. 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 2016

Notes.

The Code imposes various requirements relating to the exclusion from gross income for federal income tax purposes of interest on obligations such as the 2016 Notes. Failure to comply with these requirements may result in interest on the 2016 Notes being included in gross income for federal income tax purposes, possibly from the date of original issuance of the 2016 Notes. The Commonwealth has covenanted to comply with such requirements to ensure that interest on the 2016 Notes 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 2016 Notes and any profit made on the sale thereof are exempt from Massachusetts personal income taxes, and the 2016 Notes are exempt from Massachusetts personal property taxes. Bond Counsel expresses no opinion regarding any other Massachusetts tax consequences arising with respect to the 2016 Notes. Prospective purchasers of the 2016 Notes should be aware, however, that the 2016 Notes are included in the measure of Massachusetts estate and inheritance taxes, and the 2016 Notes 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 2016 Notes or the income therefrom under the laws of any state other than Massachusetts. A copy of the proposed form of opinion of Bond Counsel is set forth in *Appendix C* hereto.

To the extent the issue price of any maturity of the 2016 Notes is less than the amount to be paid at maturity of such 2016 Notes (excluding amounts stated to be interest and payable at least annually over the term of such 2016 Notes), 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 2016 Notes 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 2016 Notes is the first price at which a substantial amount of such maturity of the 2016 Notes 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 2016 Notes accrues daily over the term to maturity of such 2016 Notes 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 2016 Notes to determine taxable gain or loss upon disposition (including sale, redemption, or payment on maturity) of such 2016 Notes. Holders of the 2016 Notes should consult their own tax advisors with respect to the tax consequences of ownership of 2016 Notes with original issue discount, including the treatment of purchasers who do not purchase such 2016 Notes in the original offering to the public at the first price at which a substantial amount of such 2016 Notes is sold to the public.

2016 Notes purchased, whether at original issuance or otherwise, for an amount greater than the stated principal amount to be paid at maturity of such 2016 Notes, or, in some cases, at the earlier redemption date of such 2016 Notes (“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 holder’s basis in a Premium Bond will be reduced by the amount of amortizable bond premium properly allocable to such holder. Holders of Premium Bonds should consult their own tax advisors with respect to the proper treatment of amortizable bond premium in their particular circumstances.

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 2016 Notes may adversely affect the value of, or the tax status of interest on, the 2016 Notes. Further, no assurance can be given that any 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 market value and marketability of, or the tax status of interest on, the 2016 Notes. Prospective holders of the 2016 Notes are urged to consult their own tax advisors with respect to any such legislation, interpretation or development.

Although Bond Counsel is of the opinion that interest on the 2016 Notes 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 2016 Notes may otherwise affect a holder's federal or state tax liability. Among other possible consequences of ownership or disposition of, or the accrual or receipt of interest on, the 2016 Notes, the Code requires recipients of certain social security and certain railroad retirement benefits to take into account receipts or accruals of interest on the 2016 Notes in determining the portion of such benefits that are included in gross income. The nature and extent of all such other tax consequences will depend upon the particular tax status of the holder or the holder's other items of income, deduction or exclusion. Bond Counsel expresses no opinion regarding any such other tax consequences, and holders of the 2016 Notes should consult with their own tax advisors with respect to such consequences.

RATINGS

The 2016 Notes have been assigned ratings of "Aa2" (outlook: Stable) and "AAA" (outlook: Stable) by Moody's Investors Service, Inc. ("Moody's") and S&P Global Ratings ("Standard & Poor's"), respectively.

In connection with assigning its rating to the 2016 Notes, on September 15, 2016, Moody's lowered the rating on the outstanding Trust Agreement Notes from "Aa1" to "Aa2." The Moody's release announcing this action, which may be accessed at: https://www.moody.com/research/Moodys-downgrades-Massachusetts-CTF-bonds-to-Aa1-and-GANs-to--PR_903578527, noted that the downgrade of the rating on the outstanding Trust Agreement Notes to Aa2 "reflects the subordinate pledge on CTF revenues after debt service is paid on CTF bonds." The Moody's report, which also announced a downgrade of the rating on outstanding CTF Bonds to Aa1 also includes the following with respect to the CTF Bonds:

"The downgrade of the CTF bonds to Aa1 is based on our revised view of the rating in relation to the Commonwealth of Massachusetts' general obligation (GO) rating (Aa1 stable) and reflects an evolution in our thinking about when a special tax rating can pierce a general obligation rating. That relationship caps the CTF rating at the level of the GO. While the credit fundamentals have not changed, we note the ongoing need for annual appropriation of CTF debt service, and, the flow of pledged revenues through the commonwealth, via the Department of Revenue and Registry of Motor Vehicles, prior to being transferred to the trustee."

In the release, Moody's further noted certain factors that could lead to an upgrade or downgrade of the rating on the 2016 Notes and outstanding Trust Agreement Notes, including, in particular, an upgrade or downgrade in the CTF bond rating, which could be affected, among other factors noted, by a change in the Commonwealth general obligation bond rating. Information regarding the Commonwealth's general obligation bonds is available from the Commonwealth at the website of the State Treasurer, www.massbondholder.com.

The full, publicly available release of Moody's with respect to the 2016 Notes and outstanding Trust Agreement Notes also may be accessed at:

<http://www.massbondholder.com/sites/default/files/downloads/Moodys%20Final%20Report%20-%20MA%20CTF%20%26%20GANs%2C%20Ser%202016.pdf>.

Such ratings reflect only the respective views of Moody's and Standard & Poor's, and an explanation of the significance of such ratings may be obtained from the rating agency furnishing the same. There is no assurance that a rating will continue for any given period of time or that a rating will not be revised or withdrawn entirely by any or all of such rating agencies, if, in its or their judgment, circumstances so warrant. Any downward revision or withdrawal of a rating could have an adverse effect on the market prices of the 2016 Notes.

CERTAIN LEGAL MATTERS

The unqualified approving opinion as to the legality of the 2016 Notes will be rendered by Locke Lord LLP, Boston, Massachusetts, Bond Counsel to the State Treasurer. The proposed form of such opinion of Bond Counsel is attached to this Official Statement as *Appendix D*. Certain legal matters will be passed upon for the Underwriters by their counsel, McCarter & English, LLP, Boston, Massachusetts.

McCarter & English, LLP also serves as bond counsel to the State Treasurer from time to time with respect to other financing matters. The firm was selected by the Underwriters to serve as their counsel with respect to the

issuance of the 2016 Notes from a pool of seven firms previously qualified by the Office of the State Treasurer through a professional services request for proposals process. Fees for underwriters' counsel services per firm were set by the Office of the State Treasurer and are paid by the Commonwealth as part of the financing.

UNDERWRITING

The 2016 Notes are being purchased by the Underwriters, for whom Morgan Stanley & Co. LLC is acting as Representative. The Underwriters have agreed, subject to certain conditions, to purchase all of the 2016 Notes from the Commonwealth at a discount from the initial public offering prices set forth on the inside cover page hereof equal to approximately 0.279704% (\$350,776.24) of the aggregate principal amount of the 2016 Notes. The Underwriters have agreed to reoffer such 2016 Notes at public offering prices not higher than or at yields not lower than those set forth on the inside cover page of this Official Statement. The Underwriters are obligated to purchase all such 2016 Notes, if any are purchased, the obligation to make such purchase being subject to certain terms and conditions set forth in the Purchase Contract, the approval of certain legal matters by counsel and certain other conditions. Such 2016 Notes may be offered and sold by the Underwriters to certain dealers (including dealers depositing such 2016 Notes in unit investment trusts or mutual funds, some of which may be managed by the Underwriters) and certain dealer banks and banks acting as agents at prices lower (or yields higher) than the public offering prices (or yields) set forth on the inside cover page of this Official Statement. Subsequent to such initial public offering, the Underwriters may change the public offering prices (or yields) as they may deem necessary in connection with the offering of such 2016 Notes.

In addition, certain of the Underwriters may have entered into distribution agreements with other broker-dealers (that have not been designated by the Commonwealth as Underwriters) for the distribution of the 2016 Notes at the original issue prices. Such agreements generally provide that the relevant Underwriter will share a portion of its underwriting compensation or selling concession with such broker-dealers.

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various investment banking services for the Commonwealth for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the Commonwealth.

CONTINUING DISCLOSURE

In order to assist the Underwriters in complying with paragraph (b)(5) of Rule 15c2-12 of the Securities and Exchange Commission, the Commonwealth will undertake in the 2016 Notes to provide annual reports and notices of certain events. A description of this undertaking is set forth in *Appendix E* attached hereto.

Except as noted below, the Commonwealth has not failed in the last five years to comply with its continuing disclosure undertakings with respect to any of its debt.

The Commonwealth failed to file an event notice in October 2013 when the Moody's rating on outstanding Trust Agreement Notes was upgraded from Aa2 to Aa1, and failed to file an event notice in March 2014 when the S&P rating on certain insured special obligation bonds payable from the Convention Center Fund was upgraded from A to AA-. The Commonwealth has filed notices of all such rating changes with respect to the bonds that are currently outstanding.

The fiscal 2012 and fiscal 2013 annual financial information filed by the Commonwealth pursuant to its continuing disclosure undertakings related to its grant anticipation note program contained incorrect information concerning the amounts of CTF pledged funds. Amended filings have been posted with the Municipal Securities Rulemaking Board (the “MSRB”) through its Electronic Municipal Market Access (“EMMA”) system.

The fiscal 2012 annual financial information filed by the Commonwealth on March 26, 2013 pursuant to its continuing disclosure undertakings related to its general obligation bond program contained incorrect information about the amount of outstanding direct debt subject to the statutory debt limit and the amount of the limit. An amended filing for fiscal 2012 has been posted with EMMA, and a corrected table is included in the Information Statement dated August 12, 2015 (the “Information Statement”). See the *Information Statement - LONG-TERM LIABILITIES – General Authority to Borrow; Statutory Limit on Direct Debt*.

The fiscal 2014 annual financial information was filed by the Commonwealth on March 27, 2015 pursuant to its continuing disclosure undertakings with respect to its general obligation bonds; however, there was a failure to link the filing to certain CUSIP numbers for Commonwealth general obligation bonds issued from October 29, 2014 through December 31, 2014. In addition, certain annual financial information was not properly linked to certain contract assistance bonds and certain CTF Bonds. Corrective filings have since been posted on EMMA.

In the course of substituting liquidity facilities in connection with certain Commonwealth general obligation variable rate demand bonds, supplements to the respective official statements for such bonds were posted in a timely manner to EMMA setting forth detailed information regarding the substituted liquidity facilities; however, separate event notices were not posted at the time. Event notices of the liquidity substitutions have since been posted.

In the course of reviewing its event notice filings, the Commonwealth discovered that bond call notices were not posted in a timely manner to EMMA in connection with certain advance refunding transactions and that a notice of defeasance was not timely posted to EMMA until approximately three and a half months after the defeasance occurred. The Commonwealth has posted such notices with respect to all Commonwealth bonds that have been advance refunded, where the funds to redeem or pay the bonds remain held in escrow.

FINANCIAL ADVISOR

The Commonwealth has retained Public Financial Management, Inc. to act as financial advisor with respect to the issuance of the 2016 Notes. 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 and the appendices hereto. PFM is an independent financial advisory firm and is not engaged in the business of underwriting, trading or distributing securities.

MISCELLANEOUS

Any provisions of the Trust Agreement, the constitution of the Commonwealth, general and special laws and other documents set forth or referred to in this Official Statement are only summarized, and such summaries do not purport to be complete statements of any of such provisions. Only the actual text of such provisions can be relied upon for completeness and accuracy.

This Official Statement contains certain forward-looking statements that are subject to a variety of risks and uncertainties that could cause actual results to differ from the projected results, including without limitation general economic and business conditions, conditions in the financial markets, the financial condition of the Commonwealth and various state agencies and authorities, receipt of federal grants, litigation, arbitration, force majeure events and various other factors that are beyond the control of the Commonwealth and its various agencies and authorities. Because of the inability to predict all factors that may affect future decisions, actions, events or financial circumstances, what actually happens may be different from what is set forth in such forward-looking statements. Forward-looking statements are indicated by use of such words as “may,” “will,” “should,” “intends,” “expects,” “believes,” “anticipates,” “estimates” and others.

All estimates and assumptions in this Official Statement have been made on the best information available and are believed to be reliable, but no representations whatsoever are made that such estimates and assumptions are

correct. So far as any statements in this Official Statement involve any matters of opinion, whether or not expressly so stated, they are intended merely as such and not as representations of fact. The various tables may not add due to rounding of figures.

The information, estimates and assumptions and expressions of opinion in this Official Statement are subject to change without notice. Neither the delivery of this Official Statement nor any sale made pursuant to this Official Statement shall, under any circumstances, create any implication that there has been no change in the affairs of the Commonwealth or its agencies, authorities or political subdivisions since the date of this Official Statement, except as expressly stated.

Neither the Commonwealth's independent auditors, nor any other independent accountants, have compiled, examined, or performed any procedures with respect to any prospective financial information contained herein, nor have they expressed any opinion or any other form of assurance on such information or its achievability, and assume no responsibility for, and disclaim any association with, any prospective financial information.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

AVAILABILITY OF OTHER INFORMATION

Questions regarding this Official Statement should be directed to Susan E. Perez, Assistant Treasurer, Office of the Treasurer and Receiver-General, 3 Center Plaza, Suite 430, Boston, Massachusetts 02108, telephone (617) 367-3900, x. 816, or Jennifer Sullivan, Assistant Secretary for Capital Finance, Executive Office for Administration and Finance, State House, Room 373, Boston, Massachusetts 02133, telephone (617) 727-2040. Questions regarding legal matters relating to this Official Statement should be directed to Walter J. St. Onge, III, Locke Lord LLP, 111 Huntington Avenue, Boston, Massachusetts 02199, telephone (617) 239-0389.

THE COMMONWEALTH OF MASSACHUSETTS

By /s/ Deborah B. Goldberg
Deborah B. Goldberg
Treasurer and Receiver-General

By /s/ Kristen Lepore
Kristen Lepore
Secretary of Administration and Finance

September 29, 2016

THE FEDERAL-AID HIGHWAY PROGRAM

A principal source of repayment and security for the Notes is payments received by the Commonwealth from the federal government under the Federal-Aid Highway Program, pursuant to which the federal government reimburses states for the federal share of approved highway projects. This Appendix A provides a summary of the Federal-Aid Highway Program, including the process by which states request and receive Federal Highway Reimbursements from the federal government. Terms used in this Appendix A and not defined herein are defined in Appendix B.

The Federal-Aid Highway Program is an “umbrella” term that encompasses most of the federal programs that provide highway funding to the states, including the Commonwealth. Within the U.S. Department of Transportation, the FHWA is the federal agency responsible for administering the Federal-Aid Highway Program. The Federal-Aid Highway Program is financed from the transportation user-related revenues deposited in the Federal HTF. The primary source of revenues in the HTF is derived from federal excise taxes on motor fuels. Other taxes include excise taxes on tires, trucks and trailers and truck use taxes.

Under the FAST Act, the Federal-Aid Highway Program includes seven apportioned funding programs: the National Highway Performance Program, the Surface Transportation Block Grant Program, the Highway Safety Improvement Program, the Railway-Highway Crossings Program, the Congestion Mitigation and Air Quality Improvement Program, the Metropolitan Planning Program, and the National Highway Freight Program.

Certain Federal-Aid Highway Program features or requirements are explained or further defined where they appear below but are introduced here for reference:

- *The Federal Highway Trust Fund*: The HTF is a dedicated federal fund with dedicated revenues held in trust for reimbursement of expenditures by the states for costs of eligible transportation projects, including highway projects.
- *Authorization*: “Authorization” is the process by which Congress authorizes the expenditure of federal revenues on federal programs. For the Federal-Aid Highway Program, authorization historically has been provided on a multi-year basis. This, together with the availability of HTF revenues and future HTF collections permits states more certainty in planning long-term highway projects. The current multi-year authorization, the FAST Act, became law on December 4, 2015 and continues until September 30, 2020. See *Reauthorization History—The FAST Act* below. The previous multi-year authorization, MAP-21 (defined below), originally became effective on October 1, 2012 and provided funding through September 30, 2014. After the expiration of MAP-21 but before enactment of the FAST Act, Congress used a series of five short-term authorizations to fund the Federal-Aid Highway Program. See *Reauthorization History—MAP-21* below.
- *Apportionment*: For each federal fiscal year (“FFY”), the FHWA apportions the authorized funding among the states according to formulas that are established in authorizing statutes. The distribution of federal funds that do not have a statutory formula is called “allocation” rather than “apportionment.”
- *Obligation Authority (“OA”)*: “Obligation” is the commitment of the federal government to pay, through reimbursements to a state, its share of the eligible expenditures on an approved project. The amount of such federal revenues that a state can obligate in a given FFY is called its “Obligation Authority.”
- *Advance Construction (“A/C”)*: The A/C procedure allows states to commence eligible projects without first having to obligate the federal government’s share of expenditures. Thus, states may begin a project before amassing all of the OA needed to cover the federal government’s share.

- *Partial Conversion of A/C*: Under partial conversion of A/C, in a given year a state may convert A/C to OA and thus be eligible for reimbursement for a portion of the federal share of an A/C project in that or in a subsequent FFY. This removes any requirement for the state to wait for reimbursements until the full amount of OA needed for the entire project is available.

These features of the Federal-Aid Highway Program work in a complementary fashion to provide a regular flow of federal reimbursements over the years to state highway projects. The participation of the Commonwealth in such reimbursements, and the role of such participation in providing payment and security for the Notes, is discussed in *Commonwealth Participation in the Federal-Aid Highway Program*.

Although FHWA provides funding for eligible highway projects, federal-aid highways are under the administrative control of the state or local government responsible for their operation and maintenance.

Title 23 includes most of the laws that govern the Federal-Aid Highway Program, arranged systematically or codified. Generally, Title 23 embodies those substantive provisions of highway law that Congress considers to be continuing and which need not be reenacted each time the Federal-Aid Highway Program is reauthorized. Periodically, sections of Title 23 may be amended or repealed through surface transportation acts.

It should be noted that the terms and conditions of participation in the Federal-Aid Highway Program as described herein are subject to change at the discretion of Congress, and there can be no assurance that the laws and regulations now governing the Federal-Aid Highway Program will not be changed in the future in a manner that may adversely affect the ability of the Commonwealth to receive adequate Federal Highway Reimbursements to pay the Notes. The current authorization for the Federal-Aid Highway Program, the FAST Act, provides for funding through September 30, 2020. As described in this Official Statement, if there is a deficiency in Federal Highway Reimbursements, Net CTF Pledged Funds are available for debt service, subject to appropriation. See *Net CTF Pledged Funds*.

Reauthorization History

The modern Federal-Aid Highway Program originated in the Federal-Aid Highway Act of 1956, which was the first in a long series of authorizing statutes from 1956 through 1976. The 1978 Surface Transportation Act and the Federal Highway Act of 1981 were primarily extensions of existing authority. The 1982 Surface Transportation Assistance Act began the modern multi-year (i.e. four or more years) authorizing process. Prior to 1998, Congress reauthorized the Federal-Aid Highway Program pursuant to a number of multi-year authorizations.

TEA-21. The Transportation Equity Act for the 21st Century (“TEA-21”) was enacted in 1998 and authorized programs over the six-year period from FFYs 1998 through 2003. TEA-21 expired September 30, 2003, and was the subject of many interim reauthorization extensions until the enactment of SAFETEA-LU in August 2005.

SAFETEA-LU. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (“SAFETEA-LU”) became law on August 10, 2005, and authorized programs over the four-year period from FFYs 2006 through 2009. After the expiration of SAFETEA-LU in September 2009, Congress enacted 10 interim authorization measures until the enactment of MAP-21. SAFETEA-LU authorized a total of \$286.4 billion for federal surface transportation programs in FFY 2005 through FFY 2009.

