

(A Component Unit of the Commonwealth of Massachusetts)

Basic Financial Statements, Required Supplementary Information and Other Supplementary Information

June 30, 2018

(With Independent Auditors' Report Thereon)

(A Component Unit of the Commonwealth of Massachusetts)

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KPMG LLP Two Financial Center 60 South Street Boston, MA 02111

#### **Independent Auditors' Report**

Members of the Board of Directors

Massachusetts Department of Transportation:

#### **Report on the Financial Statements**

We have audited the accompanying financial statements of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of the Massachusetts Department of Transportation (MassDOT), a component unit of the Commonwealth of Massachusetts, as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise MassDOT's basic financial statements as listed in the table of contents.

#### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We did not audit the financial statements of the aggregate discretely presented component units. Those financial statements were audited by other auditors whose reports thereon have been furnished to us, and our opinions, insofar as they relate to amounts included for those entities, are based solely on the reports of the other auditors. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

#### **Opinions**

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of MassDOT, as of June 30,



2018, and the respective changes in financial position, and where applicable, cash flows thereof for the year then ended in accordance with U.S. generally accepted accounting principles.

#### **Emphasis of Matters**

Adoption of New Accounting Pronouncement

As discussed in Note 2(p) to the financial statements, in 2018, MassDOT adopted Governmental Accounting Standards Board (GASB) Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions. Our opinions are not modified with respect to this matter.

#### Other Matters

#### Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis and the schedules listed under Required Supplementary Information in the table of contents be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### Other Supplementary Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise MassDOT's basic financial statements. The Other Supplementary Information (OSI) listed in the table of contents is presented for purposes of additional analysis and is not a required part of the basic financial statements.

The OSI is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the OSI is fairly stated in all material respects in relation to the basic financial statements as a whole.

#### Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated January 8, 2019 on our consideration of MassDOT's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of MassDOT's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering MassDOT's internal control over financial reporting and compliance.



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Management's Discussion and Analysis

June 30, 2018

(Unaudited)

Management of the Massachusetts Department of Transportation (MassDOT) provides this Management's Discussion and Analysis to assist readers of its financial statements to better understand the financial activities of MassDOT for the fiscal year ended June 30, 2018. We encourage readers to consider this information in conjunction with MassDOT's basic financial statements, which follow this section.

#### **Overview of the Financial Statements**

MassDOT's financial statements present two types of statements each with a different view of MassDOT's finances. This approach focuses on both MassDOT as a whole (government-wide) and the fund financial statements. The government-wide financial statements provide both long-term and short-term information about MassDOT as a whole. The fund financial statements focus on the individual parts of MassDOT, reporting MassDOT's operations in more detail than the government-wide statements. Both presentations (government-wide and fund) allow the user to address relevant questions, broaden the basis of comparison and enhance MassDOT's accountability. Also included in the report is the financial information about activities for which MassDOT acts solely as a trustee or agent for the benefit of those outside of the government. Additional parts of the basic financial statements are the notes to the financial statements, required supplementary information and other supplementary information, which is used to assist readers and investors in reviewing MassDOT's general fund operations in more detail.

#### **Government-Wide Financial Statements**

The government-wide financial statements are designed to provide a broad overview of MassDOT as a whole, with the exception of fiduciary activities, and use accounting methods similar to those used by private-sector companies. The statements provide both short-term and long-term information about MassDOT's financial situation and are prepared using the flow of economic resources measurement focus and the full accrual basis of accounting. All revenues and expenses connected with the fiscal year are reported regardless of the timing of cash flows. The government-wide financial statements include the following two statements:

**Statement of Net Position** – Presents all of MassDOT's assets, deferred outflows of resources, liabilities, and deferred inflows of resources with the difference being reported as "net position". The net position is widely considered a good measure of MassDOT's financial health as increases and decreases in MassDOT's net position serve as a useful indicator of whether MassDOT's financial position is improving or deteriorating. The reader should consider other nonfinancial factors, such as the condition of MassDOT's infrastructure, ways and structures when evaluating financial information.

**Statement of Activities** – Presents information showing how MassDOT's net position changed during the most recent fiscal year. Revenues, expenses, and gains/losses are reported for some items that will not result in cash flows until future fiscal periods (i.e., accounts receivable or earned but unused sick and vacation time). This statement also presents a comparison between direct expenses and program revenues for each division of MassDOT.

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The government-wide financial statements present information in three columns in order to summarize MassDOT's activities. The types of activities presented are as follows:

Governmental Activities – Most of MassDOT's basic services (which are primarily funded by toll revenues, contract assistance from the Commonwealth and other nonexchange revenues) are reported in this section by operational division, which are as follows: Highway, Registry of Motor Vehicles, Rail and Transit, and Aeronautics as well as shared services represented by Planning and Enterprise Services (formerly the Office of the Secretary).

**Business**-**Type Activities** – The Massachusetts Bay Transportation Authority's (MBTA), a component unit, activities are reported here since a portion of their costs are recovered through user fees and charges to external users of goods and services.

**Discretely Presented Component Units** – Separate legal entities for which MassDOT has financial accountability are included in this section. These entities consist of fifteen regional transit authorities and operate similar to private sector companies and the business-type activities described above. The separately audited financial statements of MassDOT's component units may be obtained by directly contacting the various entities.

The fifteen regional transit authorities are as follows:

Berkshire Regional Transit Authority
Brockton Area Transit Authority
Cape Ann Transportation Authority
Cape Cod Regional Transit Authority
Franklin Regional Transit Authority
Greater Attleboro/Taunton Regional Transit Authority
Lowell Regional Transit Authority
Martha's Vineyard Transit Authority
Merrimack Valley Regional Transit Authority
Metrowest Regional Transit Authority
Montachusett Regional Transit Authority
Nantucket Regional Transit Authority
Pioneer Valley Transit Authority
Southeastern Regional Transit Authority
Worcester Regional Transit Authority

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#### **Fund Financial Statements**

Users of government financial statements will find the fund financial statement presentation to be most familiar. A fund is a grouping of related accounts that is used to maintain control over resources that have been allocated to specific projects or activities. MassDOT uses fund accounting to ensure and demonstrate compliance with several finance related legal requirements.

All of the funds of MassDOT can be divided into three categories as follows:

Governmental Funds – Most of the basic services provided by MassDOT are financed through governmental funds, which are defined as a set of accounts, focused on near-term inflows and outflows of resources to be spent. These funds are used to account for the same functions reported as governmental activities in the government-wide financial statements. The focus is also on the balances left at the end of the fiscal year available for spending. This information is useful in evaluating MassDOT's near-term financing requirements and it is based on the modified accrual basis of accounting. Such statements provide a detailed short-term view of MassDOT's finances that assist in determining whether there will be adequate financial resources available to meet current needs.

Because the focus of governmental funds is narrower than that of the government-wide financial statements, it is useful to compare the information presented for governmental funds with similar information presented for governmental activities in the government-wide financial statements. This comparison will assist the reader in understanding the long-term impact of the government's near-term financing decisions. The governmental funds balance sheet and the governmental funds statement of revenues, expenditures, and changes in fund balances include reconciliations to facilitate the comparison. The reconciliations are presented on the page immediately following each respective governmental funds' financial statement.

MassDOT has several governmental funds; two of them, the Massachusetts Transportation Trust Fund (MTTF) and Highway Capital Projects Fund are considered major funds for presentation purposes. Each major fund is presented in a separate column in the governmental funds balance sheet and in the governmental funds statement of revenues, expenditures, and changes in fund balances. The remaining governmental funds, which primarily consist of federal grant programs, the Motor Vehicle Inspection Trust Fund (MVITF), and the Central Artery/Tunnel Project Repair and Maintenance Trust (CARM) Fund, are aggregated and presented as other governmental funds.

**Proprietary Funds** – MassDOT maintains two types of proprietary funds. The enterprise fund is used to report the same function presented as business-type activities in the government-wide financial statements. MassDOT reports the MBTA as a major enterprise fund. An internal service fund is used to account for the Owner Controlled Insurance Program that was established to pay contractors' workers' compensation claims related to the Central Artery/Tunnel Project. The services provided by the internal service fund benefit the governmental function and, as a result, are included within governmental activities in the government-wide financial statements.

Proprietary funds financial statements provide the same type of information as in the government-wide financial statements, only in more detail. Like the government-wide financial statements, proprietary funds financial statements use the full accrual basis of accounting. As such, there is no reconciliation required between the government-wide financial statements' business-type activities and the proprietary funds financial statements.

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**Fiduciary Funds** – Such funds are used to account for resources held for the benefit of parties outside MassDOT. Fiduciary funds are not reflected in the government-wide financial statements because the resources of these funds are not available to support MassDOT's own programs. The full accrual basis of accounting is used for fiduciary funds.

MassDOTs' fiduciary funds are Agency funds, which are used to account for assets held in a custodial capacity.

## Notes to the Financial Statements, Required Supplementary Information and Other Supplementary Information

The notes provide additional information that is essential for a full understanding of the data reported in the government-wide and fund financial statements.

The required supplementary information section includes pension schedules related to MassDOT's proportionate share of net pension liability and pension contributions, as required by GASB Statement No. 68, "Accounting and Financial Reporting for Pensions", and Other Post Employment Benefit (OPEB) schedules related to MassDOT's share of net OPEB liability and OPEB contributions, as required by GASB 75 "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions".

The supplementary information includes a combining balance sheet and a combining schedule of revenues, expenditures and changes in fund balances for MassDOT's general fund (MTTF). The supplementary information provides details for the MTTF's Metropolitan Highway System (MHS), Western Turnpike (WT), Tobin Bridge and Other Operations.

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#### Government-Wide Financial Analysis

#### Net Position

The following table reflects the condensed net position based on the statement of net position on pages 21 and 22.

#### Condensed Statement of Net Position June 30, 2018 and 2017 (in thousands of dollars)

	Governmental		Business-typ	e (MBTA)	Total p	rimary	Change	
	activ	ities	activit	activities go			year over year	
	2018	2017	2018	2017	2018	2017	Amount	%
Current and noncurrent other assets	\$ 1,804,204	1,774,243	1,720,286	1,371,031	3,524,490	3,145,274	379,216	12 %
Capital assets	25,239,774	24,930,057	9,931,906	9,482,186	35,171,680	34,412,243	759,437	2 %
Deferred outflows of resources	215,968	341,030	513,453	484,627	729,421	825,657	(96,236)	(12)%
Total assets & deferred outflows	27,259,946	27,045,330	12,165,645	11,337,844	39,425,591	38,383,174	1,042,417	3 %
Bonds outstanding and notes payable Noncurrent liabilities Other current liabilities Deferred inflows of resources Total liabilities & deferred inflows	1,856,468 1,852,058 660,443 199,949 4,568,918	1,880,336 1,221,825 621,704 30,760 3,754,625	5,728,840 3,720,182 544,051 159,084 10,152,157	5,563,850 2,557,411 484,970 11,576 8,617,807	7,585,308 5,572,240 1,204,494 359,033 14,721,075	7,444,186 3,779,236 1,106,674 42,336 12,372,432	141,122 1,793,004 97,820 316,697 2,348,643	2 % 47 % 9 % 748 %
Net position:								
Net investment in capital assets	23,321,614	23,010,455	5,384,327	4,713,587	28,705,941	27,724,042	981,899	4 %
Restricted	684,637	678,739	20,024	19,711	704,661	698,450	6,211	1 %
Unrestricted (Deficit)	(1,315,223)	(398,489)	(3,390,863)	(2,013,261)	(4,706,086)	(2,411,750)	(2,294,336)	(95)%
Total net position *	\$ 22,691,028	23,290,705	2,013,488	2,720,037	24,704,516	26,010,742	(1,306,226)	(5)%

 $<sup>\</sup>boldsymbol{*}$  Fiscal year 2017 amounts have not been restated for the impact of GASB Statement No. 75

MassDOT's combined assets and deferred outflows (governmental and business-type activities) exceeded its liabilities and deferred inflows at June 30, 2018 by \$24.7 billion (presented as net position). The main component of net position represents the net investment in capital assets, totaling \$28.7 billion. The majority of capital assets were transferred to MassDOT by the Commonwealth in fiscal year 2010 as a result of transportation reform pursuant to the enabling legislation M.G.L. Ch.6C; however, the Commonwealth continues to finance the debt for these assets. MassDOT uses these capital assets to service the Commonwealth of Massachusetts; therefore, they are not available for future spending.

Governmental activities current and noncurrent other assets, totaling \$1.8 billion, include restricted and non-restricted cash and investments of \$1.2 billion, net receivables of \$556 million, and other assets of \$2.4 million. Governmental activities long-term liabilities, totaling \$1.9 billion, include all noncurrent liabilities, excluding the long-term portion of bonds outstanding and notes payable. Noncurrent liabilities in the condensed statement include \$250 million of derivative instruments, \$199 million in accrued interest on capital appreciation bonds, \$569 million in pension obligation, \$803 million in OPEB obligation, and \$31 million in other liabilities.

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Other current liabilities totaling \$660 million are due within one year, and exclude the current portion of bonds outstanding and notes payable totaling \$41 million. Other current liabilities include accounts payable and accrued expenses of \$456 million, unearned revenue of \$107 million, accrued interest of \$29 million, and other liabilities of \$68 million. Included within the condensed statement's other liabilities category for both noncurrent liabilities and other current liabilities is environmental remediation, workers' compensation, compensated absences, and claims and judgments.

The increase of \$1.5 billion in business-type activities total liabilities and deferred inflows compared to the prior year is attributable in part to increases in OPEB and pension obligations, and an increase in total bonds and notes payable. This is offset by an increase in total assets and deferred outflows of \$828 million. Approximately \$450 million, or 54% of the increase in total assets and deferred outflows in business-type activities is attributable to capital assets. The net position in business-type activities decreased by \$707 million from the prior year primarily due to the restatement of the 2017 net position resulting from the implementation of GASB Statement No. 75, a \$1.1 billion reduction offset by an increase in net position of \$409 million resulting from increases in operating (transportation and other) revenues of \$34 million, sales tax, contract assistance and local assessment revenues of \$48 million and other nonoperating revenue of \$76 million.

#### Changes in Net Position

MassDOT's total primary government change in net position, noted on the Condensed Statement of Changes in Net Position, decreased by \$1.3 billion from fiscal 2017. For fiscal 2018, the governmental activities change in net position amounted to a decrease of \$600 million primarily related to the restatement of of the 2017 net position resulting from the implementation of GASB Statement No. 75, a \$1 billion reduction offset by an increase in net position of \$298 million.

The governmental activities change in net position decreased by \$352 million compared to the prior year due to a decrease in revenue of \$49 million and an increase in expenses of \$303 million. Capital grants and contributions amounted to \$1.8 billion of revenues, or 60% of total governmental activities revenue, an increase from the prior year in the amount of \$25 million. Expenditure increases of \$303 million in governmental activities include Highway expenditure increases of \$205 million, Rail and Transit expenditure increases of \$67 million and a \$32 million swap termination payment (Special item).

The changes in net position are based upon the Condensed Statement of Activities.

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#### Condensed Statement of Activities June 30, 2018 and 2017 (in thousands of dollars)

	Governmental Activities			Business-type Activity (MBTA) prim		Total primary government		Change year over year	
	2018	2017	2018	2017	2018	2017	Amount	%	
Revenues:									
Program revenues:									
Fees, fines, and charges for services	\$ 541,929	571,310	764,421	730,418	1,306,350	1,301,728	4,622	— %	
Operating grants and contributions	167,608	215,590	_	_	167,608	215,590	(47,982)	(22)%	
Capital grants and contributions	1,796,727	1,771,564	493,506	511,686	2,290,233	2,283,250	6,983	— %	
General revenues:									
Operating assistance from the Commonwealth	486,635	484,609	201,898	171,417	688,533	656,026	32,507	5 %	
Taxes and assessments	_	_	1,173,288	1,156,215	1,173,288	1,156,215	17,073	1 %	
Other income	_	_	116,899	9,093	116,899	9,093	107,806	1,186 %	
Unrestricted investment income	30	(1,178)	26,856	16,692	26,886	15,514	11,372	73 %	
Total revenues	2,992,929	3,041,895	2,776,868	2,595,521	5,769,797	5,637,416	132,381	2 %	
Expenses:									
Highway	1,686,023	1,480,547	_	_	1,686,023	1,480,547	205,476	14 %	
Planning and Enterprise Services	258,676	260,300	_	_	258,676	260,300	(1,624)	(1)%	
Registry of Motor Vehicles	106,930	99,069	_	_	106,930	99,069	7,861	8 %	
Rail and Transit	501,283	434,331	_	_	501,283	434,331	66,952	15 %	
Aeronautics	12,148	10,914	_	_	12,148	10,914	1,234	11 %	
Debt service-interest	97,646	106,700	_	_	97,646	106,700	(9,054)	(8)%	
Special item-swap termination payment	32,570	_	_	_	32,570	_	32,570	100 %	
MBTA	_	_	2,368,345	2,398,758	2,368,345	2,398,758	(30,413)	(1)%	
Total expenses	2,695,276	2,391,861	2,368,345	2,398,758	5,063,621	4,790,619	273,002	6 %	
Change in net position	297,653	650,034	408,523	196,763	706,176	846,797	(140,621)	(17)%	
Net position – beginning*	22,393,375	22,640,671	1,604,965	2,523,274	23,998,340	25,163,945	(1,165,605)	(5)%	
Net position – ending	\$ 22,691,028	23,290,705	2,013,488	2,720,037	24,704,516	26,010,742	(1,306,226)	(5)%	

<sup>\*</sup>Fiscal year 2018 restated due to implementation of GASB 75

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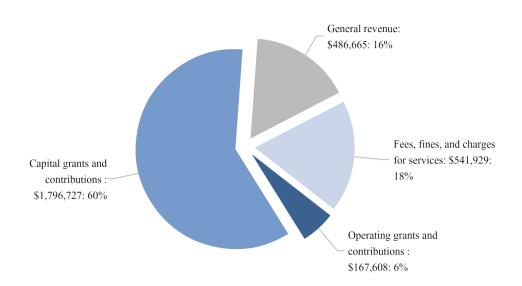
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#### **Total Revenues**

For fiscal year 2018, total governmental activities revenues (\$3.0 billion) were comprised of general revenues (\$487 million) and program revenues (\$2.5 billion), which include fees, fines and charges for services of \$542 million, operating grants and contributions of \$168 million and capital grants and contributions of \$1.8 billion.

## Govermental Activities - Total Revenue (in thousands of dollars)



The governmental activities overall revenue decreased by \$49 million, or 2%, from the prior year primarily due to a decrease in operating grants and contributions revenue of \$48 million. Fiscal 2017 was the final year of ARRA funding and various federally funded projects were completed in fiscal 2017. The revenues (operating grants and contributions revenue) for completed projects in fiscal 2017 were not expected to recur in fiscal 2018. Also, state legislation took effect in fiscal 2018 for MassDOT to record a portion of payroll and payroll related expenses of federally funded construction projects in the Highway Capital Projects Fund. In the prior year the payroll and payroll related expenses were recorded in the general operating fund.

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## Governmental Activities - Program Revenue (in thousands of dollars)

	Total			Change year over year		
		2018	2017	Amount	%	
Program revenues:						
Fees, fines, and charges for services	\$	541,929	571,309	(29,380)	(5)%	
Operating grants and contributions		167,608	215,590	(47,982)	(22)%	
Capital grants and contributions		1,796,727	1,771,564	25,163	1 %	
General revenue		486,665	483,431	3,234	1 %	
	\$	2,992,929	3,041,894	(48,965)	(2)%	

Within program revenues, fees, fines, and charges for services amounted to \$542 million. This represents a variety of MassDOT revenues, including tolls (\$379 million), rental/lease (\$61 million), and departmental revenue, such as advertising and highway-related permit fees (\$102 million). Fees, fines and charges for services decreased by \$29 million from the prior year. Prior to All Electronic Tolling (AET) going live in fiscal 2017, established violation fees on toll roads included a forty dollar charge for a violation and, if applicable, a fifty dollar late fee if the violation was not paid on time. After AET went live, the fifty dollar late fee was eliminated. During fiscal 2018, the fifty dollar late fees accumulated in accounts receivable were waived to encourage toll road users to pay outstanding violation fees and acquire an AET transponder to use on toll roads. The forty dollar toll road violation for in-state vehicles is allocated evenly between MassDOT and the Registry of Motor Vehicles.

## Program Revenue - Fees, fines, and charges for services (in thousands of dollars)

	Tota	al	Chang year over		
	2018	2017	Amount	%	
Tolls	\$ 379,541	433,974	(54,433)	(13)%	
Rental/lease	60,710	51,961	8,749	17 %	
Departmental	 101,678	85,374	16,304	19 %	
	\$ 541,929	571,309	(29,380)	(5)%	

Operating grants and contributions of \$168 million represent both contract assistance for debt service from the Commonwealth and federal grants from various federal agencies, such as Federal Transit Authority, Federal Rail Administration, and Federal Aviation Administration. These contributions are restricted for specific designated purposes and account for approximately 6% of the total MassDOT program revenues. The contributions decreased by approximately \$48 million from the prior year. Fiscal 2017 was the final year of ARRA funding and various federally funded projects were completed in fiscal 2017. Contributions related to completed projects were not expected to recur in fiscal 2018. Also, state legislation took effect in fiscal 2018 for MassDOT to record a portion

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of payroll and payroll related expenses of federally funded construction projects in the Highway Capital Projects Fund. In the prior year the payroll and payroll related expenses was recorded in the general operating fund.

Capital grants and contributions of \$1.8 billion include funding from the Commonwealth and federal agencies for projects such as the Accelerated Bridge Program (ABP), Statewide Road and Bridge Program, Chapter 90 Local Aid, Regional Transit Authority capital assistance and other capital programs. The majority of these programs are within the Highway division, which account for \$1.3 billion, or 70%, of the overall capital grants and contributions. The primary factor to cause the Capital grants and contributions to increase by \$25 million from the prior year balance of \$1.8 billion was the recording of a portion of payroll and payroll related expenses from operating to Highway Capital Projects Fund.

#### **General Revenue**

General revenues, totaling \$487 million, include operating assistance from the Commonwealth and investment income, increased by \$3 million from the prior year. Subsequent to year end, MassDOT received additional funding for fiscal 2018 which amounted to \$93.5 million compared to \$49.8 million for fiscal 2017. Included in the amount for fiscal 2018 is supplemental funding of \$32.9 million for snow and ice, \$40 million for grants to municipalities for improvement of municipal ways, and \$3.2 million from a surcharge to Transportation Network Companies (TNCs). Additionally MassDOT received \$17.4 million in cash reserves from the Executive Office for Administration and Finance to cover budget deficits related to snow and ice expenditures.

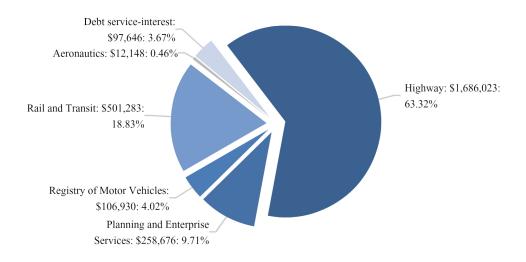
#### **Expenses**

For fiscal year 2018, expenses for governmental activities totaled \$2.7 billion. The Highway Division's operations continue to be one of the MassDOT's highest priorities and commitments, representing \$1.7 billion, or 63%, of the total governmental activities expenses.

The balance of 37% is attributable to Planning and Enterprise Services with \$259 million, the Rail and Transit Division with \$501 million, and debt service-interest expenses of \$98 million. The Registry of Motor Vehicles (RMV) and Aeronautics complete the operational spending pattern with an approximate total of \$119 million.

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## Govermental Activities - Expenses (in thousands of dollars)



Overall, MassDOT's governmental activities expenses increased by \$271 million, or 11% from the prior year. Key elements of this change were an increase of \$205 million for Highway activities and an increase of \$67 million for Rail and Transit activities for infrastructure expenditures. Also contributing to the change is the decrease of \$9 million of interest expense related to debt service. In Highway, capital asset additions decreased by approximately \$374 million from the prior year and depreciation expense increased by approximately \$62 million. Legal settlements of approximately \$39 million that were accrued in fiscal 2018 relate to highway construction contracts for bridges.

## Governmental Activities - Expenses (in thousands of dollars)

Total			Change year over year	
	2018	2017	Amount	%
\$	1,686,023	1,480,547	205,476	14 %
	258,676	260,300	(1,624)	(1)%
	106,930	99,069	7,861	8 %
	501,283	434,331	66,952	15 %
	12,148	10,914	1,234	11 %
	97,646	106,700	(9,054)	(8)%
\$	2,662,706	2,391,861	270,845	11 %
	\$	\$ 1,686,023 258,676 106,930 501,283 12,148 97,646	2018         2017           \$ 1,686,023         1,480,547           258,676         260,300           106,930         99,069           501,283         434,331           12,148         10,914           97,646         106,700	Total         year over           2018         2017         Amount           \$ 1,686,023         1,480,547         205,476           258,676         260,300         (1,624)           106,930         99,069         7,861           501,283         434,331         66,952           12,148         10,914         1,234           97,646         106,700         (9,054)

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#### Business - Type Activity

The net position for business-type activities is \$2 billion, a decrease of \$707 million from the prior year. The decrease is primarily due to the restatement of the 2017 net position resulting from the implementation of GASB Statement No. 75 which resulted in a reduction of \$1.1 billion. The reduction was offset by an increase in net position of \$409 million resulting from increases in operating (transportation and other) revenues of \$34 million, sales tax, contract assistance and local assessment revenue of \$48 million, and other nonoperating revenue of \$76 million.

#### **Government Funds Financial Analysis**

As noted earlier, MassDOT uses fund accounting to ensure and demonstrate compliance with finance related legal requirements.

#### **Governmental Funds**

As of June 30, 2018, MassDOT's governmental funds (MTTF, Highway Capital Projects, and other governmental) reported a combined ending fund balance of \$1.1 billion. Of this amount, \$2.4 million is nonspendable and relates to prepaid expenditures. The majority of the remaining fund balance of \$1.1 billion is restricted; this consists of debt service payments and grants or bonded projects that are restricted by external sources and other purposes such as insurance reserve and turnpike operations. Approximately \$350 thousand of the fund balance is assigned leaving a \$14 million unassigned deficit fund balance. All these funds are incorporated in the annual budget and approved by the MassDOT Board of Directors. The MTTF (general fund) is the chief operating fund of MassDOT. As of June 30, 2018, the total fund balance was \$694 million, comprised of \$705 million restricted, \$2.4 million nonspendable (prepaid expenditures), and \$14 million unassigned deficit. Subsequent to year end, the Commonwealth legislature passed a supplemental bill providing MassDOT with an additional \$32.9 million for snow and ice expenditures, \$40 million for grants to municipalities for the construction, maintenance or improvement of municipal way and \$3.2 million from a surcharge to transportation network companies (TNCs). Additionally, the Executive Office for Administration and Finance provided \$17.4 million of reserve funds to MassDOT to cover budget deficits related to snow and ice expenditures..

