

NEW ISSUE - BOOK-ENTRY ONLY**Ratings: See “Ratings” herein.**

In the opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Bond Counsel to the Authority, under existing law, and assuming continued compliance with various requirements of the Internal Revenue Code of 1986, as amended, interest on the Bonds will not be included in the gross income of holders of such bonds for federal income tax purposes. Interest on the Bonds will not constitute a preference item for purposes of computation of the federal individual alternative minimum tax; however, Bond Counsel observes that interest on the Bonds included in the adjusted financial statement income of certain corporations is not excluded from computation of the federal corporate alternative minimum tax. Under existing law, interest on the Bonds and any profit on the sale of the Bonds are exempt from Massachusetts personal income taxes and the Bonds are exempt from Massachusetts personal property taxes. See “TAX MATTERS” herein.



\$150,480,000
UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
Project Revenue Bonds
Senior Series 2024-1

**Dated: Date of Initial Delivery****Due: As shown on the inside cover**

The Project Revenue Bonds, Senior Series 2024-1 (the “Bonds”) will be issued by the University of Massachusetts Building Authority (the “Authority”) as fully registered bonds and will be registered in the name of Cede & Co., as nominee for The Depository Trust Company (“DTC”), New York, New York. Individual purchases of beneficial ownership of the Bonds will be made in book-entry form, in denominations of \$5,000 or any integral multiple thereof. No physical delivery of the Bonds will be made to purchasers. So long as Cede & Co. is the registered owner of the Bonds, principal and semiannual interest are payable to DTC by U.S. Bank Trust Company, National Association, Boston, Massachusetts, as Trustee. See “BOOK-ENTRY ONLY SYSTEM” herein. Interest on the Bonds will be payable on each May 1 and November 1, commencing November 1, 2024, or, if any such day is not a Business Day, the next Business Day. The Bonds, including the redemption terms of the Bonds, are more fully described herein under “THE BONDS.”

The Bonds are special obligations of the Authority payable solely from funds provided under the Enabling Act (defined herein), the Project Trust Agreement (defined herein), and the Series Resolution (defined herein), including payments made by the University of Massachusetts (the “University”), all as more fully described under “SECURITY AND SOURCES OF PAYMENT FOR THE BONDS” herein.

THE BONDS SHALL NOT BE DEEMED TO CONSTITUTE A GENERAL OBLIGATION OF THE AUTHORITY OR A DEBT OR LIABILITY OF THE COMMONWEALTH OF MASSACHUSETTS (THE “COMMONWEALTH”) OR ANY POLITICAL SUBDIVISION THEREOF. NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE COMMONWEALTH OR OF ANY POLITICAL SUBDIVISION THEREOF IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF OR THE INTEREST ON THE BONDS. THE ENABLING ACT OF THE AUTHORITY DOES NOT IN ANY WAY CREATE A SO-CALLED MORAL OBLIGATION OF THE COMMONWEALTH OR ANY POLITICAL SUBDIVISION THEREOF TO PAY DEBT SERVICE WITH RESPECT TO THE BONDS. THE AUTHORITY DOES NOT HAVE TAXING POWER.

The Bonds are offered when, as and if issued by the Authority and received by the Initial Purchaser, subject to the approval of legality by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts, Bond Counsel. Certain legal matters will be passed upon for the Authority and the University by their Disclosure Counsel, Greenberg Traurig, LLP, Boston, Massachusetts. Omnicap Group LLC, El Segundo, California, is serving as financial advisor to the Authority. It is expected that the Bonds in definitive form will be available for delivery through DTC in New York, New York on or about May 15, 2024.

May 2, 2024

\$150,480,000
University of Massachusetts Building Authority
Project Revenue Bonds
Senior Series 2024-1

<u>Maturity</u> <u>(November 1)</u>	<u>Principal</u> <u>Amount</u>	<u>Interest</u> <u>Rate</u>	<u>Yield</u>	<u>CUSIP*</u>
2025	\$2,215,000	5.00%	3.220%	914440UX8
2026	2,330,000	5.00	3.090	914440UY6
2027	2,450,000	5.00	2.920	914440UZ3
2028	2,575,000	5.00	2.820	914440VA7
2029	2,705,000	5.00	2.770	914440VB5
2030	2,845,000	5.00	2.740	914440VC3
2031	2,990,000	5.00	2.740	914440VD1
2032	3,145,000	5.00	2.740	914440VE9
2033	3,305,000	5.00	2.750	914440VF6
2034	3,475,000	5.00	2.770 ⁺	914440VG4
2035	3,655,000	5.00	2.900 ⁺	914440VH2
2036	3,840,000	5.00	3.000 ⁺	914440VJ8
2037	4,040,000	5.00	3.180 ⁺	914440VK5
2038	4,245,000	5.00	3.230 ⁺	914440VL3
2039	4,460,000	5.00	3.330 ⁺	914440VM1
2040	4,690,000	5.00	3.470 ⁺	914440VN9
2041	4,930,000	5.00	3.590 ⁺	914440VP4
2042	5,185,000	5.00	3.670 ⁺	914440VQ2
2043	5,450,000	5.00	3.730 ⁺	914440VR0
2044	5,730,000	5.00	3.790 ⁺	914440VS8
2045	6,025,000	5.00	3.840 ⁺	914440VT6
2046	6,335,000	5.00	3.890 ⁺	914440VU3
2047	6,655,000	5.00	3.940 ⁺	914440VV1
2048	7,000,000	5.00	4.020 ⁺	914440VW9
2049	7,355,000	5.00	4.060 ⁺	914440VX7
2050	7,735,000	5.00	4.070 ⁺	914440VY5
2051	8,130,000	5.00	4.080 ⁺	914440VZ2

\$26,985,000 5.00% Term Bonds Due November 1, 2054 to Yield 4.110%⁺ - CUSIP* Number: 914440WC2

* CUSIP is a registered trademark of the American Bankers Association. CUSIP data herein are provided by CUSIP Global Services, managed on behalf of The American Bankers Association by FactSet Research Systems, Inc. The CUSIP numbers are included solely for the convenience of owners of the Bonds, and none of the Authority, the University, the Trustees or the Initial Purchaser is responsible for the selection or the correctness of the CUSIP numbers printed herein. CUSIP numbers assigned to securities may be changed during the term of such securities based on a number of factors, including, but not limited to, the refunding or defeasance of such securities or the use of secondary market financial products.

⁺ Yields are calculated to the first optional redemption date, May 1, 2034.

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY

**100 Carlson Avenue
Newton, Massachusetts 02459
Telephone: (617) 928-4600**

Authority Members

Mary L. Burns, *Chair*
Michael V. O'Brien, *Vice Chair*
Gerald G. Colella, *Secretary/Treasurer*
Angela Davis
Thomas H. Green, III
Robert Lewis, Jr.
Frank Marchione
James McGaugh
Kelly O'Neill
R. Norman Peters
Charles Wu

Executive/Senior Staff

Barbara J. Kroncke, Esq., *Executive Director*
David P. Mullen, Esq., *Deputy Director; General Counsel and Director of Capital Projects*
Aaron D'Elia, *Chief Financial Officer and Treasurer*

Trustee

U.S. Bank Trust Company, National Association
Boston, Massachusetts

Bond Counsel

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
Boston, Massachusetts

Financial Advisor

Omnicap Group LLC
El Segundo, California

Disclosure Counsel

Greenberg Traurig, LLP
Boston, Massachusetts

No dealer, broker, salesperson or other person has been authorized by the University of Massachusetts Building Authority (the “Authority”), The Commonwealth of Massachusetts (the “Commonwealth”), the University of Massachusetts (the “University”) or the original purchasers of the Bonds to give any information or to make any representation with respect to the Bonds other than as contained in this Official Statement and, if given or made, such other information or representation must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale.

Certain information contained herein has been obtained from The Depository Trust Company and other sources which are believed to be reliable, but is not guaranteed as to accuracy or completeness, and as to information from sources other than the Authority, is not to be construed as a representation of the Authority. The information and expressions of opinion herein are subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the parties referred to above since the date hereof.

U.S. Bank Trust Company, National Association by acceptance of its duties as Trustee under the Project Trust Agreement described herein has not reviewed this Official Statement and makes no representations as to the information contained herein, including but not limited to any representations as to the use of the proceeds of the Bonds or related activities.

All quotations from and summaries and explanations of provisions of laws, the Project Trust Agreement, the Contract (defined herein), the Bonds, the Series Resolution and other documents herein do not purport to be complete; reference is made to said laws, the Project Trust Agreement, the Bonds and other documents for full and complete statements of their provisions. Copies of the above are available for inspection prior to the date of issuance of the Bonds at the offices of the Authority, located at 100 Carlson Avenue, Newton, Massachusetts, and subsequent to the date of issuance of the Bonds, at the principal corporate trust office of the Trustee.

Information included in this Official Statement includes forward-looking statements about the future that are necessarily subject to various risks and uncertainties (“Forward-Looking Statements”). These Forward-Looking Statements are (i) based on the beliefs and assumptions of management of the Authority and the University and on information currently available to such management and (ii) generally identifiable by words such as “estimates,” “expects,” “anticipates,” “plans,” “believes” and other similar expressions. Events that could cause future results to differ materially from those expressed in or implied by Forward-Looking Statements or historical experience include the impact or outcome of many factors that are described throughout this Official Statement. Although the ultimate impact of such factors is uncertain, they may cause future performance to differ materially from results or outcomes that are currently sought or expected by the Authority and the University.

References to web site addresses presented herein are for informational purposes only and may be in the form of a hyperlink solely for the reader’s convenience. Unless specified otherwise, such web sites and the information or links contained therein are not incorporated into, and are not part of, this final official statement for purposes of, and as that term is defined in, Rule 15c2-12 of the Securities and Exchange Commission.

TABLE OF CONTENTS

	Page
INTRODUCTORY STATEMENT	1
General	1
Purpose and Content of Official Statement	2
THE AUTHORITY	2
General	2
Members, Officers and Staff.....	3
THE BONDS.....	5
General	5
Redemption Provisions.....	5
SECURITY AND SOURCES OF PAYMENT FOR THE BONDS	6
General	6
Contract	6
Pledge of Revenues Under the Project Trust Agreement.....	7
Rate Covenant	8
Additional Indebtedness	8
Annual Debt Service Requirements	8
THE PROJECTS	10
SOURCES AND USES OF FUNDS	10
LITIGATION.....	10
LEGALITY FOR INVESTMENT	10
TAX MATTERS	11
RATINGS	12
LEGAL MATTERS.....	12
COMPETITIVE SALE OF BONDS	12
CONTINUING DISCLOSURE.....	12
FINANCIAL ADVISOR	12
FINANCIAL STATEMENTS OF THE AUTHORITY	13
FINANCIAL STATEMENTS OF THE UNIVERSITY	13
MISCELLANEOUS.....	13
 Appendix A Certain Information Regarding the University.....	 A-1
Appendix B Financial Statements of the Authority	B-1
Appendix C Financial Report of the University, including Financial Statements	C-1
Appendix D Summary of Legal Documents.....	D-1
Appendix D-1 Summary of Certain Provisions of the Project Trust Agreement	D-1-1
Appendix D-2 Summary of Certain Provisions of the Contract	D-2-1
Appendix E Proposed Form of Opinion of Bond Counsel.....	E-1
Appendix F Proposed Form of Continuing Disclosure Agreement.....	F-1
Appendix G Book-Entry Only System	G-1

[Intentionally Left Blank]

OFFICIAL STATEMENT

\$150,480,000

**University of Massachusetts Building Authority
Project Revenue Bonds
Senior Series 2024-1**

INTRODUCTORY STATEMENT

General

The purpose of this Official Statement, which includes the cover page, the inside cover page, and the appendices hereto, is to furnish information in connection with the offering by the University of Massachusetts Building Authority (the “Authority”) of its Project Revenue Bonds, Senior Series 2024-1 (the “Bonds”). Unless otherwise defined herein, capitalized terms used herein shall have the meanings set forth in Appendix D - “Summary of Legal Documents.”

The Bonds are issued pursuant to Chapter 773 of the Acts of 1960 of The Commonwealth of Massachusetts, as amended (the “Enabling Act”), and the Trust Agreement dated as of November 1, 2000 (the “Project Trust Agreement”), between the Authority and U.S. Bank Trust Company, National Association, Boston, Massachusetts, as successor trustee (the “Trustee”). The Series 2024-1 Bonds are issued pursuant to the Series Resolution Authorizing the Issuance of Project Revenue Bonds, Senior Series 2024-1 (the “Series Resolution”), adopted by the Authority on December 7, 2023.

The Authority was created by the Enabling Act as a body politic and corporate and a public instrumentality of The Commonwealth of Massachusetts (the “Commonwealth”) for the general purpose of aiding and contributing to the performance of the educational and other purposes of the University of Massachusetts (the “University”). See “THE AUTHORITY.”

The Bonds are being issued to finance and refinance projects set forth in the University’s capital plan. See “THE PROJECTS.” The proceeds of the Bonds will be used to finance the costs of such projects and to pay costs of issuing the Bonds.

The Enabling Act prohibits the Authority from initiating any project except upon request made by the University and upon written approval from the Secretary of the Executive Office for Administration and Finance of the Commonwealth.

The Bonds will be special obligations of the Authority payable solely from funds provided under the Enabling Act, the Project Trust Agreement and the Series Resolution, including payments made by the University under the Second Amended and Restated Master Contract for Financial Assistance, Management and Services dated as of May 1, 2019 (the “Contract”) among the Commonwealth, acting by and through the University, the University and the Authority.

Under the Contract, the University is obligated to pay debt service on the Bonds and other costs of the Authority related thereto with respect to the Projects from all available funds of the University. See “SECURITY AND SOURCES OF PAYMENT FOR THE BONDS.”

The obligations of the University in connection with the Bonds do not constitute a general obligation of the University or a debt or obligation of the Commonwealth, and (a) the Commonwealth shall not be obligated to pay the Bonds, and (b) neither the faith and credit nor the taxing power of the Commonwealth or of any political subdivision thereof is pledged to the payment of the Bonds. The Enabling Act does not in any way create a so-called moral obligation of the Commonwealth or of any political subdivision thereof to pay debt service with respect to the Bonds. The Authority does not have taxing power.

Purpose and Content of Official Statement

This Official Statement describes the terms and use of proceeds of, and security for, the Bonds. This introduction is subject in all respects to the additional information contained in this Official Statement, including Appendices A through H hereto. All descriptions of documents contained herein are only summaries and are qualified in their entirety by reference to each such document.

Information about the University is set forth in Appendix A. Financial Statements of the Authority and of the University, as of and for the fiscal years ended June 30, 2023 and 2022 are set forth in Appendices B and C, respectively. Summaries of certain provisions of the Project Trust Agreement and the Contract are included as Appendices D-1 and D-2, respectively. The proposed form of opinion of Bond Counsel is included in Appendix E. Appendix F includes the proposed form of the Continuing Disclosure Agreement with respect to the Authority and the University. Appendix G includes information about The Depository Trust Company and the book-entry only system. Appendix H includes Official Notice of Sale dated April 23, 2024.

The summaries of the agreements and other documents herein do not purport to be comprehensive or definitive and all references to any contract, agreement and other document described herein are qualified in their entirety by reference to each such contract, agreement and other document. Definitive copies of all contracts, agreements and other documents described in the Official Statement are available for inspection prior to the date of issuance of the Bonds at the offices of the Authority, located at 100 Carlson Avenue, Newton, Massachusetts, and subsequent to the date of issuance of the Bonds, at the principal corporate trust office of the Trustee.

THE AUTHORITY

General

The Authority was created in 1960 by the Enabling Act as a body politic and corporate and a public instrumentality placed in the Commonwealth's Department of Education, but not subject to the supervision or regulation of that Department or of any other department, commission, board, bureau or agency of the Commonwealth except as specifically provided in the Enabling Act and described herein. In 1995, the Authority was consolidated with and assumed the obligations of the University of Lowell Building Authority and the Southeastern Massachusetts Building Authority, following the University of Lowell and Southeastern Massachusetts University, respectively, being made the University's Lowell Campus and Dartmouth Campus in 1991.