MAP-21. MAP-21 was signed into law on July 6, 2012. MAP-21 extended SAFETEA-LU through the end of FFY 2012. MAP-21 also extended the imposition of the highway-user taxes, generally at the rates that were in place when the legislation was enacted, through September 30, 2016. In addition, it extended the provision for deposit of almost all of the highway-user taxes into the HTF through September 30, 2016. MAP-21 also restructured the core federal highway programs. After the expiration of MAP-21 but before enactment of the FAST Act, Congress used a series of five short-term authorizations to fund the Federal-Aid Highway Program. The Highway and Transportation Funding Act of 2014 and the Highway and Transportation Funding Act of 2015 provided extensions of the funding for the Federal-Aid Highway Program through May 31, 2015 and July 31, 2015,

respectively. In July 2015, Congress enacted the Surface Transportation and Veterans Health Care Choice Improvement Act, which extended funding for the Federal-Aid Highway Program through October 29, 2015. On October 29, 2015, Congress enacted the Surface Transportation Extension Act to further extend the Federal-Aid Highway Program through November 20, 2015. On November 20, 2015, Congress Enacted the Surface Transportation Extension Act, Part II to extend funding through December 4, 2015.

FAST Act. The FAST Act became law on December 4, 2015 and reauthorizes the Federal-Aid Highway Program through September 30, 2020. The FAST Act authorizes, among other things, a \$500 million annual increase for the National Highway Performance Program, a first year increase of \$1 billion for the Surface Transportation Program and approximately \$200 million annually thereafter for such program, and creates a new National Highway Freight Program funded with approximately \$1.2 billion annually.

In addition to the new programs created, the FAST Act provides continued funding for the programs previously funded by MAP-21 and the short-term authorizations enacted after MAP-21. The FAST Act, over the life of the legislation, increases overall highway funding by 15% and transit funding by 18%.

Although interim authorization measures have been enacted by Congress in the past, no assurance can be given that such measures would or could be enacted in the future to maintain the flow of federal-aid funding upon termination of either a short-term or multi-year authorization period.

Federal Highway Trust Fund

General. The HTF is the primary source of funding for most of the programs in the Federal-Aid Highway Program. Funded by a collection of federally-imposed motor vehicle user fees, primarily fuel taxes, the HTF is a fund established by law to hold dedicated highway-user revenues that are used for reimbursement of a state's cost of eligible transportation projects (which may include debt service on obligations issued to finance a federal-aid project), including highway projects. The HTF is composed of two accounts: the Highway Account, which funds highway and intermodal programs, and the Mass Transit Account. The Highway Account receives approximately 84% of gasoline tax revenues and 88% of diesel fuel revenues, with the remaining share of such revenues deposited in the Mass Transit Account.

HTF Revenue Sources. Federal gasoline excise taxes are the largest revenue source for the HTF. The majority of these tax revenues, including fifteen and forty-four hundredths cents (15.44¢) per gallon out of the current eighteen and four-tenths cents (18.4¢) per gallon tax, go to the Highway Account of the HTF.

The following table shows the types of taxes deposited into the HTF and the current rates that are in effect.

Motor Fuels Taxes				
Type of Tax	Tax Rate (Cents per Gallon)	Distribution of Tax⁽¹⁾		
		Highway Account of the HTF	Mass Transit Account of the HTF	Leaking Underground Storage Tank Trust Fund
Gasoline	18.4	83.9%	15.5%	0.5%
Diesel	24.4	87.9	11.7	0.4
Gasohol	18.4	83.9	15.5	0.5
Liquefied Petroleum Gas	18.3	88.4	11.6	0.0
Liquefied Natural Gas	24.3	92.3	7.7	0.0
M85 (From Natural Gas)	18.4	83.9	15.5	0.5
Compressed Natural Gas	18.4	83.9	15.5	0.5
Other User Fees				
Tires	9.45 cents for each 10 lbs. of the maximum rated load capacity over 3,500 lbs.			
Truck and Trailer Sales	12% of retailer's sales price for tractors and trucks over 33,000 lbs. gross vehicle weight ("GVW") and trailers over 26,000 lbs. GVW			
Heavy Use Vehicles	Annual tax for trucks 55,000 lbs. GVW and over equal to \$100 plus \$22 for each 1,000 lbs. (or fraction thereof) in excess of 55,000 lbs.; maximum tax of \$550			

⁽¹⁾ Totals may not add due to rounding.

Source: United State Government Accountability Office.

The following table shows annual HTF collections in the Highway Account for Federal Fiscal Years 1999 through 2014.

Highway Trust Fund, Highway Account Receipts, Federal Fiscal Years 1999-2014

(Thousands of Dollars)

<u>FFY</u>	<u>Amount</u>
1999	\$33,823,213
2000	30,347,117
2001	26,916,515
2002	27,982,938
2003	29,964,000
2004	29,785,002
2005	32,894,493
2006	33,308,081
2007	35,690,421
2008	33,532,451
2009	30,317,478
2010	30,192,515
2011	32,009,947
2012	35,241,126
2013	31,800,259
2014	34,066,104

Sources: Federal Fiscal Year 1999 through Federal Fiscal Year 2012, Highway Statistics 2012, Office of Highway Policy Information, FHWA, Table FE-210; Federal Fiscal years 2013 and 2014, Status of Highway Trust Fund – Fiscal Year 2013 and – Fiscal Year 2014, FHWA, Table FE-1 as of October 28, 2014.

Excludes interest income and other receipts. For certain other receipts, see – *History of HTF Highway Account Balances* below.

The imposition of the taxes that are dedicated to the HTF, as well as the authority to place the taxes in the HTF and to expend moneys from the HTF, all have expiration dates that must be extended periodically. The life of the HTF has been extended several times since its inception, most recently by the FAST Act (as described above). The HTF is required under current federal law to maintain a positive balance to ensure that prior commitments for distribution of federal revenues can be met. Should a situation occur where FHWA cannot fully reimburse states, FHWA may take some or all of the following actions: (1) move from daily reimbursements to weekly reimbursements; (2) align reimbursements with HTF deposits (twice monthly); or (3) make proportional payments to states based on available HTF cash. These are some of the possible actions FHWA might take in the event of a cash shortfall. The specific actions would depend on the exact nature of the shortfall.

History of HTF Highway Account Balances. At least since 2007, the nonpartisan Congressional Budget Office (“CBO”) has, from time to time, reported or testified that if Congress adhered to the highway and safety spending levels which it had authorized, absent other measures, the Highway Account of the HTF would go into deficit within a year or two after such report or testimony was presented.

From 2008 to 2016, spending exceeded the HTF’s revenues by a total of \$74 billion. Since 2008, Congress has authorized a series of transfers to the HTF to avoid delaying payments to state and local governments. Most recently, the FAST Act authorized the transfer of \$70 billion to the HTF in December 2015 as the HTF fund balance neared exhaustion. Including that amount, transfers into the HTF since 2008 have totaled almost \$144 billion.

Based on a CBO report dated December 2, 2015, the FAST Act is projected to reduce budget deficits in the HTF by \$71 billion over the Federal Fiscal Year 2016-2025 period, mostly due to the transfer to the HTF in December 2015 of \$70 billion, largely from the general fund of the U.S. Treasury. Implementing the major provisions of the FAST Act is expected to result in additional discretionary spending totaling \$201 billion over the period from Federal Fiscal Year 2016 through Federal Fiscal Year 2020, with spending from the HTF in that period expected to total \$280 billion, and revenues and interest credited to the HTF over that period expected to amount to \$208 billion.

As part of testimony provided on May 6, 2014 on the status of the HTF and options for financing highway spending, CBO stated that for several decades, the balances in the Highway Account were relatively stable or growing, but beginning in 2001 receipts had consistently fallen below expenditures. During the 1980s and the first half of the 1990s, balances in the Highway Account held steady in the vicinity of \$10 billion. In 1998, TEA-21 authorized spending that was sufficient to gradually draw down those balances. As a result of TEA-21 and SAFETEA-LU, outlays have generally exceeded revenues since 2001. Because of looming shortfalls, since 2008 Congress has enacted legislation from time to time authorizing transfers to the Highway Account from the Treasury’s general fund (“General Fund”) and from the Leaking Underground Storage Tank Trust Fund (“LUST”) as set forth in the table below.

**Net Total Transfers to Highway Account By Federal Fiscal Year of Effective Date
(Billions of Dollars)**

<u>FFY*</u>	<u>General Fund</u>	<u>LUST</u>	<u>Total</u>
2008	\$8.017	–	\$8.017
2009	7.000	–	7.000
2010	14.700	–	14.700
2011	–	–	0.000
2012	–	\$2.400	2.400
2013	5.884	–	5.884
2014	17.416	1.000	18.416
2015	<u>9.800</u>	<u>1.000</u>	<u>10.800</u>
TOTAL	\$62.817	\$4.400	\$67.217

Those intragovernmental transfers have allowed the HTF to maintain a positive balance without an increase in the taxes on gasoline, diesel fuel and ethanol blended fuel which are the principal source of HTF revenues. Those

taxes were last increased in 1993 and, according to the CBO, their purchasing power is approximately 40% below that in 1993.

HTF Revenue Projections. Revenues generated by excise taxes and credited to the HTF were projected by CBO as of March 2016 to fall from about \$37 billion in 2016 to about \$35 billion in 2024, mostly because annual increases in revenues from taxes on the use of diesel fuel and on truck sales are expected to be largely offset by annual declines in revenues from the tax on gasoline. Tax revenues from diesel fuel and truck sales are projected to increase, on average, by about 3 percent annually over the 2014-2024 period. In contrast, revenues from the tax on gasoline are projected to decline at an average annual rate of 1 percent over that period, mainly because of mandated increases in corporate average fuel economy standards.

The primary source of funds in the HTF is federal excise taxes on motor fuels, which are in part driven by total vehicle miles traveled (“VMT”) in the U.S. As shown in the table below, national VMT in recent years have decreased from a peak of approximately 3.05 trillion miles in 2007 to approximately 3.04 trillion miles in 2014.

**Vehicle Miles Travelled (“VMT”)
(Millions of Miles)**

<u>FFY</u>	<u>Total VMT</u>	<u>Annual Change</u>
2002	2,873,612	–
2003	2,908,778	1.22%
2004	2,982,017	2.52
2005	3,009,218	0.91
2006	3,033,753	0.82
2007	3,049,027	0.50
2008	2,992,705	-1.85
2009	2,975,804	-0.56
2010	2,985,095	0.31
2011	2,964,720	-0.68
2012	2,968,815	0.14
2013	2,988,280	0.66
2014	3,040,220	1.74

Source: FHWA Office of Highway Policy Information Chart VM-422C-2014.

Amounts in the HTF can be affected by the rate of expenditure of money in the fund as well as a number of other revenue-impacting factors. In its testimony provided on June 18, 2015, CBO stated that with its current revenue sources, the HTF cannot support spending at the current rate and that to address projected shortfalls in the HTF, spending on highways and transit must be reduced, taxes dedicated to the HTF must be increased, transfers of General Fund or other revenues must be continued or some combination of the first three options must be implemented.

Impact of Sequestration. On March 10, 2014, the Office of Management and Budget (“OMB”) issued a report (the “OMB 2014 Report”) which was prepared consistent with the requirements of the Balanced Budget and Emergency Deficit Control Act of 1985, as amended. The mandate from the Budget Control Act of 2011 (P. L. 112-25) requires, among other things, a 9.4 percent reduction for certain non-exempt defense discretionary programs, an 8.2 percent reduction for certain non-exempt nondefense discretionary programs and a 7.6 percent reduction for certain non-exempt nondefense mandatory programs, beginning in January 2013. The Bipartisan Budget Act of 2013 reduced some of the spending cuts required by sequestration for FFY 2015. Under Title 23, revenues deposited into the HTF carry “mandatory budget authority” in the form of federal contract authority. Federal contract authority exempts HTF revenues subject to obligation limitation from reduction. Therefore, the dedicated tax revenues deposited into the HTF are not subject to sequestration. As set forth in the OMB 2014 Report, OMB has calculated that federal contract authority not subject to obligation limitation is, however, subject to reduction at an annual rate of 7.3 percent for FFY 2015.

Rescissions. Since FFY 2005, Congress has taken action to reduce (i.e., permanently cancel) unobligated

balances of previously authorized funds by issuing certain rescissions. All of those rescissions were spread among the 50 states on a proportional basis. The aggregate amount for these rescissions for the Commonwealth was approximately \$343 million, which was applied to reduce any unobligated apportionment balances for prior years. The FFY 2015 Continuing Resolution provides for an across the board rescission of 0.0554 percent (approximately \$22.3 million) resulting in authorized nationwide Obligation Authority of approximately \$40.234 billion for FFY 2015. Upon the enactment of a full-year appropriations act or a further continuing appropriations act, the distribution of obligation limitation may be revised and additional obligation limitation provided as determined under the provisions of such law. Further rescissions are possible and may have a more adverse effect on the Commonwealth and its highway program.

Rescissions

<u>Date</u>	<u>FHWA Notice No.</u>	<u>Massachusetts Rescission Amount</u>	<u>National Total Rescissions Amount</u>	<u>Percentage of Massachusetts/National Total Rescissions</u>
December 28, 2005	4510.578	\$37,611,167	\$1,999,999,000	1.88%
March 21, 2006	4510.588	21,501,592	1,143,000,000	1.88
July 5, 2006	4510.606	13,212,522	702,362,500	1.88
March 19, 2007	4510.643	62,883,726	3,471,582,000	1.81
June 20, 2007	4510.647	15,777,563	871,022,000	1.81
March 4, 2008	4510.673	55,267,287	3,150,000,000	1.75
April 13, 2009	4510.707	54,647,719	3,150,000,000	1.73
August 31, 2009	4510.711	147,140,821	8,708,000,000	1.69
April 20, 2010 ⁽¹⁾	4510.724	-147,140,821	-8,708,000,000	1.69
August 13, 2010	4510.729	38,113,703	2,200,000,000	1.73
June 30, 2011	4510.735	42,481,280	2,500,000,000	1.70
March 22, 2013 ⁽²⁾	4510.762	481,222	32,589,000	1.48
October 1, 2013 ⁽³⁾	4510.769	672,709	46,008,000	1.46
October 1, 2014 ⁽⁴⁾	4520.231	454,079 ⁽⁵⁾	22,301,824	2.04
August 14, 2015	4510.789	682,052	46,647,000	1.46
January 8, 2016	4510.803	635,336	43,452,000	1.46
TOTAL		<u>\$343,967,878</u>	<u>\$19,378,963,324</u>	<u>1.78%</u>

(1) The amounts rescinded by FHWA Notice 4510.711 were restored under FHWA Notice 4510.724.

(2) FHWA Notice 4510.762 quantifies the amount of funds impacted by the federal sequestration order issued on March 1, 2013.

(3) FHWA Notice 4510.769 quantifies the amount of funds impacted by the federal sequestration order issued on April 10, 2013.

(4) The FFY 2015 Continuing Resolution applies an across-the-board rescission of 0.0554 percent to the annual rate for operations. Therefore, a total reduction of \$22,301,824 (i.e. \$40,256,000,000 times 0.0554 percent) applies to the annual rate for operations. However, the FFY 2015 Continuing Resolution covers the period from October 1, 2014, through December 11, 2014 (72 days) and not a full fiscal year. The pro-rata for that period is 19.73 percent (i.e. 72 days divided by 365 days). The pro-rata is applied to the distribution of obligation limitation calculated based on the annual rate for operations. Therefore, the total obligation limitation provided by FHWA Notice 4520.231 is \$7,938,108,650 (i.e. \$40,233,698,176 times 19.73 percent).

(5) FHWA Notice 4510.779 quantifies the amount of funds impacted by the federal sequestration order issued on March 10, 2014.

Effects on Commonwealth OA in FFY 2015. As a result of the 7.3 percent sequestration, the 0.0554 percent rescission (each described above) and certain other mandatory reductions, the OA for the Commonwealth during FFY 2015 is approximately \$593.1 million.

Operations

The current Federal-Aid Highway Program continues to reimburse a large percentage of state expenditures for approved highway projects. The financial assurance provided by the Federal-Aid Highway Program is unusual

among federal programs in that:

- The Federal-Aid Highway Program is based primarily on dedicated revenues, from a user-tax source, deposited in a dedicated trust fund (the HTF);
- The budget and contract authority of the FHWA is typically established by a multi-year authorization act rather than annually through appropriation acts (see *Reauthorization History* above); and
- Except in cases of rescission as explained above, contract authority is not at risk during the annual appropriations process (as budget authority is in most other federal programs), although an appropriations act is required in order to liquidate obligations.

The process for reimbursing state expenditures may be summarized in three steps: authorization, obligation and program implementation. The first step, authorization, is the most critical step in establishing overall spending authority for federal highway funding. Authorizing legislation extends the life of the Federal-Aid Highway Program and the collections that fund the HTF, sets Federal-Aid Highway Program objectives and provides formulas for determining the distribution or apportionment of available resources among the states. The existence of the dedicated revenues in the Highway Account of the HTF and the existence of multi-year (or under interim authorizations, multi-month) contract authorizations are designed to help to make available a predictable and uninterrupted flow of reimbursements to the states. The risk of contract authority lapsing between authorizing acts is minimal since sufficient unobligated balances generally exist that cover gaps in coverage between multi-year (or multi-month) reauthorization acts.

The second step, obligation, is the process through which states make use of, or “obligate,” the contract authority that has been apportioned or allocated to them in the authorization process (Step 1). Congress typically limits the amount of OA that states may use annually. To whatever extent a state’s OA is set below its authorization, the unobligated balance for that state is increased. These unobligated balances provide available funds, from which the FHWA allows states to draw, when there is a lapse period between authorization acts. Under current law, however, the unobligated balances do not otherwise entitle the states to additional funds.

The third step, program implementation, leads to actual receipt of federal funds by states. Federal-Aid Highway Program implementation methods vary state-by-state. States are permitted to make use of Advance Construction and partial conversion of Advance Construction in order to obligate varying amounts of federal funds to an eligible project from FFY to FFY, depending on how much of the state’s OA is available from the Federal-Aid Highway Program and is desired for such use by the state.

Step 1: Authorization

The first step in financing the Federal-Aid Highway Program, is the multi-year (or under interim authorizations, multi-month) authorizing legislation. Such highway authorization acts:

- Establish the taxes that fund the HTF and extend their life (reauthorization);
- Establish the specific programs and procedures through which states receive federal financial assistance for their highway programs; and
- Set upper limits on funding for specific programs and for the overall Federal-Aid Highway Program.

Multi-Year Authorization Acts. As noted earlier, the Federal-Aid Highway Program since 1982 has been periodically reauthorized on a multi-year basis by authorization acts, through which Congress influences the level of federal involvement in state highway program activities. Annual appropriations acts then establish any limits on the amount of federal funds that the FHWA may obligate to states in a given year.

Lapsing of Authorization. All federal programs must be authorized through enacted legislation that defines the programs and establishes maximum funding levels, and for most programs annual appropriations acts are necessary in order to create budget authority. Indeed, for most federal domestic discretionary programs, a lapsed authorization may have little or no effect on a program, so long as revenues are appropriated. For the Federal-Aid Highway Program, the consequences of lapsed authorization caused when Congress fails to enact reauthorization legislation are somewhat different. While Congress may pass interim legislation, the existence of contract authority and a dedicated revenue stream means that the FHWA usually can continue to provide OA by administrative action.

Though federal surface transportation legislation has authorized the Federal-Aid Highway Program for four to six years at a time, there have been periods in which the previous authorizing legislation had expired and the future legislation had yet to be enacted. See *Reauthorization History* above. In such circumstances, Congress and/or the FHWA have found ways to avoid disruptions to state highway programs and, more importantly, have been able to maintain the flow of federal revenues to states in each instance. Two mechanisms in particular have kept revenues flowing:

- Access to Unobligated Balances: The 1987 Surface Transportation and Uniform Relocation Assistance Act (“STURAA”) expired on September 30, 1991 and ISTEA was not enacted until December 18, 1991. The FHWA was able to act administratively to keep federal-aid funding flowing because states could use their unobligated balances to provide contract authority to use new OA.
- Short-Term Authorization: ISTEA expired on September 30, 1997 and until approval of TEA-21 on June 9, 1998, no new long-term authorization legislation was enacted. Despite the lack of long-term authorizing legislation, states were provided an upper limit on OA through passage of an appropriations act plus access to their unobligated balances. On November 13, 1997, Congress passed the Surface Transportation Extension Act of 1997 (“STEA”), which provided a six-month authorization for highway funding and established a limit on the amount of new OA states can use at funding levels equal to about a quarter of FFY 1997 authorization levels. Since most states have unobligated balances of at least half their normal annual OA levels and an authorization act need not be in place for the FHWA to give states new OA, states were able to spend down prior unfunded federal apportionments (contract authority) with newly allocated OA. The lack of an enacted authorization act during this period did not interrupt the flow of revenues, because dedicated highway user fees continued to flow into the HTF. (See Step 2: Obligation, below, for further explanation of OA and unobligated balances.) Similarly, Congress interim authorization measures for varying periods after TEA-21 expired until the enactment of SAFETEA-LU and again after SAFETEA-LU expired until the enactment of MAP-21 and again after MAP-21 until the enactment of the FAST Act. Each of the extensions provided additional apportionment consistent with previous levels, eliminating the need to manage OA based upon unobligated balances.