In addition to the MTTF, MassDOT established the Highway Capital Projects Fund as a major governmental fund. The Highway Capital Projects Fund accounts for highway construction projects financed primarily through federal reimbursements passed through the Commonwealth and contract assistance payments received directly from the Commonwealth. As of June 30, 2018, the total fund balance was \$42 million, a decrease of \$7 million from the prior fiscal year as a result of expenditures exceeding revenues by \$8 million.

The other governmental funds are special revenue funds used to account for and report the proceeds of specific revenue sources that are restricted or committed to expenditures for specified purposes other than debt service or capital projects. Projects within this category include federal grants, the MVITF activity, and the CARM activity. As of June 30, 2018, the total fund balance was \$400 million.

#### **Proprietary Funds**

The Proprietary Funds Statement of Fund Net Position provides the same type of information found in the government-wide statements, but in more detail. MassDOT's proprietary funds include the MBTA (a blended component unit) as a major enterprise fund, and the Owner Controlled Insurance Program (OCIP), an internal service fund.

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The net position of the MBTA at the end of the year totaled \$2.0 billion, which consisted of \$5.4 billion in net investment in capital assets, \$20 million restricted for other purposes, and a deficit of \$3.4 billion in unrestricted net position. OCIP's net position at the end of the year totaled \$2.5 million, which is considered restricted for purposes of this activity.

#### **Governmental Funds – MTTF General Fund**

#### MTTF Revenues

MTTF (General fund) revenues totaled \$1.06 billion in fiscal 2018, a decrease of \$54 million, or 5%, from fiscal 2017. The Commonwealth Transportation Fund (CTF) revenues of \$568 million and toll revenues of \$396 million combine for 91% of the total revenues. The remaining 9%, or \$93 million, consists of contract assistance and other revenues, which include rental/lease revenue, investment income, advertising, highway related permits, and other fees.

The CTF revenues consist of \$100 million dedicated for MHS bonds (through Chapter 27, Section 9 of the Acts of 2009), \$25 million for the operations and maintenance of portions of the Central Artery and the Central Artery North Area, and \$443 million for operations. The operational funding included \$353 million for MassDOT operations, \$80 million for RTA's contract assistance, and \$10 million for the Merit Rating Board.

## MTTF General Fund - Revenue (in thousands of dollars)

	Total			Char year ove			
	2018		2018 2017 An		Amount	%	
Tolls	\$	395,950	433,531	(37,581)	(9)%		
Commonwealth Transportation Fund		567,974	559,869	8,105	1 %		
Other (grants, rental/lease, departmental/other)		93,338	118,170	(24,832)	(21)%		
	\$	1,057,262	1,111,570	(54,308)	(5)%		

The \$396 million in toll revenue consists of pledged revenue of \$215 million for Metropolitan Highway System and unpledged revenue of \$141 million for Western Turnpike and \$40 million for the Tobin Bridge operations. Decreases in toll revenues from the prior year relate to waivers of late fees as discussed on page 11 of the Management's Discussion and Analysis.

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## MTTF General Fund Toll Revenue by Roadway (in thousands of dollars)

		Tota	ıl	Chang year over		
	2018		2017	Amount	%	
Metropolitan Highway System	\$	214,776	231,927	(17,151)	(7)%	
Western Turnpike		141,653	162,049	(20,396)	(13)%	
Tobin Bridge		39,521	39,555	(34)	%	
	\$	395,950	433,531	(37,581)	(9)%	

#### MTTF Expenditures

During fiscal 2018, the general fund's total expenditures decreased by 12% from the prior year. The Highway division expenditures decreased by 16%, or \$121 million. The majority of AET expenses were incurred in fiscal 2017 and not expected to repeat in fiscal 2018. Also, state legislation took effect in fiscal 2018 for MassDOT to record a portion of payroll and payroll related expenses of federally funded construction projects in the Highway Capital Projects Fund. In the prior year the payroll and payroll related expenses was recorded in the general operating fund.

Expenditures for Planning and Enterprise Services decreased from the prior year by 15% or \$21 million. Expenditures were greater in fiscal 2017 due to a \$2.7 million legal settlement and a \$15 million transfer from the MTTF operating fund to the Executive Office for Administration and Finance in fiscal 2017.

## MTTF General Fund Expenditures (in thousands of dollars)

	Total			Change year over year		
	2018		2017	Amount	%	
Highway	\$	658,920	779,921	(121,001)	(16)%	
Planning and Enterprise Services		116,867	137,608	(20,741)	(15)%	
Registry of Motor Vehicles		80,341	72,525	7,816	11 %	
Rail and Transit		81,757	83,678	(1,921)	(2)%	
Aeronautics		2,095	1,882	213	11 %	
Debt Service		151,185	167,740	(16,555)	(10)%	
	\$	1,091,165	1,243,354	(152,189)	(12)%	

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#### MTTF Budgetary Highlights

Funding for MassDOT's general fund (MTTF) operations is dependent in part upon operating assistance from the Commonwealth of Massachusetts' CTF, toll operations, and other departmental revenues.

MassDOT submits its general fund (MTTF) budget to the Standing Committee on Finance and Audit for review and to the MassDOT Board of Directors for final approval. The Board approved a \$970 million operating budget to cover fiscal year 2018 operations.

The following are some of the major fiscal year highlights:

- The Transportation Finance Act (Chapter 46 of the Acts of 2013) allows MassDOT to transfer excess revenues
  from Motor Vehicle Inspection Trust Fund (MVITF) to the general fund (MTTF), providing all expenses of the
  motor vehicle inspection program are met. In fiscal year 2018, MassDOT transferred \$43 million from the
  MVITF to the MTTF.
- 2. In November 2018, MassDOT received supplemental funding of \$32.9 million for snow and ice, \$40 million for grants to municipalities for improvement of the municipal way and \$3.2 million from a surcharge to TNCs. Additionally \$17.4 million from the Executive Office for Administration and Finance cash reserve funds was received by MassDOT to cover the balance of operating deficits related to snow and ice expenditures.

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#### **Capital Asset and Debt Administration**

#### Capital Assets

As of June 30, 2018, MassDOT's combined capital assets totaling \$35.2 billion (net of depreciation) consisted of \$25.2 billion in governmental activities and \$9.9 billion in business-type activities. This total amount represents a net increase (including additions and deductions) of \$759 million, or 2% percent, over last year. MassDOT's capital assets include land, construction in progress, infrastructure, buildings and equipment, vehicles, and software as shown in the table below.

## MassDOT Capital Assets - At Year End, Net of Depreciation (in thousands of dollars)

	Government	al activities	Business-type activities		Total	
	2018	2017	2018	2017	2018	2017
Land	\$ 1,011,475	1,005,229	390,431	390,728	1,401,906	1,395,957
Construction in progress	9,052,639	8,167,570	2,040,030	1,812,289	11,092,669	9,979,859
Infrastructure	15,060,216	15,624,451	6,153,407	6,273,132	21,213,623	21,897,583
Buildings and equipment	83,431	90,075	1,348,038	1,006,037	1,431,469	1,096,112
Vehicles	29,126	37,824	_	_	29,126	37,824
Software	2,887	4,908	_	_	2,887	4,908
Total	\$ 25,239,774	24,930,057	9,931,906	9,482,186	35,171,680	34,412,243

Within governmental activities, construction in progress (CIP) increased by \$1.1 billion due to additions to ongoing CIP projects, which include assets related to the Accelerated Bridge Program and Highway Repair Projects (Amesbury Whittier Bridge, Boston-Cambridge Longfellow Bridge, Quincy Fore River Bridge, Fall River Braga Bridge and interchange improvements, Woods Memorial Bridge – Everett- Medford, Lexington Bridge as well as Springfield viaduct replacement and 6 bridge locations on I-95 and the addition of a lane in Needham-Wellesley). The governmental activities net book value of infrastructure decreased primarily due to the increase in accumulated depreciation of the existing roads and bridges.

Additional information on MassDOT's capital assets can be found in notes 4 and 20.

#### Debt

At year-end, MassDOT had \$7.20 billion in outstanding bonds and notes compared to \$7.07 billion last year. On May 10, 2018 MassDOT issued \$136 million in revenue bonds to refund \$139 million of outstanding 2010 Series A Subordinated Bonds (Subseries A-1 and A-7) which are variable rate demand bonds that reset weekly. As part of the current refunding, swap contracts associated with the refunded variable rate bonds were terminated. The termination payment amounted to \$32 million. During fiscal 2018, the MBTA issued three series of Subordinated Senior Sales Tax bonds for the purpose of funding capital projects and redeeming commercial paper in the amount of \$167 million. The total amount of bonds issued in 2018 by the MBTA amounted to \$501 million.

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## MassDOT Outstanding Bonds and Notes at Year End (in thousands of dollars)

	Governmental activities		Business-type activities		Total		
	2018	2018 2017		2017	2018	2017	
General Transportation System Bonds (GTS)	\$ —	_	179,520	196,835	179,520	196,835	
Revenue	1,794,776	1,841,070	4,495,595	4,128,973	6,290,371	5,970,043	
Build America Bonds (BABs)	_	_	428,300	428,300	428,300	428,300	
Commercial Paper	_	_	_	167,300	_	167,300	
Metropolitan Boston Transit Parking (MBTPC)			304,585	304,585	304,585	304,585	
Total	\$ 1,794,776	1,841,070	5,408,000	5,225,993	7,202,776	7,067,063	

MassDOT maintains bond ratings of A or higher for its governmental activities bonds. The Capital Appreciation Bonds are rated (AA-) by Standard & Poor's Corporation (S&P), (A3) by Moody's Investors Services Inc., and (A +) by Fitch. MassDOT senior fixed rate bonds are rated (A+) by both S&P and Fitch and (A3) by Moody's. MBTA (business–type activity) bond ratings are as follows by S & P: General Transportation System bonds (A+), Senior Sales Tax Revenue bonds (AA+), Assessment Revenue bonds (AAA), Senior Sales Tax bonds (AA). MBTA bond ratings by Moody's Investor Service are as follows: Assessment Revenue bonds 2016 series A(Aa1), Senior Sales Tax bonds 2016 Series A (Aa2).

Additional information on MassDOT's debt can be found in notes 5 and 21.

#### **Construction Commitments**

MassDOT's outstanding commitments for engineering and design and construction contracts were \$4.5 billion at June 30, 2018. Major commitments include funding for the Highway Division in the amount of \$2.4 billion for numerous projects which include roadway reconstruction and widening and bridge replacement (Route 18 in Weymouth/Abington), interchange construction and replacement of five bridges on I-95, Woods Memorial Bridge on Route 16 and the Middlesex Turnpike Extension. Major commitments also include funding for various collaborations with the MBTA in the amount of \$1.7 billion for projects such as the Green Line extension, Red and Orange Line infrastructure improvements and vehicle purchase, and South Coast Rail improvements.

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#### **Economic Factors and Next Year's Budgets and Rates**

The MassDOT Board approved an original fiscal year 2019 operating expenditure and debt service obligation budget of \$970 million in June 2018 which was revised subsequent to year end to \$960 million. Total revenues which include tolls, fees, permits, court fines, and federal grants are budgeted approximately the same to the prior year. Total operating and debt expenditures are budgeted for a 4% increase.

#### **Future Pronouncements**

GASB has issued the following statements, which require adoption subsequent to June 30, 2018 and are applicable to MasDOT. MassDOT has not yet adopted these statements and is currently assessing the impact of each statement.

Statement No.		Adoption Required in Fiscal Year
83	Certain Asset Retirement Obligations	2019
84	Fiduciary Activities	2020
87	Leases	2021
88	Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements	2020
89	Accounting for Interest Cost Incurred before the End of a Construction Period	2021
90	Majority Equity Interests, an amendment of GASB Statements No. 14 and No. 61	2020

#### **Contacting MassDOT's Financial Management**

This financial report is designed to provide our citizens, taxpayers, customers, and creditors with a general overview of MassDOT's finances and to show MassDOT's accountability for the money it receives. Questions concerning the information provided in this report or requests for additional information should be addressed to MassDOT's Chief Financial Officer at: 10 Park Plaza, Suite 5450, Boston, Massachusetts, 02116.

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#### Statement of Net Position

June 30, 2018

(Dollars in thousands)

	Prim	Primary government				
Assets and Deferred Outflows of Resources	Governmental activities	Business- type activities	Total	Component units		
Current assets:						
Cash and short-term investments	\$ 597	293,452	294,049	24,824		
Restricted cash and investments	1,167,659	377,013	1,544,672	1,242		
Derivative instrument	6,452		6,452			
Receivables, net of allowance for uncollectibles:						
Due from Commonwealth	481,935	98,752	580,687	22,786		
Due from federal government	9,170	27,274	36,444	28,815		
Other	65,080	66,190	131,270	88,458		
Other assets	2,359	59,624	61,983	7,332		
Total current assets	1,733,252	922,305	2,655,557	173,457		
Noncurrent assets:						
Restricted cash and investments	70,952	771,128	842,080	_		
Receivables, net of allowance for uncollectibles:						
Due from Commonwealth	_		_	5,600		
Due from federal government	_		_	5,241		
Other	_		_	17,682		
Net OPEB asset	_		_	624		
Other assets	_	26,853	26,853	741		
Capital assets:						
Nondepreciable	10,064,114	2,430,461	12,494,575	107,066		
Depreciable, net of accumulated depreciation	15,175,660	7,501,445	22,677,105	450,139		
Total noncurrent assets	25,310,726	10,729,887	36,040,613	587,093		
Total assets	27,043,978	11,652,192	38,696,170	760,550		
Deferred Outflows of Resources:						
Loss on debt refundings	58,319	177,886	236,205	_		
Derivative instruments	19,721		19,721			
OPEB related	22,193	69,387	91,580	968		
Pension related	115,735	266,180	381,915	8,113		
Total deferred outflows of resources	215,968	513,453	729,421	9,081		
Total assets and deferred outflows of resources	\$ 27,259,946	12,165,645	39,425,591	769,631		

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Statement of Net Position (continued)

June 30, 2018 (Dollars in thousands)

	_	Primary government			
		overnmental activities	Business- type activities	Total	Component units
Liabilities and Deferred Inflows of Resources					
Current liabilities:					
Accounts payable and accrued expenses	\$	456,367	307,052	763,419	75,532
Unearned revenue		107,335		107,335	1,742
Accrued interest payable		28,604	127,310	155,914	1,394
Bonds and notes payable		41,436	338,545	379,981	65,332
Other liabilities		68,137	109,689	177,826	4,298
Total current liabilities		701,879	882,596	1,584,475	148,298
Noncurrent liabilities:		, ,			
Accrued interest on capital appreciation bonds		198,917	_	198,917	_
Bonds and notes payable		1,815,032	5,390,295	7,205,327	45,136
Liability for derivative instruments		249,889	220	250,109	_
Capital lease obligations			58,517	58,517	
Net pension obligation		569,276	1,333,817	1,903,093	30,412
Net OPEB obligation		803,052	2,208,769	3,011,821	56,274
Other liabilities		30,924	104,755	135,679	9,191
Unearned revenue		_	14,104	14,104	1,194
Total noncurrent liabilities		3,667,090	9,110,477	12,777,567	142,207
Total liabilities		4,368,969	9,993,073	14,362,042	290,505
Deferred Inflows of Resources:		·			
Debt instruments			179	179	_
OPEB related		133,087	142,872	275,959	808
Pension related		66,862	16,033	82,895	4,051
Total liabilities and deferred inflows of resources	\$	4,568,918	10,152,157	14,721,075	295,364
Net Position					
Net investment in capital assets		23,321,614	5,384,327	28,705,941	550,896
Restricted		684,637	20,024	704,661	8,531
Unrestricted (Deficit)		(1,315,223)	(3,390,863)	(4,706,086)	(85,160)
Total net position	\$	22,691,028	2,013,488	24,704,516	474,267

See accompanying notes to financial statements.

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## Statement of Activities Fiscal year ended June 30, 2018 (Dollars in thousands)

						Net (expens	e)/revenue and	changes in ne	t position
			]	Program revenue	S	Prim	ary governmer	nt .	
Functions/program	]	Expenses	Fees, fines, and charges for services	Operating grants and contributions	Capital grants and contributions	Governmental activities	Business- type activities	Total	Component units
Primary government:									
Governmental activities:									
Highway	\$	1,686,023	435,174	31,504	1,251,230	31,885	_	31,885	
Planning and Enterprise Services		258,676	63,161	14,102	131,661	(49,752)	_	(49,752)	_
Registry of motor vehicles		106,930	35,959	1,932	1,918	(67,121)	_	(67,121)	
Rail and Transit		501,283	7,161	17,749	402,137	(74,236)	_	(74,236)	_
Aeronautics		12,148	474	38	9,781	(1,855)	_	(1,855)	
Debt service – interest		97,646		102,283		4,637		4,637	
Total governmental activities		2,662,706	541,929	167,608	1,796,727	(156,442)	_	(156,442)	_
Business-type activities:									
Massachusetts Bay									
Transportation Authority		2,368,345	764,421		493,506		(1,110,418)	(1,110,418)	
Total primary government	\$	5,031,051	1,306,350	167,608	2,290,233	(156,442)	(1,110,418)	(1,266,860)	
Component units:									
Aggregate component units	\$	509,196	275,484	174,734	84,693				25,715
General revenues:									
Operating assistance from the Commonwealth						\$ 486,635	201,898	688,533	_
Taxes and assessments						_	1,173,288	1,173,288	_
Other income						_	116,899	116,899	_
Unrestricted investment income						30	26,856	26,886	
Total general revenues						486,665	1,518,941	2,005,606	_
Special item - swap termination payment						(32,570)		(32,570)	
Change in net position						297,653	408,523	706,176	25,715
Net Position – beginning of year (as restated)						22,393,375	1,604,965	23,998,340	448,552
Net Position – end of year						\$ 22,691,028	2,013,488	24,704,516	474,267
See accompanying notes to financial statements.									

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Governmental Funds Balance Sheet
June 30, 2018
(Dollars in thousands)

Assets	MTTF (General)	Highway capital projects	Other governmental funds	Total governmental funds
Cash and short-term investments	<u> </u>		597	597
Restricted cash and investments	790,596	43,068	400,359	1,234,023
Receivables, net of allowance for uncollectibles:				
Due from Commonwealth	90,501	391,434	_	481,935
Due from federal government	_	_	9,170	9,170
Other	65,080	_	_	65,080
Other assets	2,359	_	_	2,359
Total assets	948,536	434,502	410,126	1,793,164
Liabilities, Deferred Inflows of Resources and Fund Balances				
Liabilities:				
Accounts payable and accrued expenditures	52,943	392,967	10,364	456,274
Unearned revenue	107,335	_	_	107,335
Total liabilities	160,278	392,967	10,364	563,609
Deferred Inflows of Resources:				
Unavailable Revenue	94,566	_	_	94,566
Fund balances:				
Nonspendable	2,359	_	_	2,359
Restricted	705,295	41,535	399,412	1,146,242
Assigned	_	_	350	350
Unassigned	(13,962)	_	_	(13,962)
Total fund balances	693,692	41,535	399,762	1,134,989
Total liabilities, deferred inflows of resources, and fund balances	\$ 948,536	434,502	410,126	1,793,164

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Reconciliation of the Governmental Funds Balance Sheet Total Fund Balances to the Statement of Net Position June 30, 2018

(Dollars in thousands)

Total governmental fund balances:	\$ 1,134,989
Capital assets (net of accumulated depreciation) used in governmental activities are not financial resources and, therefore, are not reported in the governmental funds.	25,239,774
Receivables that are measurable but not available are reported as deferred inflows of resources in the governmental funds but recognized as revenue on a full accrual basis.	94,566
Capitalized loss on debt refunding in governmental activities that is not capitalized at a fund level in the governmental funds.	58,319
In the statement of net position, interest is accrued on outstanding long-term debt, whereas in the governmental funds interest is not reported until due.	(227,521)
Long-term liabilities are not due and payable in the current period and, therefore, are not reported in the governmental funds:	
Bonds and notes payable, net	(1,856,468)
Workers' compensation claims	(20,844)
Other claims and judgments	(38,574)
Compensated absences	(36,274)
Environmental remediation	(1,369)
Derivative instruments, net	(223,716)
Net pension liability, net	(520,403)
Net OPEB liability, net	(913,946)
An internal service fund is used by management to manage its OCIP program related to the central artery construction project. The assets and liabilities of the internal service fund is included in governmental activities in the statement of net position.	2,495
Net position of governmental activities	\$ 22,691,028

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#### Governmental Funds

#### Statement of Revenues, Expenditures and Changes in Fund Balances Fiscal year ended June 30, 2018

(Dollars in thousands)

	MTTF (General)	Highway capital projects	Other governmental funds	Total governmental funds
Revenues:	_			_
Toll revenue:				
Pledged as security for revenue bonds	\$ 214,776	_	_	214,776
Unpledged	181,174	_	_	181,174
Commonwealth transportation fund:				
Operations	442,974	_	_	442,974
Metropolitan highway system bonds	100,000	_	_	100,000
Central artery operations and maintenance	25,000	_	_	25,000
Commonwealth grants and contract assistance	_	1,268,929	422	1,269,351
Federal grants and reimbursements:				
Passed through the Commonwealth	_	527,067	_	527,067
Direct	_	_	20,638	20,638
Rental/lease income	53,779	6,930	_	60,709
Investment income	11,196	730	2,498	14,424
Departmental and other	28,363	807	72,508	101,678
Total revenues	1,057,262	1,804,463	96,066	2,957,791
Expenditures:	_			_
Current:				
Highway	658,920	1,261,472	8,108	1,928,500
Planning and Enterprise Services	116,867	132,817	3,620	253,304
Registry of motor vehicles	80,341	1,935	14,303	96,579
Rail and Transit	81,757	405,666	17,204	504,627
Aeronautics	2,095	9,867	_	11,962
Debt service:				
Principal	40,542	_	_	40,542
Interest	110,643	_	_	110,643
Total expenditures	1,091,165	1,811,757	43,235	2,946,157
Excess (Deficiency) of revenues over expenditures	(33,903)	(7,294)	52,831	11,634
Other financing sources (uses):				
Transfers in	64,014	_	_	64,014
Transfers out	(20,650)	_	(43,364)	(64,014)
Issuance of refunding bonds	135,690	_	_	135,690
Premium from issuance of refunding bonds	25,063	_	_	25,063
Swap termination payment related to current refunding	(32,570)	_	_	(32,570)
Debt service – principal – current refunding	(137,855)	_	_	(137,855)
Total other financing sources (uses)	33,692		(43,364)	(9,672)
Net change in fund balances	(211)	(7,294)	9,467	1,962
Fund balances at beginning of year	693,903	48,829	390,295	1,133,027
Fund balances at end of year	\$ 693,692	41,535	399,762	1,134,989

(A Component Unit of the Commonwealth of Massachusetts)

Reconciliation of the Statement of Revenues, Expenditures And
Changes in Fund Balances of Governmental Funds
to the Statement of Activities
Fiscal year ended June 30, 2018
(Dollars in thousands)

Changes in net position of governmental activities	\$ 297,653
an internal service fund is used by management to manage its OCIP program related to the central artery construction project. The net activity of the internal service fund is reported with governmental activities.	99
Environmental remediation	998
Compensated absences	637
Claims and judgments	(33,574
Workers' compensation	1,006
Net OPEB liability	(16,61)
Net pension liability	(23,15)
These amounts represent the net changes in accruals:	
ome expenses reported in the statement of activities do not require the use of current financial resources and, therefore, are not reported in the governmental funds.	
the statement of activities, interest is accrued on outstanding long-term debt, whereas in the governmental funds interest is not reported until due. This amount represents the net change in accrued interest payable.	5,16
Derivatives are reported in the government-wide statements but are not reported in the governmental liability for funds. This amount represents the net changes in the derivative instruments.	(1,31
Amortization of swap payments received	3,58
Amortization of bond discounts	(42:
Amortization of deferred losses on refunding transactions	(11,57
Amortization of premiums	2,69
Net effect of premium, discount and deferred loss on refunding transaction	(11,50
Bond maturities	178,39
Proceeds of refunding bonds	(135,69
These amounts represent the related activity of the current period:	
the issuance of long-term debt (e.g., bonds and leases) provides current financial resources to governmental funds, while the repayment of the principal of long-term debt consumes the financial resources of governmental funds. Neither transaction, however, has any impact on net position. Also,governmental funds report the effect of premiums, discounts, and similar items when debt is first issued, whereas these amounts are deferred and amortized in the statement of activities.	
Certain revenues in the statement of activities that do not provide current financial resources are not recognized in the statement of revenues, expenditures and changes in fund balances. As a result, the recognition of revenue for certain accounts receivable differ between the two statements. This amount represents the net change in deferred inflows of resources	27,25
Depreciation	(714,28
Capital outlays	1,024,00
Governmental funds report capital outlays as expenditures. However, in the statement of activities the cost of those assets are allocated over their estimated useful lives and reported as depreciation expense. These amounts represent the related activity of the current period:	1 024 00

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Proprietary Funds
Statement of Net Position
June 30, 2018
(Dollars in thousands)