The Authority was created for the general purpose of aiding and contributing to the performance of the educational and other purposes of the University by providing dormitories, dining commons and other buildings and structures, working capital and tangible and intangible personal property for (i) the use of the University, its students, staff and their dependents, (ii) lease to or use by an organization or association of students or others, the activities of which are a part of the activities at the University and subject to regulation by the University, (iii) a research foundation or other research organization the operation of which is approved by the University or (iv) any other entity the activities of which are approved by the University as furthering the purposes of the University.

The Authority is empowered, among other things, to acquire, construct, remove, demolish, add to, alter, enlarge, reconstruct, remodel and do other work upon any building or structure and to provide and install furnishings, furniture, machinery, equipment, approaches, driveways, walkways, parking areas, planting, landscaping and other facilities therein. The Enabling Act authorizes the Authority, among other things, to acquire property from the Commonwealth or others (but the Authority has no eminent domain power), to rent or lease as lessor or lessee any portion of a project, to operate projects, to employ experts and other persons, to enter into contracts, to borrow money to finance and refinance projects it undertakes or to be applied to working capital expenses in furtherance of the purposes of the University and to issue and sell its revenue bonds and notes therefor payable solely from its revenues.

The Authority's outstanding debt has primarily been issued under the Project Trust Agreement. This includes bonds that refunded debt previously issued by the Authority, the University of Lowell Building Authority, the Southeastern Massachusetts University Building Authority and the Massachusetts Development Finance Agency (or its predecessor authority). The Authority also has issued bonds under the Trust Agreement dated as of December 1,

2000 (the “Facilities Trust Agreement”), between the Authority and the Trustee. Such bonds are designated Facilities Revenue Bonds and are secured by amounts pledged therefor under the Facilities Trust Agreement and under contracts with the University executed in connection with the issuance of such bonds. Facilities Revenue Bonds, unlike bonds issued under the Project Trust Agreement, are not secured by all available funds of the University. Currently, there are no bonds outstanding under the Facilities Trust Agreement.

For information about outstanding indebtedness of the Authority, including the Authority’s authorized \$200 million commercial paper program, see Appendix A under the heading “INDEBTEDNESS OF THE UNIVERSITY - Bonds Issued by UMBA.” See Appendix B for a copy of the Authority’s audited financial statements as of and for the years ended June 30, 2023 and 2022.

Under the Enabling Act, the Authority may have up to \$200 million principal amount of notes and bonds issued by the Authority that are outstanding and guaranteed by the Commonwealth. There are no outstanding bonds of the Authority guaranteed by the Commonwealth.

The Enabling Act requires approval by the Treasurer and Receiver General of the Commonwealth and the Secretary of the Executive Office for Administration and Finance of the Commonwealth, or by their designees, of the sale and terms of bonds or notes sold by the Authority, which approval will be obtained by the Authority with respect to the Bonds.

Members, Officers and Staff

The Authority consists of 11 members appointed by the Governor of the Commonwealth, five of whom shall be appointive members of the Board of Trustees of the University and may, but need not, be graduates of the University, and two others who shall be graduates of the University. Members from the Board of Trustees of the University serve while they are Trustees of the University; each other member serves for a term expiring on June 30 in the sixth calendar year after the calendar year in which his or her term began (unless appointed to fill a vacancy in which case such member shall serve for the unexpired term). Each member continues in office until his or her successor is appointed and qualified. The Authority annually elects a chair and vice-chair from its members and also elects a secretary-treasurer and may elect an assistant secretary-treasurer, neither of whom needs to be a member of the Authority.

The present members and officers of the Authority and the dates of expiration of their respective terms are as follows:

<u>Member’s Name, Position, Residence and Profession</u>	<u>Term Expires</u>
Mary L. Burns,* Chair, Lowell Principal, Splash Media Group Boston, LLC and Principal, Chesapeake Outdoor, LLC	September 13, 2026
Michael V. O’Brien,* Vice Chair Southborough Executive Vice President, WinnCompanies	September 1, 2026
Gerald G. Colella,* Secretary/Treasurer, Seabrook, New Hampshire Chairman MKS Instruments	September 21, 2028
Angela Davis, Member, Foxborough Assistant Secretary for Law Enforcement & Criminal Justice, Executive Office of Public Safety and Security	June 30, 2025
Thomas H. Green, III, Member, Williamstown Retired Citigroup Managing Director and Head of Infrastructure Finance	June 30, 2027
Robert Lewis, Jr., * Member, Roslindale Nicholas President & Chief Executive Officer, Boys and Girls Club of Boston	September 13, 2027

<u>Member's Name, Position, Residence and Profession</u>	<u>Term Expires</u>
Frank Marchione, Member, Attleboro Real Estate Developer	June 30, 2025
James McGaugh, Member, Needham Executive Director & Counsel, US State and Local Government Affairs, General Electric	June 30, 2023 ⁺
Kelly O'Neill, Member, Danvers Senior Associate, BSC Group	June 30, 2023 ⁺
R. Norman Peters, Member, Worcester Attorney, Peters & Sowyrda	June 30, 2028
Charles Wu,* Member, Newton Executive Fellow, Harvard Business School	September 13, 2026

* University Trustee member of Authority Board. Pursuant to the Enabling Act, the members who are appointive members of the University Trustees shall continue in office as members of the Authority so long as they continue in office as University Trustees. The date indicated is the expiration date of such member's term as a University Trustee.

⁺ Each member continues in office until his or her successor is appointed and qualified.

Barbara J. Kroncke is the Executive Director of the Authority. Prior to joining the Authority in October 2019, Ms. Kroncke served as Managing Partner of the Boston office of McCarter & English, LLP and practice group leader of the Public Finance Group. Ms. Kroncke provided counsel in all areas of public finance, including bond counsel, issuer's counsel, disclosure counsel, underwriter's counsel, purchaser's counsel and credit enhancer counsel. Ms. Kroncke received a Bachelor of Arts from Loyola University of Chicago in 1986, and received a J.D. degree from New England School of Law in 1990.

David P. Mullen, Esq. is the Deputy Director, General Counsel and Director of Capital Projects of the Authority. Prior to joining the Authority in June 2015, Mr. Mullen was in private practice from December 2002. Previously, he served as the First Deputy General Counsel for the Massachusetts Bay Transportation Authority from August 2000 to November 2002. Prior to that Mr. Mullen was at the Massachusetts Highway Department from August 1992 to August 2000, serving as its Chief Counsel from 1998 to 2000. Mr. Mullen has also been an adjunct professor at law at the New England School of Law, Southern New England School of Law and Quincy College teaching various classes beginning in 1992 to 2016. After graduating from Suffolk University Law School in 1988, Mr. Mullen was appointed as an Assistant District Attorney in Suffolk County, Massachusetts. He has been a member of the Massachusetts Bar for 35 years and is a member of the Federal Bar.

Aaron D'Elia is the Chief Financial Officer and Treasurer of the Authority. Previously, Mr. D'Elia worked as the Chief Financial Officer for the Commonwealth's Executive Office of Labor and Workforce Development from 2016 to early 2020, where he managed over \$200 million of annual federal and state administrative and programmatic spending. Mr. D'Elia also worked in a number of positions in the Commonwealth's Executive Office for Administration and Finance from 1999 to 2006 and again from 2015 to 2016, including, Assistant Secretary of Capital Planning and Operations where he managed the planning, evaluation, and financing of state public infrastructure projects totaling approximately \$2 billion annually, and Director of Finance where he oversaw financial forecasting, state budget preparation, and production of the Commonwealth's quarterly cash flow estimate in cooperation with the Offices of the State Treasurer and State Comptroller. Mr. D'Elia has a B.A. in History from the University of New Hampshire.

The Authority maintains offices at 100 Carlson Avenue, Newton, Massachusetts 02459. The Authority's telephone number is (617) 928-4600. Its website can be found at <http://www.massachusetts.edu/buildingauthority/bahome.html>.

THE BONDS

General

The Bonds will be issued as fully registered bonds in the aggregate principal amounts as set forth on the inside cover page hereof, will be dated the date of delivery and will bear interest from that date to their respective maturities as set forth on the inside cover page hereof, subject to redemption as described below. Ownership interests in the Bonds will be available in denominations of \$5,000 and integral multiples thereof. Interest on the Bonds will be payable each May 1 and November 1, commencing November 1, 2024, or, if any such day is not a Business Day, the next Business Day.

The Record Date for the payment of interest on the Bonds on an Interest Payment Date is the fifteenth (15th) day of the month preceding the applicable Interest Payment Date. With respect to interest payable on Bonds other than on an Interest Payment Date, the Trustee may establish a Special Record Date. The Special Record Date may not be more than fifteen (15) nor fewer than ten (10) days before the date set for payment.

So long as Cede & Co. is the registered owner of Bonds, all payments of principal and interest on the Bonds are payable by wire transfer by the Trustee to Cede & Co., as nominee for The Depository Trust Company (“DTC”), New York, New York, which will, in turn, remit such amounts to the DTC Participants for subsequent disposition to Beneficial Owners. See Appendix G - “Book-Entry Only System” herein.

Redemption Provisions

Redemption of the Bonds by Sinking Fund Installments. The Bonds stated to mature on November 1, 2054 shall be redeemed as provided in the Resolution by mandatory Sinking Fund Installments on November 1 of each of the following years in the principal amount set forth opposite the applicable year, without premium, plus accrued interest to the redemption date:

Bonds maturing on November 1, 2054			
<u>November 1</u>	<u>Amount</u>	<u>November 1</u>	<u>Amount</u>
2052	\$8,550,000	2054	\$9,450,000
2053	8,985,000		

Optional Redemption of the Bonds. The Bonds maturing on or after November 1, 2034 are subject to optional redemption prior to their stated maturity date on or after May 1, 2034 at the option of the Authority, in whole or in part, at any time, at a Redemption Price equal to the principal amount of such Bonds or portion thereof to be redeemed, without premium, plus interest accrued thereon to the date fixed for redemption. Any optional redemption may be stated to be conditional, and shall be conditioned upon the Trustee’s receipt of funds sufficient to pay the Redemption Price of the Bonds to be redeemed on or prior to the Redemption Date.

Notice of Redemption. The Trustee is required to give notice of redemption of any Bonds, specifying the date of redemption, the portions of the principal amounts thereof to be redeemed and the redemption price, by mail, not more than sixty (60) days nor less than twenty (20) days prior to the redemption date, to the registered owners of any Bonds, or portions thereof, to be redeemed. Notice of redemption will be mailed to DTC or its nominee, as registered owner of the Bonds. Any notice of optional redemption may be conditional. The Trustee will not be responsible for mailing notices of redemption to anyone other than DTC or its nominee. The Authority is not responsible for mailing any notice of redemption.

Selection of Bonds To Be Redeemed Upon Partial Redemption. If less than all of the Bonds are to be redeemed, the particular maturities or Sinking Fund Installments of the Bonds to be redeemed at the option of the Authority will be determined by the Authority in its sole discretion.

If the Bonds are registered in book-entry only form and so long as DTC or a successor securities depository is the sole registered owner of such Bonds, if less than all of the Bonds of a maturity or Sinking Fund Installment, if

any, are called for prior redemption, the particular Bonds or portions thereof to be redeemed shall be selected in accordance with the operational arrangements of DTC then in effect.

Effect of Redemption. If notice of redemption has been given in the manner provided above and money sufficient for the redemption is being held by the Trustee for such purpose, the Bonds so called for redemption shall become due and payable on the redemption date, and interest thereon shall cease to accrue and the owners of the Bonds so called for redemption shall thereafter no longer have any security or benefit under the Project Trust Agreement except to receive payment of the redemption price for such Bonds.

SECURITY AND SOURCES OF PAYMENT FOR THE BONDS

General

The Bonds are special obligations of the Authority payable solely from the funds provided under the provisions of the Enabling Act, the Project Trust Agreement and the Series Resolution, including payments received from the University under the Contract.

Pursuant to the Contract, the University is obligated to make payments to the Authority to pay debt service on the Bonds and other costs related to the Bonds and the Projects. Such payments are secured by a pledge of the University of all available funds of the University, including trust funds and other funds administered by the University as gifts, grants or trusts, or as provided in the University's enabling act. Further, under the Contract, the University is obligated to cause to be available in Spendable Cash and Investments (as described below under "Contract" and as defined in Appendix D and formerly known as "Unrestricted Net Assets") at all times amounts sufficient to pay such costs.

However, the Bonds themselves do not constitute a general obligation of the University or a debt or obligation of the Commonwealth, and (a) the Commonwealth shall not be obligated to pay the Bonds, and (b) neither the faith and credit nor the taxing power of the Commonwealth or of any political subdivision thereof is pledged to the payment of the Bonds. The Enabling Act does not in any way create a so-called moral obligation of the Commonwealth or of any political subdivision thereof to pay debt service with respect to the Bonds. The Authority does not have taxing power.

Contract

The following is a brief overview of the terms of the Contract. For more details, see Appendix D-2 - "Summary of Certain Provisions of the Contract."

In connection with the issuance of the Bonds, the Authority and the University will certify that the Bonds are subject to the Contract.

Under the Contract, the University has agreed to remit to the Trustee amounts sufficient to pay debt service on the Authority bonds and notes that are secured by the Contract, including the Bonds, and to maintain, repair and operate the projects financed or refinanced by such bonds or notes.

The Contract also sets forth the Authority's and the University's respective obligations with respect to the projects that are the subject of the Contract, including, as applicable, acquisition, planning, construction, completion, operation, management, maintenance and repair thereof.

Under the Contract, the Authority shall annually certify by March 1 of each year to the University for the 12-month period commencing the next succeeding November 1, the amount estimated to cover the costs of debt service and other related expenses, including amounts to be funded under the Project Trust Agreement or Facilities Trust Agreement, as applicable, and costs related to the projects that are the subject of the Contract, in each case detailed by component of the financed projects. Such certificate, which may be revised from time to time as necessary, shall include the date on which such amounts are due and the source of such payments. For any project operated by the Authority for which the Authority sets rates and charges for such project, such certificate shall detail the fees, rents,

rates and other charges proposed for the use of such projects, which shall be fixed so as to be sufficient, in the aggregate, together with other available moneys, to cover all of the costs allocable to such projects.

Under the Contract, the University pledges to the making of payments required thereunder from all available funds of the University, including trust funds and other funds administered by the University as gifts, grants or trusts. In addition, the University shall cause to be available in Spendable Cash and Investments at all times amounts sufficient to pay such portion of the amounts certified by the Authority required to be paid therefrom and to provide for any other payments required under the MDFA Financing Agreements (as defined in Appendix D and referred to below under “Additional Indebtedness”). This pledge of all available funds of the University does not apply to certain projects, referred to in the Contract as “Specific Revenue Projects” and to any bonds or notes related thereto. “Spendable Cash and Investments” (formerly “Unrestricted Net Assets”) means the sum of University cash and investments, less debt service reserve funds, plus University of Massachusetts Foundation, Inc. cash and investments, less University permanently restricted net assets, less University of Massachusetts Foundation Inc. permanently restricted net assets, provided that in the event of future modifications to the University’s financial statements that provide for a different presentation of such information, the University may further modify the definition of Spendable Cash and Investments (previously referred to as the “Expendable Fund Balance”). See Appendix D-2 and Appendix A under the heading “INDEBTEDNESS OF THE UNIVERSITY - Spendable Cash and Investments.”

By April 1 of each year, the University Treasurer shall certify in writing to the Authority whether or not there are sufficient funds in Spendable Cash and Investments to pay the amounts so required to be paid therefrom and, if so, that such funds will be held in trust in Spendable Cash and Investments for the equal and ratable benefit of the Authority and each other person or entity for whose benefit amounts will be applied to the payment of amounts required to be paid therefrom and will not be expended for any other purpose. Such funds will be so held and not expended for any other purpose; provided, however, that if any portion of the amount to be paid to the Authority is paid from gifts or trust funds or funds generated by the Authority from projects, then after any such payment an amount equal to such portion so paid need no longer be held in Spendable Cash and Investments.