Although these measures have been enacted by Congress or used by FHWA in the past, no assurance can be given that such measures would or could be enacted in the future to maintain the flow of federal-aid funding upon termination of an authorization period.

Annual Distributions. For most components of the Federal-Aid Highway Program, the authorization acts set the distribution of spending authority among states. The primary methods used to distribute authorized federal highway revenues are “apportionment” and “allocation”:

- Apportionments. The contract authority created by authorization acts such as SAFETEA-LU, MAP-21, and the FAST Act is distributed annually among the 50 states, the District of Columbia, and Puerto Rico using a process called apportionment of revenues. Apportionments indicate the maximum amount of contract authority that each state can expend for eligible projects in specific programs. For each FFY, the FHWA has responsibility for apportioning authorized funding for the various programs among the states according to formulas established in the authorizing statute. Annual apportionments are generally made on the first day of the FFY, which is October 1.

- Allocations. While most highway revenues are distributed to states through apportionments, some funding categories do not contain legislatively mandated apportionment formulas. Distribution of revenues where there are no statutory formulas is called “allocation” or “discretionary allocation”. In most cases, allocated federal funding is divided among states using criteria determined administratively by the federal Department of Transportation or as provided in a statute, often through competitive grant procedures.

Apportionment formulas have been designed historically to ensure distribution of federal revenues among states according to program needs, but are also increasingly intended to provide states a share of total HTF expenditures relatively close to their payments into the HTF.

Availability of Federal Highway Revenues. Federal-aid highway revenues are available to states for use for more than one year. Their availability does not terminate at the end of the FFY, as is the case with many other federal programs. Consequently, when new apportionments or allocations are made, the amounts are added to a state’s unused apportionments and allocations from the previous FFY. Should a state fail to *obligate* (commit to spend) a year’s apportionments and allocations within the period of availability specified for a given program, however, the authority to obligate any remaining amount lapses—meaning that the authority to obligate is no longer available except for a few programs which receive indefinite, or “no-year” OA.

Matching Requirements. With a few exceptions, the federal government does not pay for the entire cost of construction or improvement of federal-aid highways. Federal reimbursements are typically matched with state and/or local government revenues to account for the necessary dollars to complete the project. The maximum federal share is specified in the legislation authorizing the program. Most projects have an 80% federal share while interstate construction and maintenance projects typically have been funded with a 90% federal share.

Step 2: Obligation

The second step of the federal-aid funding process occurs when revenues that have been authorized by legislation and either apportioned or allocated to individual states, are obligated for a specific purpose. As noted in the previous section, Congress uses annual appropriations acts to control actual annual obligation of funds in the HTF. Appropriations acts limit the amount of federal money that actually will be obligated and thus ultimately spent and these annual amounts may be less than the authorized amount. This ceiling on the amount of contract authority that states may use is called the “annual obligation limit.”

Obligation is the commitment of the federal government to pay, through reimbursement to a state, the federal government’s share of an approved project’s eligible costs, which may include debt service on obligations issued to finance a project. This process is important to the states because it allows states to award contracts with assurance that the federal government will reimburse its share of incurred costs. From the federal perspective, obligations made are the outlays the federal government has committed to make from the HTF in the future. Once an obligation is made, the federal government reimburses the states when bills or payments become due.

Once Congress establishes an overall obligation limitation, the FHWA distributes OA to states proportionately based on each state’s share of apportioned and allocated revenues. The actual ratio of OA to apportionments and allocations may vary from state to state because some federal-aid programs are exempt from the obligation limitation. Once each state’s OA is set, states then submit requests to the FHWA to obligate revenues representing the federal share of specific projects throughout the years. (A further description of this process is included in Step 3.) As a state obligates revenues, its balance of OA is commensurately reduced, although additional OA may be received (from reallocations from other states).

A state’s OA (unlike its apportionments and allocations of authorized funding) must be used before the end of the FFY for which it is made available. If the state’s OA is not so used, it will be distributed to other states. The FHWA closely monitors each state’s plans for use of OA. In mid-summer, the FHWA collects any OA from states that do not plan to obligate all of their available OA before the end of the FFY, and redistributes it to other states that can obligate the revenues. This reallocation of OA is known as the August redistribution. During each FFY in which funding has been provided to the Commonwealth pursuant to ISTEA, TEA-21, SAFETEA-LU, MAP-21, and

the FAST Act, the Commonwealth has not failed to commit its entire OA for such FFY.

Unobligated Balances. Because congressional authorization of federal-aid highway revenues represents a commitment to make all authorized revenues available to states for highway purposes, any shortfall between the limit on OA created through the annual appropriations process and the amount of contract authority apportioned and allocated to states does not disappear. Instead, the difference between obligation limitations and authorization levels creates what are known as “unobligated balances.”

Although most federal-aid apportionments lapse after four years, this rarely happens with apportioned highway revenues because old apportionments are always spent before new apportionments. Accordingly, when a state receives new apportionments and OA at the beginning of a FFY, obligations are first made against remaining prior year apportionments plus allocation until these are depleted. The net effect of this process, in conjunction with the year-to-year establishment of obligation limitations, has been that states have amassed considerable unobligated balances.

As explained in Step 1 above, unobligated balances permit the Federal-Aid Highway Program to continue to fund state highway projects during periods in which Congress fails to enact a reauthorization law before the expiration of the previous authorization period. In such periods, the unobligated balances allow states to continue to fund their programs for several months, or even longer, after an authorization act has expired.

Step 3: Program Implementation

The third and final step in the overall federal-aid highway funding process, program implementation, occurs after authorized revenues have been distributed to states, and after states have had the opportunity to obligate those revenues. Once federal-aid highway revenues have been authorized and obligated, states must have developed highway programs that describe, at a project-by-project level, exactly how federal reimbursements will be earned. The process of developing and implementing state highway programs has three broad stages:

- Budgeting;
- Planning and programming; and
- Fiscal management and federal reimbursements.

Each stage helps to ensure that states develop programs that match funding availability, and that the FHWA is able to distribute federal reimbursements to states in a timely manner.

Budgeting. Budgetary information about availability of funding is crucial to the development of state highway programs. Projected state and federal funding levels are used to budget transportation needs. Consequently, state transportation budget officials track the availability of funding and develop forecasts of future state and federal revenues. States must estimate the availability of short and long-term state and federal funding in order to plan their highway programs. They use this information as a guide during long-range planning, and as a strict constraint on short-term programming.

Planning and Programming. The budget process, and in particular, the identification of available funding, provides the context for transportation planning and programming. The long-range planning process provides a perspective of anticipated project needs regionally across the state. State Transportation Improvement Programs (“STIPs”) follow on from regional long-range plans and provide a detailed outline of projects that are proposed for implementation in a time-frame of at least four years. At the federal level, state and local highway plans are reviewed by the EPA and the FHWA.

As a condition for receiving federal reimbursements for transportation programs, states must develop comprehensive transportation plans that are based on anticipated long-term state and federal funding levels for Federal-Aid Highway Program categories. States and urban areas must satisfy these federal requirements in order to remain eligible for federal reimbursements, and specific projects are not eligible unless they are either directly

identified in a long-range plan or consistent with policies and objectives identified in long-range plans. Current federal law requires states to develop long-range transportation plans (“LRPs”) that identify long-range state policies, objectives and goals, while using realistic projections of available future state and federal funding.

Current federal law also requires that short-term planning and programming must be conducted at least every two years through the development of a TIP for each metropolitan area. Among other requirements, each TIP must include, for each project, the estimated project cost and amount of federal revenues proposed to be obligated during each year. The TIPs are then combined into the STIP, which also includes projects from regions outside a state’s metropolitan areas. The STIP lists all projects proposed for funding with federal revenues for a period of four years. The STIP is then submitted to the FHWA and FTA for approval.

Fiscal Management and Federal Highway Reimbursements. Once budgeting, planning and programming are complete, projects move into a fiscal management phase. This fiscal management process is the third element of the implementation step in the overall federal highway funding process. A state-led fiscal management system—conducted in accordance with FHWA requirements—is used to determine exactly how much federal funding will be received for each project, to obtain final FHWA authorization before projects are implemented, and to ensure timely federal reimbursement of state expenditures on contractor costs.

States are required to follow federal fiscal management procedures as they implement projects that have passed through the approval and programming processes. These fiscal management procedures ensure that the FHWA and states are able to manage the process efficiently, from project authorization to actual payment of Federal Highway Reimbursements to states.

In the traditional approach, a state simply obligates the full federal share of available funding at the beginning of the project, concurrent with project authorization. The first step in the fiscal management process begins when a state requests authorization to use federal funding on a project. The project sponsor submits plans, specifications and estimates (“PS&Es”) for a project to the FHWA division office, and requests that the FHWA approve the use of federal funding for the appropriate federal share of the project. The project must be in the STIP and the PS&Es must identify the category of federal funding that will be used.

The FHWA evaluates the PS&Es to ensure that the project is eligible for federal funding and meets a variety of federal requirements (e.g., design standards). Provided that all requirements are satisfied, the FHWA authorizes federal participation in the project, and obligates the federal share of project costs. By obligating the revenues, the FHWA makes a commitment to reimburse the state for the federal share of eligible project costs. It sets aside the appropriate amount of that state’s OA, and also sets aside an equivalent amount of apportioned revenues by program (or programs). Accordingly, the state must have sufficient OA to cover the level of federal participation it is requesting.

Once authorization for a project has been obtained, the state advertises the project and receives bids. Based on actual costs identified in bids, the state awards the contract to the lowest qualified bidder and submits a request to the FHWA asking for any necessary adjustments to federal obligations for the project. If approved, the amounts agreed to are included in a project agreement which identifies the revenues that will be encumbered by the state (formally applied against the state’s resources), and the amount that will be reimbursed by the federal government.

Construction begins, and contractors submit bills to the state as work is completed. A state pays its contractor’s bills with cash from the state treasury; the state bills the FHWA electronically for the federal share of completed work for which payment has been made; and the FHWA makes payment to the state via electronic transfer. This FHWA reimbursement to the state liquidates its obligation for the federal share of the costs incurred to that point. As project work continues and state expenditures are reported to the FHWA, federal reimbursements are made, generally on a weekly basis.

Innovative variations on this fiscal management approach include A/C and partial conversion of A/C. These variations complement one another to provide a state with additional flexibility in managing its OA and cash.

The A/C approach for authorizing projects allows states to finance projects that are eligible for federal aid

without obligating the federal share of costs at the outset of the project. This allows states to begin a project before amassing all of the OA needed to cover the federal share of that project. As with the traditional approach, the state submits PS&Es to the FHWA and requests project authorization. Under A/C, however, the FHWA is asked to authorize the project without obligating federal revenues. As a result, the state will cover the entire cost of the project and later may request the obligation of revenues, when sufficient OA is available and is desired by the state. Further, the state may then take credit for state expenditures, made from project approval to that date, as a basis for earning reimbursements.

Once the FHWA authorizes a project for federal assistance, the state follows the same procedure to advertise a project, to award the contract, and to reconcile the level of state and federal funding required. The state may request that the FHWA convert its A/C amount to an obligation at any time, provided the state has sufficient OA. This conversion of A/C to OA must occur in order for the state to be reimbursed for the federal share of the project. The state can convert A/C to OA long after state expenditures are made.

Under partial conversion of A/C, moreover, a state follows the steps to apply for A/C but converts, obligates, and receives reimbursement for only a portion of its funding of an A/C project in a given year. This removes any requirement to wait until the full amount of OA is available. The state can thus obligate varying amounts for the project's eligible cost in each year, depending on how much of the state's OA is available and desired by the state.

States are required to use a detailed accounting system to track project expenditures and reimbursements. In addition, a federal system tracks payments to states.

US Treasury Offset Program ("TOP"). The TOP is administered pursuant to the Debt Collection Improvement Act of 1996 ("DCIA"), which requires the U.S. Department of the Treasury and other disbursing agencies to collect delinquent debts owed to the U.S. Under the DCIA, if a "person" is in debt to the U.S., then federal agency payments may be offset through the TOP by the amount of the debt owed and up to the amount of the scheduled payment. "Person" is defined to include a state or local government. Administrative offset under the DCIA is precluded only when another law specifically prohibits the offset. In the last five years, no prior payments from FHWA to the Commonwealth have been delayed or withheld as a result of TOP.

[THIS PAGE INTENTIONALLY LEFT BLANK]

**SUMMARY OF CERTAIN PROVISIONS OF THE
COMMONWEALTH TRANSPORTATION FUND ACT AND THE SPECIAL OBLIGATION ACT**

The following is a brief summary of certain provisions of the Special Obligation Act (the “Special Obligation Act”) and the Commonwealth Transportation Fund Act, and together with the Special Obligation Act, the “Acts”), pursuant to which the CTF is established. The Special Obligation Act is codified as Section 20 of Chapter 29 of the General Laws and the Commonwealth Transportation Fund Act is codified as Section 2ZZZ of said Chapter 29. The Acts may be amended after the issuance of the 2016 Notes, but any such amendment must comply with the covenants of the Commonwealth contained in the Trust Agreement, as described in this Official Statement. Although the Acts contain certain covenants of the Commonwealth, the Trust Agreement provides that any provision of the Acts creating a covenant with the owners of Trust Agreement Notes shall be deemed a covenant under the Trust Agreement only to the extent expressly provided for in, and as limited by, the Trust Agreement. See *Appendix B -Summary of Certain Provisions of the Trust Agreement*. This summary of the Acts does not purport to be complete, and reference is made to the Acts for a full and complete statement of its terms and provisions.

(a) Commonwealth Transportation Fund Act

The Commonwealth Transportation Fund Act establishes the CTF, which is to be used exclusively for financing transportation–related purposes.

Amounts credited to the CTF include: all fees received by the registrar of motor vehicles to be deposited in the CTF pursuant to Section 34(iii) of Chapter 90, all receipts paid to the Commonwealth and directed to be credited to the CTF pursuant to Chapters 64A, 64E, 64F and any other amounts appropriated into the CTF. The CTF is subject to appropriation and shall be used for transportation related expenses of the MassDOT or any successor agency or authority, including to pay or reimburse the General Fund for payment of debt service on bonds issued by, or otherwise payable pursuant to a lease or other contract assistance agreement by, the Commonwealth for transportation purposes.

In addition to the revenues listed above, there are credited to the CTF all monies received by the Commonwealth from (i) the receipts from sales, as defined by Chapter 64H, of motor vehicles imposed under Section 3, 25 and 26 of Chapter 64H, (ii) from the purchase, as defined by Chapter 64H, of motor vehicles imposed under Section 4, 26 and 27 of Chapter 64I, (iii) beginning in fiscal year 2015, from certain delivery fees with respect to underground storage tanks imposed under Section 2 of Chapter 21J and (iv) in fiscal 2015-2020, transfers made from the General Fund pursuant to the Transportation Finance Act. The amounts collected in (i) and (ii) above are net of amounts dedicated to the Massachusetts School Building Authority and the Massachusetts Bay Transportation Authority.

Pursuant to the Commonwealth Transportation Fund Act, not less than the following amounts shall annually be distributed from the CTF to the Massachusetts Bay Transportation Authority and regional transit authorities:

(1) \$160 million to the Massachusetts Bay Transportation Authority or any fund controlled by the authority in each fiscal year; and

(2) \$15 million to regional transit authorities organized under Chapter 161B or predecessor statutes in each fiscal year.

(b) Special Obligation Act

Bonds issued in accordance with the provisions of the Special Obligation Act are special obligations of the Commonwealth payable solely from monies credited to the CTF. Notwithstanding the provisions of any general or special law to the contrary, such special obligation bonds are not general obligations of the Commonwealth. Special obligation bonds may be secured by a trust agreement entered into by the Treasurer, with the concurrence of the

Secretary of Administration and Finance and the Secretary of Transportation, on behalf of the Commonwealth, which trust agreement may pledge or assign all or any part of monies credited to the Commonwealth Transportation Fund and rights to receive the same, whether existing or coming into existence and whether held or thereafter acquired, and the proceeds thereof. The Treasurer is also authorized, with the concurrence of the Secretary of Administration and Finance and the Secretary of Transportation, to enter into additional security, insurance or other forms of credit enhancement which may be secured on a parity or subordinate basis with the special obligation bonds. The Special Obligation Act provides that a pledge in any such trust agreement or credit enhancement agreement is valid and binding from the time such pledge is made without any physical delivery or further act, and the lien of such pledge is valid and binding as against all parties having claims of any kind in tort, contract or otherwise, irrespective of whether such parties have notice thereof. Any such pledge may be perfected by filing the trust agreement or credit enhancement agreement in the records of the Treasurer, and no filing need be made under the Massachusetts Uniform Commercial Code.

The Special Obligation Act provides that any such trust agreement or credit enhancement agreement may establish provisions defining defaults and establishing remedies and other matters relating to the rights and security of the holders of the special obligation bonds or other secured parties as determined by the Treasurer, including provisions relating to the establishment of reserves, the issuance of additional or refunding bonds, whether or not secured on a parity basis, the application of receipts, monies or funds pledged pursuant to such agreement, and other matters deemed necessary or desirable by the Treasurer for the security of such special obligation bonds, and may also regulate the custody, investment and application of monies. Any such special obligation bonds are deemed to be investment securities under the Massachusetts Uniform Commercial Code and are made securities in which any public officer, fiduciary, insurance company, financial institution or investment company may properly invest funds and which may be deposited with any public custodian for any purpose for which the deposit of bonds is authorized by law. The Special Obligation Act provides that any such special obligation bonds, their transfer and the income therefrom, including profit on the sale thereof, shall at all times be exempt from taxation by and within the Commonwealth.

In order to increase the marketability of any such special obligation bonds issued by the Commonwealth, and in consideration of the acceptance of payment for any such special obligation bonds, the Commonwealth covenants in the Special Obligation Act with the purchasers and all subsequent holders and transferees of any such special obligation bonds that while any such special obligation bond shall remain outstanding, and so long as the principal of or interest on any such special obligation bond shall remain unpaid: (i) no pledged funds shall be diverted from the CTF, (ii) in any fiscal year of the Commonwealth, unless and until an appropriation has been made which is sufficient to pay the principal, including sinking fund payments, of and interest on all such special obligation bonds of the Commonwealth and to provide for or maintain any reserves, additional security, insurance or other form of credit enhancement required or provided for in any trust agreement securing any such special obligation bonds, no pledged funds shall be applied to any other use and (iii) so long as such revenues are necessary, as determined by the Treasurer in accordance with any applicable trust agreement or credit enhancement agreement, for the purposes for which they have been pledged, the rates of the fees collected pursuant to Sections 33 and 34 of Chapter 90 of the General Laws and the excises imposed in Chapters 64A, 64E and 64F of the General Laws shall not be reduced below the amount in effect at the time of issuance of any such special obligation bond.

The Trust Agreement provides that any provision of the Special Obligation Act creating a covenant with the owners of the Bonds shall be deemed a covenant under the Trust Agreement only to the extent expressly provided for in and as limited by the Trust Agreement.

SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT

The Trust Agreement contains terms and conditions relating to the issuance and sale of Federal Highway Grant Anticipation Notes under it, including various covenants and security provisions, certain of which are summarized below. For purposes of this summary, all references to “Notes” shall refer to the Federal Highway Grant Anticipation Notes issued under the Trust Agreement. This summary does not purport to be comprehensive or definitive and is subject to all of the provisions of the Trust Agreement, to which reference is hereby made. Copies of the Trust Agreement are available from the Trustee.