Assets and Deferred Outflows of Resources	Business-type activities - enterprise fund MBTA	Governmental activities - internal service fund
Current assets:	WIDTA	
Unrestricted cash and short-term investments	\$ 293,452	_
Restricted cash and investments	377,013	4,588
Receivables, net of allowance for uncollectibles:	377,013	4,366
Due from Commonwealth	98,752	
Due from federal government	27,274	
Other	66,190	_
Other assets	59,624	_
Total current assets	922,305	4,588
Noncurrent assets:	922,303	4,366
Restricted cash and investments	771,128	
	· · · · · · · · · · · · · · · · · · ·	_
Other assets	26,853	_
Capital assets:	2 420 461	
Nondepreciable	2,430,461	_
Depreciable, net of accumulated depreciation	7,501,445	
Total noncurrent assets	10,729,887	
Total assets	11,652,192	4,588
Deferred Outflows of Resources:		
Loss on debt refundings	177,886	_
OPEB related	69,387	
Pension related	266,180	
Total deferred outflows of resources	513,453	
Total assets and deferred outflows of resources	12,165,645	4,588
Liabilities and Deferred Inflows of Resources		
Current liabilities:		
Accounts payable and accrued expenses	307,052	93
Accrued interest	127,310	_
Bonds payable	338,545	_
Other liabilities	109,689	546
Total current liabilities	882,596	639
Noncurrent liabilities:		
Accrued liabilities	104,755	_
Bonds payable	5,390,295	_
Capital lease obligations	58,517	_
Net pension obligation	1,333,817	_
Net OPEB obligation	2,208,769	
Liability for derivative instruments	220	_
Other liabilities	_	1,454
Unearned revenue	14,104	
Total noncurrent liabilities	9,110,477	1,454
Total liabilities	9,993,073	2,093
Deferred Inflows of Resources:		
Debt instruments	179	_
OPEB related	142,872	
Pension related	16,033	
Total liabilities and deferred inflows of resources	10,152,157	
Fund Net Position	10,132,137	
Net investment in capital assets	5,384,327	
Restricted	20,024	2,495
Unrestricted	(3,390,863)	2,493
Total fund net position	\$ 2,013,488	2,495
See accompanying notes to financial statements.	Ψ 2,013,488	2,493

(A Component Unit of the Commonwealth of Massachusetts)

#### **Proprietary Funds**

#### Statement of Revenues, Expenses and Changes in Net Position Fiscal year ended June 30, 2018 (Dollars in thousands)

	Business-type activities - enterprise fund MBTA	Governmental activities - internal service fund	
Operating revenues:			
Revenue from transportation	\$ 764,421		
Operating expenses:			
Salaries and benefits	920,857	_	
Materials, supplies and services	266,658	_	
Injuries and damages	23,743	(83)	
Commuter railroad and local subsidy expense	518,329	_	
Other	7,615	_	
Depreciation and amortization	387,421	_	
Total operating expenses	2,124,623	(83)	
Operating income (loss)	(1,360,202)	83	
Nonoperating revenues (expenses):			
Dedicated sales tax	1,006,807	_	
Contract assistance - Commonwealth of Massachusetts	201,898	_	
Dedicated local assessments	166,481	_	
Other nonoperating income	116,899	_	
Interest income	26,856	16	
Interest expense	(243,722)	_	
Total nonoperating revenues (expenses), net	1,275,219	16	
Loss before capital grants and contributions and transfers	(84,983)	99	
Capital grants and contributions	493,506	_	
Increase (decrease) in net position	408,523	99	
Fund net position at beginning of year (as restated)	1,604,965	2,396	
Fund net position at end of year	\$ 2,013,488	2,495	

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#### **Proprietary Funds**

#### Statement of Cash Flows

## Fiscal year ended June 30, 2018 (Dollars in thousands)

		ess-type activities - nterprise fund MBTA	Governmental activities - internal service fund
Cash flows from operating activities:			
Receipts from customers and users	\$	660,437	_
Receipts from other operations		90,801	_
Payments to suppliers and vendors		(982,903)	_
Payments to employees		(557,633)	_
Claims, premiums and judgments paid			(378)
Net cash used in operating activities		(789,298)	(378)
Cash flows from capital and related financing activities:			<u> </u>
Additions to transportation property		(851,384)	_
Interest paid		(230,366)	<del>_</del>
Decrease in deferred credit/charges		(18,961)	_
Commercial paper advances		(167,300)	<del>_</del>
Payments on debt		(217,105)	<del>_</del>
Proceeds from capital asset sales		297	<del>-</del>
Proceeds from bond and note issuances		501,195	<del>_</del>
Bond construction and reserve account receipts		35,404	<del>-</del>
Proceeds from bond premiums		74,748	<del>_</del>
Payments of capital lease activity		(4,628)	<del>-</del>
Capital grants		486,855	_
Other		5,118	_
Net cash used in capital and related financing activities		(386,127)	_
Cash flows from noncapital financing activities:			
Sales tax and local assessment		1,350,832	_
Net cash from noncapital financing activities		1,350,832	_
Cash flows from investing activities:			
Investment income		108,997	17
Net cash from investing activities		108,997	17
Net change in cash and short-term investments		284,404	(361)
Cash and cash equivalents, restricted and other special accounts, beginning of year		386,061	4,949
Cash and cash equivalents, restricted and other special accounts, end of year	\$	670,465	4,588 (a)
Reconciliation of operating (loss) income to net cash from operating activities:			
Operating (loss) income	\$	(1,360,202)	83
Adjustments to reconcile operating (loss) income to net cash used in operating activities:			
Charges not requiring current expenditure of cash:			
Depreciation and amortization		387,421	_
Increase in pension liability		104,798	_
Increase in net OPEB liability		48,808	_
Changes in all other working capital accounts, except cash and cash equivalents and short-term debt		29,877	(461)
Total adjustments		570,904	(461)
Net cash used in operating activities	\$	(789,298)	(378)
Not eash used in operating activities	Ψ	(109,298)	(370)

<sup>(</sup>a) This amount is included as restricted cash and investments in the proprietary funds statement of fund net position. See accompanying notes to financial statements.

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# Fiduciary Funds Statement of Assets and Liabilities June 30, 2018 (Dollars in thousands)

Assets	Agency funds	
Cash and short-term investments	\$	40,578
Other Receivables		18,086
Total assets		58,664
Liabilities		
Other liabilities	\$	58,664

(A Component Unit of the Commonwealth of Massachusetts)

Notes to Financial Statements
June 30, 2018
(Dollars in thousands)

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

#### (a) Description of Business

The Massachusetts Department of Transportation (MassDOT) was established by Chapter 25 of the Acts of 2009 of the Commonwealth of Massachusetts (as amended, the Transportation Reform Act), which was enacted and approved in June 2009. The Transportation Reform Act was designed to reform the transportation system of the Commonwealth of Massachusetts (the Commonwealth) and created the new authority, MassDOT, through enactment of Chapter 6C of Massachusetts General Laws (the Enabling Act). MassDOT has a separate legal existence from the Commonwealth and is governed by a board appointed by the Governor. The Governor has appointed a Secretary of MassDOT, who serves as MassDOT's chief executive officer.

MassDOT is governed by an eleven member board, including the Secretary of Transportation who serves as ex officio chair. Ten members are appointed by the Governor. Four members, other than the chair, serve for terms that are coterminous with the Governor. The remaining six members serve for a four–year term. The Board of Directors of MassDOT was authorized to begin exercising its powers on November 1, 2009.

MassDOT was created through the transfer of the assets, liabilities and equity of:

- 1. The former Massachusetts Turnpike Authority (including both the Metropolitan Highway System and the Western Turnpike), which was dissolved as part of the legislation
  - a. The Metropolitan Highway System comprises the Boston Extension of the Turnpike, the Callahan Tunnel, the Central Artery/Tunnel (CA/T Project), the Central Artery North Area (CANA), the Sumner Tunnel and the Ted Williams Tunnel. The Western Turnpike consists of that portion of the Turnpike extending from the New York border in the Town of West Stockbridge to Route 128 in Weston.
  - b. MassDOT assumed the rights, powers, and duties of the former Massachusetts Turnpike Authority upon the November 1, 2009 transfer.
- 2. The operations of the Massachusetts Highway Department of the Commonwealth
- 3. The operations of the Massachusetts Aeronautic Commission
- 4. The operations of the Registry of Motor Vehicles of the Commonwealth
- 5. The operations of the Executive Office of Transportation of the Commonwealth
- 6. Certain assets of the Department of Conservation and Recreation (DCR) of the Commonwealth

In addition, the Tobin Bridge (including its associated land and buildings) was transferred from the Massachusetts Port Authority (effective January 1, 2010).

The Merit Rating Board was transferred to MassDOT's Registry of Motor Vehicles division via Chapter 68, Section 8 of the Acts of 2011.

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Notes to Financial Statements
June 30, 2018
(Dollars in thousands)

MassDOT has four divisions, including Highway, Rail and Transit, Aeronautics, and the Registry of Motor Vehicles, which includes the Merit Rating Board, that share administrative functions such as human resources, financial management, information technology, and planning through the shared services division, Planning and Enterprise Services (formerly the Office of the Secretary). Each division is headed by an administrator appointed by the Secretary of MassDOT.

The Enabling Act established the Massachusetts Transportation Trust Fund (MTTF) within MassDOT, into which all bridge, tunnel and highway tolls, together with certain other funds, are deposited. Transit fares of the Massachusetts Bay Transportation Authority (MBTA) may be deposited into the MTTF upon agreement of MassDOT and the MBTA.

The MTTF is to be used for operations, maintenance and capital costs related to the transportation assets under MassDOT's jurisdiction, including MBTA assets and assets of MassDOT transferred pursuant to the legislation, as well as debt service on outstanding MassDOT debt (previously held by the dissolved Massachusetts Turnpike Authority). MassDOT debt is not debt of the Commonwealth. The MTTF is not subject to appropriation and year-end balances do not revert to the Commonwealth.

Other activities transferred from the Commonwealth to MassDOT include the following: (1) the Central Artery and Statewide Road and Bridge Infrastructure Fund; (2) the Central Artery Repairs and Maintenance Trust Fund; (3) the Highway Capital Projects Fund; (4) the Federal Highway Construction Program; (5) the Motor Vehicle Inspection Trust Fund; (6) the Owner Controlled Insurance Program (OCIP) Fund related to the Central Artery/Tunnel Project and (7) various other administrative trusts transferred from the Commonwealth.

The Enabling Act contemplated that the Legislature of the Commonwealth will continue to make capital appropriations for transportation improvements and that such appropriations will continue to be funded through the issuance of Commonwealth debt by the State Treasurer. Outstanding capital spending authorizations are to be made available to MassDOT by the Commonwealth's Secretary of Administration and Finance.

The Enabling Act also established the Commonwealth Transportation Fund (CTF) as a budgetary fund of the Commonwealth for transportation-related purposes, which receives essentially the same revenues that were previously deposited into the Commonwealth's Highway Fund, including gasoline tax receipts and registry fees. The CTF is subject to appropriation by the Legislature and shall be used for transportation related expenses of the executive office of transportation or any successor agency or authority. In addition, it may pay or reimburse the Commonwealth's 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.

Legislation approved by the Governor in fiscal year 2013 provides that the CTF will also receive monies received from sales of motor vehicles and taxes imposed as excises upon sale and use at retail of motor vehicles dedicated to transportation purposes, with a guaranteed annual payment of \$275,000. The guaranteed amount of \$275,000 includes \$100,000 earmarked for MassDOT debt service, \$160,000 earmarked for the MBTA, and \$15,000 earmarked for the regional transit authorities. Legislation approved in 2018 determined amounts to be distributed from the CTF. The following amounts were distributed in fiscal 2018 from the CTF: \$127,000 earmarked for the MBTA and \$80,400 earmarked for the regional transit authorities. In addition, the CTF is used to pay debt service (present and future) associated with highway maintenance and construction projects and provides the funding of MassDOT's annual operating budget. For fiscal year 2018, MassDOT received \$567,974 from the CTF which was comprised of \$362,574

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Notes to Financial Statements
June 30, 2018
(Dollars in thousands)

for operations, \$100,000 for debt service, \$80,400 earmarked for the regional transit authorities, and \$25,000 reimbursement for the cost of the operation and maintenance of the CA/T Project and CANA as authorized by Chapter 235 of the Acts of 1998. Subsequent to year end, the Commonwealth legislature approved supplemental funding of the fiscal year 2018 operating budget totaling \$76,098. MassDOT also received \$17,391 in cash reserves from the Executive Office for Accounting and Finance to cover the balance of operating deficits.

Chapter 194 of the Acts of 2011 established the Transportation Infrastructure and Development Fund for "the purpose of transportation and related infrastructure projects" with the provision that not less than 50 percent shall be dedicated to supplementing construction and reconstruction of municipal ways. The primary source of funding consists of disbursements from the Commonwealth's Gaming Revenue Fund. For fiscal year 2018, MassDOT received \$0.

MassDOT is a component unit of the Commonwealth and its financial statements are incorporated into the financial statements of the Commonwealth.

#### (b) Basis of Presentation

The accompanying financial statements of MassDOT have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The Governmental Accounting Standards Board (GASB) is the recognized standard-setting body for establishing governmental accounting and financial reporting principles.

For financial reporting purposes, MassDOT has included all funds, organizations, agencies, boards and commissions considered part of the MassDOT legal entity. MassDOT has also considered all potential component units for which it is financially accountable as well as other organizations for which the nature and significance of their relationship with MassDOT is such that exclusion would cause MassDOT's financial statements to be misleading or incomplete. As required by GAAP, these financial statements present MassDOT (the primary government) and its component units. The information pertaining to the primary government appears in footnotes 1 through 13.

Blended Component Units – Blended component units are entities that are legally separate from MassDOT, but are so related to MassDOT, that they are, in substance, the same as MassDOT because their governing board is the same as that of MassDOT or the entities provide services entirely or almost entirely to MassDOT. The Massachusetts Bay Transportation Authority (MBTA) is the only legally separate entity that meets the criteria as a blended component unit. The information pertaining to the MBTA appears in footnotes 14 through 28.

Aggregate Discretely Presented Component Units – MassDOT presents the following fifteen (15) regional transit authorities (RTAs) in the aggregate as component units in the accompanying financial statements: Berkshire Regional Transit Authority; Brockton Area Transit Authority; Cape Ann Transportation Authority; Cape Cod Regional Transit Authority; Franklin Regional Transit Authority; Greater Attleboro–Taunton Regional Transit Authority; Lowell Regional Transit Authority; Montachusett Regional Transit Authority; Metrowest Regional Transit Authority; Merrimack Valley Regional Transit Authority; Nantucket Regional Transit Authority; Pioneer Valley Transit Authority; Southeastern Regional Transit Authority; Martha's Vineyard Transit Authority; and the Worcester Regional Transit Authority. MassDOT does not consider any of the discretely presented component units to be major.

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Notes to Financial Statements
June 30, 2018
(Dollars in thousands)

The separately audited financial statements of MassDOT's component units may be obtained by directly contacting the various entities.

#### **Government-Wide Financial Statements**

The statement of net position and the statement of activities report information on all non-fiduciary activities of the primary government and its component units. Primary government activities are defined as either governmental or business-type activities. MassDOT's governmental activities generally are financed through toll revenues, contract assistance from the Commonwealth, and other nonexchange revenues. Business-type activities are financed in whole or in part by fees charged to external parties for goods and services.

The statement of net position presents all of the reporting entity's non-fiduciary assets, deferred outflows of resources, liabilities and deferred inflows of resources, with the difference reported as net position. Net position is reported in three categories:

- Net investment in capital assets consists of capital assets, net of accumulated depreciation and reduced by outstanding balances for bonds, notes and other debt that are attributed to the acquisition, construction or improvement of those assets.
- Restricted net position results when constraints placed on asset use is either externally imposed by creditors, grantors, contributors, and the like, or imposed by law through enabling legislation.
- Unrestricted net position consists of net position, which does not meet the definition of the two
  preceding categories.

When both restricted and unrestricted resources are available for use, it is MassDOT's policy to use restricted resources first, then unrestricted resources as needed.

The statement of activities demonstrates the degree to which the direct expenses of a given function or segment is offset by program revenues. Direct expenses are those that are clearly identifiable within a specific function. Program revenues include (1) charges to customers who purchase, use, or directly benefit from goods or services provided by a given function; (2) grants and contributions that are restricted to meeting the operational requirements of a specific function and (3) grants and contributions that are restricted to meeting the capital requirements of a specific function. Other items not meeting the definition of program revenues are instead reported as general revenue and offset or supplant the net operating deficit or surplus from governmental or business-type activities.

As a general rule, the effect of interfund activity has been eliminated in the government-wide statements. Exceptions to this rule are: 1) activities between funds reported as governmental activities and funds reported as business-type activities and 2) activities between funds that are reported in different functional categories in either the governmental or business-type activities column. Elimination of these activities would distort the direct costs and program revenues for the functions concerned. Interfund receivables and payables have been eliminated from the statement of net position, except for the residual amounts due between governmental and business-type activities.

## **Fund Financial Statements**

MassDOT reports its financial position and results of operations in funds, each of which is considered a separate accounting entity. The operations of each fund are accounted for with a set of self-balancing accounts that comprise its assets and deferred outflows of resources, liabilities and deferred inflows of

(A Component Unit of the Commonwealth of Massachusetts)

Notes to Financial Statements
June 30, 2018
(Dollars in thousands)

resources, fund equity, revenues, and expenditures/expenses. Transactions between funds within a fund type, if any, have not been eliminated.

Separate financial statements are provided for governmental, proprietary and fiduciary funds. Major individual governmental funds and major individual enterprise funds are reported as separate columns in the fund financial statements pursuant to GASB reporting standards, with nonmajor funds being combined into a single column.

MassDOT is not required to and does not have a legally adopted annual budget for any of its governmental funds.

## (c) Measurement Focus and Basis of Accounting

The Government-wide financial statements are reported using the economic resources measurement focus and the full accrual basis of accounting as are the proprietary and fiduciary fund financial statements. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of cash flows. Grants and similar items are recognized as revenues as soon as all eligibility requirements have been met.

Governmental fund financial statements account for the general governmental activities of MassDOT. Governmental fund statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recognized as they become susceptible to accrual and are both measurable and available. Revenues are considered to be available when they are collected within the current period or soon enough thereafter to pay liabilities of the current period. Significant revenues susceptible to accrual include expenditure driven federal grants and amounts due from the Commonwealth. MassDOT considers all revenues available if they are collected within 60 days after fiscal year end. For federal expenditure driven grants, revenue is recognized when the qualifying expenditures have been incurred and other eligibility requirements are met and amounts are considered available. Expenditures are recorded in the period in which the related fund liability is incurred. Principal and interest on general long-term obligations are recorded as fund liabilities and expenditures when due. Compensated absences, claims and judgments, termination benefits, and similar activities are recognized to the extent that they are normally expected to be liquidated with expendable available financial resources.

MassDOT reports the following fund types:

## **Governmental Fund Types**

The General Fund is the primary operating fund of MassDOT. It is used to account for and report all financial resources not accounted for and reported in another fund. The MTTF is considered the general fund for MassDOT.

The Special Revenue Funds are used to account for and report the proceeds of specific revenue sources that are restricted or committed to expenditure for specified purposes other than debt service or capital projects.

Capital Projects Funds are used to account for and report financial resources that are restricted, committed, or assigned to expenditure for capital outlays, including the acquisition or construction of capital facilities and other capital assets. Capital projects funds exclude those types of capital-related outflows financed by proprietary funds or for assets that will be held in trust for individuals, private organizations, or other governments.

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Notes to Financial Statements
June 30, 2018
(Dollars in thousands)

Within the governmental fund types, MassDOT has established the following major fund, in addition to the MTTF:

Highway Capital Projects, a capital projects fund, accounts for highway construction projects financed primarily through federal reimbursements passed through the Commonwealth and contract assistance payments received directly from the Commonwealth.

## **Proprietary Fund Types**

Proprietary funds account for programs financed in whole or in part by fees charged to external parties for goods and services. MassDOT reports the MBTA (a blended component unit) as a major enterprise fund. MassDOT also operates one internal service fund – the Owner Controlled Insurance Program.

Revenues and expenses of proprietary funds are classified as operating or nonoperating as follows – operating revenues and expenses generally result from providing services or producing and delivering goods. All other revenues and expenses are reported as nonoperating.

## **Fiduciary Fund Types**

Fiduciary funds account for assets held in a trustee capacity for others that cannot be used to support MassDOT's programs.

MassDOT reports an Agency Fund, which is used to account for assets held in a custodial capacity. Agency funds do not present the results of operations or have a measurement focus.

## (d) Cash and Short -Term Investments

MassDOT's participation in the Massachusetts Municipal Depository Trust (MMDT) Cash Fund is presented as cash and short-term investments (both restricted and unrestricted) in the accompanying financial statements

MMDT is an internal investment pool that meets the criteria established under GASB Statement No. 79 to report its investments at amortized cost. As such, the Authority reports its investment in MMDT at amortized cost which approximates the net asset value of \$1.00 (one dollar) per share. MMDT has a maturity of less than one year and is not rated.

Restricted cash and short-term investments also include certain amounts restricted for use by bond indentures and other external requirements. Such amounts are held by the Treasurer in the MMDT Cash Fund as well as amounts held by bond and other trustees.

#### (e) Investments

Investment securities are recorded at fair value, based on quoted market price.

The Treasurer of the Commonwealth can hold certain investments on behalf of MassDOT. In the event investments are held by the Treasurer they appear as "Investments" in the accompanying financial statements. Interest earned on specific MassDOT investments is allocated to MassDOT. As of June 30, 2018, the Treasurer held no investments on behalf of MassDOT.

Restricted investments include amounts restricted for use by bond indentures and other external requirements and include certain investments held by bond and other trustees.

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Notes to Financial Statements
June 30, 2018
(Dollars in thousands)

For purposes of the statements of cash flows, unrestricted investments purchased with a maturity date of three months or less are considered cash equivalents.

## (f) Accounts Receivable

Reimbursements due from the Commonwealth for state and federally funded construction project expenditures are reported as "Due from Commonwealth" in the financial statements and are considered 100% collectible. "Due from federal government" receivables include direct grants or reimbursements and are considered 100% collectible. "Other" receivables include rental/lease receivables and toll related receivables, including postpaid toll transactions and toll violations. Other receivables are reported net of estimated allowances for uncollectible accounts, which are based on historical trends and individual account analysis.

## (g) Capital Assets

Capital assets include land, construction in progress, buildings, equipment, vehicles, software and infrastructure (e.g., roads, bridges, ramps, and other similar items). Such assets are reported in the applicable governmental or business-type activity columns of the government-wide financial statements and proprietary funds and are recorded at historical cost or estimated historical cost if purchased or constructed. Donated capital assets are recorded at acquisition value at the date of donation. Assets transferred to MassDOT from other governments (subsequent to its formation) are recorded at net carrying value (historical cost less accumulated depreciation) at the date of transfer.

Equipment, vehicles, computer equipment and software purchases that equal or exceed \$50 are capitalized. Buildings and infrastructure projects with a cost that equals or exceeds \$100 are capitalized. All land and non-depreciable land improvements are capitalized. The costs of normal maintenance and repairs that do not add to the value of assets or materially extend asset lives are not capitalized.

Capital assets are depreciated using the straight-line method over the following useful lives:

Type of asset	Estimated useful life (in years)
Buildings	40
Infrastructure - roads, bridges, and tunnels	40
Equipment	10
Computer hardware and software	3 to 7
Vehicles	5

In the government-wide financial statements, depreciation expense is charged to the function to which the capital assets relate.

Construction in progress includes all associated cumulative costs of a constructed capital asset. Construction in progress is relieved and a depreciable capital asset is reported at the point at which an asset is placed in service for its intended use. Interest incurred during the construction phase of capital assets is not capitalized as the debt related to the construction appears on the books of the Commonwealth.

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Notes to Financial Statements
June 30, 2018
(Dollars in thousands)

## (h) Fair Value

Investments are measured at fair value on a recurring basis. Recurring fair value measurements are those that are required to be made at the end of each reporting period. Fair value measurements are categorized based on the valuation inputs used to measure the fair value.

- Level 1 inputs are quoted market prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.
- Level 2 inputs are other than quoted prices in Level 1 that are observable for the asset or liability
  or similar assets or liabilities either directly or indirectly through corroboration with observable
  market data.
- Level 3 inputs are significant unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

## (i) Other Assets

Other assets consist principally of prepaid expenses.

## (j) Unearned Revenue

Unearned revenue in the governmental funds financial statements represents monies received in advance of providing goods or services in accordance with the current financial resources management focus and the modified accrual basis of accounting.

#### (k) Long -Term Debt

In the government-wide and proprietary funds, long-term debt is reported as liabilities in the statements of net position. Bond premiums and discounts are capitalized and amortized over the life of the bonds using the straight-line method which approximates the effective interest method. Gains and losses related to refunding transactions are presented as deferred inflows and outflows, respectively, and amortized using the straight-line method over the shorter of the maturity of the new debt or the defeased debt.

In the governmental funds, the face amount of long-term debt is reported as other financing sources when the debt is issued. Bond premiums are reported as other financing sources and bond discounts are reported as other financing uses. Issuance costs, whether or not withheld from the actual bond proceeds received, are reported as Planning and Enterprise Services expenditures.

## (l) Fund Balances

The following fund balance classifications describe the relative strength of spending constraints:

*Nonspendable* – represents amounts that cannot be spent either because they are in nonspendable form (i.e., prepaid amounts) or because they are legally or contractually required to be maintained intact.

*Restricted* – represents amounts that can be spent only for specific purposes because of constitutional provisions or enabling legislation or because of constraints that are externally imposed by creditors, grantors, contributors, or the laws or regulations of other governments.

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Committed – represents amounts that can be used only for specific purposes imposed by a formal action of MassDOT's Board of Directors, which is the highest level of decision-making authority. Committed amounts may be established, modified, or rescinded only through actions approved by the Board of Directors.

Assigned – represents amounts that do not meet the criteria to be classified as restricted or committed but are intended to be used for specific purposes. Under MassDOT's structure, this intent can be expressed by the Secretary of Transportation (and Chief Executive Officer), Chief Financial Officer and Controller. This classification also includes the remaining positive fund balance for all governmental funds except for the General Fund.

*Unassigned* – represents the residual fund balance for the General Fund and the negative residual fund balance of any other governmental fund that cannot be eliminated by offsetting assigned fund balance amounts.

In circumstances when an expenditure is made for a purpose for which amounts are available in multiple fund balance classifications, fund balance is depleted in the order of restricted, committed, assigned and unassigned.

Encumbrance amounts have been assigned for specific purposes for which resources already have been allocated.

## (m) Compensated Absences

Employees are granted vacation and sick leave in varying amounts based on collective bargaining agreements and state laws. Upon retirement, termination, or death, certain employees are compensated for unused vacation and sick leave (subject to certain limitations) at an approved rate of pay.

In the government-wide and proprietary fund statements of net position, compensated absences are recorded as an expense and liability as the benefits accrue.

For the governmental fund financial statements, accumulated vacation and sick leave are reported as expenditures and fund liabilities when they become due and payable upon retirement, termination, or death.