If such certification states that sufficient funds are not available in Spendable Cash and Investments to pay such amounts, such certification shall state the amount of funds so available. The University shall hold such funds in trust for the benefit of the Authority to be applied pro rata to obligations under the Contract. Notwithstanding any shortfall, the University will continue to be obligated to make payments in full. Further, under the Contract, the Authority is authorized to adopt or revise fee and other charges for the use of its projects and to bill and collect from students in the University the amounts necessary to cover any such shortfall. To date, there has never been such a shortfall.

Pledge of Revenues Under the Project Trust Agreement

The following is a brief overview of certain terms of the Project Trust Agreement. For more details, see Appendix D-1 - “Summary of Certain Provisions of the Project Trust Agreement.”

Under the Project Trust Agreement the Authority assigns, pledges and grants to the Trustee a security interest in all rights of the Authority under the Contract to receive amounts payable to the Authority thereunder.

Under the Project Trust Agreement the Authority pledges to the Trustee for the benefit of the holders of the Bonds and all other bonds issued under the Project Trust Agreement (i) all moneys paid or payable for deposit in or on deposit in any Fund, Account or subaccount created under the Project Trust Agreement, all investments received or receivable for deposit in or on deposit in any Fund, Account or subaccount created under the Project Trust Agreement and all interest or other income on such investments paid or payable for deposit in or on deposit in any Fund, Account or subaccount created thereunder and all rights of the Authority to receive such moneys, investments and interest or other income (except for the Rebate Fund), subject to application of such moneys, investments and other income as provided in the Project Trust Agreement and (ii) subject to the Project Trust Agreement, (a) the Revenues from each project financed or refinanced under the Project Trust Agreement and (b) the Revenues, including Secondary Revenues payable to the Authority from Other Projects, except as set forth in the Project Trust Agreement.

Pursuant to the Enabling Act, Revenues pledged by the Project Trust Agreement and received by the Authority in connection with the projects financed or refinanced by any Series of bonds issued under the Project Trust

Agreement are pledged to the payment of the principal of and interest on all Outstanding bonds under the Project Trust Agreement as they become due, the redemption price or the purchase price of Outstanding bonds redeemed or purchased as provided in the Project Trust Agreement and other costs payable with respect to Outstanding bonds under the Project Trust Agreement. As of December 31, 2023, there was \$3,036,330,000 principal amount of bonds Outstanding under the Project Trust Agreement.

Rate Covenant

Under the Project Trust Agreement, the Authority covenants that it will fix, revise, adjust and collect fees, rents, rates and other charges for the use of each Project and any other projects or property the Revenues from which are pledged under such Project Trust Agreement to provide Revenues sufficient in the aggregate to pay all expenses of the Authority allocable to projects financed or refinanced under the Project Trust Agreement and debt service on all bonds issued and Outstanding under the Project Trust Agreement, all as set forth in Appendix D-1 - "Summary of Certain Provisions of the Project Trust Agreement."

Additional Indebtedness

The Project Trust Agreement provides that the Authority may issue additional bonds on a parity with or subordinate to the Bonds issued under the Project Trust Agreement. See Appendix D-1 - "Summary of Certain Provisions of the Project Trust Agreement."

For a description of the Authority's indebtedness, see Appendix B.

Pursuant to certain financing agreements between the University, acting in the name and on behalf of the Commonwealth, and the Massachusetts Health and Educational Facilities Authority and its successor, the Massachusetts Development Finance Agency, in connection with the issuance of other debt for the University, the University agreed not to request or permit the Authority to issue additional indebtedness on behalf of the University except (i) indebtedness that is payable from all available funds of the University or (ii) indebtedness secured by pledged revenues derived from the project or projects being financed, new or increased student fees, existing pledged revenues or any combination of the foregoing, provided, that the maximum annual debt service on all such revenue-backed indebtedness then outstanding, including the proposed additional indebtedness, does not exceed 10% of the amount shown on the then most recent audited financial statements of the University as total available revenues. In addition, no such indebtedness shall be subject to acceleration.

For a description of the University's indebtedness, see Appendices A and C.

[Remainder of Page Intentionally Left Blank]

Annual Debt Service Requirements

The following table sets forth for each fiscal year ending June 30 the debt service on bonds Outstanding under the Project Trust Agreement, including principal (whether at maturity or by mandatory sinking fund redemption), interest and total debt service.

Fiscal Year Ended <u>June 30</u>	Debt Service on Outstanding <u>Authority Bonds</u>	Principal of <u>Bonds</u>	Interest on <u>Bonds</u>	Total Debt Service Requirements <u>for the Bonds</u>	Total Debt Service on <u>Authority Bonds</u>
2024	\$257,927,032	-	-	-	\$257,927,032
2025	251,083,422	-	\$7,231,400	\$7,231,400	258,314,822
2026	242,143,435	\$2,215,000	7,468,625	9,683,625	251,827,060
2027	240,345,536	2,330,000	7,355,000	9,685,000	250,030,536
2028	239,821,688	2,450,000	7,235,500	9,685,500	249,507,188
2029	238,734,960	2,575,000	7,109,875	9,684,875	248,419,835
2030	235,322,088	2,705,000	6,977,875	9,682,875	245,004,963
2031	229,784,675	2,845,000	6,839,125	9,684,125	239,468,800
2032	219,877,029	2,990,000	6,693,250	9,683,250	229,560,279
2033	212,092,205	3,145,000	6,539,875	9,684,875	221,777,080
2034	207,153,087	3,305,000	6,378,625	9,683,625	216,836,712
2035	209,781,468	3,475,000	6,209,125	9,684,125	219,465,593
2036	207,845,609	3,655,000	6,030,875	9,685,875	217,531,484
2037	206,935,623	3,840,000	5,843,500	9,683,500	216,619,123
2038	199,267,658	4,040,000	5,646,500	9,686,500	208,954,158
2039	194,599,955	4,245,000	5,439,375	9,684,375	204,284,330
2040	173,649,135	4,460,000	5,221,750	9,681,750	183,330,885
2041	172,414,658	4,690,000	4,993,000	9,683,000	182,097,658
2042	139,316,845	4,930,000	4,752,500	9,682,500	148,999,345
2043	139,496,870	5,185,000	4,499,625	9,684,625	149,181,495
2044	134,115,611	5,450,000	4,233,750	9,683,750	143,799,361
2045	109,253,624	5,730,000	3,954,250	9,684,250	118,937,874
2046	75,737,267	6,025,000	3,660,375	9,685,375	85,422,642
2047	61,040,047	6,335,000	3,351,375	9,686,375	70,726,422
2048	61,038,593	6,655,000	3,026,625	9,681,625	70,720,218
2049	48,856,693	7,000,000	2,685,250	9,685,250	58,541,943
2050	48,853,215	7,355,000	2,326,375	9,681,375	58,534,590
2051	48,861,664	7,735,000	1,949,125	9,684,125	58,545,789
2052	24,266,500	8,130,000	1,552,500	9,682,500	33,949,000
2053	24,261,750	8,550,000	1,135,500	9,685,500	33,947,250
2054	-	8,985,000	697,125	9,682,125	9,682,125
2055	-	9,450,000	236,250	9,686,250	9,686,250

* With respect to the Authority's Project Revenue Bonds, Senior Series 2009-2 and Project Revenue Bonds, Senior Series 2010-2, which were issued as so-called "Build America Bonds" under the American Recovery and Reinvestment Act of 2009 outstanding as of December 31, 2023 in the aggregate principal amount of \$395,870,000 and amortizing in accordance with the terms thereof, interest includes the cash subsidy payments originally expected to be received from the United States Department of the Treasury at the time of issuance and does not reflect any reduction in subsidy payments as a result of federal sequestration.

THE PROJECTS

The Bonds are being issued to finance and refinance projects in the University's capital plan that meet certain conditions set forth in the Series Resolution (the "Projects"), including without limitation a portion of the costs of four projects on the Amherst campus of the University: construction of an addition for the school of Public Health and Health Sciences building, renovation of the Goodell building, and construction of a new Computer Sciences Laboratories building and a new Sustainable Engineering Laboratories.

See Appendix A under the heading "CURRENT AND FUTURE CAPITAL PLANS" for additional information about the Projects and the University's capital plan. Under the Series Resolution, the Authority may substitute other projects in the capital plan that have been requested by the University to be initiated by the Authority and that have been approved by the Secretary of the Executive Office for Administration and Finance of the Commonwealth.

SOURCES AND USES OF FUNDS

The proceeds of sale of the Bonds are expected to be used and applied as set forth below, rounded to the nearest dollar.

Principal amount of Bonds	\$150,480,000
Original Issue Premium on the Bonds	<u>15,593,034</u>
TOTAL SOURCES	\$166,073,034
Uses of Funds:	
Deposit to Project Fund	\$165,000,000
Costs of Issuance (including Initial Purchaser's Discount)	<u>1,073,034</u>
TOTAL USES	\$166,073,034

LITIGATION

There is no litigation of any nature now pending or, to the knowledge of the Authority, threatened seeking to restrain or enjoin or restraining or enjoining the issuance, sale, execution or delivery of the Bonds or in any way contesting the validity of the Bonds or any proceedings of the Authority taken with respect to the issuance or sale thereof, the validity of the Contract, or any proceedings of the Authority or of the Commonwealth taken with respect thereto, or of the pledge of any moneys or security provided under the Project Trust Agreement for the payment of the Bonds or the existence or powers of the Authority or the titles of its officers to their offices.

See Appendix A under the caption "LITIGATION" for information about the University.

LEGALITY FOR INVESTMENT

As declared by the Enabling Act, the Bonds are securities in which all public officers and public bodies of the Commonwealth and its political subdivisions, all savings banks, insurance companies, trust companies in their commercial departments and, within the limits set by Section 40 of Chapter 172 of the General Laws of the Commonwealth, banking associations, investment companies, executors, trustees and other fiduciaries, and all other persons whatsoever who are now or may hereto be authorized to invest in bonds or other obligations of a similar nature, may properly and legally invest funds, including capital, in their control or belonging to them. The Bonds are securities which may properly and legally be deposited with and received by any state or municipal officer or any agency or political subdivision of the Commonwealth for any purpose for which the deposit of bonds or other obligations of the Commonwealth is now or may hereto be authorized by law.

TAX MATTERS

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Bond Counsel to the Authority (“Bond Counsel”), is of the opinion that, under existing law, interest on the Bonds will not be included in the gross income of holders of the Bonds for federal income tax purposes. This opinion is expressly conditioned upon continued compliance by the Authority with certain requirements imposed by the Internal Revenue Code of 1986, as amended (the “Code”), which requirements must be satisfied subsequent to the date of issuance of the Bonds in order to ensure that interest on the Bonds is and continues to be excludable from the gross income of the holders of the Bonds for federal income tax purposes. Failure to comply with certain of such requirements could cause interest on the Bonds to be included in the gross income of the holders thereof retroactive to the date of issuance of the Bonds. In particular, and without limitation, those requirements include restrictions on the use, expenditure and investment of proceeds of the Bonds and the payment of rebate, or penalties in lieu of rebate, to the United States, subject to certain exceptions. The Authority has provided covenants and certificates as to continued compliance with such requirements.

In the opinion of Bond Counsel, under existing law, interest on the Bonds is not a specific preference item for purposes of computation of the federal individual alternative minimum tax. Bond Counsel observes that interest on the Bonds included in the adjusted financial statement income of certain corporations is not excluded from computation of the federal corporate alternative minimum tax. Bond Counsel has not opined as to other federal tax consequences arising with respect to the Bonds. However, prospective purchasers should be aware that certain collateral consequences may result under federal tax law for certain holders of the Bonds. The nature and extent of these consequences depends on the particular tax status of the holder and the holder’s other items of income or deduction. Holders should consult their own tax advisors with respect to such matters.

Interest paid on tax-exempt obligations such as the Bonds is generally required to be reported by payors to the Internal Revenue Service (“IRS”) and to recipients in the same manner as interest on taxable obligations. In addition, such interest may be subject to “backup withholding” if the Bond holder fails to provide the information required in IRS Form W-9, Request for Taxpayer Identification Number and Certification, or the IRS has specifically identified the Bond holder as being subject to backup withholding because of prior underreporting. Neither the information reporting requirement nor the backup withholding requirement affects the excludability of interest on the Bonds from gross income for federal tax purposes.

For federal and Massachusetts income tax purposes, interest includes original issue discount, which with respect to a Bond is equal to the excess, if any, of the stated redemption price at maturity of such Bond over the initial offering price thereof to the public, excluding underwriters and other intermediaries, at which price a substantial amount of all such Bonds with the same maturity was sold. Original issue discount accrues based on a constant yield method over the term of a Bond. Holders should consult their own tax advisors with respect to the computations of original issue discount during the period in which any Bond is held.

An amount equal to the excess, if any, of the purchase price of a Bond over the principal amount payable at maturity constitutes amortizable bond premium for federal and Massachusetts tax purposes. The required amortization of such premium during the term of a Bond will result in reduction of the holder’s tax basis on such Bond. Such amortization also will result in reduction of the amount of the stated interest on the Bond taken into account as interest for tax purposes. Holders of Bonds purchased at a premium should consult their own tax advisors with respect to the determination and treatment of such premium for federal income tax purposes and with respect to the state or local tax consequences of owning such Bonds.

Bond Counsel has not undertaken to advise in the future whether any events after the date of issuance of the Bonds, including legislation, court decisions, or administrative actions, whether at the federal or state level, may affect the tax exempt status of interest on the Bonds or the tax consequences of ownership of the Bonds. No assurance can be given that future legislation, if enacted into law, will not contain provisions which could directly or indirectly reduce the benefit of the exclusion of the interest on the Bonds from gross income for federal income tax purposes or any state tax benefit for the Bonds. Holders should consult their own tax advisors with respect to any of the foregoing tax consequences.

In the opinion of Bond Counsel, interest on the Bonds and any profit on the sale thereof are exempt from Massachusetts personal income taxes, and the Bonds are exempt from Massachusetts personal property taxes. Bond

Counsel has not opined as to other Massachusetts tax consequences arising with respect to the Bonds. Prospective purchasers should be aware, however, that the Bonds are included in the measure of Massachusetts estate and inheritance taxes, and the Bonds and the interest thereon are included in the measure of Massachusetts corporate excise and franchise taxes. Bond Counsel has not opined as to the taxability of the Bonds or the income therefrom under the laws of any state other than Massachusetts.

RATINGS

The Bonds have been rated “AA” (stable outlook), “Aa2” (stable outlook) and “AA-” (stable outlook), respectively, by Fitch Ratings, Inc., Moody’s Investors Service, Inc. and S&P Global Ratings.

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

LEGAL MATTERS

All legal matters related to the authorization and issuance of the Bonds are subject to the approval of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts, Bond Counsel for the Authority. The approving opinion of Bond Counsel, substantially in the form attached hereto as Appendix E, will be delivered on the date of delivery of the Bonds. Certain matters will be passed upon for the Authority and the University by their Disclosure Counsel, Greenberg Traurig, LLP, Boston, Massachusetts.

COMPETITIVE SALE OF BONDS

After competitive electronic bidding on May 2, 2024, the Bonds were awarded by the Authority to BofA Securities, Inc. (the “Initial Purchaser”). The Initial Purchaser has supplied the information as to public reoffering yields of the Bonds set forth on the inside cover hereof. If all of the Bonds were resold to the public at such yields, the Initial Purchaser has informed the Authority that the Initial Purchaser’s total compensation is expected to be \$418,699.50. The Initial Purchaser of the Bonds may change the public offering yields from time to time.

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

CONTINUING DISCLOSURE

The Authority and the University will undertake to provide annual reports and notices of certain events. The proposed form of Continuing Disclosure Agreement is set forth in Appendix F attached hereto.