Definitions

The following is a summary of certain terms used in the Trust Agreement, in this Appendix C and otherwise used in this Official Statement.

“Accelerated Bridge Improvement Program” shall mean the accelerated structurally-deficient bridge improvement program referred to in Chapter 233 of the Acts of 2008, as amended from time to time.

“Accreted Value” shall mean with respect to any Notes that are Capital Appreciation Notes, an amount equal to the principal amount of such Capital Appreciation Notes (determined on the basis of the initial principal amount per \$5,000 at maturity thereof) plus the amount assuming compounding (as set forth in the Applicable Supplemental Trust Agreement) of earnings which would be produced on the investment of such initial amount, beginning on the dated date of such Capital Appreciation Notes and ending at the maturity date thereof, at a yield which, if produced until maturity, will produce \$5,000 at maturity. As of a Valuation Date, the Accreted Value of any Capital Appreciation Notes shall mean the amount set forth for such date in the Applicable Supplemental Trust Agreement and as of any date other than a Valuation Date, the sum of (i) the Accreted Value on the preceding Valuation Date and (ii) the product of (1) a fraction, the numerator of which is the number of days having elapsed from and including the preceding Valuation Date and the denominator of which is the number of days from and including such preceding Valuation Date to the next succeeding Valuation Date, and (2) the difference between the Accreted Values for such Valuation Dates.

“Act” shall mean the provisions of Sections 7 through 9 of Chapter 233 of the Acts of 2008 and Sections 20 and 2ZZZ of Chapter 29 of the Massachusetts General Laws, as amended from time to time, and any other provisions of Massachusetts law that permit the Commonwealth to fund Federal Highway Construction Program projects with the use of the Pledged Federal Highway Revenues, whether or not currently in effect or hereafter enacted.

“Additional Notes” shall mean additional notes of the Commonwealth issued pursuant to the Trust Agreement.

“Additional Pledged Funds” shall mean any monies or funds hereafter pledged by the Commonwealth for the purpose of further securing the payment of all Senior Trust Agreement Obligations.

“Adjusted Note Debt Service Requirement” shall mean, for any period of calculation, the aggregate Note Debt Service Requirement on Notes Outstanding during such period, taking into account the following adjustments:

- (i) with respect to Variable Rate Notes, the aggregate Note Debt Service Requirement thereon shall be determined based upon an interest rate equal to the average interest rate of the SIFMA Index over the five (5) years immediately prior to the date of calculation, as determined by the Commonwealth; provided, however, if the Commonwealth (1) enters into a Qualified Hedge Agreement with a Hedge Provider requiring the Commonwealth to pay a fixed interest rate or providing for a maximum interest rate on a notional amount, and (2) has made a determination that such Qualified Hedge Agreement was entered into for the purpose of providing substitute interest payments or limiting the potential increase in the interest rate for a particular maturity of Notes in a principal

amount equal to the notional amount of the Qualified Hedge Agreement, then during the term of such Qualified Hedge Agreement and so long as the Hedge Provider under such Qualified Hedge Agreement is not in default under such Qualified Hedge Agreement, the interest rate on such Notes shall be determined as if such Notes bore interest at the fixed interest rate or maximum interest rate, as the case may be, payable by the Commonwealth under such Qualified Hedge Agreement;

- (ii) with respect to Fixed Rate Notes, if the Commonwealth (1) enters into a Qualified Hedge Agreement with a Hedge Provider requiring the Commonwealth to pay a variable interest rate on a notional amount and (2) has made a determination that such Qualified Hedge Agreement was entered into for the purpose of providing substitute interest payments for a particular maturity of Notes in a principal amount equal to the notional amount of the Qualified Hedge Agreement, then during the term of such Qualified Hedge Agreement and so long as the Hedge Provider under such Qualified Hedge Agreement is not in default under such Qualified Hedge Agreement, the interest rate on such Notes shall be determined as if such Notes bore interest at the Assumed Hedge Rate;
- (iii) with respect to Tender Notes, the aggregate Note Debt Service Requirement thereon shall not include amounts payable upon mandatory or optional tender; as long as such Tender Notes are secured by a Liquidity Facility, the aggregate Note Debt Service Requirement shall be deemed to include all periodic Note Related Costs payable to the provider of any Liquidity Facility, but shall not be deemed to include any Reimbursement Obligation to such provider except to the extent provided in the Applicable Supplemental Trust Agreement;
- (iv) with respect to Notes that have Credit Enhancement, the aggregate Note Debt Service Requirements thereon shall be deemed to include all periodic Note Related Costs and other payments to the provider of the Credit Enhancement, but shall not be based upon the terms of any Reimbursement Obligation to such provider except to the extent and for periods during which Note Related Costs and other payments are required to be made pursuant to such Reimbursement Obligation due to such provider advancing funds;
- (v) the amount of any principal of any of the Refunded Notes paid or to be paid from an Escrow Account pursuant to any Supplemental Agreement shall be deducted from the Adjusted Note Debt Service Requirement for the applicable period; and
- (vi) with respect to Balloon Indebtedness, the aggregate Note Debt Service Requirement shall be calculated as if the Principal Installments with respect to such Notes amortized over a period of 25 years at an interest rate equal to The Bond Buyer's Revenue Bond Index (or, if such index is no longer published, such other substantially comparable index as may be selected by the Commonwealth) as of the most recent date for which such index was published prior to the date of calculation.

“Advance Refunded Municipal Bonds” shall mean any bonds or other obligations of any state of the United States of America or of any agency, instrumentality or local governmental unit of any such state (i) which are not callable at the option of the obligor or otherwise prior to maturity or as to which irrevocable notice has been given by the obligor to call such bonds or obligations on the date specified in the notice, (ii) which are fully secured as to principal and interest and redemption premium, if any, by a fund consisting only of cash or Government Obligations which fund may be applied only to the payment of interest when due, principal of and redemption premium, if any, on such bonds or other obligations on the maturity date or dates thereof or the specified redemption date or dates pursuant to such irrevocable notice, as appropriate, and (iii) as to which the principal of and interest on the Government Obligations which have been deposited in such fund along with any cash on deposit in such fund is sufficient to pay interest when due, principal of and redemption premium, if any, on the bonds or other obligations described in this definition on the maturity date or dates thereof or on the redemption date or dates, as appropriate.

“Agency Obligations” shall mean obligations issued or guaranteed by the Federal National Mortgage Association, Government National Mortgage Association, Federal Financing Bank, Federal Intermediate Credit Banks, Federal Farm Credit Bank, Banks for Cooperatives, Federal Land Banks, Federal Farm Credit Banks Funding Corporation, Farm Credit System Financial Assistance Corporation, Federal Home Loan Banks, Farmers Home Administration, Export-Import Bank of the United States, Resolution Funding Corporation, Student Loan Marketing Association, United States Postal Service, Tennessee Valley Authority, Federal Home Loan Mortgage Corporation 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.

“Applicable Supplemental Trust Agreement” shall mean with respect to any Series of Notes, the Supplemental Trust Agreement authorizing such Series of Notes.

“Appreciated Value” shall mean with respect to Notes that are Deferred Income Notes until the Interest Commencement Date thereon, an amount equal to the principal amount of such Deferred Income Note (determined on the basis of the initial principal amount per \$5,000 at the Interest Commencement Date thereof) plus the amount, assuming compounding (as set forth in the Applicable Supplemental Trust Agreement) of earnings which would be produced on the investment of such initial amount, beginning on the dated date of such Deferred Income Note and ending on the Interest Commencement Date, at a yield which, if produced until the Interest Commencement Date, will produce \$5,000 at the Interest Commencement Date. As of any Valuation Date, the Appreciated Value of any Notes that are Deferred Income Notes shall mean the amount set forth for such date in the Applicable Supplemental Trust Agreement and as of any date other than a Valuation Date, the sum of (i) the Appreciated Value on the preceding Valuation Date and (ii) the product of (1) a fraction, the numerator of which is the number of days having elapsed from and including the preceding Valuation Date to the Valuation Date and the denominator of which is the number of days from and including such preceding Valuation Date to and including the next succeeding Valuation Date, and (2) the difference between the Appreciated Values for such Valuation Dates.

“Appropriated Amount” shall have the meaning set forth below under “Alternative Revenues Fund”.

“Assumed Hedge Rate” shall mean the average interest rate which will be payable for the next succeeding twelve consecutive months on the notional amount under any Qualified Hedge Agreement relating to any Fixed Rate Notes as reasonably determined by an Authorized Officer.

“Authorized Officer” shall mean the State Treasurer or any designee thereof and, when used in reference to an act or document, shall also mean any other person authorized by law to perform such act or sign such document.

“Bond Counsel” shall mean any lawyer or firm of lawyers nationally recognized in the field of municipal finance and selected by the State Treasurer.

“Balloon Indebtedness” shall mean (i) a Series of Notes with respect to which, upon the issuance thereof, 25% or more of the Principal Installments are due, whether by maturity, mandatory redemption or optional or mandatory tender (and in the case of any Tender Notes, such Notes are not secured by a Liquidity Facility) in the same Fiscal Year or (ii) any portion of a Series of Notes which is so designated by the Commonwealth in the Applicable Supplemental Trust Agreement by providing that such portion shall be deemed to constitute a separate issue of Balloon Indebtedness.

“Build America Bonds” shall have the meaning set forth in Section 54AA of the Code.

“Capital Appreciation Notes” shall mean any Notes as to which interest is payable only at the maturity or prior redemption thereof. For the purposes of (i) receiving payment of the redemption price, if any, of a Capital Appreciation Note that is redeemed prior to maturity, and (ii) computing the principal amount of Capital Appreciation Notes held by the Holder thereof in giving any notice, consent, request or demand pursuant to the Applicable Supplemental Trust Agreement for any purpose whatsoever, the principal amount of a Capital Appreciation Note as of a specific date shall be deemed to be its Accreted Value as of such date.

“Code” shall mean the Internal Revenue Code of 1986, as amended.

“Commissioner of Revenue” shall mean the Commissioner of Revenue of the Commonwealth or a Deputy Commissioner or designee acting in the Commissioner’s stead.

“Commonwealth” shall mean The Commonwealth of Massachusetts.

“Commonwealth Fiscal Year” shall mean the period beginning on July 1 of any calendar year and ending on June 30 of the succeeding calendar year or such other period of twelve consecutive calendar months as may be provided by law as the fiscal year of the Commonwealth.

“Commonwealth Transportation Fund” shall mean the Commonwealth Transportation Fund of the Commonwealth established by Section 2ZZZ of Chapter 29 of the Massachusetts General Laws, as amended, or any other fund or account of the Commonwealth or any agency thereof created in replacement thereof.

“Comptroller” shall mean the Comptroller of the Commonwealth or any deputy or designee acting in the Comptroller’s stead.

“Costs of Issuance” shall mean all items of expense directly or indirectly payable or reimbursable by or to the Commonwealth and related to the authorization, sale and issuance of Notes, including but not limited to printing costs, costs of preparation and reproduction of documents, filing and recording fees, initial fees and charges of the Fiduciaries, legal fees and charges, fees and disbursements of consultants and professionals, costs and expenses of refunding, fees, expenses and other amounts payable to any underwriters of the Notes, accrued interest payable upon the initial investment of the proceeds of Notes, fees and expenses payable in connection with any Credit Enhancement or Liquidity Facility, fees and expenses payable in connection with any remarketing agreements or interest rate indexing agreements payable in connection with the original issuance of the Notes and any other cost, charge or fee payable in connection with the original issuance of Notes.

“Credit Enhancement” shall mean any agreement, including, but not limited to a policy of bond insurance, surety bond, irrevocable letter of credit, credit agreement, credit facility or guaranty arrangement with a bank, trust company, insurance company, surety bonding company, pension fund or other financial institution that provides increased credit on or security for any Series (or portion thereof) of Notes.

“Debt Service Account” shall mean either the June 15 Debt Service Account or December 15 Debt Service Account or both, as the context requires.

“December 15 Debt Service Requirement” shall mean with respect to any period ending on December 15, the Note Debt Service Requirement with respect to all Notes then Outstanding on such December 15.

“Defeasance Obligations” shall mean Government Obligations, Agency Obligations and Advance Refunded Municipal Bonds.

“Direct Payment” shall mean the refundable tax credit paid to the Commonwealth by the federal government equal to a percentage of the taxable interest the Commonwealth pays on any Build America Bonds in accordance with Section 54AA of the Code. The actual percentage of the interest expected to be received by the Commonwealth shall be set forth in the Applicable Supplemental Trust Agreement.

“Federal Fiscal Year” or “FFY” shall mean the period beginning on October 1 of any calendar year and ending on September 30 of the succeeding calendar year or such other period of twelve consecutive calendar months as may be provided by law as the fiscal year of the United States.

“Federal Highway Construction Program” shall mean all federally-aided highway construction projects undertaken by the Commonwealth as part of the Commonwealth’s program of transportation development and improvements at any time prior to or after (so long as any Notes remain Outstanding) the date of execution of the Trust Agreement.

“Federal Highway Grant Anticipation Note Trust Fund” shall mean the Federal Highway Grant Anticipation Note Trust Fund established by Section 10 of Chapter 11 of the Acts of 1997, as amended by Chapter 121 of the Acts of 1998.

“Federal Highway Reimbursements” shall mean all federal highway construction reimbursements and any other federal highway assistance received from time to time by the Commonwealth with respect to the Federal Highway Construction Program under or in accordance with Title 23 of the United States Code or any successor program established under federal law.

“Fiduciary” shall mean the Trustee or any Paying Agent.

“Government Obligations” shall mean direct general obligations of, or obligations the timely payment of principal of and interest on which are unconditionally guaranteed by, the United States of America.

“Governor” shall mean the Governor of the Commonwealth or the Lieutenant Governor of the Commonwealth at any time that under the laws of Commonwealth the Lieutenant Governor is permitted to act in the Governor’s stead.

“Hedge Provider” shall mean the counterparty with whom the Commonwealth enters into a Qualified Hedge Agreement.

“Interest Commencement Date” shall mean with respect to any Deferred Income Notes, the date specified in the Applicable Supplemental Trust Agreement (which date must be prior to the maturity date for such Deferred Income Notes), after which interest accruing on such Deferred Income Notes shall be payable with the first such payment date being the applicable interest payment date immediately succeeding such Interest Commencement Date.

“June 15 Debt Service Account” shall mean the subaccount established within the Debt Service Fund for the purpose of holding funds to be applied to meet the June 15 Debt Service Requirement.

“June 15 Debt Service Requirement” shall mean with respect to any period ending on June 15, the Note Debt Service Requirement with respect to all Notes then Outstanding on such June 15.

“Liquidity Facility” shall mean any agreement with a bank, trust company, insurance company, surety bonding company, pension fund or financial institution under which it agrees to purchase Tender Notes.

“Motor Fuels Tax” shall mean the excise imposed on fuel (other than aviation fuel) by the provisions of Chapter 64A, 64E and 64F of the Massachusetts General Laws in effect as of the date of issuance of the initial Series of Notes.

“Net CTF Pledged Funds” shall mean and include the following revenues and monies, after the application thereof in accordance with the provisions of the 1994 Trust Agreement and the Senior CTF Trust Agreement:

- (i) all monies received or to be received by the Commonwealth from the portion of the Motor Fuels Tax equal to 17.104¢ per gallon with respect to the excise tax imposed on fuel (other than aviation fuel) by the provisions of Chapter 64A^{*}, equal to 24¢ per gallon with respect to the excise tax imposed on fuel (other than liquefied gas) by the provisions of Chapters 64E and 64F, and equal to 19.1% of the average price per gallon (computed to the nearest tenth of one percent) with respect to the excise tax imposed on liquefied gas by the provisions of Chapter 64E;

^{*} Fuel subject to the provisions of Chapter 64A consisting of cellulosic biofuel or a blend of gasoline and cellulosic biofuel is taxable in proportion to the percentage of the fuel content consisting of gasoline, as determined by the Commonwealth’s Department of Energy Resources.

- (ii) all Registry Fees, including (i) motor vehicle registration fees imposed under Chapter 90; (ii) motor vehicle license fees imposed under Chapter 90; and (iii) miscellaneous fees and other revenues relating to the operation and use of motor vehicle transportation;
- (iii) all other monies received or to be received by the Senior CTF Trustee from the 1994 Trustee pursuant to the 1994 Trust Agreement;
- (iv) subject in all respects to the prior lien of the 1994 Trust Agreement, all monies received or to be received by the Commonwealth from that portion of the Motor Fuels Tax imposed on fuel (other than aviation fuel) pursuant to Chapter 64A equal to 6.86¢ per gallon;
- (v) Direct Payments received by the Commonwealth with respect to Build America Bonds; and
- (vi) to the extent permitted in the Senior CTF Trust Agreement, such Additional Pledged Funds (as therein defined) as the Commonwealth may by a subsequent supplemental trust agreement pledge to the Senior CTF Trustee as security for the Senior CTF Bonds.

For purposes of the foregoing definition of “Net CTF Pledged Funds,” the Senior CTF Trust Agreement permits the Commonwealth to change the revenues and monies constituting the CTF Pledged Funds, as defined in the Senior CTF Trust Agreement. To the extent that the revenues and monies constituting CTF Pledged Funds are amended or revised in accordance with the Senior CTF Trust Agreement, the foregoing definition of “Net CTF Pledged Funds” shall be likewise amended or revised to reflect the new revenues and monies constituting CTF Pledged Funds.

“Net Federal Highway Reimbursements” shall mean all Federal Highway Reimbursements less the amounts used or expected to be used to pay amounts due and owing under the Senior Federal Highway Notes Trust Agreement. (No Senior Federal Highway Notes remain outstanding under the Senior Federal Highway Notes Trust Agreement and no additional Senior Federal Highway Notes will be issued. Accordingly, no amounts are or will be due and owing under the Senior Federal Highway Notes Trust Agreement.)

“Note Payment Date” shall mean with respect to Notes, other than Variable Rate Notes, each December 15 and June 15, and with respect to Variable Rate Notes, the first Business Day of each month commencing with the first month following the date of issuance of such Variable Rate Notes or otherwise as specified in the Applicable Supplemental Trust Agreement for such Variable Rate Notes.

“Note Debt Service Requirement” shall mean, for any period of calculation, the aggregate of the interest, principal amount, and Sinking Fund Payments due or to become due other than by reason of redemption at the option of the Commonwealth or the Registered Owner of any Notes on all Notes Outstanding during such period; provided, however, for purposes of this definition, the scheduled principal and interest portions of the Accreted Value of Capital Appreciation Notes and the Appreciated Value of Deferred Income Notes becoming due at maturity or by virtue of Sinking Fund Payments shall be included in the calculations in such manner and during such period of time as is specified in the Applicable Supplemental Trust Agreement authorizing such Capital Appreciation Notes or Deferred Income Notes.

“Note Related Costs” shall mean all costs, fees and expenses of the Commonwealth incurred or related to any Liquidity Facility, Credit Enhancement, any remarketing or other secondary market transactions, any fees of Bond Counsel, attorneys, financial advisors, Fiduciaries, remarketing agents, rebate consultants, accountants and other advisors, retained by the Commonwealth in connection with a Series, and any other fees, charges and expenses that may be lawfully incurred by the Commonwealth to a provider of any Credit Enhancement or Liquidity Facility, other than amounts paid as the Costs of Issuance for a Series, to repay or reimburse any amounts paid by such provider due to a payment under such Credit Enhancement or Liquidity Facility and any interest on such repayment obligation unless any such amount constitutes a Note Debt Service Requirement for such Series.

“Notice of Redemption or Defeasance” shall have the meaning set forth below under “Revenue Account”.

“Obligation Authority” shall mean the annual limitation on the amount of eligible costs under Title 23 of the United States Code that the Commonwealth may obligate with respect to the Federal Highway Construction Program during a given Federal Fiscal Year, as specified in annual Federal appropriations acts.