## (n) Deferred Inflows and Outflows

MassDOT accounts for certain transactions that result in the consumption or acquisition of resources in one period that are applicable to future periods as deferred outflows and deferred inflows, respectively, to distinguish them from assets and liabilities. For fiscal year 2018, MassDOT has reported deferred outflows pertaining to its derivative instruments, deferred losses on its debt refunding transactions, pension related activities and OPEB related activities. Deferred inflows relate to deferred gains on debt refunding transactions, pension related activities and OPEB related activities.

Deferred inflows of resources in the governmental funds financial statements relate to unavailable revenue for CTF operating assistance and toll violations.

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## (o) Pension Benefits

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the State Employees' Retirement System (SERS) and additions to/deductions from SERS's fiduciary net position have been determined on the same basis as they are reported by the SERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

## (p) Other Postemployment Benefits

Effective July 1, 2017, MassDOT adopted GASB Statement No. 75 "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions". This Statement establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources, and expenditures. The Statement also identifies the methods and assumptions that are required to be used to project benefit payments, discount projected benefit payments to their actuarial present value, and attribute that present value to periods of employee service. Note disclosure and required supplementary information requirements are also addressed. The adoption of the Statement requires a restatement of the net postion of MassDOT as of June 30, 2017. As a result of adopting GASB Statement No. 75, the net position of MassDOT and its component units was restated as follows:

	Governmental Activities		Business - Type Activities	Discretely Presented Component Units
Net position, June 30, 2017, as previously reported	\$	23,290,705	2,720,037	477,382
Impact of implementing GASB 75		(897,330)	(1,115,072)	(28,830)
Net position, June 30, 2017, as restated	\$	22,393,375	1,604,965	448,552

The Commonwealth of Massachusetts administers a single-employer defined benefit Postemployment Benefits Other Than Pensions (OPEB) Plan. Benefits are managed by the Group Insurance Commission (GIC) and investments are managed by the Pension Reserves Investment Management Board (PRIM). The OPEB Plan is reported as an OPEB Trust Fund in the Commonwealth's financial statements and does not issue a stand-alone audited financial report. For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the OPEB Plan and additions to/deductions from OPEB Plan's fiduciary net position have been determined on the same basis as they are reported by the Commonwealth of Massachusetts. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

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## (q) Interfund Transfers

During the course of its operations, resources are permanently reallocated between funds. These transactions are reported as transfers in and transfers out.

For the year ended June 30, 2018, interfund transfers totaled \$43,364, which included the following:

 MassDOT transferred \$43,364 from the other governmental funds' motor vehicle inspection trust fund (MVITF) to the MTTF general fund to ensure the budget included sufficient revenue for MassDOT operations. Chapter 46 of the Acts of 2013 indicates available funds may be transferred "provided, however, that expenses of the administration and implementation of the motor vehicle inspection program" are met first.

## (r) Use of Estimates

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

## (2) Deposits and Investments

MassDOT invests in the Massachusetts Municipal Depository Trust (MMDT) Cash Fund. Authorized investments for the MMDT Cash Fund include primarily U.S. government and government agency obligations, certificates of deposits, commercial paper, notes and repurchase agreements, all with maturities of one year or less. MassDOT's investment in MMDT is presented in the accompanying financial statement captions as:

Cash and short-term investments	\$ 41,175
Restricted cash and investments	934,410
	\$ 975,585

MassDOT has other investments held by bond and other trustees in accordance with bond indentures and other external requirements. For investments held by trustees, MassDOT has implemented investment policies which incorporate the investment protocols within the Trust Agreements.

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

#### (a) Custodial Credit Risk

At June 30, 2018, all of MassDOT's bank balances were insured and not exposed to custodial credit risk. For deposits held by MMDT Cash Fund, MassDOT had minimal exposure to custodial credit risk.

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MassDOT had no custodial credit risk for investments as all investments were either insured or held in MassDOT's name.

## (b) Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of a debt investment. These investments include certain short-term cash equivalents, various long-term items and restricted assets by maturity in years. MassDOT does not have a formal policy related to interest rate risk.

**Investments maturities** 

MassDOT's investments at June 30, 2018 are presented below by investment type and maturity.

			(in ye	
			Less than	
Investment Type	F	air Value	1 year	1-5
U.S. Treasuries	\$	111,390	92,679	18,711
U.S. Agencies		59,235	6,994	52,241
Money market mutual funds		103,358	103,358	
Guaranteed Investment Contract		25,630	25,630	
MMDT		975,585	975,585	
Total	\$	1,275,198	1,204,246	70,952

#### (c) Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations.

The following table presents the credit quality ratings of the primary government's fixed income investments at June 30, 2018:

<b>Investment Type</b>	Fair Value		AAA	AA1-AA3	Unrated
U.S. Treasuries	\$	111,390	111,390		
U.S. Agencies		59,235		59,235	_
Money market mutual funds		103,358	103,358	_	_
Guaranteed Investment Contract		25,630	_	25,630	_
MMDT		975,585	_		975,585
Total	\$	1,275,198	214,748	84,865	975,585

Although the MMDT Cash Fund is not rated, the cash portfolio may only invest in securities rated in one of the two highest short-term rating categories by nationally recognized statistical rating organizations or unrated securities of comparable quality. Securities rated in the highest short-term rating category (and unrated securities of comparable quality) are identified as First Tier securities. Securities rated in the second highest short-term rating category (and unrated securities of comparable quality) are identified as Second Tier securities. At June 30, 2018, credit ratings associated with the investments of the Cash Fund were either First Tier or Second Tier.

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## (d) Concentration of Credit Risk – Investments

Concentration of credit risk is the risk of loss attributable to the magnitude of a government's investment in a single issuer. No investment category exceeded 5% of the total investments of the primary government at June 30, 2018.

## (e) Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. MassDOT was not exposed to foreign currency risk as of June 30, 2018.

## (f) Restricted Cash and Investments by Fund

The following summarizes restricted cash and investments as of June 30, 2018 by the various funds and accounts established by MassDOT for debt covenant requirements and other purposes:

Held by Treasurer Commonwealth

\$ 468,235
22,748
36,874
6,194
379,664
6,047
14,648
299,613
 4,588
\$ 1,238,611
\$

#### (g) Fair Value Hierarchy and Measurements

MassDOT categorizes its fair value measurements within the fair value hierarchy established by GAAP.

The following is a description of the valuation methodologies used for assets measured at fair value. There have been no changes in the methodologies used at June 30, 2018.

**Institutional Money Market Funds** – Valued at fair value, which is represented by the quoted price for the fund generally \$1.00 (one dollar). Institutional money market funds are generally classified as Level 1.

- **U.S. Treasury Securities** Securities issued by the U.S. government, its agencies, authorities and instrumentalities are valued using quoted prices, documented trade history in the security and a pricing model maximizing the use of observable inputs determined by investment managers.
  - U.S. Treasury Securities consist principally of U.S. Treasury bills, notes and bonds are generally classified as Level 1 of the fair value hierarchy.

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U.S. Government sponsored enterprises securities principally of U.S. Government agency
obligations including agency-issued debt, agency mortgage pass-through securities, and
agency collateralized mortgage obligation (CMOs) are generally categorized in Level 1 of the
fair value hierarchy.

**Derivative instruments** – MassDOT's interest rate swaps and forward delivery agreements are classified as Level 2 as valued using a market approach that considers benchmark interest rates.

The following summarizes the recurring fair value measurement as of June 30, 2018:

F	'air Value	Level 1	Level 2
\$	103,358	103,358	_
	111,390	111,390	
	59,235	59,235	
	273,983	273,983	_
	975,585		
	25,630		
\$	1,275,198		
\$	(249,889)		(249,889)
	6,452		6,452
\$	(243,437)	<u> </u>	(243,437)
	\$	111,390 59,235 273,983 975,585 25,630 \$ 1,275,198 \$ (249,889) 6,452	\$ 103,358 103,358 111,390 111,390 59,235 59,235 273,983 273,983 975,585 25,630 \$ 1,275,198 \$ (249,889) — 6,452 —

Debt securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities.

Derivative instruments classified in Level 2 of the fair value hierarchy are valued using a market approach that considers benchmark interest rates such as LIBOR and SIFMA.

## (3) Accounts Receivable

Governmental funds accounts receivable at June 30, 2018 consisted of the following:

	_	ross accounts receivable	Allowance for uncollectibles	Net accounts receivable
Due from Commonwealth	\$	481,935	<del></del>	481,935
Due from federal government		9,170	_	9,170
Other receivables		92,166	27,086	65,080
	\$	583,271	27,086	556,185

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# (4) Capital Assets

Capital assets of the governmental activities consisted of the following at June 30, 2018:

	Beginning balance		Increases	Decreases	Ending balance
Capital assets, not being depreciated:					
Land	\$	1,005,229	7,338	1,092	1,011,475
Construction in progress		8,167,570	968,945	83,876	9,052,639
Total capital assets, not being depreciated		9,172,799	976,283	84,968	10,064,114
Capital assets, being depreciated:					
Infrastructure		29,043,304	123,716		29,167,020
Buildings		168,727	178		168,905
Equipment		128,187	1,791		129,978
Vehicles		162,032	5,117	100	167,049
Software		28,685	1,889		30,574
Total capitals assets, being depreciated		29,530,935	132,691	100	29,663,526
Less accumulated depreciation for:					
Infrastructure		13,418,853	687,951		14,106,804
Buildings		94,103	6,155		100,258
Equipment		112,736	2,458		115,194
Vehicles		124,208	13,815	100	137,923
Software		23,777	3,910		27,687
Total accumulated depreciation		13,773,677	714,289	100	14,487,866
Total capital assets, being depreciated, net		15,757,258	(581,598)	_	15,175,660
Capital assets, net	\$	24,930,057	394,685	84,968	25,239,774

Depreciation expense was charged to functions/programs of the governmental activities as follows:

Highway	\$ 708,470
Planning and Enterprise Services	2,052
Registry of Motor Vehicles	167
Rail and Transit	 3,600
	\$ 714,289

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# (5) Bonds, Notes and Other Long-Term Liabilities

Long-term debt and other long-term liabilities of the governmental activities consisted of the following at June 30, 2018:

Senior revenue bonds:	Beginning Balance	Additions	Reductions	Ending Balance	Due within one year
Metropolitan Highway System:					
1997 Series A, Capital Appreciation Bonds (CAB's), 5.60% to 5.65%, issued September 24, 1997, due 2024 to 2029	\$ 42,007	_	_	42,007	_
Metropolitan Highway System:					
1997 Series C, Capital Appreciation Bonds (CAB's), 5.45% to 5.55%, issued September 24, 1997, due 2016 to 2023	63,228	-	11,942	51,286	11,393
Metropolitan Highway System:					
2010 Refunding, Series A, variable rate bonds, issued May 27, 2010, due 2035 to 2037	207,665	_	_	207,665	_
Borrowings related to the associated interest rate swap	2,999	_	98	2,901	102
Metropolitan Highway System:					
2010 Refunding, Series B, 3.00% to 5.00%, issued May 27, 2010, due 2011 to 2037	660,660	_	28,600	632,060	28,850
Total senior revenue bonds	976,559		40,640	935,919	40,345
Subordinated revenue bonds:					
Metropolitan Highway System:					
2010 Refunding, Series A, variable rate bonds, issued April 14, 2010, due 2030 to 2039	592,335	_	137,855	454,480	_
Borrowings related to the associated interest rate swap	10,956	_	3,489	7,467	236
Metropolitan Highway System:					
2010 Refunding, Series B, 3.25% to 5.00%, issued April 14, 2010, due 2019 to 2039	261,220	_	_	261,220	855
Metropolitan Highway System:					
2018 Refunding, Series A, 5.00%, issued May 10, 2018, due 2024 to 2029		135,690		135,690	
Total subordinated revenue bonds	864,511	135,690	141,344	858,857	1,091
Total	1,841,070	135,690	181,984	1,794,776	41,436
Less: unamortized bond discounts	(6,807)	371	(424)	(6,754)	_
Plus: unamortized premiums	46,073	25,063	2,690	68,446	
Total bonds payable	1,880,336	161,124	184,250	1,856,468	41,436
Other noncurrent liabilities:					
Workers' compensation	21,850	5,024	6,030	20,844	6,030
Judgments and claims	7,600	38,574	5,600	40,574	39,120
Compensated absences	36,911	1,263	1,900	36,274	22,354
Environmental remediation	2,367	529	1,527	1,369	633
Net pension liability	645,065	_	75,789	569,276	_
Net OPEB liability	897,330	71,337	165,615	803,052	
Total other	1,611,123	116,727	256,461	1,471,389	68,137
Total noncurrent	\$ 3,491,459	277,851	440,711	3,327,857	109,573

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

Revenue bonds are secured by a lien and pledge of cash and revenues derived from the Metropolitan Highway System. In addition, the Commonwealth has pledged \$100,000 per fiscal year until June 30, 2039 to provide contractual assistance with repayment of the bonds. These contractual payments constitute dedicated payments from the Commonwealth that are deposited directly to the Subordinated Debt Service Fund. The Commonwealth has also pledged \$25,000 per fiscal year until June 30, 2050 to provide contract assistance toward repayment of the senior bonds (until June 2037) and toward payment of subordinated bonds (until June 2039). These contractual payments constitute dedicated payments from the Commonwealth and are deposited into the Senior Debt Service Fund. The amount of pledged revenue is approximately equal to the remaining principal and interest requirements of the outstanding Metropolitan Highway System bonds.

Debt service requirements, excluding derivative borrowings, are as follows:

	Principal	Interest	Total
Year ending June 30,			
2019	\$ 41,098	84,891	125,989
2020	42,819	86,261	129,080
2021	52,550	84,635	137,185
2022	53,491	82,983	136,474
2023	55,667	81,409	137,076
2024-2028	340,969	340,683	681,652
2029-2033	439,804	205,758	645,562
2034-2038	643,010	48,283	691,293
2039	115,000	1,746	116,746
Total	\$ 1,784,408	1,016,649	2,801,057

As rates change, interest payments on the 2010 Bonds will vary. Outstanding bonds that are redeemable before their scheduled due dates are as follows at June 30, 2018:

Description	Redemption date	Redemption price	Principal amount outstanding		
Metropolitan Highway System:					
2010 Series A - Subordinated Debt	2030 to 2039	100%	\$	454,480	
2010 Series B - Subordinated Debt	2021 to 2035	100		238,210	
2010 Series A - Senior Debt	2035 to 2037	100		207,665	
2010 Series B - Senior Debt	2021 to 2037	100		593,285	

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## **Current Refunding**

On May 10, 2018, MassDOT issued \$135,690 in revenue bonds to refund \$137,855 of outstanding 2010 Series A Subordinated Bonds (Subseries A-1 and A-7) which are variable rate demand bonds that reset weekly. The new bonds (2018 Series A) bear an interest rate of 5%. Interest is payable semi-annually commencing on July 1, 2018. Principal on the 2018 Series A bonds is payable beginning January 1, 2024 and on each January 1 through 2029.

The net proceeds of \$127,251 (after payment of \$810 in underwriting fees, insurance, swap termination payment of \$32,570, other issuance costs, plus premium of \$25,063) plus an additional \$11,254 of 2010 Series A Subordinated debt service funds and debt reserve funds were used to retire the outstanding 2010 Series A-1 and Series A-7 Subordinated Bonds, terminate swap agreements associated with refunded variable rate bonds and the related accrued interest of \$650.

#### **Demand Bonds**

Included in long-term debt is \$207,665 of Senior and \$454,480 of Subordinated variable rate demand bonds. The bonds were issued in May and April 2010, respectively, and the proceeds of the bonds were used to refund certain revenue bonds issued previously by the Massachusetts Turnpike Authority. \$207,665 of the Senior Bonds and \$268,790 of the Subordinated Bonds are subject to purchase on the demand of the holder at a price equal to principal plus accrued interest. The ability of MassDOT, through its Trustee and remarketing agent, to purchase such bonds is secured through letters of credit and standby bond purchase agreements with various nationally recognized financial institutions that expire between April 2019 and April 2021. Under generally accepted accounting principles, variable rate demand obligations (VRDO's) are generally classified as current, rather than long-term liabilities if, among other things, the supporting security agreements expire less than one year after year end. Although \$92,845 of the VRDO's is secured by agreements that expire on April 12, 2019 and \$192,845 of the VRDO's is secured by agreements that expire on May 17, 2019, they are also subject to a "Mandatory Tender for Purchase" requirement that becomes effective prior to April 12, 2019 and May 17, 2019 expiration dates. This requirement, when effective, results in the VRDO's being treated as long-term debt. As such, these amounts have been presented as long-term liabilities, rather than current liabilities in the accompanying financial statements.

In 2013, \$185,690 of Subordinated bonds were converted to direct purchase mode to be held by the purchaser for a specific period of time and are not subject to purchase or remarketing at the demand of the holder and therefore do not require a letter of credit or standby bond purchase agreement. The direct purchase agreement on the 2010 Series A-4 Subordinated bonds in the amount of \$92,845 expires in April 2019 while the direct purchase agreement on the 2010 Series A-5 bonds in the amount of \$92,845 expires in April 2020.

## Prior Defeasances of Debt

At June 30, 2018, the principal amounts outstanding on revenue bonds and notes that are considered defeased are as follows:

Description	Redemption date	Redemption price	Principal amount outstanding
1993 Series A Term	2018 to 2023	100%	\$109,900

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#### **Derivative Instruments**

## **Swap Termination**

As part of the current refunding that occurred on May 10, 2018, MassDOT terminated two swap agreements by making net payments to counterparties totaling \$32,570. A portion of amounts from the current refunding were used for the swap termination payment. The amount is reported as other financing uses in the Statement of Revenues, Expenditures and Changes in Fund Balances and as a Special Item in the Statement of Activities in the accompanying financial statements.

## **Interest Rate Swaps/Swaptions**

The former Massachusetts Turnpike Authority (the Turnpike) entered into swaptions, which upon exercise became interest rate swaps (hereinafter referred to as Swaps) to (1) lock in long-term fixed rate payments and (2) hedge changes in cash flows on variable-rate bonds due to interest rate risk. As of November 1, 2009 (MassDOT's inception), these Swaps were classified as investment derivatives, as they were not associated with a then existing asset or liability of MassDOT. During the year ended June 30, 2010, these Swaps became associated with and were determined to be effective hedges of the 2010 Series A Senior and Subordinated Revenue Bonds issued by MassDOT to refund long-term debt previously issued by the Turnpike. At June 30, 2018, the remaining Swaps continue to be effective hedges of the refunding bonds.

Additionally, the Turnpike received premiums in connection with these Swaps upon issuance of the related swaptions. A portion of the premiums is considered borrowings and is valued separately from the Swaps. The balance of the borrowings at June 30, 2018 totals \$10,368 and is presented as part of bonds payable in the accompanying government-wide financial statements.

## **Forward Delivery Agreement**

MassDOT's bond trustee has invested certain of the debt service funds it holds through a Forward Delivery Agreement (Agreement). The Agreement, administered by Wells Fargo Bank, N.A., provides MassDOT with a guaranteed rate of return on trustee deposits held for debt payments until such time as payments are due. These deposits are recorded on MassDOT's financial statements at the fair value of the underlying securities provided by Wells Fargo through the Agreement. The Agreement qualifies as an investment derivative instrument and is reported at its fair value of \$6,452 as of June 30, 2018. The credit rating of Wells Fargo Bank, N.A. at June 30, 2018, as determined by S&P, was A+.

The fair value balances and notional amounts of the derivative instruments outstanding at June 30, 2018, classified by type, and the changes in fair value of such derivative instruments for the year then ended as reported in the 2018 financial statements are as follows:

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	Changes in fair value					Fair value at June 30, 2018		June 30, 2018	
	Classification	Amount debit (credit)		Classification	Amount debit (credit)		Notional		
Governmental activities:									
Cash flow hedges:									
Pay-fixed interest rate swaps	Deferred outflow	\$	(86,022)	Derivative liability	\$	(241,937)	\$	632,265	
Investment derivatives:									
Pay-fixed interest rate swaps	Investment revenue		(236)	Derivative liability		(5,738)		29,880	
Pay-variable interest rate basis swaps	Investment revenue		(587)	Derivative liability		(2,214)		100,000	
Subtotal			(86,845)			(249,889)			
Forward delivery agreements	Investment revenue		2,139	Derivative asset		6,452			
		\$	(84,706)		\$	(243,437)			

The fair values of the interest rate swaps and the Forward Delivery Agreement were estimated using the zero-coupon method. This method calculates the future net settlement payments required by the derivative, assuming that the current forward rates implied by the yield curve correctly anticipate future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for hypothetical zero-coupon bonds due on the date of each future net settlement on the derivatives.

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The following table displays the terms of MassDOT's derivative instruments outstanding at June 30, 2018

Derivative Item	Type	Objective	Effective Date	Notional amount	Term date	Payable swap rate	Receivable swap rate	Premiums received	Fair value at June 30, 2018
Cash flow l	nedges:				· <del></del>				
1	Pay-fixed	Hedge interest rate risk	7/1/2008	\$207,665	1/1/2037	4.750%	68% of 1 month	\$ 10,375 \$	(74,005)
	interest rate	from 2010 senior debt					LIBOR		
	swap	(Series A-1 and A-2)					(0.83225%) (a)		
2	Pay-fixed	Hedge interest rate risk	1/1/2008	83,100	1/1/2037	4.875%	68% of 1 month	4,391	(27,572)
	interest rate	from 2010 sub. debt					LIBOR		
	swap	(Series A-2)							
3	Pay-fixed	Hedge interest rate risk	1/1/2009	341,500	1/1/2039	4.750%	68% of 1 month	17,063	(140,360)
	interest rate	from 2010 sub. debt					LIBOR		
	swap	(Series A-3 through A-6)							
Investment	derivatives:								
4	Pay-fixed		1/1/2009	29,880	1/1/2039	4.750%	68% of 1	_	(5,738)
	interest rate						month LIBOR		
	swap								
5	Pay- variable		10/1/2002	100,000	7/1/2029	SIFMA	67% of 3 month	5,350	(2,214)
	interest rate					(1.51%) (a)	LIBOR		
	basis swap					(a)	(1.56495%) (a)		
	vasis swap						(1.3049370) (a)		
		Subtotal							(249,889)
6	Forward								
	delivery								
	agreement		_	_	1/1/2029	_	Fixed	_	6,452 \$ (243,437)

(a) - Swap Rates as of June 30, 2018

Subsequent to year end, the investment derivative with a notional amount of \$100,000 was terminated. The fair value at June 30, 2018 amounted to \$2,214 and is included in liabilities for derivative instruments on the Statement of Net Position.

#### **Swap Payments and Related Debt**

Debt service requirements of the 2010 Subordinated Debt Series A-2 through A-6 and 2010 Senior Debt Series A-1 and A-2 (2010 Bonds) and net swap payments for the cash flow hedge swaps, applying the fixed rates (4.75% – 5.00%) of the swaps and assuming 68% of 1 month LIBOR rate (1.42137%) and the variable rates (1.46% – 1.64%) on the 2010 Bonds as of June 30, 2018 are shown in the table below. There is a fixed rate (fee) component on one of the Senior 2010 bonds and two of the Subordinated 2010 bonds related to Direct Purchase contracts. The fixed rate (fee) is as follows: A-4's (0.70% through April 2019) and A-5's (0.80% through April

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2020). Such amounts are included in 2010 bonds interest amounts. The following table reflects debt service requirements through the term of the swap:

	<b>2010 Bonds</b>	<b>2010 Bonds</b>	Interest rate	
	Principal	Interest	swap, net	Total
2019	\$ 	11,344	22,144	33,488
2020		10,878	22,144	33,022
2021		10,162	22,144	32,306
2022	_	9,952	22,144	32,096
2023		9,952	22,144	32,096
2024-2028		49,757	110,721	160,478
2029-2033	77,790	47,936	106,629	232,355
2034-2038	469,355	34,095	75,548	578,998
2039	115,000	1,746	3,828	120,574
	\$ 662,145	185,822	407,446	1,255,413

As rates change, interest payments on the 2010 Bonds and net swap payments will vary.

#### **Risk Disclosures**

Credit Risk – MassDOT is not exposed to credit risk on its interest rate swaps as none of these instruments are in an asset position. However, if interest rates and volatilities change and the fair values of the swaps were to become positive, MassDOT would be exposed to credit risk in the amount of the positive fair values. To mitigate credit risk, MassDOT's counterparties are all required to be rated in the A category or higher by the three rating agencies.

The following represents the credit ratings of the swap counter parties at June 30, 2018:

Derivative swap item	Counterparty credit rating( Moody's, S&P and Fitch)
Derivative 1	Aa2, A+, AA-
Derivative 2	Aa2, A+, AA-
Derivative 3	Aa2, A+, AA-
Derivative 4	Aa2, A+, AA-
Derivative 5	Aa2, A+, AA

Basis Risk – MassDOT is exposed to basis risk related to its pay-variable receive-variable interest rate basis swap because the pay-variable rate is based on SIFMA and the receive-variable rate is 67% of 3 month LIBOR. MassDOT is also exposed to basis risk from cash flow hedges because the floating rate being hedged on the bonds is determined on a basis different from the floating rate on the swaps of 68% of 1 month LIBOR.

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

Termination Risk – MassDOT or the counter party may terminate the swap if the other party fails to perform under the terms of the contract. If any of the swaps are terminated, the related variable rate bonds would no longer be hedged. Finally, if at the time of termination the swap has a negative fair value, MassDOT would be liable for a payment equal to the swaps' fair value.

## (6) Pledged Revenues

MassDOT has pledged toll and certain related revenues, generated from the Metropolitan Highway System (MHS) to repay revenue bonds after deducting the amount necessary to pay all operating and maintenance costs, capital reinvestment and the maintenance of certain debt service reserve funds as required by the applicable bond covenants. The bonds were originally issued to provide financing for construction related to the MHS. Certain revenue bonds associated with the original issuance were refunded, for which the pledge remains. The bonds are payable through 2039 from the pledged revenues and a \$100,000 annual contract assistance payment from the Commonwealth. Annual principal and interest payments (including net swap payments) on the bonds, net of the Commonwealth's \$100,000 annual contract assistance payment, are expected to require approximately 25% of pledged revenues.

The remaining principal balance to repay MHS revenue bonds amounts to \$1,784,408. The remaining principal and interest (including net swap payments) related to MHS to be paid on the bonds is \$3,208,503. Principal and interest (including net swap payments) paid and pledged revenue received for the year ended June 30, 2018 were \$151,185 and \$214,776, respectively.