FINANCIAL ADVISOR

The Authority has retained Omnicap Group LLC (the “Financial Advisor”) to serve as its financial advisor in connection with the issuance of the Bonds. The Financial Advisor has not independently verified any of the information contained in this Official Statement and makes no guarantee as to its completeness or accuracy. The Financial Advisor’s fee for services rendered with respect to the sale of the Bonds is contingent upon the issuance and delivery of the Bonds, and receipt by the Authority of payment therefor. The Authority may engage the Financial Advisor to perform other services, including without limitation, providing certain investment services with regard to the investment of proceeds of the Bonds. The Financial Advisor is a municipal advisor registered with the Securities and Exchange Commission and the Municipal Securities Rulemaking Board, is an independent advisory firm, and is

not engaged in the business of underwriting, trading or distribution of municipal securities or other public securities and therefore will not participate in the underwriting of the Bonds.

FINANCIAL STATEMENTS OF THE AUTHORITY

The financial statements of the Authority as of and for the years ended June 30, 2023 and 2022, included in this Official Statement as Appendix B, have been audited by KPMG LLP, certified public accountants, as stated, and subject to the terms described, in their report included therein. KPMG LLP has not been engaged to perform and has not performed, since the date of its report included in Appendix B, any procedures on the financial statements addressed in that report. KPMG LLP also has not performed any procedures relating to this Official Statement.

FINANCIAL STATEMENTS OF THE UNIVERSITY

The Annual Financial Report of the University for Fiscal Year 2023 is included in this Official Statement as Appendix C. It includes the financial statements of the business-type activities and the aggregate discretely presented component units of the University, which collectively comprise the University's basic financial statements, as of and for the years ended June 30, 2023 and 2022, which have been audited by KPMG LLP, certified public accountants, as stated, and subject to the terms described, in their report included therein. KPMG LLP has not been engaged to perform and has not performed, since the date of its report included in Appendix C, any procedures on the financial statements addressed in that report. KPMG LLP also has not performed any procedures relating to this Official Statement.

MISCELLANEOUS

All quotations from and summaries and explanations of the Enabling Act, the Project Trust Agreement, the Series Resolution and the Contract contained herein do not purport to be complete and reference is made to said laws and documents for full and complete statements of their provisions. The Appendices attached hereto are a part of this Official Statement. Copies, in reasonable quantity, of the Project Trust Agreement, the Series Resolution and the Contract may be obtained upon request directed to the University of Massachusetts Building Authority, 100 Carlson Avenue, Newton, Massachusetts 02459, Attention: Chief Financial Officer.

Any statements in this Official Statement involving estimates or matters of opinion, whether or not expressly so stated, are intended as such and not as representations of fact. This Official Statement is not to be construed as a contract or agreement between the Authority and the purchasers or holders of any of the Bonds.

The delivery of this Official Statement has been duly authorized by the Authority.

[Intentionally Left Blank]

APPENDIX A

CERTAIN INFORMATION REGARDING THE UNIVERSITY

Table of Contents

HISTORY AND MISSION.....	A-1
UNIVERSITY CAMPUSES	A-2
Amherst Campus	A-2
Boston Campus	A-3
Dartmouth Campus	A-4
Lowell Campus	A-5
Worcester Campus	A-6
UMass Global.....	A-7
The University of Massachusetts Club.....	A-7
UNIVERSITY RELATED ORGANIZATIONS.....	A-7
GOVERNANCE.....	A-8
Department of Higher Education.....	A-8
Board of Trustees	A-9
Administrative Officers.....	A-11
Faculty and Staff	A-13
STRATEGIC INITIATIVES.....	A-13
ACADEMIC PROGRAMS AND ACCREDITATION	A-14
ENROLLMENT	A-15
TUITION AND FEES	A-18
Student Financial Aid.....	A-22
UNIVERSITY REVENUES AND BUDGETING.....	A-22
Budget Process	A-23
Appropriated Funds.....	A-23
Management of Non-Appropriated Funds.....	A-24
Basis of Presentation	A-25
SUMMARY OF OPERATIONS.....	A-27
SUMMARY OF FINANCIAL RESULTS, FISCAL YEARS 2021, 2022 AND 2023	A-31
Fiscal Year 2023.....	A-31
Fiscal Year 2022.....	A-32
Fiscal Year 2021.....	A-33
Endowment and Fundraising	A-34
CURRENT AND FUTURE CAPITAL PLANS	A-35
INDEBTEDNESS OF THE UNIVERSITY	A-36
Bonds Issued by UMBA.....	A-36
Commercial Paper.....	A-37
Bonds Issued by the Massachusetts Development Finance Agency	A-37
Annual Debt Service on UMBA and MDFA Bonds	A-38
Spendable Cash and Investments	A-39
Additional Indebtedness.....	A-39
INSURANCE	A-39
TECHNOLOGICAL INITIATIVES	A-40
LITIGATION	A-40
EMPLOYEE RELATIONS.....	A-40

In connection with the issuance by the University of Massachusetts Building Authority (the “Authority” or “UMBA”) of its Project Revenue Bonds, Senior Series 2024-1 (the “Bonds”), we are pleased to submit the following information with respect to the University of Massachusetts (the “University” or “UMass”) and other pertinent matters for inclusion in this Official Statement. Unless otherwise indicated, (i) all utilization and financial data for any year refers to the fiscal year ended June 30, and (ii) the University is the source of the information included in this Appendix A. Terms used in this Appendix A and not defined herein have the same meanings assigned to them in the front part of this Official Statement.

University of Massachusetts



HISTORY AND MISSION

The University is a state coeducational institution for higher education with five separate campuses at Amherst, Boston, Dartmouth, Lowell and Worcester in The Commonwealth of Massachusetts (the “Commonwealth”). The University was established in 1863 in Amherst, under the provisions of the 1862 Morrill Land Grant Acts, as the Massachusetts Agricultural College. It became known as the Massachusetts State College in 1932, and in 1947 became the University of Massachusetts. The Boston and Worcester campuses were opened in 1965 and 1970, respectively. The Lowell and Dartmouth campuses (previously the University of Lowell and Southeastern Massachusetts University, respectively) were made a part of the University by a legislative act of the Commonwealth, effective September 1, 1991.

The University’s core mission is “*to provide an affordable and accessible education of high quality and to conduct programs of research and public service that advance knowledge and improve the lives of the people of the Commonwealth, the nation and the world.*” For Fall 2023, the University enrolled 64,855 full-time equivalent students (“FTE students”). The University’s five campuses are geographically dispersed throughout the Commonwealth and possess unique and complementary missions. In addition, the online educational programs at the five campuses resulted in the award of 342,052 UMass course credits in academic year 2022-2023. In addition, the University is sole corporate member of UMass Global, a private, nonprofit institution, providing online degree and certificate programs in a wide range of disciplines, serving adult learners. See “University Campuses – UMass Global”.

The University was rated as one of the world’s best universities in the *Times Higher Education* “World University Rankings” for 2024. UMass was ranked in the top 123 universities in the world and was the only public university in New England to be listed in the global top 123. The University was ranked 4th in Massachusetts, 6th in New England, 21st in American public universities, and 43rd of all American institutions (public or private). In addition, all four of the UMass undergraduate campuses were rated in the “National Universities” category in *U.S. News & World Report’s* (“U.S. News”) 2024 Best Colleges rankings. Bolstering its global reputation, total research and development expenditures at the University reached approximately \$826 million in fiscal year 2023.

UNIVERSITY CAMPUSES

The University is composed of five campuses, spread across the Commonwealth in Amherst, Boston, Dartmouth, Lowell and Worcester. Each campus has a distinctive history and plays a unique role in advancing the University's mission.

Amherst Campus

The Amherst campus ("UMass Amherst" or the "Amherst Campus"), the University's flagship campus, located approximately 90 miles west of Boston, is the largest in the University system. The Amherst Campus enrolled approximately 30,192 FTE students for Fall 2023. UMass Amherst offers the most comprehensive and varied programs of the campuses in the University system, including liberal arts and professional programs, in addition to doctoral and research programs. It offers five associate-level programs and 111 bachelor's, 82 master's and 51 doctoral degree programs. During the 2022-2023 academic year, the Amherst Campus conferred 28 associate's, 6,838 bachelor's, and 2,413 advanced degrees (including 319 doctorate degrees), as well as 601 undergraduate certificates and 194 graduate certificates. Students may enroll in the College of Education, College of Engineering, College of Humanities and Fine Arts, Manning College of Information and Computer Sciences, Isenberg School of Management ("ISOM"), Elaine Marieb College of Nursing, College of Natural Sciences, School of Public Health and Health Sciences, College of Social and Behavioral Sciences, and the Stockbridge School of Agriculture.

The 1,400-acre Amherst Campus includes more than 13 million square feet in buildings, including the 28-story W.E.B. DuBois Library, with over six million volumes including eBooks as well as governmental documents and law collections, the 9,000-seat multi-purpose William D. Mullins Center, and 52 campus residence halls in seven unique residential areas. Additions to the campus during the past 15 years include a new student recreation center, an integrated sciences building, the Life Science Laboratories Complex, a 1,400-bed residential and classroom Commonwealth Honors College complex, a state-of-the-art integrated learning center, as well as a completely renovated South College with thoughtful addition, a new innovative wood-constructed Design Building, a state-of-the-art Physical Sciences Building with specialized laboratories and 130 lab benches, the Isenberg Business Innovation Hub addition, the new Worcester Commons and the fully-renovated Student Union building. The iconic Old Chapel, which closed in 1986 and was listed on the National Register of Historic Places in 2015, underwent a complete renovation and reopened in late 2016. The University and the Authority recently completed the on-campus development of the Fieldstone apartment complex, including 623 beds of undergraduate and 201 beds of graduate student housing and campus-operated cafe and bouldering wall spaces pursuant to a public-private partnership and built 150 family housing units pursuant to a design-build contract. The University and Authority are currently developing the Computer Science Laboratories addition, the new Sustainable Engineering Laboratories Building, the new School of Public Health & Health Sciences HUB, the Thermal Energy Storage Tank system, the North Energy Exchange Center consisting of ground source heating and cooling carbon zero technology, and the complete renovation of Goodell Hall. UMass Amherst also operates the 72-acre Mount Ida Campus in Newton, which serves as a center for student experiential learning, industry engagement, and academic and research collaboration.

The Amherst campus is an AASHE (Association for the Advancement of Sustainability in Higher Education) STARS Gold Campus and is ranked in *The Princeton Review's* 2024 Top 50 Green Colleges list. The Amherst campus continues to develop its sustainable infrastructure, including a solar panel installation project and a commitment to ensuring that all new construction is 100% LEED-certified.

The Amherst Campus is ranked 32nd among the Top Public Schools (tie) and 67th in National Universities (tie) in *U.S. News* 2024 Best College rankings. The Center for Measuring University Performance in its "The Top American Research Universities 2020 Annual Report," ranks UMass Amherst 71st for total research expenditures and 66th in federal research expenditures among public research institutions, and in the top 50 among public research universities on multiple other measures of success: 38th for SAT score, 47th in national academy memberships, 16th in faculty awards, 42nd in doctorates awarded and 63rd in postdoctoral appointees. During fiscal year 2023, a total of 1,164 research awards were secured for a total of approximately \$240.0 million, including 444 federal awards totaling approximately \$142.8 million.

Boston Campus

The 120-acre Boston campus (“UMass Boston” or the “Boston Campus”), located three miles from downtown Boston, is a residential campus that can house approximately 1,100 students. The Boston Campus is located on a harbor peninsula with the nearby John F. Kennedy Presidential Library and Museum (the “JFK Library”), the Edward M. Kennedy Institute for the United States Senate (the “Kennedy Institute”) and the Massachusetts State Archives and Commonwealth Museum (the “State Archives”). The Boston Campus focuses on the academic needs of the local urban and non-traditional populations and the research and policy needs of business, government and communities in the greater Boston metropolitan region. The Boston Campus has a diverse student body, with approximately 13,088 FTE students enrolled for Fall 2023. The Boston Campus offers 68 undergraduate degree programs, 49 master’s programs, and 30 doctoral programs, together with 12 undergraduate certificate programs and 53 graduate certificate programs. During the 2022-2023 academic year, the Boston Campus conferred 2,389 bachelor’s degrees and 974 advanced degrees (including 111 doctorate degrees), as well as six undergraduate certificates and 132 graduate certificates. Students may enroll in the College of Liberal Arts, College of Science and Mathematics, College of Management, College of Nursing and Health Sciences, McCormack Graduate School of Policy and Global Studies, College of Education and Human Development, School for Global Inclusion and Social Development, Honors College, and School for the Environment.

The Boston Campus is the only educational institution in the Northeast to share its campus with a presidential library. The students and faculty have access to the JFK Library, as well as to the State Archives, which houses valuable Massachusetts historic and state government records, and the Kennedy Institute, which is owned by the Authority and operated by a charitable organization of the same name registered in the District of Columbia. The Kennedy Institute operates as a civic, academic and research institution focused on the study of the United States Senate. Although the Kennedy Institute has broad public access and is available for use by target groups outside of the University, one of the primary purposes of the Kennedy Institute is to enhance the academic and research environment available to the students and faculty of the University. The University provides financial support for the capital and operating expenses of the Kennedy Institute in the approximate amount of \$1.25 million annually.

Additions to the Boston Campus during the past 10 years include the 220,000 square foot Integrated Sciences Complex, a 190,000 square foot general academic building known as University Hall, and a 1,077-bed student dormitory. The student dormitory project was undertaken through a public-private partnership model; a non-profit entity owns the facility and a for-profit management company operates and maintains the facility. In addition, the University has nearly completed the Substructure Demolition and Quadrangle Development (SDQD) project. This project removes a major safety risk and is the key step in transforming the campus. The project included the removal or repair of deteriorated and outmoded structures built in the 1970s, including the Science Center and Clark Pool, and opening a new central Quadrangle. The Boston Campus adopted a new Campus Master Plan Update in 2023, designed to plan for the physical space needed to support the campus’ Strategic Plan and guided by four core principles:

- **Belonging:** Celebrating diversity and creating an inclusive, connected learning environment.
- **Openness:** Fostering intellectual curiosity, engaging with our city, and embracing community.
- **Sustainability:** Committing to environmental stewardship through efficiency, renewables, and more.
- **Collaboration:** Encouraging cross-disciplinary scholarship to address complex global challenges.

The Campus Master Plan Update is intended to be a living and flexible document that guides decision-making for the future of the physical campus. The plan does not sequence new construction but instead maintains flexible implementation by minimizing enabling projects which would dictate an order of completion. The Campus Master Plan prioritizes the renovation of existing space, specifically the “heritage” buildings, to meet programmatic needs, improve adjacencies, address deferred maintenance, and increase efficiency. The plan incorporates strategies and recommendations that reinforce the strengths of the campus and address challenges and opportunities to create a better physical environment for the entire campus community. Guided by this plan, the current capital plan for the Boston Campus is focused on meeting the campus’ most critical physical plant needs with the resources currently projected to be available with the Substructure Demolition and Quadrangle Development (SDQD) project being the largest project of the campus’ capital plan for several years.

In May 2010, the Authority purchased the Bayside Exposition Center (the “Bayside Site”) for \$18.7 million. The 20-acre Bayside Site is approximately one-half mile from the Boston Campus. The UMass Board of Trustees and the Authority voted in February 2019 to authorize the Authority to enter into a long-term lease for the Bayside Site with a selected developer. Under the terms proposed by the designated developer and accepted by the University and the Authority, the developer, subject to certain contingencies, will enter into a 99-year ground lease for an upfront payment of up to \$235 million, with a minimum lease price of \$192 million. The developer is in the process of obtaining the permits necessary for its development of the site. The Authority and the University expect to enter the ground lease with the developer by June 2024.