“Outstanding,” when used with reference to Notes, shall mean as of a particular date, all Notes theretofore and thereupon being authenticated and delivered except (i) any Note cancelled by the Commonwealth or a Fiduciary at or before said date, (ii) any Note in lieu of or in substitution for which another Note shall have been authenticated and delivered and (iii) Notes deemed to have been paid as described under “Defeasance”.

“Paying Agent” shall mean any paying agent or co-paying agent for Notes of any Series appointed pursuant to the Trust Agreement or an Applicable Supplemental Trust Agreement and its successor or successors and any other corporation which may at any time be substituted in its place pursuant to the Trust Agreement.

“Permitted Investments” shall mean and include any of the following, if and to the extent the same are at the time legal for investment of Commonwealth funds:

- (i) Government Obligations;
- (ii) Agency Obligations;
- (iii) Certificates or receipts representing direct ownership of future interest or principal payments on Government Obligations or any obligations of agencies or instrumentalities of the United States of America which are backed by the full faith and credit of the United States, which obligations are held by a custodian in safekeeping on behalf of the holders of such receipts;
- (iv) Direct obligations and fully guaranteed certificates of beneficial interest of the Export-Import Bank of the United States; senior debt obligations of the Federal Home Loan Banks; debentures of the Federal Housing Administration; guaranteed mortgage-backed bonds and guaranteed pass-through obligations of the Government National Mortgage Association; guaranteed Title XI financing of the U.S. Maritime Administration; mortgage-backed securities and senior debt obligations of the Federal National Mortgage Association; obligations of the Student Loan Marketing Association; obligations of the Federal Farm Credit Systems; obligations of the Resolution Trust Corporation and participation certificates and senior debt obligations of the Federal Home Loan Mortgage Corporation or any successor agency to each of the foregoing;
- (v) All other obligations issued or unconditionally guaranteed as to the timely payment of principal and interest by an agency or person controlled or supervised by and acting as an instrumentality of the United States of America pursuant to authority granted by Congress;
- (vi) (a) Interest-bearing time or demand deposits, certificates of deposit, or other similar banking arrangements with any government securities dealer, bank, trust company, savings and loan association, national banking association or other savings institution (including the Trustee), provided that such deposits, certificates, and other arrangements are fully insured by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation or (b) interest-bearing time or demand deposits or certificates of deposit with any bank, trust company, national banking association or other savings institution (including the Trustee), provided such deposits and certificates are in or with a bank, trust company, national banking association or other savings institution whose long-term unsecured debt is rated in one of the three highest long-term Rating Categories by each Rating Agency then maintaining a rating on any Notes, and provided

further that with respect to (a) and (b), any such obligations are held by the Trustee or a bank, trust company or national banking association other than the issuer of such obligations, unless the issuer is the Trustee;

- (vii) Repurchase agreements collateralized by securities described in subparagraphs (i), (ii), (iii), (iv) or (v) above with any registered broker/dealer or with any commercial bank, provided that (a) a specific written repurchase agreement governs the transaction, (b) the securities are held, free and clear of any lien, by the Trustee or an independent third party acting solely as agent for the Trustee, and such third party is (1) a Federal Reserve Bank, or (2) a bank which is a member of the Federal Deposit Insurance Corporation and which has combined capital, surplus and undivided profits of not less than \$25 million, and the Trustee shall have received written confirmation from such third party that it holds such securities, free and clear of any lien, as agent for the Trustee, (c) the repurchase agreement has a term of thirty days or less, or a third-party custodian will value the collateral securities no less frequently than monthly and will liquidate the collateral securities if any deficiency in the required collateral percentage is not restored within five business days of such valuation, and (d) the fair market value of the collateral securities in relation to the amount of the repurchase obligation, including principal and interest, is equal to at least one hundred and two percent (102%);
- (viii) Money market funds rated in the highest short-term Rating Category by each Rating Agency then maintaining a rating on any Notes;
- (ix) Commercial paper rated in the highest short-term Rating Category by each Rating Agency then maintaining a rating on any Notes;
- (x) Advanced Refunded Municipal Bonds;
- (xi) Short-term or long-term obligations of any state of the United States of America that are rated in the three highest rating categories by each Rating Agency then maintaining a rating on any Notes Outstanding; and
- (xii) Investment contracts with banks or other financial institutions whose long-term unsecured debt or claims-paying ability is rated in one of the three highest Rating Categories by each Rating Agency then maintaining a rating on any of the Notes Outstanding, but in no event lower than the Rating Category designated by such Rating Agency for the Notes.

“Pledged Federal Highway Revenues” shall mean all Net Federal Highway Reimbursements hereafter received by the Commonwealth and, any other monies deposited to or held for the credit of the Federal Highway Grant Anticipation Note Trust Fund (other than in the Project Fund) so long as any Notes remain Outstanding.

“Pledged Funds” shall have the meaning set forth below under “Pledge”.

“Principal Installment” shall mean, as of any particular date of computation and with respect to Notes of a particular Series, an amount of money equal to the aggregate of (i) the principal amount of Outstanding Notes of said Series which mature on a single future date, reduced by the aggregate principal amount of such Outstanding Notes which would at or before said future date be retired by reason of the payment when due and application in accordance with the Trust Agreement of Sinking Fund Payments payable at or before said future date for the retirement of such Outstanding Notes, plus (ii) the amount of any Sinking Fund Payment payable on said future date for the retirement of any Outstanding Notes of said Series.

“Qualified Hedge Agreement” shall mean an interest rate exchange, cap, floor or collar agreement between the Commonwealth and a Hedge Provider based upon a notional amount, where (a) the Hedge Provider, or the person who guarantees the obligation of the Hedge Provider to make any payments due to the Commonwealth, has

unsecured long-term obligations rated, or (b) the hedge agreement itself is rated, in each case as of the date the hedge agreement is entered into, by any Rating Agency then maintaining a rating on the Notes Outstanding in either (i) a Rating Category, with respect to each such Rating Agency, at least equal to “A,” but in no event lower than the Rating Category designated by such Rating Agency for the Notes Outstanding subject to such hedge agreement or (ii) a lower Rating Category which any such Rating Agency indicates in writing to the Commonwealth and the Trustee will not, by itself, result in a reduction or withdrawal of its rating on Commonwealth general obligation bonds or will not, by itself, result in a reduction or withdrawal of its rating on the Notes Outstanding (without regard to Credit Enhancement) subject to such hedge agreement that is in effect prior to entering into such hedge agreement.

“Rating Agency” shall mean any of Moody’s Investors Service, Inc., Standard & Poor’s Ratings Services, a division of The McGraw-Hill Companies, Inc., and Fitch Ratings Inc. and their respective successors or assigns.

“Rating Categories” shall mean rating categories as published by a Rating Agency in its written compilations of ratings and any written supplement or amendment thereto and any such Rating Category shall be determined on the generic rating without regard to any modifiers and, unless otherwise specified herein or in an Applicable Supplemental Trust Agreement, shall be long term ratings.

“Rating Confirmation” means evidence that no Note rating then in effect from a Rating Agency will be withdrawn or reduced solely as a result of an action to be taken hereunder.

“Rebate Fund Requirement” shall mean, as of any date of calculation, an amount equal to the aggregate of the amounts, if any, calculated in accordance with each Applicable Supplemental Trust Agreement authorizing the issuance of a Series of Tax-Exempt Notes as the amount required to be maintained in the Rebate Fund with respect to such Notes.

“Redemption Price” shall mean, with respect to any Note, the principal amount thereof plus the premium, if any, payable upon redemption thereof.

“Refunding Notes” shall mean any of the Notes authorized for refunding purposes under the Trust Agreement.

“Registered Owner” shall mean the registered owner of a Note of a particular Series of Notes as shown on the register for such Series of Notes.

“Registry Fees” shall mean the monies deposited in the Commonwealth Transportation Fund pursuant to Section 34(iii) of Chapter 90.

“Reimbursement Obligation” shall mean the amounts due to the provider of a Credit Enhancement or Liquidity Facility under the terms thereof as described below under “Credit Enhancement; Liquidity Facilities”.

“Secretaries” shall mean collectively the Secretary of Administration and Finance and the Secretary of Transportation.

“Secretary of Administration and Finance” shall mean the Secretary of the Executive Office for Administration and Finance of the Commonwealth or any designee acting in the Secretary’s stead.

“Secretary of Transportation” shall mean the Secretary of the Massachusetts Department of Transportation or any designee acting in the Secretary’s stead.

“Senior CTF Bonds” shall mean the bonds of the Commonwealth issued under and secured by the Senior CTF Trust Agreement, which bonds are secured by a lien on the Net CTF Pledged Funds, including the issuance of subordinate bonds in accordance with the terms thereof.

“Senior CTF Trust Agreement” shall mean the Trust Agreement, dated as of December 1, 2010, by and between the Commonwealth and the Senior CTF Trustee, as from time to time amended and supplemented.

“Senior CTF Trustee” shall mean the trustee appointed in accordance with the Senior CTF Trust Agreement, and its successors and assigns.

“Senior Federal Highway Notes” shall mean the notes of the Commonwealth issued under and secured by the Senior Federal Highway Notes Trust Agreement, which notes are secured by a senior lien on the Federal Highway Reimbursements and a subordinate lien, under the circumstances described in the Senior Federal Highway Notes Trust Agreement, on a certain portion of the Motor Fuels Tax.

“Senior Federal Highway Notes Trust Agreement” shall mean the amended and Restated Trust Agreement dated as of December 1, 2010, by and between the Commonwealth and U.S. Bank National Association, as trustee, as from time to time amended and supplemented.

“Senior Obligations” shall mean the 1994 Trust Agreement Bonds and the Senior CTF Bonds, as from time to time outstanding under their respective trust agreements.

“Series” when used with respect to less than all of the Notes, shall mean such Notes designated as a Series of Notes pursuant to a Supplemental Trust Agreement.

“SIFMA Index” shall mean, on any day, the index currently known as the Securities Industry and Financial Markets Association (SIFMA) Municipal Swap Index as of the most recent date for which such index was published by Municipal Market Data, Inc., any successor to such index, or, if such index is no longer published by Municipal Market Data, Inc. or its successor, any other reasonably comparable index selected by the Commonwealth.

“Sinking Fund Payment” shall mean, as of any particular date of computation and with respect to Notes of a particular Series, the amount of money required by any Supplemental Trust Agreement to be paid by the Commonwealth on a single future date for the retirement of any Outstanding Notes of said Series which mature after said future date, but does not include any amount payable by the Commonwealth by reason of the redemption of Notes at the election of the Commonwealth.

“State Fiscal Year” or “SFY” shall mean the period beginning on July 1 of any calendar year and ending on June 30 of the succeeding calendar year or such other period of twelve consecutive calendar months as may be provided by law as the fiscal year of the Commonwealth.

“Statement of Available Revenues” shall have the meaning set forth below under “Revenue Account”.

“State Treasurer” shall mean the Treasurer and Receiver-General of the Commonwealth or any Deputy Treasurer of the Commonwealth acting on the State Treasurer’s behalf.

“Supplemental Trust Agreement” shall mean any Trust Agreement of the Commonwealth amending or supplementing the Trust Agreement adopted and becoming effective in accordance with the terms of Article IX.

“Tax Exempt Notes” shall mean any Notes accompanied by a Bond Counsel’s opinion upon the original issuance thereof that the interest on such Notes is not includable in the gross income of the Registered Owner thereof for Federal income tax purposes.

“Trustee” shall mean U.S. Bank National Association, and its successor or successors and any other corporation which may at any time be substituted in its place pursuant to the Trust Agreement.

“Valuation Date” shall mean (i) with respect to any Notes that are Capital Appreciation Notes, the date or dates set forth in the Applicable Supplemental Trust Agreement on which specific Accreted Values are assigned to such Notes and (ii) with respect to any Notes that are Deferred Income Notes, the date or dates prior to the Interest

Commencement Date set forth in the Applicable Supplemental Trust Agreement on which specific Appreciated Values are assigned to such Notes.

“Variable Rate Ceiling” shall mean the maximum interest rate payable on Variable Rate Notes.

Pledge

There are pledged for the payment of principal and Redemption Price of and interest on the Notes (i) the Pledged Federal Highway Revenues and all rights to receive the same, whether now existing or coming into existence and whether now held or hereafter acquired and including any proceeds thereof; (ii) subject to the terms and conditions set forth in the Trust Agreement, the Net CTF Pledged Funds, (iii) Direct Payments received by the Commonwealth with respect to Build America Bonds, (iv) all monies, securities and any investment earnings with respect thereto in all Funds and Accounts held pursuant to the Trust Agreement other than the Project Fund and the Rebate Fund, and (v) any amounts payable to the Commonwealth by a Hedge Provider pursuant to a Qualified Hedge Agreement (collectively, the “Pledged Funds”). The full faith and credit of the Commonwealth has not been pledged to the payment of the Notes.

The Commonwealth may in any Supplemental Trust Agreement pledge any Additional Pledged Funds or portions thereof which the Commonwealth may lawfully pledge to the payment of amounts due under the Trust Agreement. From and after the date of such Supplemental Trust Agreement such amounts shall be deemed part of the Pledged Funds under the Trust Agreement.

Trust Agreement to Constitute Contract

The Trust Agreement constitutes a contract between the Commonwealth and the Registered Owners from time to time of the Notes, and the pledge made therein and the covenants and agreements therein set forth to be performed by or on behalf of the Commonwealth shall be for the equal benefit, protection and security of the Registered Owners of any and all of the Notes, all of which, regardless of the time or times of their issue or maturity, shall be of equal rank without preference, priority or distinction of any of the Notes over any other thereof, except as otherwise expressly provided in or permitted by the Trust Agreement.

Authorization of Notes

The Commonwealth is authorized to issue one or more Series of Notes under the Trust Agreement, which Notes may be issued without limitation as to amount except as provided in the Trust Agreement with respect as limited by law. The Notes may be issued as Fixed Rate Notes, Variable Rate Notes, Tender Notes, Capital Appreciation Notes, Deferred Income Notes, Discount Notes, Build America Bonds or any combination thereof.

The Commonwealth may issue Notes (“Fixed Rate Notes”) which bear a fixed rate or rates of interest during the term thereof. The Applicable Supplemental Trust Agreement shall specify the rate or rates of interest borne by such Notes and the interest payment dates thereof.

The Commonwealth may issue Notes (“Variable Rate Notes”) which provide for a variable, adjustable, convertible or other similar rates of interest, not fixed as to percentage at the date of issue for the term thereof. Any Variable Rate Notes shall bear a maximum interest rate, or Variable Rate Ceiling.

The Commonwealth may provide that any Series of Notes may include an option exercisable by the Registered Owners thereof to have such Notes (“Tender Notes”) either repurchased or redeemed prior to the maturity thereof. Any Tender Notes may be secured by a Liquidity Facility providing for the repurchase or payment of any tender price of Tender Notes which have not been remarketed upon tender of such Notes and any accrued and unpaid interest due on such Notes upon the tender date thereof. The provider of any such Liquidity Facility shall have a rating on its short term obligations within the highest Rating Category from any Rating Agency then maintaining a rating on the Notes Outstanding.

The Commonwealth may issue Notes (“Capital Appreciation Notes”) which provide for the addition of accrued and unpaid interest to the principal due thereon upon such terms with respect thereto determined by an Applicable Supplemental Trust Agreement. The Applicable Supplemental Trust Agreement shall specify interest rate or rates for such Notes and the Accreted Values of any such Notes.

The Commonwealth may issue Notes (“Discount Notes”) which either bear a zero stated rate of interest or bear a stated rate of interest such that such Notes are sold at a price less than the aggregate principal amount thereof in order to provide such yield thereon as deemed appropriate and desirable thereon by the Commonwealth. In the Applicable Supplemental Trust Agreement for any Discount Notes, the Commonwealth may provide for the determination of the “principal amount” and “interest” payable on such Notes.

The Commonwealth may issue Notes (“Deferred Income Notes”) which provide for the deferral of interest on such Notes until the Interest Commencement Date. The Applicable Supplemental Trust Agreement shall specify the interest rate or rates for such Notes and Interest Commencement Date for such Notes.

The Commonwealth may issue Notes as “Build America Bonds” as specified by the Commonwealth at the time of issuance thereof that provide for a Direct Payment to be received by the Commonwealth from the federal government with respect to a portion of the interest payable on such Notes. The Applicable Supplemental Trust Agreement shall authorize the State Treasurer to make any elections, certifications, representations, agreements, modifications or amendments required with respect to any such Notes, including, without limitation, to the extent permitted or authorized by law, the allocation to the Revenue Account of any Direct Payment received by the Commonwealth from the federal government with respect to a portion of the interest payable on such Notes.

Additional Notes

One or more Series of Additional Notes may be issued for the purpose of (i) paying costs of any Federal Highway Construction Program project to the extent then authorized by the laws of the Commonwealth, including the Accelerated Bridge Improvement Program, (ii) the making of deposits in the Debt Service Fund, (iii) the payment of the Costs of Issuance of such Notes, or (iv) any combination of the foregoing.

A Series of Additional Notes shall be executed by the State Treasurer and Governor and Comptroller and delivered to the Paying Agent for such Series of Notes and by it authenticated and delivered to or upon the order of an Authorized Officer, but only upon notification by the Trustee that it has received:

- (i) an opinion of Bond Counsel with respect to the validity of the Additional Notes and the enforceability of the pledge under the Trust Agreement;
- (ii) the documents and monies, if any, required by the Applicable Supplemental Trust Agreement;
- (iii) a certificate of an Authorized Officer stating that, as of the delivery of such Additional Notes and application of their proceeds, no Event of Default will have happened and will then be continuing;
- (iv) the following certificates:
 - (a) A certificate or certificates of the Commissioner of Revenue or the Comptroller, or such other officer or official of the Commonwealth as shall be appropriate, setting forth the amount of (1) Federal Highway Reimbursements and (2) Net CTF Pledged Funds received by the Commonwealth for each month for the eighteen (18) month period ending with the last full month immediately preceding the date of issuance of the Additional Notes (or, if the information for such last full month is not then available, the last month for which such information is available), and
 - (b) A certificate of an Authorized Officer showing that the amount of Federal Highway Reimbursements received by the Commonwealth during any twelve (12) consecutive

months out of such eighteen (18) month period referred to in clause (A) above was not less than one hundred fifty percent (150%) of the maximum annual aggregate Adjusted Note Debt Service Requirement in the then current or any future Commonwealth Fiscal Year with respect to the Trust Agreement Notes Outstanding including the proposed Additional Notes, and

(c) A certificate of an Authorized Officer showing that the amount of Net CTF Pledged Funds received by the Commonwealth during the same twelve (12) consecutive months referred to in clause (B) above was not less than two hundred fifty percent (250%) of the maximum annual aggregate Adjusted Note Debt Service Requirement in the then current or any future Commonwealth Fiscal Year on Notes Outstanding including the proposed Additional Notes;

(i) a certificate of an Authorized Officer substantially to the following effect:

(a) that the amount of Net Federal Highway Reimbursements expected to be received from the date of issuance of the Additional Notes to the end of the then current Federal Fiscal Year will be at least equal to one hundred twenty percent (120%) of the Trust Agreement Obligations to be due and payable with respect to the Additional Notes during the next succeeding Federal Fiscal Year, other than any portion of such Trust Agreement Obligations to be paid from proceeds of the Additional Notes or other available amounts deposited with the Trustee for such purpose; and

(b) that the Trustee shall have on deposit on the date of issuance of such Additional Notes, either from a portion of the proceeds of such Additional Notes or from other amounts available for such purpose, an amount sufficient to pay the Note Debt Service Requirement payable with respect to the Additional Notes during the remainder of the Federal Fiscal Year in which the Additional Notes are issued;

(i) a certificate of an Authorized Officer to the effect that the aggregate amount of bonds and notes, including the Notes and the Senior CTF Bonds, issued under Sections 7 and 8 of Chapter 233 of the Acts of 2008, other than any Refunding Notes and refunding Senior CTF Bonds, does not exceed the limit imposed by law (which, at the time of issuance of the 2016 Notes, is \$2,984,000,000); and

(ii) if any such Additional Notes are to be issued as Tender Notes, a fully executed copy of the Liquidity Facility for such Notes, if any.