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# (7) Governmental Fund Balances

The constraints on fund balances as listed in aggregate in the Governmental Funds Balance Sheet are detailed as follows.

# **Governmental Funds - Fund Balance**

	MTTF (general)	Highway capital projects	Other governmental funds	Total
Nonspendable:				
Prepaid expenditures	\$ 2,359	_		2,359
Restricted:				
Debt service	299,613	_	_	299,613
Turnpike (toll) operations and capital reinvestment	284,562	_	_	284,562
Tobin bridge and metropolitan highway system operations	119,068		_	119,068
Transportation infrastructure fund		36,874		36,874
Transportation Infrastructure & Development Fund	_	4,661	_	4,661
Central Artery repairs and maintenance	_	_	377,904	377,904
Motor vehicle safety inspection	_	_	5,612	5,612
Highway	_	_	722	722
Planning and Enterprise Services	726	_	76	802
Registry	1,326	_	_	1,326
Rail and Transit	_	_	15,098	15,098
Total restricted fund balances	705,295	41,535	399,412	1,146,242
Assigned:				
Highway operations		_	250	250
Registry operations		_	100	100
Total assigned fund balances			350	350
Unassigned	(13,962)			(13,962)
Total governmental fund balances	\$ 693,692	41,535	399,762	1,134,989

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## (8) Employee Benefit Plans

## (a) Pension Plan

#### General Information about the Pension Plan

Plan description: Pensions are provided to eligible MassDOT employees through the Massachusetts State Employees' Retirement System (MSERS), a cost-sharing multiple-employer defined benefit pension plan as defined in GASB Statement No. 67, Financial Reporting for Pension Plans. The MSERS is governed by the Massachusetts State Retirement Board (MSRB), which consists of five members-two elected by current and active MSERS members, one by the remaining members of the MSRB, one who is appointed by the State Treasurer and the State Treasurer, who serves as ex-officio and is the Chair of the MSRB. Membership in the MSERS is mandatory immediately upon the commencement of employment for all permanent employees working a minimum of 25 hours per week. MSERS is part of the Commonwealth of Massachusetts' reporting entity and does not issue a stand-alone audited financial report.

Benefits provided: MSERS provides retirement, disability, survivor and death benefits to members and their beneficiaries. MGL establishes uniform benefit and contribution requirements for all contributory public employee retirement systems (PERS). These requirements provide for superannuation retirement allowance benefits up to a maximum of 80% of a member's highest three-year average annual rate of regular compensation. For employees hired after April 1, 2012, retirement allowances are calculated on the basis of the last five years or any five consecutive years, whichever is greater in terms of compensation. Benefit payments are based upon a member's age, length of creditable service, group creditable service, and group classification. The authority for amending these provisions rests with the Legislature.

Members become vested after ten years of creditable service. A superannuation retirement allowance may be received upon the completion of twenty years of creditable service or upon reaching the age of 55 with ten years of service. Normal retirement for most employees occurs at age 65; for certain hazardous duty and public safety positions, normal retirement is at age 55. Most employees who joined the system after April 1, 2012 cannot retire prior to age 60.

The MSERS' funding policies have been established by Chapter 32 of the MGL. The Legislature has the authority to amend these policies. The annuity portion of the MSERS retirement allowance is funded by employees, who contribute a percentage of their regular compensation. Costs of administering the plan are funded out of plan assets.

Contributions: Chapter 32 of the MGL assigns authority to establish and amend contribution requirements of the plan. Active plan members contribute between 5 and 9% of their gross regular compensation except for State Police which is 12% of regular compensation. The contribution rate is based on the date plan membership commences. Members hired on or after January 1, 1979, contribute an additional 2% of annual regular compensation in excess of \$30.

The MGLs governing employer contribution requirements to MSERS are varied and vary among employers to such an extent that there is no uniform contribution method. Consequently, MSERS developed an effective contribution methodology that allocates total actual contributions among the employers in a consistent manner (based on an employer's share of total covered payroll). Any differences between the effective contribution and an employer's actual contributions are considered a nonemployer contribution from the Commonwealth. While certain nonemployer contributions are the legal responsibility of the Commonwealth and are identified by MSERS as special funding situations, MassDOT does not fall within

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this category. For the June 30, 2017 measurement date, the Commonwealth made contributions on behalf of MassDOT totaling \$9,185 and MassDOT made contributions totaling \$25,519 to the pension plan.

# Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2018, MassDOT reported a liability of \$569,276 for its proportionate share of the net pension liability. The net pension liability was measured as of June 30, 2017, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of January 1, 2017 for which update procedures were used to roll forward the total pension liability to the measurement date (June 30, 2017). MassDOT's proportion of the net pension liability is based on actual contributions adjusted for nonemployer contributions (as described above). At June 30, 2017, MassDOT's proportion was 4.43888%, which compared to a proportion of 4.67817% at June 30, 2016.

For the year ended June 30, 2018, MassDOT recognized pension expense of \$61,654. At June 30, 2018, MassDOT reported deferred outflows of resources and deferred inflows of resources from the following sources:

		Deferred Outflows of Resources	Deferred Inflows of Resources
Net difference between projected and actual earnings on pension plan investments	\$		6,783
Changes of assumptions		59,242	_
Changes in proportion		5,170	44,591
Difference between expected and actual experience		22,010	15,488
Contributions subsequent to the measurement date		29,313	
	\$	115,735	66,862
	_		

Excluding contributions made subsequent to the measurement date, the amount reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ending June 30,	A	Amount		
2019	\$	(9,003)		
2020		29,741		
2021		5,966		
2022		(5,707)		
2023		(1,437)		
Totals	\$	19,560		

Actuarial assumptions: The total pension liability for the June 30, 2017 measurement date was determined by an actuarial valuation as of January 1, 2017 rolled forward to June 30, 2017. This valuation used the following assumptions:

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- 1. (a) 7.50% investment rate of return, (b) 3.50% interest rate credited to the annuity savings fund and (c) 3.00% cost of living increase per year.
- 2. Salary increases are based on analyses of past experience but range from 4.0% to 9.0% depending on group and length of service.
- 3. Mortality rates were as follows:
  - Pre-retirement reflects RP-2014 Blue Collar Employees Table projected generationally with Scale MP-2016 and set forward 1 year for females
  - Post-retirement reflects RP-2014 Blue Collar Healthy Annuitant table projected generationally with Scale MP-2016 set forward 1 year for females
  - Disability the mortality rate is assumed to be in accordance with the RP-2000 Healthy Annuitant table projected generationally with Scale BB and a base year of 2015 (gender distinct)
- 4. Experience studies were performed as follows:
  - Dated February 27, 2014 and encompasses the period January 1, 2006 to December 31, 2011.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future rates of return by the target asset allocation percentage. Best estimates of geometric rates of return for each major asset class included in the target asset allocation are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity	40%	5%
Portfolio Completion Strategies	13%	3.6%
Core Fixed Income	12%	1.1%
Private Equity	11%	6.6%
Value Added Fixed Income	10%	3.8%
Real Estate	10%	3.6%
Timber / Natural Resources	4%	3.2%
Hedge Funds	%	3.6%
Totals	100%	

Discount rate: The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that contributions from employers will be made at rates equal to difference between actuarially determined contribution rates and the member rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

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Sensitivity of MassDOT's proportionate share of the net pension liability to changes in the discount rate: The following presents MassDOT's proportionate share of the net pension liability calculated using the discount rate of 7.50%, as well as what the MassDOT's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50%) or 1-percentage-point higher (8.50%) than the current rate:

	1% Decrease (6.50%)		Current Discount Rate (7.50%)	1% Increase (8.50%)
MassDOT's Proportionate Share of the Net Pension Liability	\$	775,330	569,276	403,294

*Pension plan fiduciary net position*: Detailed information about the pension plan's fiduciary net position is available in the Commonwealth of Massachusetts' Comprehensive Annual Financial Report.

## (b) Other Postemployment Benefits (OPEB)

Plan Description. MassDOT participates in the Commonwealth's OPEB plan, an single employer defined Postemployment Benefits Other Than Pensions (OPEB) Plan. Benefits are managed by the Commonwealth's Group Insurance Commission (GIC) and investments are managed by the Pension Reserves Investment Management (PRIM) Board.

At the inception of MassDOT, the employees of the former Massachusetts Turnpike Authority became eligible to participate in the Commonwealth's OPEB plan. All other employees of MassDOT were members of the plan prior to the creation of MassDOT and remain so.

The State Retiree Benefits Trust Fund (SRBT) is set up solely to pay for OPEB benefits and the cost to administer those benefits. It can only be revoked when all such health care and other non-pension benefits, current and future, have been paid or defeased. GIC administers benefit payments, while the Trustees are responsible for investment decisions. The SRBT is administered by the board of trustees and is reported as an OPEB Trust Fund in the Commonwealth's financial statements and does not issue a stand-alone audited financial report.

Management of the SRBT is vested with a board of trustees, which consists of seven members including the Secretary of Administration and Finance (or their designee), the Executive Director of the GIC (or their designee), the Executive Director of PERAC (or their designee), the State Treasurer (or their designee), the Comptroller (or their designee), one person appointed by the Governor and one person appointed by the State Treasurer. The members elect one person to serve as chair of the board.

Benefits provided. Under Chapter 32A of the Massachusetts General Laws the Commonwealth is required to provide certain health care and life insurance benefits for retired employees of the Commonwealth. Substantially all of the Commonwealth's employees may become eligible for these benefits if they reach retirement age while working for the Commonwealth. Eligible retirees are required to contribute a specified percentage of the health care/benefits costs, which are comparable to contributions required from employees.

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Funding Policy. Employer and employee contributions rates are set in the General Law. The Commonwealth recognizes its share of the costs on an actuarial basis. As of June 30, 2018 and as of the valuation date (January 1, 2017), participants contributed 0% to 20% of the premium cost, depending on the date of hire and whether the participant is active, retiree or survivor status. As part of the fiscal 2010 General Appropriation Act, all active employees pay an additional 5% of premium costs. MassDOT is required to reimburse the Commonwealth at their contractual fringe rate of 8.92% based on current payroll. MassDOT's reimbursement to the Commonwealth for the year ending June 30, 2018 was approximately \$22,193, which equaled the required contribution.

The Massachusetts General Laws (MGLs) governing employer contributions to OPEB determine whether entities are billed for OPEB costs. Consequently, OPEB developed an effective contribution methodology which allocates total actual contributions amongst the employers in a consistent manner (based on an employer's share of total covered payroll). Any differences between the effective contribution and an employer's actual contributions are considered a nonemployer contribution from the Commonwealth. According to MGL, certain nonemployer contributions are the legal responsibility of the Commonwealth and have accordingly been reflected on the schedule of employer and nonemployer allocations as special funding situations. MassDOT is not a special funding situation.

## OPEB Liabilities, OPEB Expense, and Deferred Inflows of Resources Related to Pensions

At June 30, 2018 MassDOT reported a liability of \$803,052 for its proportionate share of the net OPEB liability. The net OPEB liability was measured as of June 30, 2017 and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of January 1, 2017 for which procedures were used to roll forward the total OPEB liability to the measurement date. MassDOT's proportion of the net OPEB liability is based on actual contributions adjusted for nonemployer contributions. At June 30, 2017, MassDOT's proportion was 4.59294%.

For the year ended June 30, 2018, MassDOT recognized OPEB expense of \$38,842. At June 30, 2018, MassDOT reported deferred outflows of resources and deferred inflows of resources from the following sources:

	Deferred Outflows of Resources	Deferred Inflow of Resources
Net difference between projected and actual investment earnings on OPEB plan investments	\$ _	1,465
Changes of assumptions		90,954
Changes in proportion		38,821
Difference between expected and actual experience	_	1,847
Contributions subsequent to the measurement date	22,193	_
	\$ 22,193	133,087

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Excluding contributions made subsequent to the measurement date, the amount reported as deferred outflows of resources and deferred inflows of resources will be recognized in OPEB expense as follows:

Year ending June 30	Amount
2019	\$ (27,845)
2020	(27,845)
2021	(27,845)
2022	(27,845)
2023	(21,707)
Total	\$ (133,087)

Actuarial Assumptions: The total OPEB liability for the June 30, 2017 measurement date was determined by an actuarial valuation as of January 1, 2017 rolled forward to June 30, 2017. This valuation used the following assumptions:

- 1. The following annual health care cost trend rates:(1) 8.5%, decreasing by 0.5% each year to an ultimate rate of 5.0% in 2024 for medical, (2) 5.0% for Employer Group Waiver Plan ("EGWP") and (3) 5.0% for administration costs.
- 2. The mortality rate was in accordance with RP 2014 Blue Collar Mortality Table projected with scale MP-2016 from the central year, with females set forward one year.
- 3. Participation rates:
  - a. 100% of all retirees who currently have health care coverage will continue with the same coverage, except that retirees under age 65with POS/PPO coverage switch to Indemnity at age 65 and those over age 65 with POS/PPO coverage switch to HMO.
  - b. All current retirees, other than those indicated on the census data as not being eligible by Medicare, have Medicare coverage upon attainment of age 65, as do their spouses. All future retirees are assumed to have Medicare coverage upon attainment of age 65.
  - c. 80% of current and future contingent eligible participants will elect health care benefits at age 65, or current age if later.
  - d. Actives, upon retirement, take coverage, and are assumed to have the following coverage:

-	Retirement Age		
_	Under 65	Age 65 +	
Indemnity	40.0%	85.0%	
POS/PPO	50.0%	0.0%	
НМО	10.0%	15.0%	

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Investment assets of the OPEB plan are with the Pension Reserves Investment Trust (PRIT) Fund. The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future rates of return by the target asset allocation percentage. Best estimates of geometric rates of return for each major asset class included in the PRIT Fund's target asset allocation as of June 30, 2017 are summarized in the following table:

		Long-Term Expected Real Rate of Return
Asset Class	Target Allocation	2017
Global Equity	40.0%	5.0%
Portfolio Completion Strategies	13.0%	3.6%
Core Fixed Income	12.0%	1.1%
Private Equity	11.0%	6.6%
Value Added Fixed Income	10.0%	3.8%
Real Estate	10.0%	3.6%
Timber/Natural Resources	4.0%	3.2%
Hedge Funds	%	3.6%
Total	100.0%	

Discount rate: The discount rate used to measure the OPEB liability as of June 30, 2017 was 3.63%. The rate was based on a blend of the Bond Buyer Index rate of 3.58% as of the measurement date June 30, 2017 and the expected rate of return. The OPEB plan's fiduciary net position was not projected to be available to make all projected future benefit payments for current plan members. The projected "depletion date" when projected benefits are not covered by projected assets is 2023. Therefore, the long-term expected rate of return on plan investments of 7.50% per annum was not applied to all periods of projected benefit payments to determine the total OPEB liability as of June 30, 2017.

Sensitivity of MassDOT's proportionate share of the net OPEB liability to changes in the discount rate: The following presents MassDOT's proportionate share of the net OPEB liability calculated using the discount rate, as well as what the proportionate share of the net OPEB liability would be if it were calculated using a discount rate that is 1- percentage point lower or 1- percentage point higher than the current rate:

	1% Decrease (2.63%)	Current Discount Rate (3.63%)	1% Increase (4.63%)
MassDOT's Proportionate Share of the Net OPEB Liability \$	953,288	803,052	683,604

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Sensitivity of MassDOT's proportionate share of the net OPEB liability to changes in the healthcare cost trend rate: The following presents MassDOT's proportionate share of the net OPEB liability, as well as what the net OPEB liability would be if it were calculated using a healthcare cost trend rate that is 1-percentage point lower or 1-percentage point higher than the current healthcare cost trend rate:

	1% Decrease	Current Rate	1% Increase
MassDOT's Proportionate Share of the Net OPEB Liability	\$ 664,424	803,052	985,480

## (9) Leases

## (a) Commitments

MassDOT has commitments under various operating leases. Total lease expense for the year ending June 30, 2018 was \$5,426. The following is a summary of the future minimum lease payments for operating lease obligations:

Years:	Amount
2019	\$ 6,815
2020	5,785
2021	5,328
2022	3,591
2023	3,049
Thereafter	10,422
Total	\$ 34,990

Capital lease obligations are not material to MassDOT's financial statement

## (b) Rental Income

MassDOT leases property and air rights to others. For the year ended June 30, 2018, MassDOT earned \$60,709 in rental income. The following is a schedule by years of minimum future rental income on non-cancelable operating leases as of June 30, 2018:

Years:	Amount
2019	\$ 51,610
2020	41,903
2021	41,847
2022	39,453
2023	39,738
Thereafter	584,263
Total	\$ 798,814

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## (10) Risk Management

As part of its normal operations, MassDOT encounters the risk of accidental loss stemming from third party liability claims, property loss or damage, and job related injuries and illnesses. In managing these loss exposures, MassDOT applies a combination of risk management measures, including safety and loss prevention program, emergency planning, contractual risk transfer, self-insurance (internal retention) and commercial insurance. Settled claims resulting from the risks discussed above did not exceed the amount of insurance coverage in force during the year ended June 30, 2018.

In connection with the self-insurance and insurance programs, MassDOT retains part of the losses incurred and internally manages the self-insured claims. The current MassDOT self-insured retention includes (i) up to \$2,500 per loss for public official liability (ii) \$10,000 per loss for privacy & network liability, (iii) \$500 per loss involving damage to buildings and their contents, and (iv) \$50,000 per bridge and tunnel loss. Insurance is purchased above self-insured amounts, subject to availability and reasonableness of cost. Liability insurance policies related to the former Massachusetts Turnpike Authority's exposures in prior periods (for incurred but not reported claims) have been assigned to MassDOT and remain in force.

## (a) Workers' Compensation

Massachusetts' Human Resources Division (HRD). HRD assumed responsibility for making fair and timely payments of indemnity and medical benefits to injured Massachusets, maintaining the claim and financial records and for negotiating appropriate settlements for all workers' compensation claims. This includes all legacy claims from the predecessor entities.

Liabilities for self-insured claims are reported if it is probable that a loss has been incurred and the amount can be reasonably estimated. These losses include an estimate of claims that have been incurred but not reported at year-end and are based on the historical cost of settling similar claims. MassDOT records such liabilities as other liabilities.

The estimated workers' compensation liability for occurrences through June 30, 2018 is \$20,844. This amount is based on the results of a review performed by an independent actuarial firm retained by MassDOT, and represents an estimate of liabilities incurred based on past experience for claims reported and not reported as of June 30, 2018.

Changes in the workers' compensation claims liability since July 1, 2016 were as follows:

Liability balance, July 1, 2016	\$ 23,650
Provision to record estimated losses	3,359
Payments	(5,159)
Liability balance, June 30, 2017	\$ 21,850
Liability balance, July 1, 2017	\$ 21,850
Provision to record estimated losses	5,024
Payments	(6,030)
Liability balance, June 30, 2018	\$ 20,844

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## (b) Owner Controlled Insurance Program (OCIP)

MassDOT has assumed responsibility for providing worker's compensation and general liability insurance for all eligible contractors and subcontractors working on the Central Artery/Tunnel Project (Project) by establishing an OCIP. A Trust, managed and administered by an independent third party (trustee), was established to protect a portion of the assets set aside with the insurance carrier to fund project liabilities. During fiscal 2018, the Trust was dissolved and MassDOT commenced managing and administering OCIP. Amounts related to OCIP are restricted and cannot be used for other purposes and continue to be recorded in the internal service fund.

These insurance programs within the OCIP are structured as retrospectively rated insurance programs with retained loss limits of \$1,000 per claim, \$3,000 on aggregate per occurrence for worker's compensation and \$2,000 per contractor, \$6,000 on aggregate per occurrence for general liability coverage. MassDOT is responsible for loss costs up to these amounts.

The estimated Claims and Judgments liability for the OCIP for occurrences through June 30, 2018 is \$2,000. This amount is based on the results of a review performed by an independent actuarial firm and it represents an estimate of liabilities incurred based on past experience for claims incurred and not reported as of June 30, 2018. Any residual amount remaining at the end of the program will be transferred to MassDOT's Transportation Infrastructure Fund.

Changes in the claims liability since July 1, 2016 were as follows:

Liability balance, July 1, 2016	\$ 3,600
Provision to record estimated losses	(359)
Payments	(641)
Liability balance, June 30, 2017	\$ 2,600
Liability balance, July 1, 2017	\$ 2,600
Provision to record estimated losses	(200)
Payments	(400)
Liability balance, June 30, 2018	\$ 2,000

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## (11) Commitments

MassDOT enters into construction contracts for roads, bridges, highways (including the Metropolitan Highway System and Western Turnpike) with various construction and engineering companies. Significant construction contracts outstanding at June 30, 2018 approximated \$4,510,637.

## (12) Litigation

MassDOT from time to time is engaged in various matters of routine litigation. These matters include personal injury and property damage claims for which MassDOT's liability is covered in whole or in part by insurance. MassDOT does not expect that these matters will require any amounts to be paid which in the aggregate would materially affect the financial statements. MassDOT accrued \$38,574 for legal claims related to the Fore River Bridge and the Longfellow Bridge at June 30, 2018.

## (13) Subsequent Events

Subsequent to year end, the Commonwealth legislature passed supplemental funding for fiscal 2018 Commonwealth Transportation Fund operations totaling \$76,098. Additionally the Executive Office for Administration and Finance provided \$17,391 from cash reserves to MassDOT to cover remaining fiscal 2018 budget deficits.

Subsequent to year end, MassDOT's fiscal 2019 operating budget was revised and approved for \$959,868 in expenditures and debt service. The amount will be funded from operating revenue from CTF (\$587,315), pledged and unpledged revenues (\$441,253), motor vehicle inspection trust fund (\$55,528), federal funds (\$17,998) and other revenues (\$35,214) including departmental, leases, investment income and reserves.

Subsequent to year end, MassDOT settled two legal claims. On October 15, 2018, the MassDOT Board of Directors approved a settlement agreement related to the Longfellow Bridge Rehabilitation Project (contract #72699) in the amount of \$23,959. The Secretary of MassDOT also approved a settlement agreement related to the Fore River Bridge design-build project (contract #71680) in the amount of \$14,615.

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## (14) MBTA - The Reporting Entity

The Massachusetts Bay Transportation Authority (the "Authority") was originally created in 1964 as a body politic and corporate and a political subdivision of the Commonwealth of Massachusetts (the Commonwealth) to finance and operate mass transportation facilities within, and, to a limited extent, outside of its territorial area of 176 cities and towns and is authorized to enter into agreements for providing mass transportation service by private companies, including railroads. The 176 cities and towns are grouped into three categories, based upon the weighting of each member's allocable percentage of population and assessments: (i) the inner 14 cities and towns; (ii) the outer 51 cities and towns; and (iii) the other 111 served communities.

Chapter 161A is referred to herein, together with Section 35T of Chapter 10 of Massachusetts General Laws, as the "Enabling Act."

The Authority is governed and its corporate powers exercised by the board of directors (the "Board of Directors" or "Board") of the Massachusetts Department of Transportation ("MassDOT"). However, during its existence, the Fiscal Management Control Board (FMCB) is afforded all the powers, responsibilities, and obligations relative to the Authority that are vested in the Board with the exception of authorizing the issuance of debt, which remains the responsibility of the Board. Futhermore, the General Manager is hired and retained by the Secretary of Transportation, as the FMCB reports to the Secretary.

The Control Board Act is part of the Commonwealth Fiscal Year 2016 budget, Chapter 46 of the Acts of 2015 of the Commonwealth, effective July 17, 2015. The FMCB is within the Massachusetts Department of Transportation and reports to the Secretary.

In addition, the Control Board 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 2018, 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 Authority 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 ownsource 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 Authority, including contracts entered into before the establishment of the Control Board, 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 Control Board 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.

The Control Board consists of five members appointed by the Governor. Three members shall be members of the Board, one shall have experience in transportation finance and one shall have experience in mass transit operation. The Control Board term has been extended by the optional two years at the time of creation and will continue until June 30, 2020. On May 25, 2017, the Governor accepted the FMCB's recommendation to extend

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its governance by two years and will continue until June 30, 2020, as allowed under the authorizing statute. By extending the term, the Authority will maintain momentum toward improving service and investment for riders. The Governor may not extend the FMCB term beyond June 30, 2020.

Following the dissolution of the Control Board, the Mass DOT Board will resume sole governance of the Authority. The Board consists of 11-members. The Secretary of Transportation shall serves ex-officio as Chair and ten other members are appointed by the Governor, one of whom shall be a rider, as defined in the Enabling Act; one of whom shall have experience in the field of public or private finance; one of whom shall have experience in transportation planning and policy; one of whom shall have experience in civil engineering; one of whom shall have experience in the field of public or private finance or transportation planning and policy; one of whom shall have municipal government experience in one of the fourteen cities and towns, as defined in the Enabling Act; one of whom shall have municipal government experience in one of the fifty-one cities and towns, as defined in the Enabling Act; one of whom shall have municipal government experience in one of the other served communities, as defined in the Enabling Act; one of whom shall have municipal government experience in a city or town not part of the area constituting the authority, as defined in the Enabling Act; and one of whom shall be a representative of a labor organization selected from a list of three nominees provided by the Massachusetts State Labor Council, AFL-CIO. Four of the members, other than the Chair, shall serve for terms that are coterminous with the Governor; provided, however, that at least three of the coterminous members shall have experience in transportation policy, public finance or civil engineering and at least one of the coterminous members shall be a rider. The six remaining members appointed by the Governor shall serve for terms of four years. No more than six of the eleven directors, except the ex-officio director, shall be members of the same political party.

Under the Enabling Act, the Advisory Board, consisting of a representative of each of the cities and towns paying Assessments, shall have certain specified powers, including the power to review the Authority's long term capital program and annual operating budget. The Enabling Act does not provide for the Authority to be a debtor under the federal bankruptcy code.

The Control Board shall appear before and provide updates to the Board not less than once per month.

On May 4, 2011, the Authority approved the establishment of Metropolitan Boston Transit Parking Corporation ("MBTPC") a private Massachusetts nonprofit corporation organized under the provisions of Chapter 180 of Massachusetts General Laws, for the limited purpose of taking action necessary to provide for issuance of bonds on behalf of the Authority secured by the revenues from the parking system of the Authority. The MBTPC Systemwide Senior Lien Parking Revenue Bonds, Series 2011 were issued on June 22, 2011. The Authority is the sole member of MBTPC and the Board of Directors consists of three ex officio management employees of the Authority. MBTPC has no employees. MBTPC is authorized under the Systemwide Parking Revenue Bonds Resolution (the "General Resolution") to issue debt payable and has assumed certain rights to receive gross revenues from the parking system of the Authority under a Transfer and Disposition Agreement. The obligations of the corporation, the bonds and Transfer and Disposition Agreement are limited obligations, payable solely from the assets of MBTPC, which are pledged under the General Resolution and recourse shall be limited to such assets. Due to its relationship with the Authority, the MBTPC is considered a blended component of the Authority.