Dartmouth Campus

The Dartmouth campus (“UMass Dartmouth” or the “Dartmouth Campus”) distinguishes itself as a vibrant public research university dedicated to engaged learning and innovative research resulting in personal and lifelong student success. The Dartmouth Campus serves as an intellectual catalyst for economic, social and cultural transformation on a global, national and regional scale. The Dartmouth Campus enrolled 6,558 FTE students for Fall 2023. The Dartmouth Campus offers 61 undergraduate degree programs and 59 graduate degree programs (including 17 at the doctorate level). During the 2022-2023 academic year, the Dartmouth Campus conferred 1,161 bachelor’s degrees and 580 advanced degrees (including 142 doctorate degrees), as well as five undergraduate certificates and 72 graduate certificates. Students may enroll in the College of Arts and Sciences (with a School of Education), the Charlton College of Business, the College of Engineering, the College of Nursing and Health Sciences, the College of Visual and Performing Arts, the School for Marine Science and Technology, and the University of Massachusetts School of Law (the “Law School”). The main campus, designed by the eminent architect Paul Rudolph, is located on 710 acres in Dartmouth, approximately 55 miles south of Boston and 30 miles east of Providence, Rhode Island. Other Dartmouth Campus sites include the Law School in Dartmouth, the School for Marine Science and Technology on the waterfront in New Bedford, and the Center for Innovation & Entrepreneurship in Fall River.

The Law School was established in 2010 through the donation by Southern New England School of Law, a private law school, of certain of its assets to the University of Massachusetts Foundation, Inc., including its facility, equipment, systems and furnishings. Overall enrollment in the Law School for Fall 2023 was 344 students. The Law School is accredited by American Bar Association (the “ABA”) and has a public-service focus, with a curriculum concentrating on civil and human rights, legal support for businesses, economic justice and community law. The operating plan for the Law School calls for increases in enrollment, the bar pass rate, and the employment rate for graduates, as well enhancing the Law School’s reputation and assuring compliance with ABA standards. The Law School’s most recent ABA Standard 316 pass rate was 83.9%.

In Spring 2020, UMass Dartmouth completed a \$134 million public-private partnership project comprising a 1,200-bed residence hall and a new dining facility. In Summer 2020, the UMass Dartmouth completed a \$45 million renovation to the Science and Engineering building. As of December 2023, the renovation project for the Liberal Arts Building (LARTS) has entered the design phase. This historic \$97 million project will take famed architect Paul Rudolph’s first designed building on campus to new heights. The renovations to the campus’ main academic building will update classrooms, student support spaces, and other communal learning areas to give our students the educational facility they need to achieve educational, professional, and personal success. Upgrades include adding air conditioning, energy efficiency upgrades like new exterior windows, roof, HVAC, and lighting systems. In addition to student spaces, there will also be enhancements to faculty and staff spaces.

Since 2016, UMass Dartmouth has officially been designated as a Doctoral University – Higher Research Activity (R2) by the National Carnegie Classification of Institutions of Higher Education at the Center for Postsecondary Research at Indiana University (the “Carnegie Classification”), achieving a major milestone for the University and the region. UMass Dartmouth is the only Massachusetts research university located south of Boston. This designation elevated UMass Dartmouth from its previous designation as a Master’s University.

In the 2018 edition of the *U.S. News* “America’s Best Colleges” report, UMass Dartmouth achieved a National Tier 1 designation for the first time in its history, rising from its previous designation as a regional university. In the 2024 *U.S. News* Best Colleges rankings, UMass Dartmouth ranked 112th (tied) in the Top Public Schools and 4th among national universities in the Commonwealth in Social Mobility.

Lowell Campus

The Lowell Campus (“UMass Lowell” or the “Lowell Campus”) is a doctoral-level research university committed to educating students for lifelong success and conducting hands-on research and outreach that sustains the economic, environmental and social health of the world.

Located in the historic industrial city of Lowell, approximately 25 miles northwest of Boston, the Lowell Campus spans more than 125 acres along the Merrimack River in three campus clusters – North, South and East. UMass Lowell enrolled 13,663 FTE students for Fall 2023. The Lowell Campus offers five associate’s, 136 bachelor’s, 50 master’s and 30 doctoral degree programs, as well as undergraduate and graduate certificate programs. During the 2022-2023 academic year, the Lowell Campus conferred 25 associate’s degrees, 2,918 bachelor’s degrees, and 1,596 advanced degrees (including 147 doctorate degrees), as well as 105 undergraduate certificates and 246 graduate certificates. Students may enroll in the College of Fine Arts, Humanities and Social Sciences, the Kennedy College of Sciences, the Francis College of Engineering, the Zuckerberg College of Health Sciences, and the Manning School of Business. The most recent additions to UMass Lowell’s degree offerings are bachelor’s and master’s degrees in Industrial Engineering, bachelor’s degrees in Engineering Physics and Graphic Design, and a doctoral degree in Public Health.

The Lowell Campus has undergone significant transformation over the past 15 years, with more than 18 buildings having been constructed, acquired and redeveloped, fully renovated, or built via public-private partnerships on the Lowell Campus, since 2009. In 2019, UMass Lowell completed the largest Accelerated Energy Program in the Commonwealth, which generates \$1.2 million in annual energy savings, reduces water usage annually by 1.7 million gallons, and reduces annual CO2 emissions by 9.0 million pounds. The Lowell Campus continues to prioritize energy efficiency. In 2022, UMass Lowell earned its third consecutive gold rating in the AASHE Sustainability Tracking, Assessment & Rating System. Its sustainability rating is the highest in Massachusetts and third-highest in New England.

In July 2013, UMass Lowell athletics officially elevated to Division I in all sports. Currently 13 sports are part of the America East Conference. The reclassification to full Division I status is a four-year process, which UMass Lowell formally completed in August 2017. The UMass Lowell ice hockey program has competed in Division I since 1983 and is a member of Hockey East.

The Lowell Campus, which in 2020 celebrated the 125th anniversary of the founding of its predecessor institutions Lowell State College (1894) and Lowell Technological Institute (1895), continues to receive new honors and accolades. In 2024 the *Wall Street Journal* ranked UMass Lowell as the No. 1 public university in Massachusetts – a distinction based on student support, a diverse campus environment, and the return on investment realized by students. In the 2024 *U.S. News* Best Colleges rankings, UMass Lowell ranked 84th in the Top Public Schools. In 2024, *U.S. News* ranked UMass Lowell’s online graduate programs among the best in the nation in criminal justice (number 3), education (number 12), computer information technology (number 14), and engineering (number 26), and among the most affordable. UMass Lowell’s online bachelor’s degrees also were highly rated among the best in New England and number 35 nationally among the more than 200 public and private programs ranked. The Commonwealth Institute and the *Boston Globe Magazine* have ranked UMass Lowell among the top 12, and the highest ranked college or university, in the Top Women-led Businesses in Massachusetts in each year since 2017.

UMass Lowell’s first-ever comprehensive fundraising campaign, *Our Legacy, Our Place: The Campaign for UMass Lowell*, concluded in Summer 2020 and raised \$40 million more than the original goal of \$125 million.

Worcester Campus

The UMass Chan Medical School (“UMass Chan”, “UMass Worcester” or the “Worcester Campus”) provides general and specialized medical education, engages in a comprehensive program of basic scientific and clinical research, and provides graduate level training in biomedical sciences and nursing. As Massachusetts’ only public medical school, UMass Chan furthers its mission to improve the health and wellness of its diverse communities throughout Massachusetts and across the world by leading and innovating in education, research, health care delivery and public service. Founded in 1962 by the Massachusetts Legislature and sited in Worcester in 1965, UMass Chan welcomed its first class of 16 medical students in 1970. In September 2021, UMass Chan received a \$175 million unrestricted gift from The Morningside Foundation. In recognition of the historic gift, UMass Medical School was renamed UMass Chan Medical School and its three graduate schools were renamed: the T.H. Chan School of Medicine; the Tan Chingfen Graduate School of Nursing; and the Morningside Graduate School of Biomedical Sciences. Today, UMass Chan is an internationally renowned hub for medical education, biomedical research, and health care innovation.

UMass Chan’s academic community, which is nationally recognized for its primary care education program, includes undergraduate and graduate medical education, graduate-level training in nursing and biomedical sciences, inter-professional training in allied health professions, and continuing education for health care practitioners. UMass Chan’s three graduate schools educate more than 1,300 medical, science, and nursing students each year. In collaboration with its primary clinical partner, UMass Memorial Health, UMass Chan is responsible for a large post-graduate medical residency and fellowship program that trains residents and fellows. For Fall 2023, the UMass Chan student body was composed of 1,354 FTE medical, nursing and biomedical science students, who are enrolled in a wide array of master’s or doctoral degree programs. UMass Chan’s Graduate Medical Education enterprise consists of 26 residency programs and 56 fellowship programs (39 ACGME Accredited, 17 Non-Standard). Its educational community is comprised of 525 residents and 128 fellows in accredited graduate medical education programs. Additionally, there are 21 fellows in Non-Standard Training Programs.

The T.H. Chan School of Medicine offers medical students an accessible and exceptional academic experience that optimally prepares them to become physicians who are caring, competent, productive, and self-fulfilled in their chosen career. The Morningside Graduate School of Biomedical Sciences trains students in one of 10 areas of study while emphasizing a broad background in the basic biomedical sciences in preparation for research that is directly relevant to human disease. The Tan Chingfen Graduate School of Nursing offers master’s and doctoral-level preparation for advanced-practice nurses and nurse educators, as well as an innovative graduate entry pathway program that provides an accelerated advanced nursing degree to students from disciplines outside nursing.

While the academic medical community has evolved over the years, UMass Chan’s commitment to its founding public mission remains steadfast. UMass Chan is recognized as a national leader in primary care training as evidenced by its consistent position among the top quartile of all medical schools for primary care education in the annual *U.S. News* best graduate school rankings; in 2023-2024, *U.S. News* ranked UMass Chan in the top 10 percent nationally for primary care.

In 2021, as the first vaccines to prevent COVID-19 were becoming available, UMass Chan created a novel Vaccine Corps which recruited hundreds of volunteers, including medical and nursing students, to staff vaccination clinics in Worcester and across the commonwealth. Within a couple of months, Vaccine Corps volunteers had administered 100,000 shots, marking a significant contribution to public health at the height of the pandemic. UMass Chan’s Carnegie Classification as a community-engaged institution – the first medical school campus to be so designated – both reflects and reinforces a genuine and unyielding commitment to its public mission.

Given its commitment to primary care and to educating the next generation of physicians, UMass Chan plays an important and unique role in helping to address the health care workforce needs of Massachusetts. UMass Chan has aligned itself with the Association of American Medical Colleges’ recommendation that medical schools increase the number of physicians they educate to help address the looming shortage of doctors, especially those in primary care fields, and has committed to expanding the T.H. Chan School of Medicine’s class size, opening up admissions to a select number of highly qualified out-of-state students and incrementally increasing the number of students in each class. As of Fall 2023, the entering class reached 200 students. This significant class size expansion initiative has necessitated identifying and partnering with additional clinical affiliates to ensure that the T.H. Chan School of

Medicine continues to offer an outstanding educational experience. In 2015, UMass Chan entered into an affiliation with Cape Cod Hospital in Hyannis, and established its first-ever regional campus, UMass Chan-Baystate, in collaboration with Baystate Health in Springfield. More recently, in December 2022, UMass Chan and Lahey Hospital & Medical Center signed a master affiliation agreement and received approval from the Liaison Committee on Medical Education to establish a regional campus in Burlington to be known as UMass Chan-Lahey, which will welcome its inaugural cohort of students in Fall 2024.

Consistent with its strategic plan and mission, UMass Chan supports a highly productive and collaborative research enterprise that attracts more than \$300 million in total external research funding, nearly two-thirds of which was from the National Institutes of Health (“NIH”) in fiscal year 2023. UMass Chan also ranked 37th out of 140 U.S. medical schools that receive NIH funding according to the Blue Ridge Institute for Medical Research’s latest report.

In September 2020, the Board of Trustees approved the construction of a new \$325 million education and research building for UMass Chan. See “Current and Future Capital Plans”. The new facility, which will open in Spring 2024, will support and accelerate UMass Chan’s continued research growth and impact.

UMass Global

In March 2019, the University’s President announced plans for a new online college that would serve adult learners, citing the need to preserve the University’s mission in the face of the demographic decline that is disrupting higher education in the United States. The University’s goals for the online initiative were to become a key workforce development partner to Massachusetts employers, increase economic mobility for Massachusetts residents, and generate revenue that would sustain the University over the next several decades, positioning UMass to lead through the coming disruption and emerge stronger. After a lengthy due diligence process that included vetting numerous possible partners, in June 2020, the University announced that it would enter into a strategic partnership with Brandman University (“Brandman”), a private nonprofit institution located in Irvine, California, then a part of the Chapman University System (“Chapman”). Brandman was originally formed in 1958 as a college within Chapman University, and provides online educational services to a range of adult learners. In September 2021, Chapman transferred control of Brandman’s Board of Regents to the University, and the University became the sole corporate member of Brandman, now named UMass Global. UMass Global remains a California nonprofit public benefit corporation, accredited by the WASC Senior College and University Commission.

Headquartered in Irvine, California, UMass Global maintains a robust and scalable service and technology platform, allowing for the delivery of a wide variety of online certificate and degree programs efficiently and effectively, including employer-funded degree programs and competency-based education (CBE). UMass Global offers over 65 fully online undergraduate, graduate (including one professional doctoral program), credential, certificate, and non-degree credit programs in the fields of education, arts and sciences, and business and professional studies. UMass Global currently offers two associate degrees, 14 bachelor’s degrees, 16 master’s degrees, and one professional doctorate degree, as well as 18 graduate and undergraduate certificates, nine teaching credentials, and five education-related authorizations. Among these programs, UMass Global offers four direct assessment CBE programs. As of September 1, 2023, UMass Global had 13,150 enrollments (i.e., the number of course enrollments by all students), and provided educational services to students across 49 states.

The University of Massachusetts Club

The University, acting through UMBA, has established an Alumni dining club, the University of Massachusetts Club. The Club opened in 2005 and is now located on the 32nd floor of One Beacon Street in Downtown Boston. The Club is managed by a not-for-profit organization, University Services, Inc., which is governed by a board that includes both University and UMBA appointees and personnel.

UNIVERSITY RELATED ORGANIZATIONS

The financial statements of the University include the University and certain other organizations that have a significant relationship with the University. The financial statements include the University’s blended component units, which are UMBA, the Worcester City Campus Corporation (“WCCC”), a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code of 1986, as amended, and the University of Massachusetts Amherst

Foundation, Inc. (the “UMass Amherst Foundation”), a tax-exempt organization that was established in 2003, and UMass Global. Through its Board of Directors, the UMass Amherst Foundation leads and supports private fundraising on behalf of UMass Amherst faculty, students and facilities.

As described in the front part of this Official Statement, the purposes of UMBA are to provide dormitories, dining commons and other buildings and structures for use by the University and other entities associated with the University and to issue bonds to finance such projects. The University created WCCC in 1992 to purchase various assets of Worcester City Hospital, to operate as a real estate holding company, and to foster and promote the growth, progress, and general welfare of the Worcester Campus and all of its locations. The subsidiaries of WCCC include Worcester Campus Services, Inc. (“WCS”) and U Health Solutions, Inc. (formerly Public Sector Partners, Inc.). WCS has 12 real estate holding company subsidiaries.

The University’s discretely presented component units are the University of Massachusetts Foundation, Inc. (the “Foundation”) and the University of Massachusetts Dartmouth Foundation, Inc. (the “Dartmouth Foundation”). These foundations are tax-exempt organizations related to the University and were established to foster and promote the growth, progress and general welfare of the University and to solicit, receive and administer gifts and donations for such purposes, or in the case of the Dartmouth Foundation, for the purposes of the Dartmouth Campus. The Foundation manages the majority of the University’s endowments, including the endowment of the UMass Amherst Foundation and the Dartmouth Foundation. Separate financial statements are presented for the Foundation and the Dartmouth Foundation.