Refunding Notes

One or more Series of Refunding Notes may be issued for the purpose of refunding all or any part of the Notes of one or more Series Outstanding upon delivery, among other items, of the following:

(i) an opinion of Bond Counsel with respect to the validity of the Refunding Notes and the enforceability of the pledge under the Trust Agreement;

(ii) a certificate of an Authorized Officer stating that, as of the delivery of such Refunding Notes and application of their proceeds, no Event of Default will have happened and will then be continuing;

(iii) a certificate of an Authorized Officer setting forth the Adjusted Note Debt Service Requirement for each Commonwealth Fiscal Year in which Notes are or will be Outstanding (a) computed immediately prior to the delivery of such Refunding Notes and (b) computed immediately after the delivery of such Refunding Notes, and showing either that (x) the Adjusted Note Debt Service Requirement for each Commonwealth Fiscal Year in which Notes will be Outstanding as computed in (b) of this paragraph will

not be greater than the Adjusted Note Debt Service Requirement in each such Commonwealth Fiscal Year as computed in (a) of this paragraph or (y) the net present value of the Adjusted Note Debt Service Requirement as computed in paragraph (b) of this paragraph is less than the net present value of the Adjusted Note Debt Service Requirement as computed in paragraph (a) of this paragraph; provided that, in lieu of such certificate, the Comptroller or Commissioner of Revenue and an Authorized Officer may deliver to the Trustee certificates satisfying the conditions to the issuance of Additional Notes and in each case treating the Refunding Notes to be issued as Additional Notes thereunder; and

- (iv) an amount of money or Defeasance Obligations sufficient to effect payment at maturity or redemption of the Prior Notes to be refunded.

Creation of Liens; Other Indebtedness

Except as otherwise expressly provided in the Senior CTF Trust Agreement, the Commonwealth shall not issue any bonds, notes or other evidences of indebtedness, other than the Notes, secured by a pledge of or other lien on the Pledged Funds or any other monies, securities and funds held or set aside by the Commonwealth or by the Fiduciaries under the Trust Agreement, and shall not otherwise create or cause to be created any lien or charge on such Pledged Funds, monies, securities and funds. The Trust Agreement permits the issuance of other indebtedness secured by a subordinate lien on Pledged Funds.

Credit Enhancement; Liquidity Facilities

The Commonwealth may obtain or cause to be obtained Credit Enhancement or a Liquidity Facility providing for payment of all or a portion of the principal, premium, or interest due or to become due on such Notes or providing for the purchase of such Notes or a portion thereof. In connection therewith the Commonwealth may agree with the issuer of such Credit Enhancement or Liquidity Facility to reimburse such issuer directly for amounts paid under the terms of such Credit Enhancement or Liquidity Facility, together with interest thereon ("Reimbursement Obligation"). Such Reimbursement Obligation may be subject to a lien on Pledged Funds on a parity with the lien created by the Trust Agreement in favor of the Notes.

Qualified Hedge Agreements

The Commonwealth may from time to time enter into Qualified Hedge Agreements with a Hedge Provider with respect to all or a portion of the Notes of any Series Outstanding. The obligations of the Commonwealth thereunder may be secured by a pledge of the Pledged Funds; provided, however, that such security with respect to amounts due and owing thereunder other than regularly scheduled payments of principal and interest, such as termination payments, shall be expressly subordinate to the security for the Notes Outstanding.

Any amounts paid to the Commonwealth pursuant to a Qualified Hedge Agreement shall be deposited in the Revenue Account. Any amounts payable by the Commonwealth under a Qualified Hedge Agreement may be payable from any amounts lawfully available to the State Treasurer for such purpose. Upon the issuance of any Refunding Notes, an Authorized Officer shall deliver to the Trustee a certificate setting forth the interest rate (the "Assumed Hedge Rate") which such Authorized Officer reasonably determines will be the average interest rate which will be payable for the next succeeding twelve consecutive months on the notional amount under any Qualified Hedge Agreement relating to any Fixed Rate Notes which will remain Outstanding under which the Commonwealth is required to pay a variable interest rate on such notional amount.

Establishment of Funds and Accounts

The following funds and accounts have been established and are currently held by the Trustee:

- (i) Redemption Fund;

- (ii) Debt Service Fund;
 - (a) June 15 Debt Service Payment Account;
 - (b) December 15 Debt Service Payment Account;
 - (c) Holding Account; and
 - (d) Defeasance Account
- (iii) Note Related Costs Fund; and
- (iv) Rebate Fund.

Such Funds, except the Rebate Fund, are subject to the pledge created by the Trust Agreement.

The State Treasurer will establish the Revenue Account to be maintained as part of the Federal Highway Grant Anticipation Note Trust Fund and held by the Trustee so long as Notes shall remain Outstanding, which Account shall be subject to the pledge created by the Trust Agreement. The State Treasurer will also establish the Project Fund to be maintained as part of the Federal Highway Grant Anticipation Note Trust Fund and held by the State Treasurer so long as Notes shall remain Outstanding, which Fund shall not be subject to the pledge created by the Trust Agreement.

Project Fund

Except as otherwise provided in the Applicable Supplemental Trust Agreement, the State Treasurer shall deposit in the Project Fund the amounts, if any, provided in such Applicable Supplemental Trust Agreement as necessary to pay the Costs of Issuance of such Series and to pay costs of the Federal Highway Construction Program project to the extent then authorized by the laws of the Commonwealth, including the Accelerated Bridge Improvement Program financed by such Series. Such amounts shall be applied by the State Treasurer to the payment of the Costs of Issuance and to pay costs of the Federal Highway Construction Program project to the extent then authorized by the laws of the Commonwealth, including the Accelerated Bridge Improvement Program, for which such Notes have been issued. Investment earnings received by the State Treasurer on any proceeds of Notes shall be promptly transferred to the Trustee for deposit in the Revenue Account.

Revenue Account

The State Treasurer shall deliver to the Trustee within two business days of receipt, Pledged Federal Highway Revenues collected by the Commonwealth. Immediately upon receipt thereof, the Trustee shall deposit in the Revenue Account all Pledged Federal Highway Revenues paid to the Commonwealth and any other monies deposited with or paid to the Trustee for application in accordance with the Trust Agreement, including, without limitation, any Direct Payment.

On or before October 10 of each Federal Fiscal Year (or the next following Business Day), the State Treasurer, with the written concurrence of the Secretaries, shall deliver to the Trustee a statement of available revenues with respect to said Federal Fiscal Year (the "Statement of Available Revenues"), which shall be based upon such information as the State Treasurer shall deem relevant, including without limitation, information obtained from the Executive Office for Administration and Finance and the Massachusetts Department of Transportation. The Statement of Available Revenues shall set forth (i) the amount of Federal Highway Reimbursements expected to be received by the Commonwealth for the then current Federal Fiscal Year, (ii) any deficiency in any Funds and Accounts with respect to Trust Agreement Obligations due and payable in the then current Federal Fiscal Year, and (iii) the Trust Agreement Obligations then expected to be due and payable during the following Federal Fiscal Year. The statement of Trust Agreement Obligations shall set forth separate amounts for the Note Debt Service Requirement, the aggregate Note Related Costs expected to be due and payable during such period and deposits, if any, to the Rebate Fund. The State Treasurer, with the written concurrence of the Secretaries, shall from time to time

promptly deliver to the Trustee a revised Statement of Available Revenues upon receipt of notice or knowledge of any changed circumstance that would, in the judgment of the State Treasurer, materially change the prior Statement of Available Revenues.

Notwithstanding any other provision of the Trust Agreement to the contrary, if the Statement of Available Revenues includes any deficiency in any Fund or Account with respect to Trust Agreement Obligations due and payable in the then current Federal Fiscal Year, all Federal Highway Reimbursements received from and after the date of such Statement of Available Revenues shall be applied first to satisfy any such deficiency. For purposes of the Trust Agreement, the amount of Federal Highway Reimbursements expected to be received by the Commonwealth for any Federal Fiscal Year shall be net of the amount of any deficiency (whether or not such deficiency has been satisfied) set forth in a Statement of Available Revenues.

If the Statement of Available Revenues projects that the amount of Federal Highway Reimbursements expected to be received by the Commonwealth during the current Federal Fiscal Year shall be equal to or greater than one hundred twenty percent (120%) of Trust Agreement Obligations due during the following Federal Fiscal Year, then the Trustee shall, at the written direction of the State Treasurer, transfer to the State Treasurer, Federal Highway Reimbursements received by it during the period beginning on the later of October 10 and the date of delivery of the Statement of Available Revenues and ending on the earlier of December 15 and the date on which the difference between the amount of Federal Highway Reimbursements expected to be received by the Commonwealth during the then current Federal Fiscal Year, as set forth in the most recent Statement of Available Revenues delivered to the Trustee, minus the amount of Federal Highway Reimbursements received by the Commonwealth to date in such Federal Fiscal Year shall equal one hundred twenty percent (120%) of the Trust Agreement Obligations due during the following Federal Fiscal Year, as set forth in the most recent Statement of Available Revenues delivered to the Trustee, in the amounts and at the times specified, for application as permitted by law, free and clear of the lien of the Trust Agreement.

If the certification described in the immediately preceding paragraph has been given, commencing on the earlier of (i) the December 15 following delivery of such certification and (ii) the date on which the difference between the amount of Federal Highway Reimbursements expected to be received by the Commonwealth during the then current Federal Fiscal Year, as set forth in the most recent Statement of Available Revenues delivered to the Trustee, minus the amount of Federal Highway Reimbursements received by the Commonwealth to date in such Federal Fiscal Year shall equal one hundred twenty percent (120%) of the sum of Trust Agreement Obligations due in the following Federal Fiscal Year, as set forth in the most recent Statement of Available Revenues delivered to the Trustee, the Trustee shall then transfer all Federal Highway Reimbursements received by it from the Revenue Account first to the December 15 Debt Service Account until the amount therein shall equal the December 15 Debt Service Requirement in such following Federal Fiscal Year and, second, in the following order, to the Note Related Costs Fund and the Rebate Fund, until the date on which all Trust Agreement Obligations to be due and payable on or prior to December 15 in the following Federal Fiscal Year, as set forth in the most recent Statement of Available Revenues delivered to the Trustee, shall have been provided for. From such date until the earlier of the following June 14 of such Federal Fiscal Year and the date on which the difference between the Federal Highway Reimbursements expected to be received by the Commonwealth during the then current Federal Fiscal Year, as set forth in the most recent Statement of Available Revenues delivered to the Trustee, minus the amount of Federal Highway Reimbursements received by the Commonwealth to date in such Federal Fiscal Year, shall equal one hundred twenty percent (120%) of the sum of Trust Agreement Obligations payable after December 15 of the next succeeding Federal Fiscal Year, as set forth in the most recent Statement of Available Revenues delivered to the Trustee, the Trustee shall, at the written direction of the State Treasurer, transfer Federal Highway Reimbursements received by it during such period to the State Treasurer, in the amounts and at the times specified, for application as permitted by law, free and clear of the lien of the Trust Agreement. Commencing on the earlier of the June 15 following delivery of such certification and the date on which the difference between the Federal Highway Reimbursements expected to be received by the Commonwealth during the then current Federal Fiscal Year, as set forth in the most recent Statement of Available Revenues delivered to the Trustee, minus the amount of Federal Highway Reimbursements received by the Commonwealth to date in such Federal Fiscal Year, shall equal one hundred twenty percent (120%) of the sum of Trust Agreement Obligations payable after December 15 of the next succeeding Federal Fiscal Year, as set forth in the most recent Statement of Available Revenues delivered to the Trustee, the Trustee shall then transfer all Net Federal Highway Reimbursements received by it from the Revenue Account first to the June 15 Debt Service Account until the amount therein shall equal the June 15 Debt Service

Requirement in such following Federal Fiscal Year and second, in the following order, to the Note Related Costs Fund and the Rebate Fund, until the date on which all Trust Agreement Obligations to be due and payable in the following Federal Fiscal Year shall have been provided for. From and after such date until the following September 30, the Trustee shall, at the written direction of the State Treasurer, transfer Federal Highway Reimbursements received by it during such period to the State Treasurer, in the amounts and at the times specified, for application as permitted by law, free and clear of the lien of the Trust Agreement.

If the Statement of Available Revenues projects that the amount of Net Federal Highway Reimbursements expected to be received by the Commonwealth during the current Federal Fiscal Year shall be less than one hundred twenty percent (120%) of the Trust Agreement Obligations due during the following Federal Fiscal Year, then the Trustee shall transfer all Net Federal Highway Reimbursements received by it thereafter from the Revenue Account first to the December 15 Debt Service Account until the amount therein shall equal the December 15 Debt Service Requirement, second, to the June 15 Debt Service Account until the amount therein shall equal the June 15 Debt Service Requirement and third, in the following order, to the Note Related Costs Fund and the Rebate Fund, until the date on which all Trust Agreement Obligations to be due and payable in the following Federal Fiscal Year, as set forth in the most recent Statement of Available Revenues delivered to the Trustee, shall have been provided for.

Notwithstanding the foregoing, if on October 1 of any Federal Fiscal Year and so long as the Trustee shall not have received any certification with respect to such Federal Fiscal Year, the Trustee shall retain all Net Federal Highway Reimbursements until such time as such certification is delivered, at which time the Trustee may transfer amounts then held by it in accordance with such certification as if such certification had been delivered on October 1 of such Federal Fiscal Year or otherwise at the required time. In addition, during the continuance of an Event of Default, the Trustee shall not transfer any Pledged Funds to the Commonwealth until such time as the Event of Default is cured or waived, at which time the Trustee may transfer amounts then held by it as permitted by the Trust Agreement as if such Event of Default had not occurred.

Notwithstanding anything in the Trust Agreement to the contrary, if on any December 15 or June 15 the Trustee holds funds in the Revenue Account and the amount then held in the December 15 Debt Service Account or the June 15 Debt Service Account, as applicable, is less than the December 15 Debt Service Requirement or the June 15 Debt Service Requirement, as applicable, the Trustee shall immediately transfer all or any portion of the balance then held first, in the Revenue Account and second, in the other Debt Service Account, to the applicable Debt Service Account in order to cause the balance therein to equal the December 15 Debt Service Requirement or June 15 Debt Service Requirement, as applicable.

At any time the State Treasurer, with the written concurrence of the Secretaries, but subject also to any covenants and agreements made by the Commonwealth in connection with the issuance of Senior Obligations, may direct the Trustee in writing to transfer an amount of Net Federal Highway Reimbursements and any other available funds then on deposit in the Revenue Account and otherwise available to be transferred to the State Treasurer free and clear of the lien of the Trust Agreement, to the Redemption Fund or the Defeasance Account for the purpose of redeeming or defeasing the principal amount of Notes Outstanding as set forth in said certificate, provided, however, that, except to the extent necessary to pay Trust Agreement Obligations due and payable in any Commonwealth Fiscal Year, no more than fifty percent (50%), or such other percentage as may be permitted by law, of the amount apportioned by law to the Commonwealth in any Federal Fiscal Year with respect to the Federal Highway Construction Program shall be applied in the Commonwealth Fiscal Year ending on June 30 of such Federal Fiscal Year or in the Commonwealth's Fiscal Year, commencing on July of such Federal Fiscal Year to the payment of Trust Agreement Obligations, including without limitation, the payment or defeasance prior to maturity of the principal of and interest on Notes Outstanding. Any transfer of Net Federal Highway Reimbursements to either the Redemption Fund or Defeasance Account shall be revocable by the State Treasurer until the later of (i) June 20 of the Commonwealth Fiscal Year in which such transfer was made and (ii) the date on which the State Treasurer shall deliver to the Trustee a notice of redemption or defeasance specifying the principal amount of Notes to be redeemed or defeased and, if applicable, the redemption date of such Notes (the "Notice of Redemption or Defeasance"), at which time such transfer shall be irrevocable.

The Trustee is authorized to accept at any time from the State Treasurer, in addition to Pledged Funds, any other monies certified by the State Treasurer to be lawfully available for carrying out or satisfying any purpose under the Trust Agreement. The Trustee shall deposit such monies in the Fund or Account, as the State Treasurer

may direct in writing, and, provided no Event of Default shall then be occurring under the Trust Agreement and the amounts then held in the Debt Service Accounts, the Rebate Fund and the Note Related Costs Fund are at least equal to the applicable amounts then specified in the Trust Agreement, the Trustee shall transfer such amount as the State Treasurer may direct in writing, but not in excess of the amount received from the State Treasurer, to the State Treasurer, for application as permitted by law, free and clear of the lien of the Trust Agreement.

Debt Service Fund

The Trustee shall pay out of the applicable Debt Service Account in the Debt Service Fund to the respective Paying Agents for any Notes (i) on or before each interest payment date of Notes the amount required for the interest and Principal Installments payable on such date and (ii) on or before each redemption date for the Notes, other than a redemption date on account of Sinking Fund Payments, the amount required for the payment of interest and Redemption Price on the Notes then to be redeemed; provided that in each case the State Treasurer may direct the Trustee to make such payments to the Paying Agents on such date prior to the due date as the State Treasurer determines to the extent amounts are available therefor in such Fund. If the amount accumulated in the applicable Debt Service Account in the Debt Service Fund is insufficient to make the payment due from such Account for either of the purposes specified above, the Trustee shall transfer any available amount in the other Debt Service Account to the extent necessary to make up the deficiency. Amounts accumulated in the applicable Debt Service Account in the Debt Service Fund with respect to any Sinking Fund Payment (together with amounts accumulated therein with respect to interest on the Notes for which such Sinking Fund Payment was established) may, and if so directed in writing by an Authorized Officer shall, be applied by the Trustee prior to the forty-fifth (45th) day preceding the due date of such Sinking Fund Payment, to (i) the purchase of Notes of the Series and maturity for which such Sinking Fund Payment was established, at prices not exceeding the applicable sinking fund Redemption Price plus interest on such Notes to the first date on which such Notes could be redeemed (or in the case of a Sinking Fund Payment due on the maturity date, the principal amount thereof plus interest to such date), such purchases to be made in such manner as the State Treasurer shall arrange, or (ii) the redemption of such Notes then redeemable by their terms. The applicable Redemption Price or principal amount (in the case of maturing Notes) of any Notes so purchased or redeemed shall be deemed to constitute part of the applicable Debt Service Account in the Debt Service Fund until such Sinking Fund Payment date for the purpose of calculating the amount of such Account.

In satisfaction, in whole or in part, of any amount required to be paid into the Debt Service Fund which is attributable to a Sinking Fund Payment, there may be delivered on behalf of the Commonwealth to the Trustee Notes of the Series and maturity entitled to such payment. All Notes so delivered to the Trustee in satisfaction of a Sinking Fund Payment shall reduce the amount thereof by the amount of the aggregate of the sinking fund Redemption Prices of such Notes.

Redemption Fund

The Commonwealth may deposit in the Redemption Fund any monies, including Pledged Funds, not otherwise required by the Trust Agreement to be otherwise deposited or applied. If at any time the amount on deposit and available therefor in the Debt Service Fund is insufficient to pay the principal or Redemption Price of and interest on the Notes then due, the Trustee shall withdraw from the Redemption Fund and deposit in the applicable Debt Service Account in the Debt Service Fund the amount necessary to meet the deficiency (other than amounts held therein for the redemption of Notes for which a notice of redemption shall have been given). Subject to the foregoing, amounts in the Redemption Fund may be applied by the Commonwealth to the redemption of Notes at prices not exceeding the applicable Redemption Prices (plus accrued interest) had such Notes been redeemed (or, if not then subject to redemption, at the applicable Redemption Prices when next subject to redemption), such purchases to be paid for by the Trustee at such times and in such manner as arranged and directed by an Authorized Officer.