In accordance with the requirements of Governmental Accounting Standards Board (GASB), Statements, of the financial statements must present the Authority (the primary government) and its component units. Pursuant to this criterion, no component units, other than the MBTPC, were identified for inclusion in the accompanying financial statements. Additionally, the accompanying financial statements are incorporated into the financial statements of MassDOT, as the Authority is a component unit of MassDOT.

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## (15) MBTA - Summary of Significant Accounting Policies

## (a) Basis of Financial Reporting

The Authority applies U.S. generally accepted accounting principles ("GAAP") as prescribed by GASB. The accompanying financial statements have been prepared using the economic resources measurement focus and the accrual basis of accounting and reflect transactions on behalf of the Authority, the reporting entity. The Authority accounts for its operations as an enterprise fund. Operating revenues and expenses result from providing transportation services to member communities. All other revenues and expenses are reported as nonoperating revenues and expenses.

## (b) Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

## (c) Cash

Cash and cash equivalents include cash on deposit and money market funds.

## (d) Investments

Investments are generally presented at fair value, other than certain investments that are recorded at amortized cost. The MBTA uses an independent pricing source to determine the fair value of investments at quoted market prices. Changes in fair value are included in nonoperating interest income in the Statement of Revenues, Expenses and Changes in Net Position. The investments recorded at amortized cost are those outlined by GASB standards and include: Investments held by the Authority in nonparticipating interest-earning investment contracts and money market investments and participating interest-earning contracts that have a remaining maturity at the time of purchase of one year or less. The Authority also records its investments in state and local government series obligations at cost due to prohibition of transferability of the obligations. The Authority invests in the Massachusetts Municipal Depository Trust ("MMDT") which is an internal investment pool and is not SEC-registered. The fund is state-regulated and is valued at amortized cost.

## (e) Statements of Cash Flows

For purposes of the statements of cash flows, the Authority considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents, which are reported as temporary cash investments.

#### (f) Cash and Investment Accounts

Certain cash and investments are segregated from operating cash and investments and labeled restricted due to certain internal or external restrictions as follows:

Bond Construction Accounts – represent unexpended bond proceeds.

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- Lease Deposits represent investments (Treasury STRIPS and a collateralized investment agreement)
  held by trustees that will be used to make scheduled equity payments on the Authority's capital
  leases.
- Bond Reserve Accounts represent funds required to be maintained by trust agreements and bond resolutions.
- Stabilization Accounts represent funds held in accordance with statutory requirements to be used when annual revenues are projected to be less than annual expenses, or if the Authority has insufficient funds on hand to pay current expenses.

Unrestricted cash and temporary investments are free of any internal or external restrictions. Other cash and temporary investments represent internally restricted funds held for capital maintenance, debt service and other expenses.

## (g) Capital Assets

All capital assets exceeding \$5, with a useful life of greater than one year, are stated at historical cost. These costs include the Authority's labor costs for employees working on capital projects, related fringe benefits, and an allocated share of general and administrative costs. Ordinary maintenance and repairs are charged to expense as incurred.

Depreciation of capital assets is computed using the straight line method over the estimated useful life of the asset. The major categories of transportation property in service and their estimated useful lives are as follows at June 30, 2018:

	Estimated useful life
Ways and structures	10 - 60 years
Building and equipment	3 - 25 years

## (h) Construction in Progress

During fiscal year 2018, \$937,255 was expended towards the completion of major construction projects and improvements in progress. The projects and improvements completed were transferred to the appropriate transportation property accounts. Major projects included transit service extensions, right of way improvements, and purchases of new rolling stock and other equipment.

In prior years, the interest on debt used to finance major construction/procurement projects was capitalized by aggregating the interest expense incurred from the date of the debt issuance until the entire drawdown of the proceeds, then offsetting that amount with interest earned over the same period by the invested proceeds. Over the past several years, the Authority substantially completed certain major projects whose interest costs were previously capitalized. These projects included the Automated Fare Collection System, the Greenbush Commuter Rail Line extension, the Silverline Transitway and several vehicle fleet procurements. Accordingly, in fiscal year 2018, the Authority had no material capitalized interest.

## (i) Materials and Supplies

Materials and supplies are stated at average cost and include items to support the Authority's operations.

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# (j) Self-Insurance

The Authority is fully self-insured for various risks including workers' compensation, and injuries and damages claims. The Authority also self-insures a portion of casualty, liability claims, and property losses.

#### (k) Revenue Recognition

The Authority realizes revenue from a variety of different sources including but not limited to dedicated sales tax revenue, dedicated assessment revenue, state contract assistance appropriated funds, fare revenue, and nonfare revenue such as real estate, parking, and advertising revenues.

Under the Enabling Act, the Dedicated Revenues are impressed with a trust for the benefit of Authority bondholders. Furthermore, the Commonwealth covenants that while any Authority bonds or notes secured by the Dedicated Revenues are outstanding and remain unpaid, the Dedicated Revenues shall not be diverted, and, so long as the Dedicated Revenues are necessary for the purpose for which they have been pledged, the rate of the sales tax shall not be reduced below the amount of the Dedicated Sales Tax and the aggregate revenue from Assessments shall be adjusted each July 1 by the growth rate of the inflation index over the preceding 12 months not to exceed 102.5% of the previous year's assessment.

The dedicated assessment revenue consists of the obligation of 176 cities and towns in the Authority's expanded district to pay assessments for transportation services and benefits rendered. The Commonwealth deducts the assessments from each municipality's local aid payments; as such, these payments are received from the Commonwealth. The Authority recognizes the assessments on an accrual basis as nonoperating revenue.

The Transportation Reform Act established the Commonwealth Transportation Fund (CTF), a budgetary fund of the Commonwealth for transportation related purposes, to receive essentially the same revenue previously deposited into the Highway Fund, including gasoline tax receipts and registry fee revenue. The CTF will also receive the sales tax receipts dedicated for transportation purposes. The Authority receives a dedicated revenue stream consisting of the Assessments and the Dedicated Sales Tax (collectively, the "Dedicated Revenues"). The Dedicated Sales Tax is equal to the greater of the base revenue amount (as defined in the Enabling Act) and the amount raised by a 1% statewide sales tax to be funded from existing sales tax receipts, subject to adjustment under certain circumstances set forth in the Enabling Act, plus \$160,000 annually. The Transportation Finance Act also provided funding for various transportation services and infrastructure needs within the various units of MassDOT. The Commonwealth appropriated the amount of \$127,000 of an operating transfer from the CTF to the Authority in the fiscal 2018 capital budget for pay-go capital purposes. These amounts are subject to appropriation by the Commonwealth in future years. The Authority recognizes the state appropriated funds on an accrual basis as nonoperating revenue.

The Authority generates significant revenue from the operation of its transportation system, including both fare revenue and nonfare revenue such as those derived from real estate, parking, and advertising. Fare revenue is recorded on an accrual basis as operating revenue when fare media is purchased by riding customers through fare vending equipment and pass programs administered by the Authority. Real estate, parking, and advertising revenue is recorded on an accrual basis as operating revenue upon reporting of independent contractors managing these revenue streams on behalf of the Authority.

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# (1) Capital Grants and Contributions

The Authority receives capital grants from certain governmental agencies to be used for various purposes connected with the planning, modernization, and expansion of transportation facilities and equipment. Capital grants of the Authority are reported as revenue rather than contributed capital as required by GASB Statement No. 33, Accounting and Financial Reporting for Nonexchange Transactions.

# (m) Compensated Absences

The Authority accrues for vested vacation pay when it is earned by employees. The amount of vested vacation pay accrued as of June 30, 2018 was \$19,668.

#### (n) Lease Accounts

Lease accounts represent amounts owed by third parties that are required to be used to pay lease payments under payment undertaking agreements on the Authority's capital leases (note 19).

#### (o) Pension Plans

The Authority sponsors three defined benefit pension plans, including the MBTA Retirement Fund, the MBTA Police Association Retirement Plan and the MBTA Deferred Compensation Plan. The Authority measures and records a net pension liability on its statement of net position which represents its unfunded pension plans' obligation. For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the MBTA Retirement Fund, the MBTA Police Association Retirement Plan, and the MBTA Deferred Compensation Plan, and additions to/deductions from the Plans' fiduciary net position have been determined on the same basis as they are reported by the Plans. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

# (p) Other Postemployment Benefits

Effective July 1,2017, the Authority adopted GASB Statement No.75 "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions." This Statement establishes standards for recognizing and measuring liabilities, deferred outflows or resources, deferred inflows of resources, and expense/expenditures. The Statement also identifies the methods and assumptions that are required to be used to project benefit payments, discount projected benefit payments to their actuarial present value, and attribute that present value to periods of employee service. Note disclosure and required supplementary information requirements are also addressed. The adoption of the Statement requires a restatement of the net position of the Authority as of June 30, 2017 (note 1(p)).

#### (q) Environmental Remediation Costs

The Authority recognizes pollution remediation liabilities related to site investigation, planning and design, cleanup, and site monitoring in accordance with the provisions of GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations*. An operating expense provision and corresponding liability measured at current value using the expected cash flow method and in a range of possible estimated amounts has been recognized for certain pollution remediation obligations. The remediation obligation estimates are subject to change over time due to price fluctuations, changes in technology, changes in potential responsible parties, statutes or regulations, or other factors, which could result in the revision of these estimates (note 24).

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#### (r) Derivatives

Derivative instruments are reported as assets or liabilities at fair value on the statement of net position. Changes in fair value may be reported in the statement of revenue, expenses, and changes in net position, or as deferred inflows or deferred outflows of resources in the statement of net position depending upon whether the derivative instrument qualifies for hedge accounting.

# (s) Available Unrestricted Resources

The Authority's policy is to utilize available unrestricted resources prior to restricted resources.

#### (t) Deferred Inflows and Outflows

The Authority accounts for certain transactions that result in the consumption or acquisition of one period that are applicable to future periods as deferred outflows and deferred inflows, respectively, to distinguish them from assets and liabilities. For fiscal 2018, the Authority has reported deferred outflows related to its derivative instruments, its pension plans, its other postemployment benefit plan and the deferred losses on debt refunding transactions. The deferred inflows are related to the deferred gains on debt refunding transactions, its other postemployment benefit plan and its pension plans.

# (u) Statement of Net Position

The statement of net position presents all of the Authority's assets and liabilities, with the difference reported as net position. Net position is reported in three categories:

- Net investment in capital assets consists of capital assets, net of accumulated depreciation and reduced
  by outstanding balances for bonds, notes and other debt that are attributed to the acquisition,
  construction or improvement of those assets.
- **Restricted net position** result when constraints placed on net position use are either externally imposed by creditors, grantors, contributors, and the like, or imposed by law through enabling legislation.
- **Unrestricted net position** consists of net position which does not meet the definition of the two preceding categories.

#### (v) Restatement of Net Position

As a result of adopting GASB Statement No. 75 "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions", the net position of the Authority as of July 1, 2017 was restated. (Note 1)

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# (16) MBTA - Deposits and Investments

The Authority's investment policy is to only invest in securities named in the respective trust agreements.

The Authority is authorized by its board of directors to make deposits into checking and savings accounts and to invest in direct obligations of the U.S. Treasury, its agencies and instrumentalities, bankers' acceptances, investment agreements, municipal bonds, repurchase agreements secured by U.S. government and agency obligations, and certain other investments permitted under the trust indentures.

Obligations of any agency or instrumentality of the United States of America including, but not limited to, the following may be acceptable as collateral to secure certificates of deposit or other instruments:

- (A) Federal Home Loan Banks
- (B) Federal Land Banks
- (C) Federal Intermediate Credit Banks
- (D) Bank for Cooperatives
- (E) Federal National Mortgage Association
- (F) Federal Farm Credit Banks

The Authority may invest in prime commercial paper of corporate issuers with a minimum quality rating of P-1 by Moody's Investors Service (Moody's) or A-1 by Standard and Poor's (S&P). These instruments can vary in maturity; however, no more than 10% of the investment funds shall be invested in the commercial paper of a single corporation.

Additionally, the Authority is authorized to invest in the Massachusetts Municipal Depository Trust (MMDT), a pooled money market like investment fund managed by the Commonwealth, established under General Laws, Chapter 29, Section 38A. MMDT is an external investment pool that meets the criteria established by GASB 79 to report its investments at amortized cost. As such, the Authority reports its investment in MMDT at amortized cost which approximates the net asset value of \$1.00 (one dollar) per share. MMDT has a maturity of less than one year and is not rated.

Marketable securities, which consist primarily of U.S. government instruments, are carried at fair value based upon quoted market prices. Nonparticipating interest earning contracts, including certificates of deposit and guaranteed investment contracts, and state and local government series obligations are carried at cost.

Deposits and investments consisted of the following amounts presented in the accompanying statement of net position at June 30, 2018:

	 2018
Restricted:	
Bond construction accounts	\$ 356,989
Bond reserve, stabilization, and other accounts	734,299
Lease deposits	58,470
Subtotal	1,149,758
Unrestricted cash and temporary investments	 256,492
	\$ 1,406,250

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Included in bond reserve, stabilization, and other accounts at June 30, 2018 are investments in Commonwealth debt instruments with a fair value of \$44,589.

In March 2016, the Board of the Authority approved the establishment of a Lockbox Capital Maintenance Fund (the "Fund") that is to be funded by the increase in fare revenue generated by the fare changes effective July 1, 2016. Resources deposited in the Fund will be used for pay-as-you-go capital improvements to the system. Spending from the Fund for any purpose other than capital improvements requires at least a two-thirds vote of the FMCB. The Fund had a balance of over \$136,019 as of June 30, 2018.

### (a) Custodial Credit Risk – Deposits

The custodial credit risk for deposits is the risk that, in the event of a bank failure, the Authority's deposits may not be recovered. The deposits in the bank in excess of the insured amount and collateralized amount are uninsured and uncollateralized. The carrying amount of the Authority's deposits at June 30, 2018 was \$275,649. The bank balance at June 30, 2018 was \$279,387. Of this amount, \$0 was exposed to custodial credit risk as uninsured and uncollateralized. These amounts reflect the Federal Deposit Insurance Corporation limit of \$250 per institution at June 30, 2018.

# (b) Interest Rate Risk – Investments

Interest rate risk is the risk that changes in interest rates of debt investments will adversely affect the fair value of an investment. The Authority follows the guidelines in the Authority's trust agreements, and does not have a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

The Authority's fixed income investments at June 30, 2018 are presented below. All investments are presented by investment type and maturity.

	2018						
	Investment maturities (in years						
Investment type	Amount	Less than 1 year	1 - 3	4 - 8	More than 8		
MMDT	\$ 394,817	394,817					
Money market funds	324,834	324,834		_	_		
Guaranteed investment contracts	3,916	<u> </u>	_	_	3,916		
U.S. Treasury STRIPS	58,470	_	_	_	58,470		
U.S. Treasury Securities	119,755	119,755	_	_	_		
U.S. government-sponsored enterprises	99,432	2 70,734	_	_	28,698		
State and Local Government	62,926	<u> </u>	_	12,180	50,746		
Municipal bonds	44,589	_	_	15,493	29,096		
International bank notes	21,863	21,863					
Investments	\$ 1,130,602	932,003		27,673	170,926		

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# (c) Credit Ratings

The Authority holds guaranteed investment contracts with a fair value of \$3,916 at June 30, 2018. These investments are not rated.

The Authority had \$285,740 in U.S. Treasury STRIPS, U.S. Treasury securities, State and local government series and municipal bonds as of June 30, 2018. The investments in Treasury STRIPS, U.S. Treasury Securities and State and local government series obligations are backed by the full faith and credit of the U.S. government. The municipal bonds have an implied credit rating of Aaa/AA+.

The Authority has \$99,432 invested in government-sponsored enterprises as of June 30, 2018. These investments have an implied credit rating of AAaa/AA+ or they have been collateralized to AAA.

The Authority has \$394,817 invested in MMDT as of June 30, 2018, a state investment pool managed by Fidelity Investments as agent for the Commonwealth and shareholders of the MMDT. MMDT is unrated.

The Authority also has \$346,697 invested in money market funds and international bank notes as of June 30, 2018. These investments are not rated.

# (d) Concentration of Credit Risk – Investments

Concentration of credit risk is the risk of loss attributable to the magnitude of the Authority's investment in a single issuer. The issuers where securities at year-end exceeded 5% of the total investments, other than U.S. government obligations and mutual funds, are as follows:

	by Moody's/S&P	2018	Percentage of portfolio
Federal National Mortgage Association	Aaa/AA+	\$66,636	5.9%

# (e) Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The Authority was not exposed to foreign currency risk as of June 30, 2018.

#### (f) Fair Value Hierarchy and Measurements of Investments

Investments are measured at fair value on a recurring basis. Recurring fair value measurements are those that are required to be made at the end of each reporting period. Fair value measurements are categorized based on the valuation inputs used to measure the fair value.

- Level 1 inputs are quoted market prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.
- Level 2 inputs are other than quoted prices in Level 1 that are observable for the asset or liability or similar assets or liabilities either directly or indirectly through corroboration with the observable market data.

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• Level 3 inputs are significant unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The following is a description of the valuation methodologies used for assets measured at fair value. There have been no changes in the methodologies used at June 30, 2018.

**Institutional Money Market Funds** – Valued at fair value, which is represented by the quoted price for the fund – generally \$1.00 (one dollar) per share. Money market funds are generally classified as Level 1.

- **U.S. Treasury Strips** Treasury strips are typically valued based on pricing sources with reasonable level of price transparency or derived from a treasury curve. Treasury strips are generally categorized as Level 2 of the fair value hierarchy.
- **U.S. Treasury Securities** Securities issued by the U.S. Government, its agencies, authorities and instrumentalities are valued using quoted prices, documented trade history in the security and a pricing model maximizing the use of observable inputs determined by investment managers.
- U.S. Treasury Securities consist principally of U.S. Treasury bills, notes and bonds are generally classified as Level 2 of the fair value hierarchy
- U.S. Government sponsored enterprises securities consist principally of U.S. Government
  agency obligations including agency-issued debt, agency mortgage pass-through securities,
  and agency collateralized mortgage obligations (CMOs) are generally categorized in Level 2
  of the fair value hierarchy.

**Municipal bonds** – State and municipal bonds are generally valued based on the independent prices obtained from third party valuation services. Where prices of recently executed market transactions of similar securities and of comparable size are easily observed, those are taken into consideration for arriving at the fair value. When independent prices are available for state and municipal bonds, these are categorized as Level 2 of the fair value hierarchy.

**Derivative Instruments** – The Authority's interest rate swaps and forward delivery agreements are classified as Level 2 as valued using a market approach that considers benchmark interest rates.

The Authority categorizes its recurring fair value measurements within the fair value hierarchy as of June 30, 2018 as follows:

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	Fair Value		Level 1	Level 2	
Investments by Fair Value Level					
Money Market Funds	\$	324,834	324,834	_	
U.S. Treasury STRIPS		58,470	_	58,470	
U.S. Treasury securities		119,755	_	119,755	
U.S. Government sponsored enterprises		99,432	_	99,432	
Municipal bonds		44,589	_	44,589	
International bank note		21,863	_	21,863	
		668,943	324,834	344,109	
Investments measured at amortized cost					
MMDT		394,817			
State & Local Government Series		62,926			
Guaranteed investment contracts		3,916			
<b>Total Investments</b>	\$	1,130,602	324,834	344,109	
Interest rate swaps	\$	156	_	156	
Forward delivery agreements		35,343	_	35,343	

The Authority categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. Debt securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those identical securities. Debt securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. The Authority has no securities classified in Level 3.

Derivative instruments (i.e., interest rate swaps and forward delivery agreements) classified in Level 2 of the fair value hierarchy are valued using a market approach that considers benchmark interest rates.

# (g) Forward Delivery Agreements

The Authority has entered into several forward delivery agreements ("FDAs") with various counterparties related to its debt service and debt service reserve funds (collectively, "the Funds"). These FDAs provide for the counterparties to pay the Authority a fixed rate of return on the amounts on deposit in the Funds in exchange for the Authority's obligation to purchase securities at specified dates in the future. Under the FDAs, the Authority receives fixed return rates ranging from 4.000% to 6.281% and commits to purchase the securities at their market value on the specified future dates ranging through June 30, 2037. The credit ratings of the counterparties to the FDAs as of June 30, 2018, as determined by Standard and Poor's, were from "A" – to "AA".

The investments purchased by the Authority and held in the Funds as of June 30, 2018 have been recorded at fair value. The FDAs qualify as derivatives under GASB Statement No. 53 and have been valued at fair value as of the date of the Statement of Net Position. At June 30, 2018, the fair value of the FDAs represents an asset of \$35,343 to the Authority.

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#### (17) MBTA - Pledged Revenues

The Authority has pledged, as security for Sales Tax Series Bonds issued and Assessment Bonds issued, a portion of the Commonwealth sales tax (excluding meals) that is restricted for purposes of providing a dedicated revenue source to the Authority and a portion of the assessments obligated to be paid by cities and towns for which the Authority provides specified transportation services. Such bonds, issued by the Authority, provide financing for a portion of the capital improvement projects included in the Authority's approved Capital Investment Program ("CIP"), and are payable through June 30, 2046. The pledge of dedicated sales tax receipts and assessments from local communities remains in place until all bonds outstanding are retired and paid. The Authority generally issues bonds annually to fund its CIP, and these funds will continue to be pledged as security for the bonds until such time as the Authority no longer finances its CIP through the issuance of bonds secured by such pledged revenues and all such Authority bonds issued and outstanding have been retired. The total amount of dedicated sales tax revenues and assessment revenues received in fiscal year 2018 was \$1,008,184 and \$166,209, respectively a total of \$1,174,398. Total annual debt service (principal and interest) paid during fiscal year 2018 on outstanding Sales Tax Series, Assessment and Prior Obligation Bonds was \$435,428, representing 37.5% of pledged revenues.

The MBTPC pledge of dedicated parking receipts of the parking system of the Authority remains in place until all bonds outstanding are retired and paid. MBTPC began operations on June 22, 2011 and total annual debt service commenced on July 1, 2011. The debt service requirement in fiscal year 2018 was \$15,373, which represents 34.9% of \$44,021 revenue in the fiscal year 2018.

Total principal and interest remaining on Sales Tax Series Bonds, Assessment Bonds, Prior Obligation Bonds, and MBTPC Bonds outstanding as of June 30, 2018 are \$8,035,006.

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# (18) MBTA - Net Investment in Direct Financing Lease

The Authority entered into a direct financing lease related to the underground parking garage structure located at Nashua Street and Legends Way in the City of Boston effective on June 6, 2012. The lease is for a subsurface building area with five levels of parking with a capacity for 1,275 automobiles (unaudited). The lease agreement is for a 75 year term with an initial rent payment of \$50,000 paid on the commencement date of the lease. Future annual base rent payments will commence on the tenth anniversary of the lease, June 6, 2022, and continue for a 30 year period. The lessee has the right within five years following the effective date to prepay the then outstanding balance of the annual base rent, without penalty, but did not exercise that right.

As of June 30, 2018 and through date of the audit opinion date, the lessee has not elected to prepay the outstanding balance of the annual base rent.

The following lists the components of the net investment in direct financing lease as of June 30,:

	2018
Total minimum lease payments receivable	\$ 68,981
Less unearned income	(42,128)
Net investment in direct financing lease	\$ 26,853

#### (19) MBTA - Lease Obligations

#### (a) Capital Lease Arrangements

Transportation property and facilities under capital leases are summarized in the capital assets note 20.

In fiscal 2006, the Authority entered in a Sale-in/Lease-out (SILO) transaction involving 80 commuter rail cars. The agreement provides for the lease of rolling stock for a period of 11 years for 48 cars and 17 years for the remaining 32 cars. Because the transaction did not meet the "in-substance defeasance" criteria, the lease liability and the related refunding trust established to pay off the lease payments as they come due are included in the accompanying financial statements. As of June 30, 2018, the outstanding SILO lease liability was \$58,470. The liability for all of the Authority's leases changed in 2018 as follows:

Outstanding balance - June 30, 2017	\$ 63,098
Change in lease balance	(4,581)
Outstanding balance - June 30, 2018	\$ 58,517

# (b) Operating Leases

As of June 30, 2018, the Authority leased approximately 37,000 square feet of office space and equipment within a property in Somerville, Massachusetts. This lease requires minimum lease payments of \$802 and \$687 in fiscal years 2019 and 2020, respectively. The lease terminates as of June 30, 2020.

In June 2017, the Authority, as lessor, entered into a 99-year lease with a third party for space at the South Station for an annual lease payment of \$1,000 plus contractual increases over the life of the lease.

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# (20) MBTA - Capital Assets

A summary rollforward of capital assets at June 30, 2018 is as follows:

	Beginnin balanc June 30, 2	e	Decreases	Ending balance June 30, 2018
Capital assets not being depreciated:				
Land	\$ 390	),728 —	297	390,431
Construction work in progress	1,812	2,289 937,255	709,514	2,040,030
Total capital assets not being depreciated	2,203	3,017 937,255	709,811	2,430,461
Capital assets being depreciated:				
Ways and structures	10,954	1,988 142,359		11,097,347
Buildings and equipment	3,084	4,237 485,795	11,040	3,558,992
Buildings and equipment included in capital lease	234	4,150 —	16,931	217,219
Total capital assets being depreciated	14,273	3,375 628,154	27,971	14,873,558
Less accumulated depreciation for:				
Ways and structures	4,681	1,856 262,084		4,943,940
Buildings and equipment	2,143	3,306 137,450	11,040	2,269,716
Buildings and equipment included in capital lease	169	2,044 2,129	12,716	158,457
Total	6,994	401,663	23,756	7,372,113
Other capital assets, net	7,279	9,169 226,491	4,215	7,501,445
Capital assets, net	\$ 9,482	2,186 1,163,746	714,026	9,931,906

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# (21) MBTA - Long-Term Debt

#### (a) Bonds Payable

The Enabling Act authorizes the Authority to issue general obligation debt, revenue, or other debt secured by a pledge or conveyance of all or a portion of revenues, receipts, or other assets or funds of the Authority beginning July 1, 2000.