GOVERNANCE

Under the General Laws of the Commonwealth (the “General Laws”), the University is governed by a Board of Trustees (the “University Trustees” or the “Board of Trustees”) under the coordinating authority of the Commonwealth’s Department of Higher Education (“DHE”). The day-to-day operations of the University are directed by a team of administrative officers of the University, the chief executive officer being the President of the University (the “President”).

The General Laws give the University Trustees the authority to govern the University and to appoint the President, the Chancellors (the senior administrative officers of each campus), and other officers and members of the professional staff. The General Laws also grant to the University Trustees the legal right to establish and manage non-appropriated funds, including, for example, tuition, certain student fees, grants and contracts, and funds used to support certain self-sufficient operations within the University. See “University Revenues and Budgeting” below. The University Trustees consist of 19 voting members and three non-voting members (each a “Trustee”). Seventeen voting members of the University Trustees are appointed by the Governor of the Commonwealth (the “Governor”). One of these appointees is the Commonwealth’s Secretary of Education, as mandated by Chapter 27 of the Acts of 2008, at least five of those appointed must be alumni of the University, and one must be a representative of organized labor. Two of the voting members are full-time students of the University and three additional full-time students act as non-voting members. The student members are elected annually from each of the five campuses and the two voting student positions are rotated annually among the members representing the five campuses. The University Trustees, except for the student members, serve five-year staggered terms, and are eligible for reappointment for an additional five-year term.

The President is responsible for implementing the policies of the University Trustees and for providing leadership for the activities and operations of the University. The President’s Office is responsible for the development of academic and financial policies, overall coordination of University activities, and certain University-wide operational activities, including Internal Audit, the General Counsel’s office, the Treasurer’s and Controller’s functions, Information Systems, Human Resources, and the Unified Procurement Services Team (“UPST”).

Department of Higher Education

The University is subject to the coordinating authority of the DHE, which has the statutory responsibility to develop, foster and advocate for the public higher education system in Massachusetts (which consists of the University, nine state universities, and 15 community colleges), to review and establish tuition at the state universities and the community colleges (but not the University), to approve changes in academic programs at the state universities

and the community colleges, and to collaborate with the public institutions of higher education in order to identify and define institutional missions.

The Board of the DHE consists of 13 voting members; one of whom is the Commonwealth's Secretary of Education, nine members appointed by the Governor reflecting regional geographic representation, and three members chosen to represent public institutions of higher education. Of the members appointed by the Governor, at least one must be a representative of organized labor, one must be a representative of the business community, and one must be a full-time undergraduate student at a public institution of higher education. Of the members chosen to represent public institutions of higher education, one must be a member of the University Trustees, chosen by a vote of the University Trustees, one must be a member of a board of trustees of a state university, chosen by vote of the chairs of the boards of trustees of each of the state universities, and one must be a member of a board of trustees of a community college, chosen by vote of the chairs of the boards of trustees of each of the community colleges. Three of the DHE members appointed by the Governor are appointed for terms coterminous with that of the Governor. The undergraduate members of the Board of the DHE are appointed annually. The remaining members are appointed to serve five-year terms. The chairperson of the Board of the DHE is selected by the Governor.

Board of Trustees

The members and officers of the University Trustees as of November 2023, their original appointment dates and the year of expiration of their respective current terms are set forth below. The term expiration date is typically September 1 of the applicable year; however, Trustees generally continue to serve until a successor Trustee is appointed.

Name and Position; Month and Year Initially Appointed	Current Term Expiration Date
Stephen R. Karam, <i>Board of Trustees Chair</i> , Fall River <i>Appointed September 2017</i> Principal, Karam Financial Group	2027
Mary L. Burns, <i>Board of Trustees Vice Chair</i> , Lowell <i>Appointed December 2016</i> Principal, Splash Media Group Boston, LLC	2026
Fahad K. Alden, Bedford <i>Non-Voting Student Member, Appointed May 2023</i> University of Massachusetts, Lowell	2024
Christopher J. Brady, North Andover <i>Non-Voting Student Member, Appointed May 2023</i> University of Massachusetts, Amherst	2024
David M. Brunelle, Paxton <i>Appointed September 2022</i> Managing Director & Principal, North Pointe Wealth Management	2024
Gerald G. Colella, Seabrook, NH <i>Appointed September 2022</i> Chairman of the Board, MKS Instruments, Inc.	2024
Jose M. Delgado, Springfield <i>Appointed September 2022</i> Springfield City Council At Large	2023*
Michael E. Dooley, Norwood <i>Voting Student Member, Appointed May 2023</i> University of Massachusetts, Boston	2024

* Serves until a successor Trustee is appointed.

Name and Position; Month and Year Initially Appointed	Current Term Expiration Date
Robert Epstein, Boston <i>Appointed September 2015</i> President & CEO, Horizon Beverage Group	2025
Richard M. Kelleher, Duxbury <i>Appointed April 2019</i> Chairman, Pyramid Group	2023*
Robert Lewis, Jr., Boston <i>Appointed June 2020</i> Nicholas President & CEO, Boys & Girls Clubs of Boston	2027
Ann M. Maguire Keches, Boston <i>Appointed September 2022</i> Of Counsel, Keches Law Group, PC	2025
Michael V. O'Brien, Southborough <i>Appointed December 2016</i> Vice President, WinnCompanies	2026
Noreen C. Okwara, M.D., Lowell <i>Appointed September 2018</i> Internal Medicine Resident, Brigham & Women's Hospital	2023*
Imari K. Paris Jeffries, PhD, Boston <i>Appointed December 2016</i> Executive Director, King Boston	2026
Julie M. Ramos Gagliardi, Somerset <i>Appointed June 2020</i> Director of Programs, SouthCoast Community Foundation	2024
Elizabeth D. Scheibel, South Hadley <i>Appointed November 2016</i> Former District Attorney, Northwestern District, Northampton, MA Principal/Consultant, Scheibel Associates	2026
Steven A. Tolman, Brighton <i>Appointed September 2017</i> President, Massachusetts AFL-CIO	2027
Amelia S. Troye, Shrewsbury <i>Non-Voting Student Member, Appointed May 2023</i> University of Massachusetts, Chan Medical School	2024
Patrick Tutwiler, Ph.D., Andover <i>Appointed January 2023</i> Secretary of Education, Executive Office of Education Commonwealth of Massachusetts	<i>Serves Ex-Officio</i>
Jehan S. Worthy, New Bedford <i>Voting Student Member, Appointed May 2023</i> University of Massachusetts, Dartmouth	2024
Charles F. Wu, MBA, Newton <i>Appointed December 2016</i> Executive Fellow, Harvard Business School Founding Partner, BayNorth Capital, LLC	2026

* Serves until a successor Trustee is appointed.

Administrative Officers

The following is a list of the current administrative officers of the University.

Martin T. Meehan, J.D.

Martin T. Meehan, J.D., began his term as President of the University on July 1, 2015. Mr. Meehan had previously served as the Chancellor of the Lowell Campus since July 2007. Prior to that, Mr. Meehan represented the Fifth Congressional District of Massachusetts in the U.S. House of Representatives since 1993. He has also served as the First Assistant District Attorney for Middlesex County from 1991 to 1992. Mr. Meehan was also the Director of Public Affairs for the Massachusetts Secretary of the Commonwealth, and the Deputy Secretary of State for Securities and Corporations from 1986 to 1990. Mr. Meehan earned his B.S. in Education and Political Science from the University of Massachusetts, Lowell, a Master's degree in Public Administration from Suffolk University, and a J.D. degree from Suffolk University Law School. He holds honorary degrees from Suffolk University, and Shenkar College of Engineering & Design in Israel.

Kumble R. Subbaswamy, Ph.D., Interim Senior Vice President for Academic Affairs, Student Affairs, and Equity

Kumble R. Subbaswamy, Ph.D., was appointed Interim Senior Vice President for Academic Affairs, Student Affairs, and Equity in July 2023. Dr. Subbaswamy was previously the Chancellor of the Amherst Campus since July 2012. Prior to serving as Chancellor of the Amherst Campus, he served as provost at the University of Kentucky since 2006. He joined the University of Kentucky's physics faculty in 1978 after serving as a post-doctoral fellow at the University of California, Irvine. During his first 18 years at the University of Kentucky, he served as Associate Dean of Arts and Sciences and as chair of the Department of Physics and Astronomy. Dr. Subbaswamy served as Dean of the College of Arts and Sciences at the University of Miami from 1997 to 2000, when he left to become Dean of Arts and Sciences at Indiana University in Bloomington, where he served until 2006. Dr. Subbaswamy holds a B.S. degree in Physics from Bangalore University, an M.S. degree in Physics from Delhi University, and a Ph.D. degree in Physics from Indiana University.

Lisa A. Calise, Senior Vice President for Administration & Finance and Treasurer

Lisa A. Calise was appointed to the position of Senior Vice President for Administration & Finance and Treasurer in February 2017. Prior to joining the University, Ms. Calise was the Chief Financial Officer at Perkins School for the Blind, focusing on global services and education for those living with blindness and deafblindness. Before joining Perkins in 2010, Ms. Calise served the City of Boston for over a decade, including as the Director of Administration and Finance, and as Chief Financial Officer and Collector-Treasurer and Budget Director, implementing efficiency improvements and managing the City's finances through challenging economic times. Prior to coming to Boston, Ms. Calise served in the White House Office of Management and Budget as a budget examiner. Ms. Calise has served as a member of both the Massachusetts Bay Transportation Authority (MBTA) Fiscal and Management Control Board, and the Massachusetts Department of Transportation Board. Ms. Calise holds a B.A. degree from Boston College and a Master's Degree in Public Management from the University of Maryland.

David A. Lowy, J.D., General Counsel

David A. Lowy, J.D., began his term as General Counsel on February 7, 2024. Previously, he was an Associate Justice to the Massachusetts Supreme Judicial Court, appointed by Governor Charles Baker on August 16, 2016. Mr. Lowy was the first UMass graduate to serve on the state's Supreme Judicial Court. Prior to that, Mr. Lowy served on the Supreme Judicial Court Advisory Committee on Massachusetts Evidence Law as an Editor; the committee's work resulted in publication of the Massachusetts Guide to Evidence in 2008. In 2001, Governor Paul Cellucci appointed Mr. Lowy to the Superior Court bench, and he was first appointed to the bench in 1997 as a District Court Judge. Prior to that, Mr. Lowy served as Deputy Legal Counsel to Governor William F. Weld from 1992 to 1995 and was also an assistant district attorney in Essex and Suffolk Counties from 1992 to 1997. Prior to that, Mr. Lowy was an associate in the Litigation Department of Goodwin, Procter & Hoar (1987-1988 and 1989-1990), leaving for a year-long stint to work as a law clerk to Judge Edward F. Harrington in the U.S. District Court. Mr. Lowy earned a B.A., *cum laude*, Phi Beta Kappa, from the University of Massachusetts, Amherst in 1983, and graduated *magna*

cum laude from Boston University School of Law in 1987. Mr. Lowy's teaching positions include adjunct professorships at New England School of Law (1991- present), Suffolk University Law School (1995-2005), and Boston University School of Law (2006 - present), where he teaches courses in evidence. Mr. Lowy will also serve as Strategic Advisor for Law School Education and Adjunct Professor of Law at the UMass School of Law.

Javier A. Reyes, Ph.D., Chancellor, Amherst Campus

Javier A. Reyes, Ph.D., began his tenure as Chancellor of UMass Amherst on July 1, 2023. Dr. Reyes is an economist who has devoted his career to the cause of public higher education, holding leadership positions at the University of Illinois Chicago (UIC), West Virginia University, and the University of Arkansas. He most recently served as interim chancellor of UIC, Chicago's largest university campus. Born and raised in Mexico, Dr. Reyes is the first Hispanic person to serve as chancellor of UMass Amherst. Dr. Reyes received his bachelor's degree in economics from the Instituto Tecnológico y de Estudios Superiores de Monterrey, Campus Estado de Mexico, in 1998, and his doctorate in economics from Texas A&M University in 2003. He is actively engaged with the TIAA Diversity Council and the Association of Latino Professionals For America (ALPFA).

Marcelo Suárez-Orozco, Ph.D., Chancellor, Boston Campus

Marcelo Suárez-Orozco, Ph.D., was appointed Chancellor of the Boston Campus in February 2020 and assumed the position in August 2020. Prior to his appointment, Dr. Suárez-Orozco served as the inaugural University of California, Los Angeles (UCLA) Wasserman Dean, where he led two academic departments, 16 nationally renowned research institutes, and two innovative demonstration schools at UCLA's Graduate School of Education & Information Studies. Prior to joining UCLA, Dr. Suárez-Orozco was a professor at Harvard University, where he served as the Victor S. Thomas Professor of Education, Co-Founder and Co-Director of the Harvard Immigration Project, and founding Member of the Executive Committee of the David Rockefeller Center for Latin American Studies, and at New York University, where he served as the inaugural Courtney Sale Ross University Professor of Globalization and Education. He is a member of the American Academy of Arts and Sciences (currently serving in the Governance and Trust Board), the National Academy of Education, and the Board of Advisors of the Thomas Mann House, and a Trustee of the Carnegie Foundation for the Advancement of Teaching. Dr. Suárez-Orozco received his A.B., M.A. and Ph. D. (Anthropology) from University of California, Berkeley.

Mark A. Fuller, Ph.D., Chancellor, Dartmouth Campus

Mark A. Fuller, Ph.D., was appointed Chancellor of UMass Dartmouth on August 9, 2021, after serving as Interim Chancellor since January 19, 2021. A first-generation college student, Dr. Fuller is a passionate advocate for public education. Dr. Fuller came to the Dartmouth Campus from UMass Amherst, where he served as Vice Chancellor for Advancement for the last three years, following nine years as the Dean and Thomas O'Brien Endowed Chair at the Isenberg School of Management. Under his leadership, the Isenberg School moved up more than 25 positions between 2013 and 2018 in the *U.S. News & World Report* rankings and its online MBA program was ranked by the *Financial Times* as the #1 program in the nation, and the #3 program in the world. Prior to joining UMass Amherst in 2009, Dr. Fuller held faculty positions at Washington State University and Baylor University. He has extensive experience in curriculum development and program management at the undergraduate, MBA, Executive MBA, and Ph.D. level, and has significant expertise in distance education. Dr. Fuller received his M.S. in Management and Ph.D. in Management Information Systems from the University of Arizona's Eller College of Management.

Julie Chen, Ph.D., Chancellor, Lowell Campus

Julie Chen, Ph.D., was appointed Chancellor of UMass Lowell in May 2022 and assumed the position in July 2022. Prior to her appointment, Dr. Chen served as Vice Chancellor for Research and Economic Development, leading the campus' growing research franchise to a nearly \$95 million annual operation. As UMass Lowell's chief research officer, Chen facilitated numerous innovative models that brought together industry, government and academia. Dr. Chen joined the UMass Lowell faculty in 1997 after six years as an assistant professor at Boston University. She spent 2002-2004 in Washington, D.C., as director for the Materials Processing and Manufacturing as well as the Nanomanufacturing programs at the National Science Foundation. Dr. Chen was appointed UMass Lowell's Vice Provost for Research in 2009, and she was promoted to Vice Chancellor in 2016 with an added external and outreach focus. Dr. Chen received her Ph.D., Master of Science, and Bachelor of Science degrees from the Massachusetts

Institute of Technology in mechanical engineering, where she was a student athlete and Academic All-American in softball and field hockey. In 2019 Dr. Chen was awarded an honorary degree from Queens University Belfast. She is a recipient of the U.S. Army Public Service Commendation Medal – the Army’s fourth-highest civilian honor – in recognition of her leadership in developing the innovation ecosystem.