Net CTF Pledged Funds

Not later than December 15 of each year, the State Treasurer, after consultation with the Secretaries, shall notify the Governor, the Speaker of the House, the President of the Senate and the Trustee if the Statement of Available Revenues shows that projected Net Federal Highway Reimbursements are not expected to be sufficient to pay projected Trust Agreement Obligations during the following Commonwealth Fiscal Year. Upon delivery to the

Governor of such a notice, the Governor shall include in the operating budget to be submitted to the General Court in accordance with Section 7H of Chapter 29 of the Massachusetts General Laws a recommendation to appropriate from Net CTF Pledged Funds an amount equal to the Trust Agreement Obligations to be due in said Commonwealth Fiscal Year, less the sum of (x) the amount of any available funds on deposit in the Federal Highway Grant Anticipation Note Trust Fund, the Debt Service Fund and the Note Related Costs Fund as of the date of the certification of the State Treasurer, minus (y) the portion of such amounts expected to be expended prior to the beginning of said Commonwealth Fiscal Year on Trust Agreement Obligations due in the current Commonwealth Fiscal Year, plus (z) any amount of Net Federal Highway Reimbursements expected to be received prior to the beginning of said Commonwealth Fiscal Year that will not be expended prior to the beginning of said Commonwealth Fiscal Year.

At any time prior to the enactment of the General Appropriation Act, the State Treasurer shall, if necessary, after consultation with the Secretaries, supplement the notification referenced above to reflect any changed circumstances known to the State Treasurer with respect to the amount of Net Federal Highway Reimbursements expected to be available to pay Trust Agreement Obligations in the applicable Commonwealth Fiscal Year. Such certification shall be made promptly after the State Treasurer becomes aware of any changed circumstances that are material to such amount.

If the notifications specified above were given and indicated a need for an appropriation of funds by the General Court, then (i) commencing in the January following delivery of such certification the Net CTF Pledged Funds received by the Commonwealth shall be deposited with the Trustee in the Holding Account promptly upon receipt by the Commonwealth until the amount therein shall equal the sum of (A) the December 15 Debt Service Requirement in the following Commonwealth Fiscal Year (less any amount available for such purpose on deposit in the December 15 Debt Service Account) and (B) all Trust Agreement Obligations to be due and payable prior to December 15 in the following Commonwealth Fiscal Year (less any amounts available for such purpose on deposit in the Note Related Costs Fund and the Rebate Fund) and (ii) commencing with the July following delivery of such certification the Net CTF Pledged Funds received by the Commonwealth shall be deposited with the Trustee in the Holding Account promptly upon receipt by the Commonwealth and applied thereafter as further provided in the Trust Agreement; provided that notwithstanding any provision of the Trust Agreement to the contrary, in the event the Trustee holds an amount under the Trust Agreement during any Commonwealth Fiscal Year at least equal to the Trust Agreement Obligations due and payable during such Commonwealth Fiscal Year, which amount is available for paying such Trust Agreement Obligations without any further appropriation or other legislative approval, the State Treasurer shall no longer be required to pay Net CTF Pledged Funds to the Trustee during the remainder of such Commonwealth Fiscal Year, except as otherwise provided in the Trust Agreement. For purposes of the Act, and so long as the Act shall require that the expenditure of amounts in the CTF are subject to appropriation for the purposes described in the Trust Agreement, the Holding Account shall be deemed to be an account within the CTF and the Trustee is hereby authorized to receive Net CTF Pledged Funds from the Senior CTF Trustee for the purposes set forth in the Trust Agreement.

Notwithstanding the foregoing provisions to the contrary, in the event an appropriation is enacted into law with respect to any Commonwealth Fiscal Year from any available funds of an amount sufficient, together with other available funds in the Federal Highway Grant Anticipation Note Trust Fund as of the end of the immediately preceding Commonwealth Fiscal Year to pay the Trust Agreement Obligations due and payable during said Commonwealth Fiscal Year, the State Treasurer may deposit the amount of such appropriation with the Trustee and direct the Trustee to transfer all or any portion of the Net CTF Pledged Funds then on deposit in the Debt Service Fund to the State Treasurer for credit to the CTF to be applied as provided by law; provided that no such transfer shall be made unless and until the amount then held by the Trustee under the Trust Agreement is sufficient to pay all Trust Agreement Obligations due and payable during said Commonwealth Fiscal Year.

Application of Net CTF Pledged Funds

If Net CTF Pledged Funds are required to be deposited with the Trustee, and so long as the Act or other applicable law shall require that the expenditure of Net CTF Pledged Funds is subject to appropriation for the purposes described below, at the beginning of each Commonwealth Fiscal Year after the adoption of the operating budget for the Commonwealth for such Commonwealth Fiscal Year, the Secretary of Administration and Finance

and the State Treasurer shall certify to the Trustee the amount appropriated for such Fiscal Year for payment of the following amounts:

- (i) the Note Debt Service Requirement for such Fiscal Year;
- (ii) the Note Related Costs, if any, for such Fiscal Year; and
- (iii) the Rebate Fund Requirement, if any, for such Fiscal Year.

If amounts are appropriated for such purposes as an aggregate sum, such sum shall be allocated in the order set forth above for the amounts set forth above and such certificate shall set forth such allocation. To the extent additional amounts are appropriated during a Commonwealth Fiscal Year for any such purpose, the Secretary of Administration and Finance and the State Treasurer shall also certify to the Trustee the amount of any such supplemental appropriation. The aggregate amounts appropriated for each such purpose as provided herein shall be referred to as an “Appropriated Amount” for such purpose.

After Net CTF Pledged Funds have been deposited with the Trustee into the Holding Account, the Secretary of Administration and Finance and the State Treasurer shall, on the first Business Day of each month beginning in July of the new Commonwealth Fiscal Year, deliver a certificate to the Senior CTF Trustee and the Trustee setting forth the following:

- (i) the amount then on deposit in the December 15 Debt Service Payment Account and/or the June 15 Debt Service Payment Account relating to the Notes that are payable in the following Federal Fiscal Year covered by the applicable Statement of Available Revenues;
- (ii) the amount by which the December 15 Debt Service Requirement and/or June 15 Debt Service Requirement, as the case may be, is greater than the sum of the amount(s) set forth in subparagraph (i) above plus any amounts in the Holding Account (the “Debt Service Requirement Difference”);
- (iii) the amounts then on deposit in the Note Related Costs Fund and the Rebate Fund available to pay Trust Agreement Obligations other than the Note Debt Service Requirement;
- (iv) the amount by which the Trust Agreement Obligations other than the Note Debt Service for the period covered by the Statement of Available Revenues exceeds the sum of the amount(s) set forth in subparagraph (iii) above plus any amounts in the Holding Account that are not being applied to the Debt Service Requirement Difference (the “Trust Agreement Obligations Difference”); and
- (v) a direction to the Senior CTF Trustee to transfer to the Trustee, to the extent available under the Senior CTF Trust Agreement and subject to the limitation that any such transfer shall not exceed the Appropriated Amount, Net CTF Pledged Funds in an amount sufficient to fully fund the next December 15 Debt Service Requirement Difference or June 15 Debt Service Requirement Difference and the Trust Agreement Requirement Difference for the next Note Payment Date between the date of the certificate and the applicable Note Payment Date in substantially equal installments, determined by the number of months remaining between the date of the certificate and the month prior to the Note Payment Date.

Upon deposit of the amounts described above and so long as there shall be Appropriated Amounts sufficient to pay the amounts set forth in subparagraphs (ii) and (iv) above (if such appropriations shall be required by the Act or other provisions of law), the balance on deposit in the Holding Account (less any amounts required to be deposited under subparagraphs (ii) and (iv) above for which there are not sufficient Appropriated Amounts) shall

be transferred by the Trustee on the last business day of each month to the State Treasurer free and clear of the lien hereof and may be thereupon applied to any purpose permitted by law.

Notwithstanding any provision in the Trust Agreement to the contrary, in no event shall Net CTF Pledged Funds be applied in any Commonwealth Fiscal Year to any purpose in excess of the Appropriated Amount for such purpose during such Fiscal Year, unless the State Treasurer shall certify in writing to the Trustee that any such application shall not be subject to appropriation.

Note Related Costs Fund

The amount on deposit and available in the Note Related Costs Fund shall be applied by the Trustee to the payment of Note Related Costs at the times and in the amounts as directed from time to time by an Authorized Officer.

If at any time the amount on deposit and available therefor in the Debt Service Fund is insufficient to pay the principal or Redemption Price of and interest on the Notes then due, the Trustee shall withdraw from the Note Related Costs Fund, after withdrawal of amounts from the Redemption Fund described above, and deposit in the applicable Debt Service Account in the Debt Service Fund the amount necessary to meet such deficiency; provided, however, that the aggregate of such amount deposited therein from Net CTF Pledged Funds shall not in any Commonwealth Fiscal Year, together with all other amounts deposited therein during such Commonwealth Fiscal Year, exceed the Appropriated Amount for the purpose of paying the principal and Redemption Price of and interest due on the Notes Outstanding during such Commonwealth Fiscal Year.

Upon the certification of an Authorized Officer and all Fiduciaries that all Note Related Costs have been paid, any balance in the Note Related Costs Fund shall be paid by the Trustee to the State Treasurer free and clear of the lien of the Trust Agreement and such amounts shall be applied to any purposes permitted by law.

Investments

Except as otherwise described below under “Defeasance,” money held for the credit of any Fund or Account under the Trust Agreement shall, to the fullest extent practicable, be invested in Permitted Investments which shall mature or be redeemable at the option of the Registered Owner thereof, on such dates and in such amounts as may be necessary to provide monies to meet the payments required to be made from such Funds and Accounts. Amounts on deposit in the Debt Service Fund may be invested only in Permitted Investments of the type described in subparagraphs (i), (ii), (iii), (iv), (vi), (vii), (ix) or (xi) of the definition of Permitted Investments. Any income from Permitted Investments may be transferred to the Rebate Fund to the extent required by an applicable Supplemental Trust Agreement.

In computing the amount in any Fund or Account for any purpose, Permitted Investments shall be valued at amortized cost. Unless otherwise provided in the Trust Agreement, Permitted Investments in any Fund or Account shall be valued at least once in each Commonwealth Fiscal Year on the last day thereof.

Powers as to Notes and Pledge

The Commonwealth represents in the Trust Agreement that it is duly authorized under the Act and all applicable laws to create and issue Notes thereunder and to enter into the Trust Agreement and to pledge the Pledged Funds in the manner and to the extent provided in the Trust Agreement. Except for the senior pledge and lien on certain of the Pledged Funds in favor of the Registered Owners of the Senior Obligations, the Commonwealth covenants that the Pledged Funds are and will be free and clear of any pledge, lien, charge or encumbrance thereon with respect thereto prior to, or of equal rank with, the pledge created by the Trust Agreement. The Commonwealth agrees that at all times, to the extent permitted by law, it will defend, preserve and protect the pledge of the Pledged Funds under the Trust Agreement and all the rights of the Registered Owners under the Trust Agreement against all claims and demands of all persons whomsoever.

Covenants as to Pledged Funds

The Commonwealth covenants and agrees that it will not change the rate of the Registry Fees or the Motor Fuels Tax credited to the CTF, or both, in any respect, except as provided in the Senior CTF Trust Agreement.

The Commonwealth covenants and agrees that Federal Highway Reimbursements shall not be diverted from the purposes identified in the Trust Agreement except as provided therein or in any Credit Enhancement, nor shall the trusts created thereby be broken, and the pledge and dedication in trust of these funds shall continue unimpaired and unabrogated.

The Commonwealth covenants and agrees that (i) no Net CTF Pledged Funds shall be diverted from the Commonwealth Trust Fund; and (ii) in any Commonwealth Fiscal Year and until an appropriation has been made which is sufficient to pay the principal, including Sinking Fund Payments, of and interest on all Notes and to provide for or maintain all other Trust Agreement Obligations, reserves, additional security, insurance or other forms of Credit Enhancement required or provided for in the Trust Agreement, none of the Net CTF Pledged Funds to the extent necessary to fund the remaining Trust Agreement Obligations not funded with Pledged Federal Highway Revenues shall be applied to any other use.

Tax Covenants; Rebate Fund

The Commonwealth shall take, or require to be taken, such action as may from time to time be required to assure the continued exclusion of interest on any Series of Tax Exempt Notes from the federal gross income of Registered Owners of any such Series of Tax Exempt Notes. The Commonwealth shall not permit the investment or application of the proceeds of any Series of Tax Exempt Notes, 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 indebtedness to be “arbitrage bonds” within the meaning of said section 148. The Commonwealth shall establish within the Rebate Fund a separate account within the Rebate Fund for such Series and may provide in the Applicable Supplemental Trust Agreement for the deposits of amounts therein to pay “rebate” on the investment of amounts in accordance with Section 148(1) of the Code. Funds on deposit in the Rebate Fund shall be applied as set forth in the Applicable Supplemental Trust Agreement. Unless otherwise specified in the Applicable Supplemental Trust Agreement, interest or other income derived from the investment or deposit of monies in the Rebate Fund shall be held therein. The Rebate Fund and the amounts on deposit therein shall not be deemed Pledged Funds thereunder.

Limitations on Covenants

Notwithstanding any provision of the Trust Agreement to the contrary, any provisions of the Act creating covenants with Registered Owners shall be deemed a covenant with the Registered Owners only to the extent expressly provided in and as limited by the Trust Agreement.

Events of Default

One or more of the following events shall constitute an Event of Default under the Trust Agreement:

- (i) If default shall be made in the payment of the principal or Redemption Price of any Note when due, whether at maturity or by call for mandatory redemption or redemption or purchase at the option of the Commonwealth or any Registered Owner, or otherwise, or in the payment of any Sinking Fund Payment when due; or
- (ii) If default shall be made in the payment of any installment of interest on any Note when due; or
- (iii) If default shall be made by the Commonwealth in the performance or observance of the covenants, agreements and conditions on its part described under the first paragraph of “Covenants as to Pledged Funds and Federal Highway Grant Anticipation Note Trust Fund” above; or

- (iv) If default shall be made by the Commonwealth in the performance or observance of any other of the covenants, agreements or conditions on its part provided in the Trust Agreement or in the Notes and such default shall continue for a period of thirty (30) days after written notice thereof shall be given to the Commonwealth by the Trustee or to the Commonwealth and the Trustee by the Registered Owners of a majority in principal amount of the Notes Outstanding; provided that if such default cannot be remedied within such thirty-day period, it shall not constitute an Event of Default if corrective action is instituted by the Commonwealth within such period and diligently pursued until the default is remedied.

Application of Revenues and Other Monies After Default

During the continuance of an Event of Default, the Trustee shall apply the monies, securities and funds held by the Trustee and such Pledged Funds and the income therefrom, to the fullest extent permitted by law, as follows and in the following order:

- (i) to the payment of the reasonable and proper charges and expenses of the Fiduciaries and of any counsel selected by a Fiduciary;
- (ii) to the payment of the interest and principal amount or Redemption Price then due on the Notes, as follows:
 - (a) unless the principal amount of all of the Notes shall have become due and payable,

First: To the payment to the persons entitled thereto of all installments of interest then due in the order in which such installments came due, and, if the amount available shall not be sufficient to pay in full all installments that came due at the same time, then to the payment thereof ratably, according to the amounts due thereon, to the persons entitled thereto, without any discrimination or preference; and

Second: To the payment to the persons entitled thereto of the unpaid principal amount or Redemption Price of any Notes which shall become due, whether at maturity or by call for redemption, in the order of their due dates, and, if the amount available shall not be sufficient to pay in full all the Notes due on any date, then to the payment thereof ratably, according to the amounts of principal or Redemption Price due on such date, to the persons entitled thereto, without any discrimination or preference; and

- (b) if the principal of all of the Notes shall have become due and payable, to the payment of the principal amount and interest then due and unpaid upon the Notes without preference or priority of principal over interest or of interest over principal, or of any installment of interest over any other installment of interest, or of any Note over any other Note, ratably, according to the amounts due respectively for principal amount and interest, to the persons entitled thereto, without any discrimination or preference; and
- (i) to the payment of any person entitled to the payment of any Note Related Cost ratably in accordance with the amount of such Note Related Costs,

provided that any payment by the Trustee of Net CTF Pledged Funds shall not exceed the Appropriated Amount for such purpose during the then current Commonwealth Fiscal Year, unless the State Treasurer shall certify to the Trustee that payment of such amount shall not then be subject to appropriation.

Proceedings Brought by Trustee

If an Event of Default shall happen and shall not have been remedied, then and in every such case, the Trustee may proceed to protect and enforce its rights and the rights of the Registered Owners of the Notes under the Trust Agreement by a suit or suits in equity or at law. The Registered Owners of a majority in principal amount of the Notes Outstanding may direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, provided that the Trustee shall have the right to decline to follow any such direction if the Trustee in good faith shall determine that the action or proceeding so directed would involve the Trustee in personal liability or be unjustly prejudicial to the Registered Owners not parties to such direction.

Regardless of the happening of an Event of Default, the Trustee shall have power to, but unless requested in writing by the registered owners of a majority in principal amount of the Notes then Outstanding and furnished with reasonable security and indemnity, shall be under no obligation to, institute and maintain such suits and proceedings as it may deem necessary or expedient to prevent any impairment of the security under the Trust Agreement by any acts which may be unlawful or in violation of the Trust Agreement, or necessary or expedient to preserve or protect its interests and the interests of the Registered Owners.

Nothing contained in the Trust Agreement is intended to preclude the Trustee upon the occurrence of an Event of Default from asserting any and all remedies it may have at law or equity with respect to the Pledged Funds and other amounts held as security under the Trust Agreement, including asserting any rights it may have as Trustee under the Trust Agreement as a secured party with respect to all security granted thereunder notwithstanding any requirements contained in the Trust Agreement with respect to Appropriated Amounts.

Restrictions on Registered Owners' Action

No Registered Owner of any Note shall have any right to institute any suit, action or proceeding at law or in equity for the enforcement of any provision of the Trust Agreement or for any remedy under the Trust Agreement, unless such Registered Owner shall have previously given to the Trustee written notice of the happening of any Event of Default and the Registered Owners of at least twenty-five percent (25%) in principal amount of Notes then Outstanding shall have filed a written request with the Trustee, and shall have offered it reasonable opportunity, to exercise the powers granted in the Trust Agreement in its own name, and unless such Registered Owners shall have offered to the Trustee adequate security and indemnity against the costs, expenses and liabilities to be incurred thereby, and the Trustee shall have refused to comply with such request within a reasonable time.

No Right of Acceleration

Neither the Registered Owners nor the Trustee shall have any right to accelerate the payment of principal or interest due on any Notes Outstanding upon the occurrence of any Event of Default.

Responsibility of Fiduciaries

The duties and obligations of the Fiduciaries shall be determined by the express provisions of the Trust Agreement and the Fiduciaries shall not be liable except for their performance of such duties and obligations as are specifically set forth in the Trust Agreement. No Fiduciary shall be under any responsibility or duty with respect to the issuance of the Notes for value or the application of the proceeds thereof or the application of any monies paid to the Commonwealth or any other Fiduciary. No Fiduciary shall be under any obligation or duty to perform any act which would involve it in expense or liability or to institute or defend any suit in respect thereof, or to advance any of its own monies, unless properly indemnified. No Fiduciary shall be liable in connection with the performance of its duties under the Trust Agreement except for its own negligence or bad faith nor shall any Fiduciary be liable for any action taken or omitted by it in good faith and believed by it to be authorized or within the discretion or rights or powers conferred upon it by the Trust Agreement.

Compensation

The Commonwealth shall pay to each Fiduciary from time to time reasonable compensation for all services rendered under the Trust Agreement, and also all reasonable expenses, charges, counsel fees and other disbursements, including those of its attorneys, agents, and employees incurred in and about the performance of their powers and duties under the Trust Agreement. To the extent permitted by law, the Commonwealth shall indemnify and save each Fiduciary harmless against any liabilities which it may incur in the exercise and performance of its powers and duties under the Trust Agreement, and which are not due to its negligence or bad faith.

Resignation of Trustee

The Trustee may at any time resign and be discharged of the duties and obligations created by the Trust Agreement by giving not less than sixty (60) days' written notice to the State Treasurer and giving not less than thirty (30) days' written notice to each Registered Owner and Paying Agent specifying the date when such resignation shall take effect, and such resignation shall take effect upon the day specified in such notice provided a successor shall have been appointed, unless previously a successor shall have been appointed by the State Treasurer or the Registered Owners, in which event such resignation shall take effect immediately on the appointment of such successor.