Debt issued by the Authority prior to and outstanding as of July 1, 2000 (the "Prior Obligations") is backed by the full faith and credit of the Commonwealth to the extent revenues collected by the Authority are insufficient to pay the debt, until the debt is paid off. Principal and interest payments on that debt were subsidized by the Commonwealth prior to June 30, 2000. As of June 30, 2018, Prior Obligations in the amount of \$179,520 are outstanding.

Debt issued by the Authority after June 30, 2000 (new debt) will not be supported by the Commonwealth's guarantee. Additionally, the Authority is not expected to receive any principal or interest subsidies from the Commonwealth for the repayment of the prior obligations and new debt of the Authority, unless authorized by special legislation.

The Authority issued three series of Subordinated Senior Sales Tax bonds during fiscal year 2018 for the purpose of funding capital projects and redeeming commercial paper as follows.

On October 12, 2017, the Authority issued Subordinated Sales Tax Series Bond Anticipation Notes, Series 2017 (Sustainability Bonds) in the amount of \$271,095. Interest payments are made annually on July 1 through the maturity date of December 1, 2021.

On October 12, 3017, the Authority issued Subordinated Sales Tax Bond Anticipation Notes, Series 2017 Series A-1 (Sustainability Bonds) in the amount of \$99,170 and Series A-2 in the amount of \$130,930, respectively. Amortization commences on July 1, 2025. Interest payments are made annually on July 1 until final maturity on July 1, 2046.

On December 8, 2017, the Authority entered into a TIFIA/RRIF loan with the United States Department Transportation in the amount of \$382,000. The Authority can draw on the loan no later than December 31, 2021. All bonds pay 2.63% coupon rates. Amortization commences on July 1 after the draw date and final maturities occur on January 1, 2039. Interest payments are made on January 1 and July 1. There were no outstanding loan balances as of June 30, 2018.

GTS bonds, all issued prior to July 1, 2000, are payable in annual installments on March 1 and interest is payable semiannually on March 1 and September 1. The GTS bonds were issued to provide funds for the financing of the Authority's transportation properties.

The Authority redeemed commercial paper notes (CP) in the amount of \$167,300 during fiscal year 2018. CP Sales Tax Series A and Series B were redeemed in their entirety. As of June 30, 2018, no commercial paper was outstanding.

As of June 30, 2017, \$167,300 of commercial paper was outstanding. As June 30, 2017, the total commercial paper notes included CP Sales Tax Series A in the amount of \$79,775 and CP Sales Tax Series B in the amount of \$87,525. The weighted average annual interest rate for CP Sales Tax Series A and Series B were 0.82% and 0.70%, respectively.

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The Authority's outstanding bonds payable at June 30, 2018 are as follows:

	Final fiscal year of Interest maturity rates		Outstanding principal as of June 30, 2018	Due in fiscal year 2019
General transportation system bonds:				
1991 Series A Bonds dated November 1, 1991	2021	7.00%	\$ 28,020	8,715
1994 Series A Refunding Bonds dated June 1, 1994	2019	7.00%	985	985
1998 Series C Bonds dated November 1, 1998	2022	5.50%	3,915	945
2000 Series Variable Rate Demand Obligation dated March 2000*	2030	Variable	146,600 179,520	8,195 18,840
Revenue Bonds:			· · · · · · · · · · · · · · · · · · ·	
2003 Series A Senior Sales Tax dated January 29, 2003	2021	5.25%	79,165	16,855
2003 Series C Senior Sales Tax dated February 3, 2004**	2023	Variable	112,630	17,885
2004 Series B Senior Sales Tax dated March 9, 2004	2030	4.00%-5.25%	253,970	39,190
2004 Series C Senior Sales Tax dated December 22, 2004	2024	4.00%-5.50%	114,435	33,880
2005 Series A Senior Sales Tax dated March 24, 2005	2031	5.00%	735,450	_
2005 Series B Senior Sales Tax dated December 21, 2005	2029	4.10%-5.50%	91,830	65
2006 Series A Senior Sales Tax dated March 2, 2006	2034	5.25%	238,850	_
2006 Series B Senior Sales Tax dated December 5, 2006	2023	5.25%	135,990	12,620
2006 Series C Senior Sales Tax dated June 28, 2006	2027	5.50%	8,410	8,410
2006 Series A Assessment dated September 13, 2006***	2035	Variable	161,340	_
2007 Series A-1 Senior Sales Tax dated May 24, 2007	2035	5.25%	205,675	_
2008 Series B Senior Sales Tax dated April 20, 2008	2034	3.75%-5.25%	33,810	1,435
2008 Series A Assessment dated November 13, 2008	2035	4.37%-5.25%	16,330	16,330

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# Notes to Financial Statements June 30, 2018 (Dollars in thousands)

_	Final fiscal year of maturity	Interest rates	Outstanding principal as of June 30, 2018	Due in fiscal year 2019
Revenue Bonds continued:				
2009 Series B Senior Sales Tax dated February 26, 2009	2019	3.00%-5.00%	\$ 20,135	20,135
2009 Series D Senior Sales Tax dated October 29, 2009	2020	3.00%-5.00%	14,445	7,045
2010 Series A Senior Sales Tax dated February 17, 2010****	2031	Variable	80,255	80,255
2010 Series B Senior Sales Tax dated April 6, 2010	2036	4.00%-5.00%	69,595	1,535
2010 Series C Senior Sales Tax dated December 8, 2010	2021	5.00%	63,450	17,000
2012 Series A Assessment dated June 21, 2012	2042	4.00%-5.00%	391,125	20,690
2014 Series A Senior Sales Tax dated April 23, 2014	2045	3.00%-5.00%	189,850	5,305
2015 Series A Senior Sales Tax dated October 14, 2015	2046	2.00%-5.00%	177,855	_
2015 Series B Senior Sales Tax dated October 14, 2015	2036	4.00%-5.00%	180,550	_
2016 Series A Senior Sales Tax dated July 19, 2016	2035	Zero Coupon	288,195	_
2016 Series A Assessment dated July 19, 2016	2029	2.00%-5.00%	119,260	_
2017 Series A Senior Sales Tax dated March 7, 2017 *****	2027	Variable	211,800	21,150
2017 Series A-1 Subordinated Sales Tax dated October 12, 2017	2046	5.00%	99,170	_
2017 Series A-2 Subordinated Sales Tax dated October 12, 2017	2046	5.00%	130,930	_
2017 Bond Anticipation Notes Subordinated Sales Tax dated October	2022	4.0007	251.005	
12, 2017	2022	4.00%	271,095	
M. D. D. D.			4,495,595	319,705
Metropolitan Boston Transit Parking (MBTPC) Bonds:				
2011 Series A MBTPC dated June 22, 2011	2042	4.00%-5.25%	\$ 304,585	_
,			304,585	

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# Notes to Financial Statements June 30, 2018 (Dollars in thousands)

	Final fiscal year of maturity	Interest rates	F	orincipal of June 30, 2018	Due in scal year 2019
Revenue Build America (BABs) Bonds					
2009 Series C Senior Sales Tax dated October 29, 2009	2040	4.75%-5.569%	\$	218,300	
2010 Series D Senior Sales Tax dated December 8, 2010	2041	4.546%-5.869%		210,000	_
				428,300	_
Total bond and notes payable				5,408,000	\$ 338,545
Unamortized capital appreciation				(59,418)	
Total long-term				5,348,582	
Less current maturities				(338,545)	
Plus unamortized bond premiums/discounts, net				380,258	
Total long-term bonds payable			\$	5,390,295	

- \* The bonds were issued as variable rate demand obligations ("VRDOs") and bear interest at a variable rate. As of September 28, 2011, the 2000 Series VRDO was split into 2000 Series A1 VRDO (\$94,000) and 2000 Series A2 VRDO (\$94,000). The interest rates as of June 30, 2018 for the 2000 Series A1 are 1.14% and 1.17% for the 2000 Series A2 VRDO.
- \*\* The 2020 maturity in the amount of \$25,005 is variable rate debt based on the MUNI-CPI rate, plus 79 basis points.
- \*\*\* The 2024 maturity in the amount of \$19,260 and the 2025 maturity in the amount of \$5,000 is variable debt based on the MUNI-CPI rate, plus 123 basis points.
- \*\*\*\* This bond was issued as a windows VRDO and its variable interest is based on the SIFMA rate, plus 9 basis points. As of June 30, 2018 the variable interest is based on the SIFMA rate, plus 30 basis points. The Authority classifies these bonds short-term, as it does not have a standby purchase agreement and/or a letter of credit providing liquidity support for the remarketing window. The Authority does not currently anticipate the bond being called.
- \*\*\*\*\* This bond bears interest at a variable rate of 70% of (3) month LIBOR plus 48 basis points. Due to a margin rate reset as a result of the Tax Cuts and Jobs Act of 2017, the rate increased on January 1, 2018 to 85.1% of three month LIBOR plus 58.3 basis points. The interest rate as of June 30, 2018 was 2.55%. Since this bond is a direct purchase, there is no standby purchase agreement and/or letter of credit providing liquidity support.

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The principal and interest maturities of the bonds and notes payable as of June 30, 2018 are as follows:

	]	Principal	Interest
Fiscal Year(s):		_	
2019	\$	258,290	236,648
2020		266,155	230,412
2021		278,195	217,410
2022		292,955	204,285
2023		485,055	186,061
2024-2028		1,369,910	743,723
2029-2033		1,199,370	448,749
2034-2038		622,140	245,677
2039-2043		495,525	98,355
2043-2047		140,405	15,686
Total	\$	5,408,000	2,627,006

A summary roll forward of bonds payable for the year ended June 30, 2018 is as follows:

	2018						
		Salance 2017	Bonds issued	Principal payments	Refunded/ redeemed principal	Capital appreciation bond accretion	Balance 2018
GTS	\$	196,835	_	(17,315)			179,520
REVENUE	4	4,128,973	501,195	(199,790)	_	5,799	4,436,177
BABs		428,300	_		_		428,300
Commercial Paper		167,300	_	(167,300)	_		_
MBTPC		304,585	_		_	_	304,585
	\$ 3	5,225,993	501,195	(384,405)		5,799	5,348,582

A rollforward of the 2016A capital appreciation bonds for the year ended June 30, 2018 is as follows:

	Ι	Oue at Maturity	Unamortized appreciation	Outstanding Balance
June 30, 2017	\$	288,195	(65,217)	222,978
Appreciation		<u> </u>	5,799	5,799
June 30, 2018	\$	288,195	(59,418)	228,777

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The following funds are included in restricted assets at June 30, 2018 in connection with the Authority's revenue bond trust agreements and bond resolutions:

		2018			
	A	Assessment bonds	Sales tax bonds	MBTPC bonds	
Debt service	\$	88,756	347,248	8,259	
Debt service reserve		30,037	190,707	12,308	
	\$	118,793	537,955	20,567	

The minimum required balance in the debt service reserve funds at June 30, 2018 was \$175,818 for the Sales Tax Series Bonds and \$27,860 for the Assessment Bonds. The minimum required balances in the debt service reserve funds at June 30, 2018 for MBTPC Bonds were \$12,294. The MBTA has complied with its financial bond covenants by maintaining sufficient cash and investments in the debt service reserve funds.

In order to take advantage of low interest rates and easily accessible short-term capital markets, the Authority has the ability to issue commercial paper to raise funds in order to meet its capital needs. The Authority has a \$250,000 commercial paper program in total of which \$150,000 is administered by JP Morgan and \$100,000 by Barclays Capital Inc. The Authority's commercial paper program has been assigned short-term ratings of P-1 and A-1+ by Moody's and S&P, respectively. The Authority had no commercial paper outstanding as of June 30, 2018.

### (b) Debt Refundings

The Authority did not issue any debt to refund any prior bond issues during fiscal year 2018.

In prior years, the Authority defeased in substance several GTS, Sales Tax Series, and Assessment Series Bonds by placing the proceeds of new bonds or available cash in an irrevocable trust fund to provide for future debt service payments on the old debt. Accordingly, the trust account asset and the liability for the defeased bonds are not included in the accompanying financial statements. As of June 30, 2018, the balance of \$490,520 of all bonds are considered defeased in-substance and are still outstanding.

#### (c) Derivative Instruments

The Authority has entered into several interest rate swaps. The Authority entered into Swaps in order to: (1) provide lower cost fixed rate financing for its capital needs through synthetic fixed rate structures; (2) lock in long-term fixed rate returns on invested assets in its required reserve funds; (3) create synthetic refinancing with cash flow savings realized as the Authority designates; or (4) create a synthetic fixed rate for the purchase of vehicular fuel for fixed periods of time rather than being exposed to unpredictable variations in fuel prices on the spot market. All Swaps for which the Authority received an upfront payment are considered hybrid instruments. The premiums/up-front payments are reported as a borrowing and included in the long-term liability unearned revenue on the statement of net position and the Swaps are reported based on the "at the market" rates at the time of execution.

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#### **Summary of Swap Transactions by Category**

# Synthetic Fixed Rate Swap Transactions

Туре	Objective	Effective date	Notional amount	Term date	Fixed payable swap rate	Variable receivable swap rate	at J	r value une 30 018
lges:						_		
Pay – fixed	Hedge changes in cash	February 2004	25,005	2020	4.13	CPI+79		
swap	the Senior Sales Tax	2004				oasis points		
	Series 2003 C						\$	(528)
Pay – fixed interest rate swap	Hedge changes in cash flows on the Senior Sales Tax Series 2010 A	December 2001	79,645	2030	2.00	SIFMA		904
rivatives:								
Pay – fixed interest rate	(a) Originally to hedge changes in cash flows on	December 2001	75,480	2022	2.00	SIFMA		
swap	variable rate debt						<u> </u>	(220) (220) 156
	Pay – fixed interest rate swap  Pay – fixed interest rate swap  Pay – fixed interest rate swap  rivatives:  Pay – fixed interest rate interest rate	Pay – fixed Hedge changes in cash interest rate flows on a portion of swap the Senior Sales Tax Series 2003 C  Pay – fixed Hedge changes in cash interest rate flows on the Senior Sales swap Tax Series 2010 A  rivatives:  Pay – fixed (a) Originally to hedge interest rate changes in cash flows on	Type Objective date  lges:  Pay – fixed Hedge changes in cash interest rate flows on a portion of swap the Senior Sales Tax Series 2003 C  Pay – fixed Hedge changes in cash interest rate flows on the Senior Sales Sales Tax Series 2010 A  Pay – fixed Hedge changes in cash interest rate flows on the Senior Sales swap Tax Series 2010 A  rivatives:  Pay – fixed (a) Originally to hedge interest rate changes in cash flows on 2001	Type Objective date amount  lges:  Pay – fixed Hedge changes in cash interest rate flows on a portion of swap the Senior Sales Tax Series 2003 C  Pay – fixed Hedge changes in cash interest rate flows on the Senior Sales Tax Series 2010 A  Pay – fixed Hedge changes in cash interest rate flows on the Senior Sales swap Tax Series 2010 A  rivatives:  Pay – fixed (a) Originally to hedge interest rate changes in cash flows on 2001	Type Objective date amount date  leges:  Pay – fixed Hedge changes in cash interest rate flows on a portion of swap the Senior Sales Tax Series 2003 C  Pay – fixed Hedge changes in cash interest rate flows on the Senior Sales Tax Series 2010 A  Pay – fixed Hedge changes in cash interest rate flows on the Senior Sales swap Tax Series 2010 A  Pay – fixed (a) Originally to hedge interest rate changes in cash flows on 2001	Type Objective Effective date Notional amount Term date swap rate  Pay – fixed Hedge changes in cash interest rate flows on a portion of swap the Senior Sales Tax Series 2003 C  Pay – fixed Hedge changes in cash interest rate flows on the Senior Sales Tax Series 2003 C  Pay – fixed Hedge changes in cash interest rate flows on the Senior Sales 2001  Tax Series 2010 A  Pay – fixed (a) Originally to hedge interest rate changes in cash flows on 2001	Type Objective Effective date Notional amount Term date swap rate    Swap	Type Objective Effective date Notional Term swap rate swap rate 22  lages:  Pay – fixed Hedge changes in cash interest rate flows on a portion of 2004 basis points  swap the Senior Sales Tax Series 2003 C \$  Pay – fixed Hedge changes in cash interest rate flows on the Senior Sales 2001  Suap Tax Series 2010 A  Pay – fixed Hedge changes in cash interest rate flows on the Senior Sales 2001  Fivatives:  Pay – fixed (a) Originally to hedge pay – fixed (a) Originally to hedge interest rate changes in cash flows on 2001

The fair value of the cash flow hedges is recorded as an asset, offset by a deferred inflow of resources, in the accompanying financial statements as these swaps qualify for hedge accounting. As of June 30, 2018, the Authority determined that the investment derivative instrument does not meet the criteria of hedge accounting. Accordingly, the change in fair value of this swap is reported within nonoperating revenue (expense) on the statements of revenue, expenses, and changes in net position.

The fair values of the interest rate swaps were calculated by a third-party derivative advisor where each leg of the swap is valued utilizing the present value of expected future cash flows based on the contractual terms of each swap or an "at the market rate" in accordance with the requirements of Governmental Accounting Standards Board ("GASB"), Statements. Expected cash flows are discounted using the U.S. Dollar Swap curve provided by independent third parties such as Bloomberg.

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#### Risk Disclosure

Credit Risk – Because all of the Authority's Swaps rely upon the performance of the third parties who serve as swap counterparties, the Authority is exposed to credit risk, or the risk that a swap counterparty fails to perform according to its contractual obligations. The appropriate measurement of exposure to this risk at the reporting date is the fair value of the swaps in an asset position, as shown in the columns labeled fair value in the tables above. To mitigate credit risk, the Authority maintains strict credit standards for swap counterparties. All swap counterparties for long-term swaps are rated in the A category by both Moody's and S&P. To further mitigate credit risk, the Authority's swap documents require counterparties to post collateral for the Authority's benefit if they are downgraded below a designated threshold and the fair value of the swap is in favor of the counterparty.

The following represents the credit ratings of the counterparties as of June 30, 2018:

Derivative swap item	Counterparty credit rating Moody's/S&P
Derivative 2	Aa3/A-
Derivative 3	A3/BBB+
Derivative 8	Aa3/A-

Basis Risk – The Authority is exposed to basis risk when the floating rate the Authority receives under the swaps is different from the variable rate on the associated bonds. Should this occur, the expected savings may not be realized. Refer to tables above for basis for swap and bond variable rates and the actual rates in place at year-end.

Termination Risk – The Authority's swap agreements do not contain any out-of-the-ordinary termination events that would expose it to significant termination risk. In keeping with market standards, the Authority or the counterparty may terminate each swap if the other party fails to perform under the terms of the contract. In addition, the swap documents allow either party to terminate in the event of a significant loss of creditworthiness. If at the time of the termination a swap has a negative value, the Authority would be liable to the counterparty for a payment equal to the fair value of such swap.

Rollover Risk – Rollover risk is the risk that occurs when the term of the swap does not match the term or maturity of the debt associated with the hedge. The Authority is subject to rollover risk for those swaps that hedge its variable rate demand obligations in the event the Authority is not able to remarket those instruments as anticipated.

#### (d) Demand Bonds

The GTS 2000 Series Bonds issued March 10, 2000 were issued as Variable Rate Demand Obligations ("VRDOs"). The Authority's obligation to purchase these Bonds in the event of a failed remarketing is secured by Standby Bond Purchase Agreement ("SBPA") with Barclays Bank PLC, a nationally recognized financial institution. The SBPA was renewed on September 14, 2018 and will expire on September 21, 2022.

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#### (22) MBTA - Commitments and Contingencies

#### (a) Capital Investment Program ("CIP")

The Authority's continuing CIP for mass transportation has projects in service and in various stages of approval, planning, and implementation. The following tables show, as of June 30, 2018, capital project costs approved, expenditures against these projects, and estimated costs to complete these projects, as well as the major funding sources:

Funding source	Approved roject costs	Expenditures through June 30, 2018	Unexpended costs
Federal grants	\$ 8,662,152	8,160,680	501,472
State and local sources	4,287,574	3,459,720	827,854
Authority bonds	7,933,502	6,326,365	1,607,137
Total	\$ 20,883,228	17,946,765	2,936,463

The terms of the federal grant contracts require the Authority to, in part, utilize the equipment and facilities for the purposes specified in the grant agreement, maintain these items in operation for a specified time period, which normally approximates the useful life of the equipment, and comply with the Equal Employment Opportunity and Affirmative Action programs required by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users ("SAFETEA-LU"). Failure to comply with these terms may jeopardize future funding and require the Authority to refund a portion of these grants to the Federal Transit Administration ("FTA"). In management's opinion, no events have occurred that would result in the termination of these grants or require the refund of a significant amount of funds received under these grants.

Other cases and claims include disputes with contractors and others arising out of the Authority's CIP. In the opinion of the general counsel to the Authority, amounts reasonably expected to be paid by the Authority would be within the scope of grant funds and other funds available to the Authority for the respective projects.

The Authority has entered into several long-term contracts to purchase coaches, locomotives, buses, rapid transit cars, and other transportation equipment. Unpaid amounts under these contracts total approximately \$897,690 at June 30, 2018.

# (b) Legal and Other

The Authority is involved in numerous lawsuits, claims, and grievances arising in the normal course of business, including claims for personal injury and personnel practices, property damage, and disputes over eminent domain proceedings. In the opinion of the general counsel to the Authority, payments of claims by the Authority, for amounts not covered by insurance, in the aggregate, are not expected to have a material adverse effect on the Authority's financial position.

The Authority participates in a number of federally assisted grant programs. These programs are subject to financial and compliance audits by the grantors or their representatives. In the opinion of the Authority's management, liabilities resulting from such disallowed expenditures, if any, will not be material to the accompanying financial statements.

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#### (23) MBTA - Risk Management

The Authority is exposed to various risks of loss related to general liability, property and casualty, workers' compensation, and unemployment.

Buildings are fully insured to the extent that losses exceed the self-insured retention of \$2,500 for buildings valued over \$25,000 and the self-insured retention of \$1,000 for buildings valued under \$25,000 effective March 1, 2014. The Authority is self-insured for workers' compensation, unemployment claims, vehicle damage and loss. Prior to June 30, 2015, the Authority paid 85% of all health premiums up to a maximum of \$200 per individual for all Blue Cross plans and \$100 for Harvard and Tufts plans who remained under the self-insured health plans. Beginning July 1, 2015, the Authority provided all its employees with health insurance through the health insurance plans administered by the Group Insurance Commission of the Commonwealth ("GIC") and was no longer self-insured. Under GIC, the Authority pays 75% to 80% of all healthcare premiums for active employees within the health insurance plans administered by GIC; and pays 80% to 90% of all health premiums for retired employees within the health insurance plans administered by GIC. Supplemental postemployment benefits for certain retirees are provided by the Authority as well. See note 27.

The Authority self- funds a \$7,500 per occurrence deductible for general liability. The Authority has a program of excess public liability insurance to provide for \$67,500 of layered coverage on a per occurrence and annual aggregate basis. In the opinion of the general counsel to the Authority, payments of claims by the Authority for amounts not covered by insurance, in the aggregate, are not expected to have a material adverse effect on the Authority's financial position.

Expenditures for claims and judgments and workers' compensation were \$4,470 and \$15,157, respectively for the year ended June 30, 2018.

The requirements of GASB, Statements require that liabilities for self insured claims be reported if it is probable that a loss has been incurred and the amount can be reasonably estimated. These losses include an estimate of claims that have been incurred but not reported. The Authority reserves such liabilities, which consist of workers' compensation, health claims (prior to June 30, 2015), and injuries and damages (legal claims) as accrued expenses as of June 30, 2018. Changes in the self insurance liabilities in fiscal year 2018 were as follows:

2018
\$ 144,410
37,505
(19,627)
\$ 162,288
\$

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#### (24) MBTA - Environmental Remediation Obligations

Effective July 1, 2008, the Authority implemented GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations*. Statement No. 49 identifies the circumstances under which a government entity would be required to report a liability related to pollution remediation. The statement requires a government entity to estimate its expected outlays for pollution remediation if it knows that a site is polluted based on specific recognition triggers and disclose those obligations associated with cleanup efforts.

The Authority is responsible for the cleanup of leaking fuel storage tanks in facilities owned by the Authority, or parcels of land acquired as part of transit expansions. The Authority is currently managing six active storage tank sites in various stages of remediation and monitoring. The Authority has a number of years' experience in managing these cleanups and the assessment of costs for these types of cleanups. The amount of the estimated pollution remediation liability assumes there will be no major increases in the operating cost of providing these cleanup services.

The Authority is responsible for a facility where Polychlorinated Biphenyls ("PCB") have been detected in the building caulk. Caulk containing PCB is frequently found in buildings built or renovated between 1950 and 1978. PCB containing caulk is no longer manufactured and is required to be removed under federal regulations. The maintenance building was found to contain such PCB containing caulk and as a result, a remediation program is now underway as part of the rehabilitation of the building.

During the year ended June 30, 2018, the Authority made payments for remediation costs of \$1,058. The Authority performed cost completion estimates totaling \$1,679 in fiscal year 2018, with the change in the liability being recorded in the other operating expenses in the statement of revenue, expenses, and changes in net position. The accrued total liability as of June 30, 2018 included in the long-term accrued liabilities in the statement of net position was \$6,423.

# (25) MBTA - Commuter Railroad

Under the Enabling Act, the Authority may enter into agreements with private transportation companies, railroads, and other concerns providing for joint or cooperative operation of any mass transportation facility and for operation and use of any mass transportation facility and equipment for the account of the Authority.

On February 5, 2014 the Authority and Keolis Commuter Services ("Keolis") entered into an operating agreement effective July 1, 2014 to provide commuter railroad service over the Authority's rail lines. The contract is for a period of eight (8) years, through June 30, 2022. The Authority has a fixed base contract amount of \$2,686,342 over the eight-year term of the agreement. The contract also has a provision for an extension period, comprised of the option to extend for no less than two but no greater than four, year extension. The payments for all commuter rail costs incurred by Keolis totaled \$450,598 in fiscal year 2018. The fixed base contract over the term of the contract and four year extension period termination date of June 30, 2026 is \$4,258,131.

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#### (26) MBTA - Retirement Plans

The Authority provides retirement benefits to employees through six defined benefit retirement plans and one defined contribution plan: The MBTA Retirement Fund, the MBTA Police Association Retirement Plan, the MBTA Deferred Compensation Plan, the MBTA Executive Deferred Compensation Plan, the MBTA Executive Deferred Compensation Annuity Plan, the MBTA Excess Benefit Annuity Plan and the MBTA Deferred Compensation Savings Plan.