Michael F. Collins, M.D., Chancellor, Worcester Campus and Senior Vice President for Health Sciences

Michael F. Collins, M.D., was appointed Chancellor of the Worcester Campus, where he also serves as professor of quantitative health sciences and medicine, in September 2008, after serving as interim Chancellor of the Worcester Campus from June 2007 to September 2008. In June 2007, Dr. Collins was appointed Senior Vice President for Health Sciences at the University. Dr. Collins served as Chancellor of the UMass Boston Campus from 2005 through 2007. Prior to joining the University, Dr. Collins served as President and Chief Executive Officer of Caritas Christi Health Care from 1994 to 2004 and from 1994 to 2001 he served as President of St. Elizabeth’s Medical Center in Brighton, a university academic medical center affiliated with Tufts University School of Medicine. A board-certified physician in internal medicine and a Fellow of the American College of Physicians, Dr. Collins has held a number of faculty and academic leadership positions over the course of his career. At Texas Tech University Health Sciences Center, his posts included Assistant Professor of Internal Medicine and Assistant Dean for Patient Care Resources. At Tufts University, he served as Clinical Professor of Internal Medicine and Associate Dean of Government and Medical Affairs in the School of Medicine and as a senior fellow at the Jonathan M. Tisch College of Citizenship and Public Service. Dr. Collins received a B.A. degree from the College of the Holy Cross and an M.D. degree from Tufts University School of Medicine.

Faculty and Staff

The University had 6,035 faculty members for Fall 2023, including 4,371 full-time faculty. Of the total faculty, 30.6% were tenured, 11.9% were on a tenure track, and the remaining 55.5% were not on a tenure track. University faculty have received some of the world’s most prestigious awards and honors, including the MacArthur Fellowship, the Pulitzer Prize, the National Book Award and the Nobel Prize. University faculty also include National Science Foundation grant winners and Fulbright Scholars. The University also had 12,460 staff members for Fall 2023, of which 93.7% were full-time. The University student FTE to faculty FTE ratios, excluding continuing education, range from 15:1 to 18:1 across the campuses (excluding the Worcester Campus).

STRATEGIC INITIATIVES

Under the leadership of President Meehan and the University Trustees, the University is engaged in a series of strategic initiatives identified as a result of an interactive, collaborative process between the President’s Office and campus leadership directed toward the following:

- ***A World Class Public University*** – UMass is committed to offering students a high-quality education and a transformative student experience. Efforts to date have resulted in UMass graduates from every campus earning higher starting salaries than graduates from at least 53% of all other Massachusetts colleges and universities. The internationally renowned faculty at UMass are a driving force for revolutionary research, development and discovery. Endowed chairs and professorships have helped attract top scholars to the University and support teaching and research efforts.
- ***Financial Accountability Framework*** – The University is committed to fiscal oversight, internal controls, risk management, and transparency. The framework is governed by the following goals:
 - Ensure financial sustainability and mitigate risk – including initiatives on financial sustainability, capital strategy, risk management and tax compliance. An example of this is the University’s system-wide enterprise risk management program that coordinates through a formal governance structure, and regularly collaborates with campus risk and emergency management partners, such as the Office of the General Counsel and Internal Audit. The program facilitates the maintenance of a University-wide Risk Registry, which proactively identifies, assesses, and prioritizes risks across the University, providing transparency and a shared understanding of risks at both leadership and

operational levels, and building capacity and networks to address critical risks and methods to determine the effectiveness of the strategies.

- Deliver efficient operations to ensure access and affordability for students - including initiatives on shared services and operational improvements. An example of this is the Unified Procurement Services Team (UPST), which recently celebrated two years of creating efficiency and effectiveness for the University. The UPST, which was established in January 2020, has helped achieve \$112.0 million in annualized cost savings through more than 280 initiatives across all five campuses. To continue achieving its mission of providing “better, faster, cheaper” services to the University, UPST has developed a robust pipeline of process improvements and cost savings projects. UPST continues to focus on driving system-wide contracts, creating efficiencies for all campuses.
 - Improve capacity to deliver financial, administrative and other service objectives to the University community - including initiatives focused on providing the requisite analysis of the issues presented, human resource impacts, and financial reporting. An example of this is the University’s five-year financial forecast presented in December of each year, which improves transparency, identifies areas for further analysis during the budget development process, and provides sensitivity analysis to demonstrate variances in major assumptions (e.g., enrollment and residential occupancy).
- ***Educating the Massachusetts Workforce*** – The University is a significant contributor to the Massachusetts workforce. UMass fuels the economy, not just by educating students, but in ensuring that University graduates have the requisite skills today’s high-profile, in-demand jobs require. UMass educates nearly three times as many Massachusetts residents as the top eight Massachusetts private universities combined, graduating over 18,000 students each year.
 - ***Life Changing Research*** – Through its distinguished research programs, UMass is anchoring significant economic development in all parts of the Commonwealth. In fiscal year 2023, UMass conducted \$826 million in research in areas critical to the Massachusetts economy, including the life sciences, engineering, computer and data science, education, and climate science. Much of the research at UMass has the potential to be commercialized, often leading to spin-off private companies and new products.
 - ***Driving the State Economy*** – UMass is a vital economic driver in all regions of the Commonwealth, generating billions in economic impact each year. UMass is the third largest employer in the Commonwealth and generates \$8.3 billion in annual economic activity.

ACADEMIC PROGRAMS AND ACCREDITATION

The University offers a broad spectrum of academic programs across its campuses, granting Bachelor of Arts degrees in over 60 fields, Bachelor of Science degrees in over 50 fields, and bachelor’s degrees in a number of other areas, including Fine Arts and Business Administration. Master of Arts degrees are granted in more than 25 fields, Master of Science degrees are granted in over 45 fields, and a variety of other master’s degrees are granted in specialized areas including Education, Teaching, Business Administration and Public Health. In addition, the University grants Doctor of Philosophy degrees in over 50 fields, as well as Doctor of Education, Doctor of Science, Doctor of Engineering, Doctor of Audiology, Doctor of Nursing Practice, Doctor of Physical Therapy, Juris Doctor and Doctor of Medicine degrees. The academic resources of the University are also accessible to part-time students, to local, national and international businesses, and to the general community through the continuing education programs.

Each campus of the University is accredited by the New England Commission of Higher Education (“NECHE”), the major accrediting body for institutions of higher education in New England. The campuses are accredited through the years indicated: Amherst Campus – 2028; Boston Campus – 2025; Dartmouth Campus – 2030; Lowell Campus – 2023; and UMass Chan – 2032. In 2022, after conducting an intensive, thorough and collaborative review, NECHE re-accredited UMass Chan for a full 10-year period that runs through 2032. The Lowell Campus underwent its 10-year comprehensive evaluation in Fall 2023 and NECHE’s response will be forthcoming in Spring 2024. The T.H. Chan School of Medicine at UMass Chan is a member of the Association of American Medical

Colleges and was given full accreditation through 2028 by the Liaison Committee on Medical Education (“LCME”), the major accrediting body for programs leading to the M.D. degree. The Law School is accredited by the American Bar Association through 2030. In addition to the foregoing, individual schools and academic programs are accredited by the appropriate agencies in their particular fields.

The University is also an institutional member of numerous organizations of higher learning and professional societies, including, among others, the Association of American Colleges, the Association of Public and Land-Grant Universities, the American Council on Education, the American Association of Colleges for Teacher Education, the American Association of Colleges of Nursing, the Council of Colleges of Arts and Sciences, and the New England Board of Higher Education.

ENROLLMENT

Admission to the University is open to residents and non-residents of the Commonwealth on a competitive basis. Massachusetts residents accounted for 80.0% and 47.1% of the University’s total undergraduate and graduate enrollment, respectively, during Fall 2023.

For Fall 2023, total FTE enrollment at the University (including continuing education but not including UMass Global) was 64,855, representing an increase of 0.4% from Fall 2022.

Total FTE Enrollment, Fall 2019-2023

Enrollment Type	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Undergraduate	53,095	52,633	50,721	50,145	49,903
Graduate	<u>12,908</u>	<u>13,437</u>	<u>14,064</u>	<u>14,434</u>	<u>14,952</u>
Total	66,003	66,070	64,785	64,578	64,855

Head Count Enrollment

The following tables show opening head count enrollment for the University as a whole, and at each campus, as of the University’s Fall semester for the academic years shown.

Total Headcount Enrollment

Enrollment Type	Fall				
	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
In-state undergraduate	47,754	46,987	45,428	44,139	43,113
Out-of-state undergraduate	9,610	9,958	9,790	10,381	10,789
In-state graduate	9,461	9,935	9,909	9,406	9,284
Out-of-state graduate	<u>8,240</u>	<u>8,551</u>	<u>9,427</u>	<u>10,026</u>	<u>10,407</u>
Total	75,065	75,431	74,554	73,959	73,593

Amherst Campus

Enrollment Type	Fall				
	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
In-state undergraduate	18,551	18,627	18,393	18,083	17,415
Out-of-state undergraduate	5,658	5,606	5,838	6,308	6,521
In-state graduate	2,605	2,798	2,845	2,727	2,764
Out-of-state graduate	<u>4,536</u>	<u>4,611</u>	<u>4,969</u>	<u>5,111</u>	<u>5,110</u>
Total	31,350	31,642	32,045	32,229	31,810

Boston Campus

Enrollment Type	Fall				
	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
In-state undergraduate	10,851	11,147	10,738	10,462	10,303
Out-of-state undergraduate	1,744	1,723	1,531	1,759	1,931
In-state graduate	2,228	2,320	2,135	1,908	1,907
Out-of-state graduate	<u>1,166</u>	<u>1,069</u>	<u>1,233</u>	<u>1,450</u>	<u>1,530</u>
Total	15,989	16,259	15,637	15,586	15,671

Dartmouth Campus

Enrollment Type	Fall				
	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
In-state undergraduate	5,673	5,350	5,179	4,839	4,856
Out-of-state undergraduate	732	677	654	678	746
In-state graduate	1,104	1,149	1,123	1,090	1,018
Out-of-state graduate	<u>645</u>	<u>693</u>	<u>761</u>	<u>850</u>	<u>1,139</u>
Total	8,154	7,869	7,717	7,457	7,759

Lowell Campus

Enrollment Type	Fall				
	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
In-state undergraduate	12,679	11,863	11,118	10,755	10,539
Out-of-state undergraduate	1,476	1,952	1,767	1,636	1,591
In-state graduate	2,693	2,800	2,964	2,793	2,707
Out-of-state graduate	<u>1,490</u>	<u>1,754</u>	<u>2,014</u>	<u>2,151</u>	<u>2,122</u>
Total	18,338	18,369	17,863	17,335	16,959

Worcester Campus

Enrollment Type	Fall				
	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Medical School	643	670	663	686	722
Other	<u>591</u>	<u>622</u>	<u>629</u>	<u>666</u>	<u>672</u>
Total†	1,234	1,292	1,292	1,352	1,394

† Does not include the head count of registrants in the various continuing medical education programs offered at the Worcester Campus.

The following tables provide aggregate data for the campuses (except the Worcester Campus) on University applications, acceptances and matriculations for first year undergraduates and for transfer students for the Fall semesters 2019 through 2023.

First Year Applicants, Acceptances and Matriculants, Fall 2019-2023

	Fall				
	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Applications Received	78,615	77,299	80,611	86,188	93,571
Number of Acceptances	52,895	53,787	58,619	63,484	66,098
Percent of Applicants Accepted	67%	70%	73%	74%	71%
Number of Matriculants	11,530	10,577	10,226	11,222	11,123
Percent Matriculated of Those Accepted	22%	20%	17%	18%	17%

Transfer Student Applicants, Acceptances and Matriculants, Fall 2019-2022

	Fall				
	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Applications Received	10,302	9,823	9,846	9,067	9,352
Number of Acceptances	7,229	6,886	6,816	7,041	7,234
Percent of Applicants Accepted	70%	70%	69%	78%	77%
Number of Matriculants	4,199	3,917	3,777	3,424	3,441
Percent Matriculated of Those Accepted	58%	57%	55%	49%	48%

As shown in the tables above, although the University experienced an increase of approximately 8.6% in freshmen applications for Fall 2023 compared to Fall 2022, total new freshmen enrollees for Fall 2023 decreased by approximately 0.9% compared to Fall 2022 for UMass as a whole, and total new transfer enrollees increased by approximately 0.5%, for Fall 2023 compared to Fall 2022 based on headcount.

As of April 17, 2024, first year undergraduate applications for the Amherst, Boston, Dartmouth, and Lowell campuses for Fall 2024 totaled approximately 93,910, representing a 3% increase over the applications received as of the same date last year. Approximately 66,527 first year applicants have been accepted for admission as of April 17, 2024. As of April 17, 2024, transfer applications for the Amherst, Boston, Dartmouth, and Lowell campuses for Fall 2024 totaled approximately 6,210, representing a 2% increase over the applications received as of the same date last year. Approximately 4,180 transfer applicants have been accepted for admission as of April 17, 2024.

The following tables show the most currently available retention and six-year graduation rates for undergraduate freshmen entering the University. The level and changes in retention and graduation rates reflect the diversity of the entering students among the four undergraduate campuses; the lower averages in large part reflect the non-traditional student population served by the Boston Campus.

One-Year Retention Rates - Fall Term (%)

	Fall				
	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Range of Campus Averages	70-91	71-89	69-91	67-90	64-91

Six-Year Graduation Rates (%)

	Fall				
	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Year of Entry	2013	2014	2015	2016	2017
Graduation After 6 Years - Range of Campus Averages	49-82	50-83	49-84	51-83	49-83

The following table shows the average Scholastic Aptitude Test ("SAT") scores for entering University undergraduate freshmen for the Fall terms shown.

SAT Scores for Incoming Freshmen

	Fall				
	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Range of Campus Averages	1091-1292	1091-1290	1139-1352	1140-1358	1140-1376
National Average	1059	1051	1060	1050	1028

Source: University records for Campus Averages; College Board for National Averages.

Degrees Awarded

The University awards four levels of degrees: associate's, bachelor's, master's and doctoral/professional degrees, as well as undergraduate and graduate certificates. The number of degrees and certificates awarded by the University in the five most recently completed academic years are shown in the following table.

	Academic Year				
	<u>2018-2019</u>	<u>2019-2020</u>	<u>2020-2021</u>	<u>2021-2022</u>	<u>2022-2023</u>
Associate's/Certificate	666	684	751	787	781
Bachelor's	13,231	13,101	13,392	13,153	13,306
Master's/CAGS [†]	4,985	4,841	4,891	5,201	5,489
Doctorate/Professional	915	944	946	1,051	983

[†]“CAGS” means Certificate of Advanced Graduate Studies.

TUITION AND FEES

The following tables show tuition and mandatory fees for full-time graduate and undergraduate students in effect at the Amherst, Boston, Dartmouth, Lowell and Worcester Campuses for fiscal years 2020 through 2024.

Tuition & Mandatory Fees: Fiscal Years 2020-2024

Amherst Campus

	Fiscal Year				
	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
TUITION					
Undergraduate (MA resident)	\$15,791	\$15,791	\$15,791	\$16,186	\$16,591
Undergraduate (non-resident)	35,112	35,779	36,316	37,405	38,527
Graduate (MA resident)	14,778	14,778	14,778	15,148	15,527
Graduate (non-resident)	32,392	33,040	33,536	34,542	35,578
OTHER MANDATORY FEES					
Undergraduate (MA resident)	\$598	\$648	\$648	\$766	\$766
Undergraduate (non-resident)	598	648	648	766	766
Graduate (MA resident)	2,195	2,221	2,237	2,261	2,286
Graduate (non-resident)	2,195	2,221	2,237	2,261	2,286
TOTAL TUITION & MANDATORY FEES					
Undergraduate (MA resident)	\$16,389	\$16,439	\$16,439	\$16,952	\$17,357
Undergraduate (non-resident)	35,710	36,427	36,964	38,171	39,293
Graduate (MA resident)	16,973	16,999	17,015	17,409	17,813
Graduate (non-resident)	34,587	35,261	35,773	36,803	37,864
DORMITORY RESIDENTS ONLY					
Average Room & Board	\$13,004	\$13,329	\$14,217	\$14,776	\$15,437
TUITION, MANDATORY FEES, ROOM & BOARD					
Undergraduate (MA resident)	\$29,393	\$29,768	\$30,656	\$31,728	\$32,794
Undergraduate (non-resident)	48,714	49,756	51,181	52,947	54,730
Graduate (MA resident)	29,977	30,328	31,232	32,185	33,250
Graduate (non-resident)	47,591	48,590	49,990	51,579	53,301

[Remainder of this page intentionally left blank.]