Removal of Trustee

The Trustee may be removed at any time by an instrument or concurrent instruments in writing, filed with the Trustee, and signed by the Registered Owners of a majority in principal amount of the Notes then outstanding or their attorneys-in-fact duly authorized, excluding any Notes held by or for the account of the Commonwealth. Except during the existence of an Event of Default, the State Treasurer may remove the Trustee at any time for cause or upon not less than ninety (90) days' prior written notice to the Trustee for such other reason as shall be determined in the sole discretion of the State Treasurer.

Appointment of Successor Trustee

In case at any time the Trustee shall resign or shall be removed or shall become incapable of acting, or shall be adjudged bankrupt or insolvent, or if a receiver, liquidator or conservator of the Trustee, or of its property, shall be appointed, or if any public officer shall take charge or control of the Trustee, or of its property or affairs, a successor may be appointed by the Registered Owners of a majority in principal amount of the Notes then Outstanding, excluding any Notes held by or on account of the Commonwealth, by an instrument or concurrent instruments in writing signed and acknowledged by such Registered Owners or by their attorneys-in-fact duly authorized and delivered to such successor Trustee; notification thereof being given to the State Treasurer and the predecessor Trustee. Pending such appointment, the State Treasurer by a written instrument signed by an Authorized Officer and delivered to the predecessor Trustee shall forthwith appoint a Trustee to fill such vacancy until a successor Trustee shall be appointed by the Registered Owners. Any Trustee appointed in succession to the Trustee shall be a bank or trust company organized under the laws of any state, or a national banking association, having a capital and surplus aggregating at least fifty million dollars (\$50,000,000), if there be such a bank or trust company or national banking association willing and able to accept the office on reasonable and customary terms and authorized by law to perform all duties imposed upon it by the Trust Agreement.

Supplemental Trust Agreement Effective Upon Filing

The State Treasurer, with the written concurrence of the Secretaries, and the Trustee may at any time and from time to time enter into supplements or amendments to the Trust Agreement for any one or more of the following purposes:

- (i) to cure any ambiguity, inconsistency or formal defect or omission in the Trust Agreement that shall not have a material adverse effect on the Registered Owners of the Notes;

- (ii) to close the Trust Agreement against, or provide limitations and restrictions contained in the Trust Agreement on, the original issuance of Notes;
- (iii) to add to the covenants and agreements of the Commonwealth contained in the Trust Agreement other covenants and agreements thereafter to be observed for the purpose of further securing the Notes;
- (iv) to surrender any right, power or privilege reserved to or conferred upon the Commonwealth by the Trust Agreement;
- (v) to authorize Notes of a Series and, in connection therewith, specify and determine any matters and things relative to such Notes not contrary to or inconsistent with the Trust Agreement;
- (vi) to authorize any Credit Enhancement, Liquidity Facility or Reserve Credit Facility;
- (vii) to exercise any provision in the Trust Agreement or to make such determinations under the Trust Agreement as expressly provided therein to be exercised or determined in a Supplemental Trust Agreement;
- (viii) to confirm, as further assurance, any pledge under and the subjection to any lien or pledge created or to be created by the Trust Agreement of the Pledged Funds;
- (ix) in connection with any change in the Commonwealth Fiscal Year or Federal Fiscal Year, to amend or supplement the appropriate provisions of the Trust Agreement to reflect such change in a manner consistent, as nearly as practicable, with the original provisions of the Trust Agreement, as amended to the date of the Supplemental Trust Agreement implementing the amendment or supplement;
- (x) to authorize the funding of additional Federal Highway Construction Program projects with the issuance of Notes as authorized from time to time by the Legislature of the Commonwealth; and
- (xi) for any other purpose, provided that such Supplemental Trust Agreement does not prejudice in any material respect the right of the registered owner of any Note Outstanding at the date such Supplemental Trust Agreement becomes effective.

Powers of Amendment

Any modification or amendment of the Notes or of the Trust Agreement may be made by a Supplemental Trust Agreement, with the written consent (i) of the Registered Owners of at least a majority in the principal amount of all Notes Outstanding at the time such consent is given, or (ii) in case less than all of the several Series of Notes then Outstanding are affected by the modification or amendment, of the Registered Owners of at least a majority in principal amount of the Notes of each Series so affected and Outstanding at the time such consent is given, and (iii) in case the modification or amendment changes the amount or date of any Sinking Fund Payment, of the Registered Owners of the Notes of the particular Series and maturity entitled to such Sinking Fund Payment 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 Notes of any specified like Series and maturity remain Outstanding, the vote or consent of the Registered Owners of such Notes shall not be required and such Notes shall not be deemed to be Outstanding for the purpose of any calculation of outstanding Notes under this Section; and provided, further, that no such modification or amendment shall permit a change in the terms of redemption or maturity of the principal amount of any Outstanding Note or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or the rate of interest thereon or the method for determining such rate or terms of any Credit Enhancement or Liquidity Facility relating to a Note without the consent of the Registered Owner of such Note, or shall change or modify any of the rights or obligations of any Fiduciary without its written assent thereto, or

shall reduce the percentages of the principal amount of Notes the consent of which is required to effect any such modification or amendment.

Defeasance

If the Commonwealth shall pay or cause to be paid, or there shall otherwise be paid, to the Registered Owners of the Notes then Outstanding, the principal amount and interest and Redemption Price, if any, to become due thereon, at the times and in the manner stipulated therein and in the Trust Agreement and if no Note Related Costs then due and payable remain unpaid or payment of any such Costs has been provided for, then the pledge of the Pledged Funds and any other monies and securities pledged by the Trust Agreement and all other rights granted by the Trust Agreement shall be discharged and satisfied. In such event, the Trustee shall, upon request of the Commonwealth, execute and deliver to the Commonwealth all such instruments as may be desirable to evidence such release and discharge and the Fiduciaries shall pay over or deliver to the Commonwealth all monies or securities held by them pursuant to the Trust Agreement which are not required for the payment or redemption of Notes not theretofore surrendered for such payment or redemption or for the payment of any Note Related Costs or for deposit to any Rebate Account with respect to any Series of Tax Exempt Notes.

Notes or interest installments for the payment or redemption of which monies shall be held by the Fiduciaries (through deposit by the Commonwealth of funds for such payment or redemption or otherwise), whether at or prior to the maturity or the redemption date of such Notes, shall be deemed to have been paid within the meaning and with the effect expressed in the Trust Agreement. All Outstanding Notes of any Series or any part of a Series shall prior to the maturity or redemption date thereof be deemed to have been paid within the meaning and with the effect expressed in the Trust Agreement if (i) in case any of said Notes are to be redeemed on any date prior to their maturity, an Authorized Officer shall have given to the Trustee, in form satisfactory to it, irrevocable instructions to provide notice of redemption on said date of such Notes, (ii) there shall have been deposited with the Trustee in the Defeasance Account either monies in an amount which shall be sufficient, or Defeasance Obligations not subject to redemption or otherwise called for redemption for which amounts have been placed in escrow, in each case the principal of and interest on which when due will provide monies which, together with the monies, if any, deposited with the Trustee at the time of deposit of such Defeasance Obligations, shall be sufficient, as certified by a firm of independent public accountants, to pay when due the principal amount or Redemption Price, if applicable, and interest due and to become due on said Notes on and prior to the redemption date or maturity date thereof, as the case may be. Any cash received from the principal or interest payments on such Defeasance Obligations deposited with the Trustees if not then needed for such purpose, may, to the extent practicable be reinvested in Defeasance Obligations or, in lieu of such direction at the time of receipt, an Authorized Officer may authorize and direct the Trustee to enter into one or more forward purchase agreements providing for the purchase of Defeasance Obligations at future dates as provided in the Trust Agreement.

For purposes of determining whether Variable Rate Notes shall be deemed to have been paid prior to the maturity or redemption date thereof, as the case may be, by the deposit of monies, or Defeasance Obligations and monies, if any, the interest to come due on such Variable Rate Notes on or prior to the maturity date or redemption date thereof, as the case may be, shall be calculated at the Variable Rate Ceiling if in effect with respect to such Notes.

Tender Notes shall be deemed to have been paid only if, in addition to satisfying the requirements thereof, there shall have been deposited with the Trustee monies 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 Notes which could become payable to the Registered Owners of such Notes upon the exercise of any options provided to the Registered Owners of such Notes; provided, however, that if, at the time a deposit is made with the Trustee pursuant to the provisions described above, the options originally exercisable by the Registered Owner of Tender Notes are no longer exercisable, such Notes shall not be considered Tender Notes.

Unclaimed Funds

Any monies held by the Fiduciary in trust for the payment and discharge of any Notes which remain unclaimed for the applicable escheat period after the date when such Notes have become due and payable, either at their stated maturity dates or by call for earlier redemption, if such monies were held by the Fiduciary at such date,

or for the applicable escheat period after the date of deposit of such monies if deposited with the Fiduciary after the said date when such Notes become due and payable, shall be paid to the Commonwealth as its absolute property and free from trust, and the Fiduciary shall thereupon be released and discharged with respect thereto and the Registered Owners shall look only to the Commonwealth for the payment of such Notes.

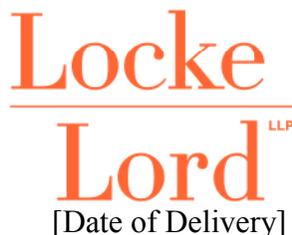
No Recourse on the Notes

No recourse shall be had for the payment of the principal or Redemption Price of or the interest on the Notes or for any claim based thereon or on the Trust Agreement against any official, agent, representative or employee of the Commonwealth or any person executing the Notes. No official, agent, representative or employee of the Commonwealth shall be held personally liable to any purchaser or holder of any Note under or upon such Note, or under or upon the Trust Agreement or any Supplemental Trust Agreement relating to Notes, or, to the extent permitted by law, because of the sale or issuance or attempted sale or issuance of Notes, or because of any act or omission in connection with the investment or management of the Pledged Funds, funds or monies of the Commonwealth, or otherwise in connection with the management of its affairs, excepting solely for things willfully done or omitted to be done with an intent to defraud.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

PROPOSED FORM OF OPINION OF BOND COUNSEL

Upon delivery of the 2016 Notes described below, Bond Counsel proposes to deliver an opinion substantially in the following form:



111 Huntington Avenue
Boston, MA 02199
Telephone: 617-239-0100
Fax: 617-227-4420
www.lockelord.com

The Honorable Deborah B. Goldberg
Treasurer and Receiver-General
The Commonwealth of Massachusetts
State House, Room 227
Boston, Massachusetts 02133

The Commonwealth of Massachusetts
\$125,410,000 Federal Highway Grant Anticipation Notes
(Accelerated Bridge Program), 2016 Series A
Dated Date of Delivery

We have acted as bond counsel to The Commonwealth of Massachusetts (the “Commonwealth”) in connection with the issuance by the Commonwealth of the above-referenced notes (the “2016 Notes”). In such capacity, we have examined the law and such certified proceedings and other papers as we have deemed necessary to render this opinion, including Section 20 of Chapter 29 of the Massachusetts General Laws, as amended (the “Act”) and other applicable statutes. We have also examined the Trust Agreement dated as of December 1, 2010 (the “Trust Agreement”) between the Commonwealth and U.S. Bank National Association, as successor trustee (the “Trustee”), as heretofore supplemented and amended (the “Trust Agreement”), and as further supplemented and amended by the Fourth Supplemental Trust Agreement dated as of October 1, 2016 (the “Fourth Supplemental Trust Agreement,” and collectively with the Trust Agreement, the “Agreement”) between the Commonwealth and the Trustee. Capitalized terms not otherwise defined herein are used herein as defined in the Agreement.

The 2016 Notes are issued pursuant to the Agreement. Notes issued under the Agreement, including the 2016 Notes, are payable from and secured by a pledge of Pledged Funds.

As to questions of fact material to our opinion, we have relied upon representations and covenants of the Commonwealth contained in the certified proceedings and other certifications of public officials and others 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 Commonwealth has the right and power under the Act and other applicable law to enter into the Fourth Supplemental Trust Agreement, and it has been duly and lawfully executed on behalf of the Commonwealth by the Treasurer and Receiver-General of the Commonwealth, with the concurrence of the Secretary of the Executive Office for Administration and Finance of the Commonwealth and the Secretary of the Massachusetts Department of Transportation.

2. The Agreement has been duly authorized, executed and delivered by the Commonwealth, is in full force and effect and constitutes the valid and binding obligation of the Commonwealth enforceable upon the Commonwealth in accordance with its terms. No other authorization for the Agreement is required.

3. Pursuant to the Act and other applicable law, the Agreement creates the valid pledge which it purports to create of the Pledged Funds, rights, moneys, securities, credit facilities and funds held under the Agreement, in the manner and to the extent provided in the Agreement, for the security of the 2016 Notes on a parity with other Notes issued under the Agreement.

4. The 2016 Notes have been duly authorized, executed and delivered by the Commonwealth and are valid and binding special obligations of the Commonwealth, enforceable in accordance with the terms thereof and the terms of the Agreement and are entitled to the benefits of the Act, as provided under the Trust Agreement, and of the Agreement. The 2016 Notes are not general obligations of the Commonwealth, and the full faith and credit of the Commonwealth are not pledged to the payment thereof. The 2016 Notes are payable solely from the sources provided therefor in the Agreement.

5. Interest on the 2016 Notes is excluded from gross income of the owners thereof for federal income tax purposes pursuant to Section 103 of the Code, is not an item of tax preference under Section 57 of the Code for purposes of computing alternative minimum tax, and is taken into account in the calculation of adjusted current earnings for purposes of the alternative minimum tax imposed on corporations.

6. Interest on the 2016 Notes is excluded from the gross income of the owners of the 2016 Notes for federal income tax purposes. In addition, interest on the 2016 Notes 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 Commonwealth with all requirements of the Internal Revenue Code of 1986 that must be satisfied subsequent to the issuance of the 2016 Notes in order that interest thereon be, and continue to be, excluded from gross income for federal income tax purposes. The Commonwealth has covenanted to comply with all such requirements. Failure by the Commonwealth to comply with certain of such requirements may cause interest on the 2016 Notes to become included in gross income for federal income tax

purposes retroactive to the date of issuance of the 2016 Notes. We express no opinion regarding any other federal tax consequences arising with respect to the 2016 Notes.

7. Interest on the 2016 Notes and any profit made on the sale thereof are exempt from Massachusetts personal income taxes, and the 2016 Notes are exempt from Massachusetts personal property taxes. We express no opinion as to other Massachusetts tax consequences arising with respect to the 2016 Notes or as to the taxability of the 2016 Notes or the income therefrom 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 2016 Notes and the enforceability of the 2016 Notes 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.

LOCKE LORD LLP

[THIS PAGE INTENTIONALLY LEFT BLANK]

CONTINUING DISCLOSURE UNDERTAKING

Commonwealth of Massachusetts

Federal Highway Grant Anticipation Notes
(Accelerated Bridge Program)
2016 Series A

Continuing Disclosure Undertaking

On behalf of the Commonwealth, the Treasurer and Receiver-General of the Commonwealth hereby undertakes for the benefit of the owners of the Federal Highway Grant Anticipation Notes (Accelerated Bridge Program), 2016 Series A (the “2016 Notes”) to provide the Municipal Securities Rulemaking Board (the “MSRB”) through its Electronic Municipal Market Access (“EMMA”) system pursuant to the requirements of Rule 15c2-12 of the Securities and Exchange Commission (the “Rule”), no later than 270 days after the end of each fiscal year of the Commonwealth, (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 Official Statement dated September 29, 2016 (the “Official Statement”) relating to the 2016 Notes, and in each case substantially in the same level of detail as is found in the referenced section of the Official Statement:

Financial Information and Operating Data Category	Reference to Official Statement for Level of Detail
Actual CTF Pledged Funds and Net CTF Pledged Funds as of end of prior Commonwealth Fiscal Year	NET CTF PLEDGED FUNDS
Aggregate annual fiscal year debt service requirements for the Notes issued under the Trust Agreement, beginning with the current Commonwealth Fiscal Year.	DEBT SERVICE REQUIREMENTS
Summary presentation of Obligation Authority made available to the Commonwealth and the amount of Obligation Authority actually obligated by the Commonwealth on a ten-year comparative basis, concluding with the prior Federal Fiscal Year.	COMMONWEALTH PARTICIPATION IN THE FEDERAL-AID HIGHWAY PROGRAM – Funding History
Summary presentation of apportionments received by the Commonwealth on a six-year comparative basis, concluding with the prior Federal Fiscal Year.	COMMONWEALTH PARTICIPATION IN THE FEDERAL-AID HIGHWAY PROGRAM – Funding History

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 General Laws and other applicable

state finance laws, if any, in effect from time to time including separately stated information with respect to the Federal Highway Grant Anticipation Note Trust Fund and (ii) general purpose financial statements 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 the Commonwealth.

On behalf of the Commonwealth, the Treasurer and Receiver-General of the Commonwealth hereby further undertakes for the benefit of the owners of the 2016 Notes to provide in a timely manner to EMMA notice of any of the following events with respect to the 2016 Notes:

- (i) principal and interest payment delinquencies;
- (ii) non-payment related defaults, if material;
- (iii) unscheduled draws on the debt service reserves reflecting financial difficulties;
- (iv) unscheduled draws on the credit enhancements reflecting financial difficulties;
- (v) substitution of the credit or liquidity providers or their failure to perform;
- (vi) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determination of taxability, Notices of Proposed Issue (IRS Form 5701-TEB)
- (vii) other material notices or determinations with respect to the tax status of the 2016 Notes, or other material events affecting the tax status of the 2016 Notes;
- (viii) modifications to rights of Noteholders, if material;
- (ix) optional, contingent or unscheduled calls of 2016 Notes, if material;
- (x) defeasances;
- (xi) release, substitution or sale of property securing repayment of the 2016 Notes, if material;
- (xii) rating changes;
- (xiii) bankruptcy, insolvency, receivership or similar event of the Commonwealth*;
- (xiv) the consummation of a merger, consolidation, or acquisition involving the Commonwealth or the sale of all or substantially all of the assets of the Commonwealth, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;
- (xv) appointment of a successor or additional trustee or the change of name of a trustee, if material;

Whenever the Commonwealth obtains knowledge of the occurrence of an event described in clauses (ii), (vii), (viii), (ix), (xi), (xiii), (xiv) or (xv), the Commonwealth shall as soon as possible determine if such event is

* As noted in the Rule, this event is considered to occur when any of the following occur: (i) the appointment of a receiver, fiscal agent or similar officer for the Commonwealth in a proceeding under the U.S. Bankruptcy Code or in any proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Commonwealth, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or (ii) the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Commonwealth.

material under applicable federal securities laws.

Upon the occurrence of an event described in clauses (i), (iii), (iv), (v), (vi), (x) or (xii), and in the event the Commonwealth determines that the occurrence of an event described in clauses (ii), (vii), (viii), (ix), (xi), (xiii), (xiv) or (xv) is material under applicable federal securities laws, the Commonwealth shall, in a timely manner not in excess of ten (10) business days after the occurrence of the event, file a notice of such occurrence with the MSRB.

Nothing herein shall preclude the Commonwealth from disseminating any information in addition to that required hereunder. If the Commonwealth disseminates any such additional information, nothing herein shall obligate the Commonwealth to update such information or include it in any future materials disseminated.

To the extent permitted by law, the foregoing provisions of this Note related to the above-described undertakings to provide information shall be enforceable against the Commonwealth in accordance with the terms thereof by any owner of a Note, 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 2016 Notes, 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 the foregoing provisions as aforesaid. The failure to comply with the above-described undertakings shall not constitute an Event of Default under the Trust Agreement, and the sole remedy in connection with such undertakings shall be limited to an action to compel specific performance of the obligations of the Commonwealth in connection with such undertakings and shall not include any rights to monetary damages. The Commonwealth's obligations in respect of such undertakings shall terminate if no 2016 Notes 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 this Note relating to such undertakings may be amended by the Treasurer and Receiver-General of the Commonwealth, without the consent of, or notice to, any owners of the 2016 Notes, (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 the Commonwealth for the benefit of the owners of 2016 Notes, (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 undertakings in a manner consistent with the provisions 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 2016 Notes, 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 2016 Notes, 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 2016 Notes affected thereby at or prior to the time of such amendment.

[THIS PAGE INTENTIONALLY LEFT BLANK]