The MBTA Retirement Fund, a single employer plan, covers all employees except the MBTA police, who are covered separately, and certain executives who elect coverage under an alternate plan. The MBTA Retirement Fund and the MBTA Police Association Retirement Plan, a single employer plan, both provide retirement, disability, and death benefits to their members. The MBTA Retirement Fund issues separately audited financial statements that may be obtained by writing to One Washington Mall, Boston, Massachusetts 02108, or by calling (617) 316-3800. The MBTA Police Association Retirement Plan also issues separately audited financial statements that may be obtained by writing to the Board of Directors, MBTA Police Association Retirement Plan, P.O. Box 35, Grafton, Massachusetts 01519.

The MBTA Deferred Compensation Plan, a single-employer plan, provides supplemental pension benefits for certain Local 453, Steelworkers, Transit Employee Administrators (collective bargaining units) and executive employees after retirement. Employees may participate in both the MBTA Retirement Fund and the MBTA Deferred Compensation Plan. The MBTA Deferred Compensation Plan is unfunded and does not issue separately audited financial statements.

The remaining defined benefit plans are single employer plans that are unfunded and do not issue separately audited financial statements. These plans collectively have less than ten active and retired participants. A copy of the actuarial report for any of these retirement plans can be obtained by writing to the Office of the Chief Financial Officer, MBTA, Ten Park Plaza, Boston, Massachusetts 02116.

*Employees covered by benefit terms*. At December 31, 2017, the following employees were covered by the benefit terms:

	MBTA Retirement Fund	MBTA Police Association Retirement Fund	MBTA Deferred Compensation Plan
Retired employees or beneficiaries receiving benefits	6,823	102	945
Active employees	5,386	253	595
Inactive employees entitled to, but not yet receiving benefits  Totals:	314	27 382	
1000100		302	1,5 10

#### (a) Funding Policy and Annual Pension Cost

The pension agreements between the Authority and Local 589, dated July 1, 2014 for the MBTA Retirement Fund and the MBTA Police Association dated June 30, 2003, designates that the board of trustees of each retirement plan establish the contribution requirements; however, the Authority may amend these requirements.

The historical MBTA Retirement Fund contribution rates are as follows:

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Notes to Financial Statements
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#### **Contribution Percentage**

	Valuation	Effective			
	Date	Date	Employer	Employee	Total
-	12/31/2015	7/1/2016	18.0386%	6.4614%	24.5000%
	12/31/2016	7/1/2017	20.0111%	7.1189%	27.1300%
	12/31/2017	7/1/2018	22.6811%	8.0089%	30.6900%

Actual contributions made in were in accordance with these contribution requirements.

The historical MBTA Police Association Retirement Plan contribution rates are as follows:

#### **Contribution Percentage**

				<u> </u>
Valuation Date	Effective Date	Employer	Employee	Total
12/31/2015	7/1/2016	14.6200%	8.3600%	22.9800%
12/31/2016	7/1/2017	14.1800%	8.7900%	22.9700%
12/31/2017	7/1/2018	14.1800%	8.7900%	22.9700%

Contributions are not required to be made for the MBTA Deferred Compensation Plan. Rather benefit payments are made on a "pay as you go" basis.

#### Net Pension Liability

The Authority's June 30, 2018 net pension liability for each retirement plan was measured as of December 31, 2017, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of December 31, 2016 rolled forward to December 31, 2017.

*Actuarial assumptions*. The total pension liability in the December 31, 2017 actuarial valuations were determined using the following actuarial assumptions, applied to all periods included in the measurement:

Pension	MBTA Retirement Fund	MBTA Police Association Plan	MBTA Deferred Compensation Plan
Actuarial assumptions:			
Inflation rate	3.00%	3.00%	3.00%
Salary increases	4.00%	3.50%	4.00%
Investment rate of return*	7.50%	7.00%	3.16%

<sup>\*</sup>Net of pension plan investment expense, including inflation

For the December 31, 2017 actuarial valuation, mortality rates are used for all active employees and were based on the RP-2000 Blue Collar Mortality Tables with generational projection using the Scale BB. The RP-2000 Blue Collar Tables for Health Males projected by Scale BB generationally are the basis for all retirees and deferred vested participants. The RP-2000 Blue Collar Tables for Health Females projected by Scale BB generationally are the basis for all beneficiary participants. The RP-2000 Tables for Disabled Lives projected by Scale BB generationally are used for the period after disability retirement. Among preretirement deaths, 7.5% are assumed to qualify for accidental death benefits.

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The actuarial assumptions used in the December 31, 2017 valuation for the MBTA Retirement Fund were based on the results of an actuarial experience study for the four-year period ending December 31, 2014. There was no separate experience actuarial study performed for the MBTA Police Association Plan or the MBTA Deferred Compensation Plan.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the target allocation as of December 31, 2017 are summarized in the following tables:

# **MBTA Retirement Fund**

	2017		
	Target Allocation	Long Term Expected Real Rate of Return	
Equity	43%	8.56%	
Fixed Income	25%	1.79	
Alternatives	30%	7.96	
Cash	2%	0.94	
Total	100%	_	

#### **MBTA Police Association**

	2017		
	Target Allocation	Long Term Expected Real Rate of Return	
Equity	45%	8.41%	
Fixed Income	36%	1.83	
Alternatives	19%	5.99	
Total	100%	_	

Discount rate. The discount rate used to measure the total pension liability as of December 31, 2017 was 7.50% for the MBTA Retirement Fund while the discount rate for the MBTA Police Association Retirement Plan was 7.00%. The projection of cash flows used to determine the discount rate assumed that employee contributions will continue to be made in accordance with the current funding policy. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current MBTA Retirement Fund and MBTA Police Association Retirement Plan members. The discount rate used to measure the total pension liability for the MBTA Deferred Compensation Plan was 3.16%. Since this plan is unfunded, the assumed discount rate has been determined in accordance with the method prescribed by GASB No. 67 and is based on the S&P Municipal Bond 20 Year Grade Rate Index, whose yield to maturity was 3.16% as of December 31, 2017.

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# Change in the Net Pension Liability – MBTA Retirement Fund

	Increase (Decrease)							
	Total Pension Liability		on Fiduciary		nsion Fiduciary			et Pension Liability
		(a)		(b)		(a)-(b)		
Balances at December 31, 2016	\$	2,632,256		1,485,606		1,146,650		
Changes for the year:								
Service cost		31,850		0		31,850		
Interest		204,780		0		204,780		
Difference between expected and actual experience		44,627		0		44,627		
Contributions - employer		_		83,382		(83,382)		
Contributions - employee				29,775		(29,775)		
Net investment Income		_		221,691		(221,691)		
Benefit payments, including refund of employee contributions		(212,815)		(212,815)		_		
Administrative expense		_		(4,463)		4,463		
Net changes		197,130		117,570		79,560		
Balances at December 31, 2017	\$	2,829,386	\$	1,603,176	\$	1,226,210		

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# Change in the Net Pension Liability – MBTA Police Association Retirement Plan

	Increase (Decrease)				
		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension   Liability (c)	
Balances at December 31, 2016	\$	99,635	78,265	21,370	
Changes for the year:					
Service cost		2,042		2,042	
Interest		6,958	_	6,958	
Contributions - employer			2,492	(2,492)	
Contributions- employee			1,504	(1,504)	
Net investment Income		_	9,371	(9,371)	
Difference between expected and actual experience		(1,769)	_	(1,769)	
Change in assumptions			_	_	
Benefit payments, including refund of employee contributions		(4,636)	(4,636)	_	
Administrative expense			(180)	180	
Net changes		2,595	8,551	(5,956)	
Balances at December 31, 2017	\$	102,230	86,816	15,414	

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# Change in the Net Pension Liability - MBTA Deferred Compensation Plan

	Increas	se (Decrease)
	Total Per	nsion Liability
Balances at December 31, 2016	\$	85,573
Changes for the year:		
Service cost		2,039
Interest		3,142
Difference between expected and actual experience		2,206
Changes in assumptions		5,122
Benefit payments, including refund of employee contributions		(5,889)
Net changes		6,620
Balances at December 31, 2017	\$	92,193

Sensitivity of net pension liability to changes in the rate. The following presents the net pension liability of the Authority, calculated using the discount rates disclosed as well as what the Authority's net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate as of December 31, 2017:

	Current Rate	1 % ecrease of irrent Rate	Current scount Rate		1 % ecrease of rrent Rate
MBTA Retirement Fund	7.50%	\$ 1,517,983	\$ 1,226,210	\$	978,782
MBTA Police Assoc. Retirement Plan	7.00%	28,477	15,414		4,566
MBTA Deferred Compensation	3.16%	102,914	92,193		83,230

# Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended June 30, 2018 the Authority recognized pension expense of \$186,571; \$2,503; and \$11,886 for the MBTA Retirement Fund, the MBTA Police Association Retirement Plan and the MBTA Deferred Compensation Plan, respectively.

At June 30, 2018 the Authority reported deferred outflows of resources and deferred inflow of resources related to pension amounts from the following sources:

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<b>Deferred Outflows of Resources:</b>	MBTA Retirement Fund		MBTA Police Assoc. Retirement	MBTA Deferred Compensation Plan	Total
Changes in assumptions	\$	102,951	448	4,155	107,554
Contributions subsequent to the measurement date		36,125	1,093	2,762	39,980
Differences between expected and actual experience		111,984	1,176	5,486	118,646
Total deferred outflows of resources		251,060	2,717	12,403	266,180
<b>Deferred Inflows of Resources:</b>					
Net difference between projected and actual earnings on pension	\$	(5,318)	(1,237)	_	(6,555)
Differences between expected and actual experience		_	(4,432)	_	(4,432)
Changes in assumptions		(2,705)		(2,341)	(5,046)
Total deferred inflows of resources		(8,023)	(5,669)	(2,341)	(16,033)
Less: Contributions subsequent to the measurement date		(36,125)	(1,093)	(2,762)	(39,980)
Net deferred outflows and inflows					
of resources exclusive of employer specific deferrals	\$	206,912	(4,045)	7,300	210,167

Amounts reported as deferred outflows of resources related to pensions resulting from the Authority contributions subsequent to the measurement date will be recognized as a reduction in the net pension liability in the year ending June 30, 2019.

Other amounts reported as deferred outflows and inflows of resources related to pensions will be recognized/ (amortized) into pension expense as follows:

	MBTA Retirement Fund		MBTA Police Assoc. Retirement Plan	MBTA Deferred Compensation Plan
Year ended June 30:				
2019	\$	86,996	(369)	3,453
2020		67,010	(530)	2,017
2021		38,376	(1,463)	1,830
2022		14,530	(1,412)	
2023		_	(17)	
2024		_	(254)	
Totals:	\$	206,912	(4,045)	7,300

# Payable to the Pension Plans

At June 30, 2018 the Authority reported a payable for \$2,196 for the outstanding amount of contributions to pension plans required for the year ended June 30, 2018.

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# (b) The MBTA Deferred Compensation Savings Plan

The Authority provides a defined contribution retirement plan for nonunion and certain grandfathered union management not participating in the MBTA Retirement Fund. Authority employee trustees administer the plan and recommend benefit amendments that require approval from the Authority's general manager. The plan requires members to contribute 8.009% of total covered payroll with the Authority contributing 8%. The plan had 389 members at June 30, 2018, and the cost of the Plan to the Authority was \$1,230 for fiscal year 2018. Member contributions vest to plan members immediately, while contributions made by the Authority vest to plan members as follows: 50% after three years, 75% after four years, and 100% after five years of credited service. The total asset balance of \$33,961 as of June 30, 2018 were held by a third party administrator who allocates the assets of fully funded member account balance at the direction of individual member discretion.

# (27) MBTA - Other Postemployment Benefits

In addition to providing the pension benefits described, the Authority provides OPEB for eligible retired employees under two arrangements. The Authority participates in the Commonwealth of Massachusetts' Group Insurance Commission ("GIC") plan which provides health and other benefits to both Medicare and Non-Medicare eligible retirees. The Authority also provides eligible retirees with additional non-duplicative supplemental life insurance and Medicare Part B premium benefits through the Transit Employees Health and Welfare Fund. The benefits, benefit levels, employee contributions, and employer contributions are governed by the Authority, collective bargaining agreements, and state statute. Plan membership as of July 1, 2017 is as follows:

Retirees or beneficiaries currently receiving benefit payments	\$ 4,368
Active employees	 5,099
	\$ 9,467

### (a) Benefits Provided

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

# (b) Funding Policy

Retiree contributions to the GIC plan vary based on the date of retirement. Pre- and post-65 retirees with a retirement date on or before July 1, 1994 contribute 10% to the cost of the health plan. Retirees who retired after July 1, 1994 and filed for retirement prior to August 10, 2009 contribute 15% of the cost of the health plan. Retirees who retired after July 1, 1994 and filed for retirement on or after August 10, 2009 but on or before October 1, 2009 with a retirement date on or before January 31, 2010 contribute 15% of the cost of the health plan. Retirees who file for retirement after October 1, 2009 will contribute 20% of the cost of the health plan. The Authority contributes the remainder of the health plan costs on a pay-as-you-go basis.

#### (c) Total OPEB Liability

The Authority's total OPEB liability of \$2,208,769 was measured as of June 30, 2017 and was determined by an actuarial valuation as of June 30, 2016 rolled forward to June 30, 2017.

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Actuarial assumptions and other inputs: The total OPEB liability as of June 30, 2017 was determined using the following actuarial assumptions and other inputs, applied to all periods included in the measurement, unless otherwise specified:

Inflation	3.00%
Salary increases	4.00

Actuarial Cost Method and Amortization Period. The entry age normal cost method based on level percentage of projected salary.

Mortality. RP-2014 generational table using Scale MP-2017, applied on a gender-specific basis.

*Discount Rate.* The discount rate used to measure the total OPEB liability is 3.13% per annum, the 20 year S&P Municipal Bond 20 Year High Grade index at June 30, 2017. The discount rate used for June 30, 2016 was assumed to be 2.71% and is also based on the 20 year S&P Municipal Bond 20 Year High Grade index.

*Healthcare cost trend rates*. Trend rates begin with 6.8% and decrease to an ultimate rate of 5.0% after ten years.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of the February 5, 2016 actuarial experience study for the five-year period of experience from January 1, 2010 - December 31, 2014.

#### **Change in Total OPEB Liability**

	<b>Increase (Decrease)</b>				
Balances at June 30, 2016	\$	2,294,076			
Changes for the year:					
Service cost		82,886			
Interest		63,600			
Changes in benefits		(171,163)			
Benefit payments, including refund of					
employee contributions		(60,630)			
Net changes		(85,307)			
Balances at June 30, 2017	\$	2,208,769			

Sensitivity of the net OPEB liability to changes in the discount rate. The following presents the total OPEB liability of the Authority, as well as what the Authority's total OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (2.13%) or 1-percentage-point higher (4.13%) than the current discount rate (in thousands):

	1% Decrease		Dis	scount Rate	1% Increase		
Total OPEB liability	\$	2,649,049	\$	2,208,769	\$	1,866,831	

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Sensitivity of the total OPEB liability to changes in the healthcare cost trend rates. The following presents the total OPEB liability of the Authority, as well as what the Authority's total OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage point lower or cost trend rates that are 1-percentage point higher than the current healthcare cost trend rates (in thousands):

	19	1% Decrease		Discount Rate		1% Increase		
Total OPEB Liability	\$	1,848,081	\$	2,208,769	\$	2,720,351		

# OPEB expense and Deferred Outflows of Resources and Deferred Inflows of Resources related to OPEB

For the year ended June 30, 2018 the Authority recognized OPEB expense of \$118,195. At June 30, 2018, the Authority reported deferred outflows of resources and deferred inflows of resources related to OPEB amounts from the following sources:

Deferred outflows of resources:	
Contributions subsequent to the measurement date	\$ 69,387
Total deferred outflows of resources	69,387
Deferred inflows of resources:	
Changes in assumptions	(142,872)
Total deferred inflows of resources	 (142,872)
Net deferred outflows and inflows of resources	(73,485)
Less contributions subsequent to the measurement date	(69,387)
Net deferred outflows and inflows of resources	
exclusive of employer specific deferrals	\$ (142,872)

Amounts reported as deferred outflows of resources related to OPEB resulting from the Authority contributions subsequent to the measurement date will be recognized as a reduction in the net OPEB liability in the year ending June 30, 2019.

Other amounts reported as deferred outflows and inflows of resources related to OPEB will be recognized /(amortized) into pension expense as follows:

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Notes to Financial Statements
June 30, 2018
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Vear	ended	luna	411.

2019	\$ (28,291)
2020	(28,291)
2021	(28,291)
2022	(28,291)
2023	(28,291)
2024	(1,417)
Totals	\$ (142,872)

# (d) Transit Employees Health and Welfare Trust

In fiscal 2015 the Authority and Local 589 (Local Union 589, Amalgamated Transit union, AFL-CIO and CLC) as a result of an arbitration award established a separate trust fund, the Transit Employee Health and Welfare Trust Fund (the "Trust Fund"), to address legislative changes impacting healthcare and other coverage (medical, dental, vision and life insurance) for Local 589 active and retired employees (collectively, the "employees"). The Authority and the employees are required to make contributions to the Trust Fund based on the rates agreed to in the Collective Bargaining Agreement. Contributions, once received by the Trust Fund, must be used exclusively "to provide benefits to eligible participants and/or appropriate administrative or operating expenditures." The Trust allows participation of any Authority employee and retiree and provides pre and post retiree benefits to those individuals through the Trust Fund. As such the Trust Fund does not meet the definition of a qualifying trust under the requirements of GASB 75 and its assets cannot be used to reduce the Authority's total OPEB liability.

In fiscal 2018, the Authority made contributions to the Trust Fund of \$12,292. The liability for the Authority's obligation for the benefits administered by this Trust Fund is recorded as part of the Authority's total OPEB liability. All operating activities of the Trust Fund have been excluded from the accompanying financial statements.

#### (28) MBTA – Subsequent Events

Subsequent to year end, on July 2, 2018, the Authority issued \$95,610 in 2018 Subseries A-1 Senior Sales Tax Bonds Variable Rate Demand Obligations and \$95,619 in 2018 Subseries A-2 Senior Sales Tax Bonds Variable Rate Demand Obligations to be used to refinance the Authority's 2017 Series A \$190,650 Senior Sales Tax Bonds Multi-Modal Obligations to minimize the interest impact of changes within the tax code that went into effect in January 2018.

The GTS 2000 Series Bonds issued March 10, 2000 were issued as a Variable Rate Demand Obligation. The Authority's obligation to purchase these Bonds in the event of a failed remarketing is secured by a Standby Bond Purchase Agreement (SBPA) with Barclays Bank OLC, a nationally recognized financial institution. The SBPA was renewed on September 14, 2018 and will expire on September 21, 2022.

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Required Supplementary Information Fiscal year ended June 30, 2018 (Dollars in thousands) (Unaudited)

# SCHEDULE OF MASSDOT'S PROPORTIONATE SHARE OF THE NET PENSION LIABILITY

	2018		2017	2016	2015
		neasurement ate June 30, 2017)	(measurement date June 30, 2016)	(measurement date June 30, 2015)	(measurement date June 30, 2014)
MassDOT's proportion % of the net pension liability		4.43888%	4.67817%	5.07498%	4.98100%
MassDOT's proportionate share of the net pension liability	\$	569,276	645,065	577,676	369,795
MassDOT's covered-employee payroll	\$	256,471	263,416	280,329	266,308
MassDOT's nonemployer contributions provided by the Commonwealth	\$	9,185	8,701	2,648	8,199
MassDOT's proportionate share of the net pension liability as a percentage of its covered-employee payroll		221.96%	244.88%	206.07%	138.86%
Plan fiduciary net position as a percentage of the total pension liability		67.21%	63.48%	67.87%	76.32%

- (1) Amounts presented were determined as of June 30th of the prior fiscal year.
- (2) Data is being accumulated annually to present 10 years of the reported information.

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Required Supplementary Information Fiscal year ended June 30, 2018 (Dollars in thousands) (Unaudited)

# SCHEDULE OF MASSDOT'S PENSION CONTRIBUTIONS

	2018	2017	2016	2015	2014	
Contractually required contribution	\$ 29,313	25,519	24,893	29,126	21,118	
Contributions in relation to the contractually required contribution	(29,313)	(25,519)	(24,893)	(29,126)	(21,118)	
Contribution deficiency (excess)	\$ —					
MassDOT's covered-employee payroll	\$ 248,834	256,471	263,416	280,329	266,308	
Contributions as a percentage of covered employee payroll	11.78%	9.95%	9.45%	10.39%	7.93%	
	2013	2012	2011			
Contractually required contribution	<b>2013</b> \$ 17,220	<b>2012</b> 22,376	<b>2011</b> 13,469			
Contractually required contribution  Contributions in relation to the contractually required contribution						
Contributions in relation to the contractually	\$ 17,220	22,376	13,469			
Contributions in relation to the contractually required contribution	\$ 17,220	22,376	13,469			

(1) Data is being accumulated annually to present 10 years of the reported information.

(A Component Unit of the Commonwealth of Massachusetts)

Required Supplementary Information Fiscal year ended June 30, 2018 (Dollars in thousands) (Unaudited)

# SCHEDULE OF MASSDOT'S CHANGES IN NET OPEB LIABILITY

		2018
	(measurement date June 30, 2017)	
MassDOT's proportion % of the net OPEB liability		4.59294%
MassDOT's proportionate share of the net OPEB liability	\$	803,052
MassDOT's covered-employee payroll	\$	256,471
MassDOT's proportionate share of the net OPEB liability as a percentage of its covered-employee payroll		313.12%
Plan fiduciary net position as a percentage of the total OPEB liability		5.39%

- (1) Amounts presented were determined as of June 30th of the prior fiscal year.
- (2) Data is being accumulated annually to present 10 years of the reported information.

(A Component Unit of the Commonwealth of Massachusetts)

Required Supplementary Information Fiscal year ended June 30, 2018 (Dollars in thousands) (Unaudited)

# SCHEDULE OF MASSDOT'S OPEB CONTRIBUTIONS

		2018
Actuarially determined contribution  Contributions in relation to the actuarially determined contribution	\$	22,193 (22,193)
Contribution deficiency (excess)	\$	
Covered employee payroll Contributions as a percentage of covered employee payroll	\$	248,834 8.92%

Data is being accumulated annually to present 10 years of the reported information.

(A Component Unit of the Commonwealth of Massachusetts)

Massachusetts Transportation Trust Fund Combining Balance Sheet June 30, 2018 (Dollars in thousands)

Assets	ŀ	etropolitan Highway System	Western Turnpike	Tobin Bridge	Other operations	Total
Restricted cash and investments	\$	471,908	174,999	120,941	22,748	790,596
Receivables, net of allowance for uncollectibles:						
Due from Commonwealth		_	_		90,501	90,501
Other		38,243	17,796	4,688	4,353	65,080
Other assets		1,566	471	85	237	2,359
Total assets	\$	511,717	193,266	125,714	117,839	948,536
Liabilities, Deferred Inflows of Resources and Fund Balances:						
Accounts payable and accrued expenditures		19,375	13,015	6,546	14,007	52,943
Unearned revenue		105,469	1,316		550	107,335
Total liabilities		124,844	14,331	6,546	14,557	160,278
Deferred Inflows of Resources:						
Unavailable Revenue		781	281	15	93,489	94,566
Total liabilities and deferred inflows of resources	\$	125,625	14,612	6,561	108,046	254,844
Fund balances:						
Nonspendable		1,566	471	85	237	2,359
Restricted		384,526	178,183	119,068	23,518	705,295
Unassigned		_	_		(13,962)	(13,962)
Total fund balances		386,092	178,654	119,153	9,793	693,692
Total liabilities, deferred inflows of resources and fund balances	\$	511,717	193,266	125,714	117,839	948,536

(A Component Unit of the Commonwealth of Massachusetts)

# Massachusetts Transportation Trust Fund Combining Schedule of Revenues, Expenditures, and Changes in Fund Balances Fiscal year ended June 30, 2018 (Dollars in thousands)

Revenues Toll revenue:	Metropolitan Highway System	Western Turnpike	Tobin Bridge	Other operations	Eliminations	Total
Pledged as security for revenue bonds	\$ 214,776	_		_	_	214,776
Unpledged	_	141,653	39,521	_	_	181,174
Commonwealth transportation fund:						
Operations	_	_	_	442,974	_	442,974
Metropolitan highway system bonds	100,000	_	_	_	_	100,000
Central artery operations and maintenance	25,000	_	_	_	_	25,000
Rental/leases income	11,998	28,506	_	13,275	_	53,779
Investment income	5,961	2,187	1,719	1,329	_	11,196
Departmental and other	9,324	6,406	74	12,559	_	28,363
Total revenues	367,059	178,752	41,314	470,137		1,057,262
Expenditures						
Current						
Highway**	199,166	144,189	33,609	281,956	_	658,920
Planning and Enterprise Services	20,938	10,416	575	84,938	_	116,867
Registry of motor vehicles	_	_	_	80,341	_	80,341
Rail and Transit	_	_	_	81,757	_	81,757
Aeronautics	_	_	_	2,095	_	2,095
Debt service:						
Principal	40,542	_	_	_	_	40,542
Interest	110,643					110,643
Total expenditures	371,289	154,605	34,184	531,087		1,091,165
Excess (deficiency) of revenues over expenditures	(4,230)	24,147	7,130	(60,950)	_	(33,903)
Other financing sources (uses):						
Transfers in	_	_	_	64,014	(20,650)	43,364
Transfers out	(20,650)	_	_	_	20,650	125 (00
Issuance of refunding bonds Premium from issuance of refunding bonds	135,690 25,063	_	_	_	_	135,690 25,063
Swap termination payment, current refunding	(32,570)	_	_	_	_	(32,570)
Debt Service-principal, current refunding	(137,855)	_	_	_	_	(137,855)
Total other financing sources (uses)	(30,322)			64,014		33,692
Net change in fund balances	(34,552)	24,147	7,130	3,064		(211)
Fund balances at beginning of year	420,644	154,507	112,023	6,729		693,903
Fund balances at end of year	\$ 386,092	178,654	119,153	9,793		693,692

<sup>\*\*</sup> Pay go Maintenance expenditures of \$192 million are included in total line (\$110 million in MHS & \$82 million WT)