Boston Campus

	Fiscal Year				
	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
TUITION					
Undergraduate (MA resident)	\$14,187	\$14,187	\$14,187	\$14,542	\$14,905
Undergraduate (non-resident)	34,649	34,649	34,649	35,515	36,581
Graduate (MA resident)	18,433	18,433	18,433	18,894	19,366
Graduate (non-resident)	35,980	35,980	35,980	36,879	37,801
OTHER MANDATORY FEES					
Undergraduate (MA resident)	\$466	\$510	\$530	\$630	\$630
Undergraduate (non-resident)	466	510	530	630	630
Graduate (MA resident)	455	505	505	605	605
Graduate (non-resident)	455	505	505	605	605
TOTAL TUITION & MANDATORY FEES					
Undergraduate (MA resident)	\$14,653	\$14,697	\$14,717	\$15,172	\$15,535
Undergraduate (non-resident)	35,115	35,159	35,179	36,145	37,211
Graduate (MA resident)	18,888	18,938	18,938	19,499	19,971
Graduate (non-resident)	36,435	36,485	36,485	37,484	38,406
DORMITORY RESIDENTS ONLY¹					
Average Room & Board (Undergraduate only)	\$15,270	\$15,741	\$16,355	\$16,896	\$17,512
TUITION, MANDATORY FEES, ROOM & BOARD¹					
Undergraduate (MA resident)	\$29,923	\$30,438	\$31,072	\$32,068	\$33,047
Undergraduate (non-resident)	50,385	50,900	51,534	53,041	54,723
Graduate (MA resident)	18,888	18,938	18,938	19,499	19,971
Graduate (non-resident)	36,435	36,485	36,485	37,484	38,406

¹ Room rates are recommended by an operating committee, composed of representatives of the nonprofit entity that owns the facility, the management company that operates the facility, the University and the Authority, and approved by the nonprofit owner. See “University Campuses – Boston Campus”.

[Remainder of this page intentionally left blank.]

Dartmouth Campus

	Fiscal Year				
	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
TUITION					
Undergraduate (MA resident)	\$13,833	\$13,833	\$13,833	\$14,179	\$14,533
Undergraduate (non-resident)	29,578	29,578	29,578	30,317	31,075
Graduate (MA resident)	16,390	16,390	16,390	16,390	16,390
Graduate (non-resident)	29,578	29,578	29,578	29,578	29,578
Graduate Law School (MA resident)	28,661	28,661	28,661	29,500	30,090
Graduate Law School (non-resident)	37,569	37,569	37,569	38,600	39,372
OTHER MANDATORY FEES					
Undergraduate (MA resident)	\$525	\$575	\$575	\$675	\$675
Undergraduate (non-resident)	525	575	575	675	675
Graduate (MA resident)	525	575	575	675	675
Graduate (non-resident)	525	575	575	675	675
Graduate Law School (MA resident)	525	575	575	675	675
Graduate Law School (non-resident)	525	575	575	675	675
TOTAL TUITION & MANDATORY FEES					
Undergraduate (MA resident)	\$14,358	\$14,408	\$14,408	\$14,854	\$15,208
Undergraduate (non-resident)	30,103	30,153	30,153	30,992	31,750
Graduate (MA resident)	16,915	16,965	16,965	17,065	17,065
Graduate (non-resident)	30,103	30,153	30,153	30,253	30,253
Graduate Law School (MA resident)	29,186	29,236	29,236	30,175	30,765
Graduate Law School (non-resident)	38,094	38,144	38,144	39,275	40,047
DORMITORY RESIDENTS ONLY					
Average Room & Board	\$13,870	\$15,327	\$15,825	\$16,134	\$16,590
TUITION, MANDATORY FEES, ROOM & BOARD					
Undergraduate (MA resident)	\$28,228	\$29,735	\$30,233	\$30,987	\$31,798
Undergraduate (non-resident)	43,973	45,480	45,978	47,126	48,340
Graduate (MA resident)	30,785	32,291	32,790	33,111	33,565
Graduate (non-resident)	43,973	45,480	45,978	46,299	46,753
Graduate Law School (MA resident)	43,056	44,563	45,061	46,309	47,355
Graduate Law School (non-resident)	51,964	53,471	53,969	55,409	56,637

[Remainder of this page intentionally left blank.]

Lowell Campus

	Fiscal Year				
	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
TUITION					
Undergraduate (MA resident)	\$15,078	\$15,078	\$15,078	\$15,462	\$15,850
Undergraduate (non-resident)	33,004	33,004	33,004	33,830	34,676
Graduate (MA resident) ¹	14,590	14,590	14,590	14,956	15,330
Graduate (non-resident) ¹	26,370	26,370	26,370	27,030	27,706
OTHER MANDATORY FEES					
Undergraduate (MA resident)	\$570	\$620	\$620	\$720	\$720
Undergraduate (non-resident)	570	620	620	720	720
Graduate (MA resident) ²	570	620	620	720	720
Graduate (non-resident) ²	570	620	620	720	720
TOTAL TUITION & MANDATORY FEES					
Undergraduate (MA resident)	\$15,648	\$15,698	\$15,698	\$16,182	\$16,570
Undergraduate (non-resident)	33,574	33,624	33,624	34,550	35,396
Graduate (MA resident)	15,160	15,210	15,210	15,676	16,050
Graduate (non-resident)	26,940	26,990	26,990	27,750	28,426
DORMITORY RESIDENTS ONLY					
Average Room & Board	\$13,060	\$13,380	\$13,570	\$13,930	\$14,310
TUITION, MANDATORY FEES, ROOM & BOARD					
Undergraduate (MA resident)	\$28,708	\$29,078	\$29,268	\$30,112	\$30,880
Undergraduate (non-resident)	46,634	47,004	47,194	48,480	49,706
Graduate (MA resident)	28,220	28,590	28,780	29,606	30,360
Graduate (non-resident)	40,000	40,370	40,560	41,680	42,736

¹ Graduate tuition charges at UMass Lowell are on a 9-credit load basis.

² Graduate fee charges at UMass Lowell are on a 9-credit load basis.

[Remainder of this page intentionally left blank.]

Worcester Campus

	Fiscal Year				
	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
TUITION					
Medical School (resident - class of '19 and beyond)	\$36,030	\$36,570	\$37,120	\$38,048	\$39,380
Medical School (non-resident)	61,960	62,889	63,832	65,428	67,718
Graduate School of Nursing (MA resident)	14,064	14,275	14,490	14,852	15,372
Graduate School of Biomedical Sciences (MA resident)	14,506	14,724	14,946	15,320	15,856
Graduate School of Nursing (non-resident)	19,230	19,518	19,812	20,308	21,019
Graduate School of Biomedical Sciences (non-resident)	31,862	32,340	32,826	33,648	34,826
OTHER MANDATORY FEES					
Medical School (resident - class of '19 and beyond)	\$2,316	\$2,091	\$2,130	\$2,180	\$2,310
Medical School (non-resident)	2,316	\$2,091	2,130	2,180	2,310
Graduate School of Nursing (resident and non-resident)	1,390	1,390	1,410	1,444	1,492
Graduate School of Biomedical Sciences (resident and non-resident)	1,056	1,056	1,072	1,098	1,134
TOTAL TUITION & MANDATORY FEES					
Medical School (resident - class of '19 and beyond)	\$38,346	\$38,661	\$39,250	\$40,228	\$41,690
Medical School (non-resident)	64,276	64,980	65,962	67,608	70,028
Graduate School of Nursing (MA resident)	15,454	15,665	15,900	16,296	16,864
Graduate School of Biomedical Sciences (MA resident)	15,562	15,780	16,018	16,418	16,990
Graduate School of Nursing (non-resident)	20,620	20,908	21,222	21,752	22,511
Graduate School of Biomedical Sciences (non-resident)	32,918	33,396	33,898	34,746	35,960

Student Financial Aid

Eligible University students receive financial aid packages primarily awarded from the federal government, with varying combinations of grants and scholarships, loans and part-time employment. Grants and scholarships represent financial aid that does not require repayment by the student. The primary federal grants and scholarships awarded to eligible University students in fiscal year 2023 were federal Pell Grants of approximately \$80.2 million and federal Supplemental Education Opportunity Grants of approximately \$3.4 million. New loans processed by the University for eligible students under federal student loan programs and federally guaranteed loan programs totaled approximately \$317.0 million for fiscal year 2023. Eligible University students also received approximately \$6.0 million through the federal Work-Study Program for fiscal year 2023.

UNIVERSITY REVENUES AND BUDGETING

In general, the University receives revenues from multiple sources: Commonwealth appropriations, tuition, student fees and self-supporting activities for which fees are charged to cover the cost of providing the service, and federal and state contracts. In fiscal year 2023, Commonwealth appropriations provided approximately 24.3% of all operating and non-operating revenues of the University (not including University Related Organizations), tuition and fees accounted for approximately 25.1% of all operating and non-operating revenues, and other non-appropriated funds (including grants and contracts, auxiliary enterprises and other operating revenues) provided the remaining 50.6%. The fiscal year 2024 budget of approximately \$4.1 billion in expenses and approximately \$4.2 billion in revenues, adopted by the Board of Trustees on May 31 2023, reflects the University's commitment to financial accountability and use of real time data to support decision-making. The University is committed to achieving the fiscal year 2024 budget surplus, and based on second quarter results, the University currently expects to achieve this goal.

The University prepares annual financial statements in accordance with generally accepted accounting principles on an accrual basis. The financial statements of the University as of June 30, 2023 appearing in Appendix B to this Official Statement have been audited by KPMG LLP, independent certified public accountants. The audited financial statements of the University should be read in their entirety, including the footnotes and the Management Discussion and Analysis attached thereto. KPMG LLP has not been engaged to perform and has not performed, since

the date of its report included in Appendix B, any procedures on the financial statements addressed in that report. KPMG LLP also has not performed any procedures relating to this Official Statement.

Budget Process

The University's fiscal year, like that of the Commonwealth, is from July 1 through June 30. A key source of University revenues is the annual state appropriation determined in the Commonwealth's annual budget process. This process begins approximately one year in advance of the commencement of each fiscal year. The University prepares its consolidated state budget request and forwards it to the Governor and the House and Senate Committees on Ways and Means. A copy of the University's request is also forwarded to the DHE, which incorporates the University's request in whole or in part into its state budget request for the entire public higher education system. The Governor makes funding recommendations to the state legislature (the "Legislature"). The Legislature in turn appropriates funds through its annual budget and other appropriating acts to the University Trustees, who distribute the funds to the five campuses. The Commonwealth budget process, however, is only one of several ongoing budgetary and review processes that culminate in the presentation to the University Trustees of the overall annual University operating budget.

Appropriated Funds

The following tables detail the University's appropriations as included in the Commonwealth's budget for fiscal years 2020 through 2024 and the calculation of total Commonwealth support reported in the financial statements for fiscal years 2019 through 2023. **Table A** details the University's base appropriation as provided for in the Commonwealth's annual budget for fiscal years 2020 through 2024, as more fully discussed below. **Table B** details the total Commonwealth support received by the University from all sources for fiscal years 2019 through 2023, as reflected in the University's annual audited financial statements.

TABLE A
Commonwealth Appropriations by Fiscal Year
(\$ millions)

	Fiscal Year				
	2020	2021	2022	2023	2024
Commonwealth Appropriations	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>
UMass Base Appropriation	\$558.0	\$560.5	\$571.2	\$622.9	\$687.1
Collective Bargaining Costs	<u>2.4*</u>	<u>0</u>	<u>28.2</u>	<u>41.2</u>	<u>66.1</u>
Total State Appropriation	<u>\$560.5</u>	<u>\$560.5</u>	<u>\$599.4</u>	<u>\$664.1</u>	<u>\$753.2</u>

*The Commonwealth transferred certain funds to the University's base appropriation in fiscal years 2019 and 2022 to support collective bargaining, and in fiscal year 2020 to support collective bargaining and the implementation of the Paid Family Medical Leave Act.

The funds appropriated by the Commonwealth for the University generally are applied to pay employee salaries, including unionized faculty and staff, salaries and related expenses. The Commonwealth also includes in its annual appropriation the fringe benefit costs of those University employees who are paid from Commonwealth appropriations. Such fringe benefit costs are added to the "State Appropriations" financial statement line item as presented in the table below. The University pays the Commonwealth for the fringe benefit costs of those employees paid from funding sources other than Commonwealth appropriations. The University includes tuition collected in its financial statements in the line item captioned "Tuition and Fees" in the "Combined Statements of Revenue, Expenses and Changes in Net Position".

[Remainder of this page intentionally left blank.]

TABLE B
Total Commonwealth Support
(\$ thousands)

Fiscal Year	Fiscal Year				
	2019	2020	2021	2022	2023
Gross Commonwealth Appropriations	\$542,095	\$566,941	\$568,350	\$618,245	\$704,241
Plus: Fringe Benefits	238,126	243,577	277,131	261,758	307,119
Net Commonwealth Appropriations	<u>\$780,221</u>	<u>\$810,518</u>	<u>\$845,481</u>	<u>\$880,003</u>	<u>\$1,011,360</u>

The Commonwealth's fiscal year 2021 budget approved in December 2020 included a total appropriation of \$560.5 million, resulting in no change in funding from fiscal year 2020.

The Commonwealth's fiscal year 2022 budget approved in July 2021 included a base appropriation of \$571.2 million, representing an increase of 1.9% over the fiscal year 2021 base appropriation. The appropriation partially funded the University's request, including \$4 million for student mental health services and \$6.7 million for increased costs due to inflation. In addition to the base appropriation, the Commonwealth committed to funding a share of collective bargaining costs and transferred \$28.2 million to the University, resulting in a total appropriation of \$599.4 million for fiscal year 2022. The Commonwealth also appropriated COVID Impact Mitigation Funding during fiscal year 2022, earmarking \$30 million for the University toward mitigating the impacts related to the COVID-19 pandemic and for capital maintenance projects.

The Commonwealth's fiscal year 2023 budget approved in July 2022 included a total appropriation of \$664.1 million, an increase of 10.8% above the fiscal year 2022 appropriation. Of that increase, \$41.2 million supports the Commonwealth's share of collective bargaining costs for fiscal year 2023. The remaining increase included \$21 million to defray rising costs due to inflation, \$15 million to support student financial aid, and an additional \$15 million not earmarked for any specific purpose.

The Commonwealth's fiscal year 2024 budget approved in August 2023 included a base appropriation of \$687.1 million, an increase of 3.5% above the appropriation included in the Commonwealth's fiscal year 2023 budget. In addition, in December 2023, \$66.1 million was transferred to the University supporting the Commonwealth's share of collective bargaining costs, resulting in a total appropriation of \$753.2 million for fiscal year 2024.

Management of Non-Appropriated Funds

All non-appropriated funds are managed and grouped for budgetary purposes into several trust funds. Non-appropriated funds are funds derived by the University from revenue sources other than Commonwealth appropriations and include, for example, tuition, student fees, gifts, grants, contracts and sponsored programs. The University Trustees establish and collect certain student fees and charges, including charges for room and board. Non-appropriated funds are retained by the University. Approximately 77.4% and 75.6% of the University's operating and non-operating revenues for fiscal years 2022 and 2023, respectively, were non-appropriated.

University trust funds are financial accounts that are established by the University Trustees under authority granted by the Legislature in connection with self-supporting operations, such as student services, parking and certain research and public service activities. Revenues received from these self-supporting activities are expended by law for the respective purposes for which each trust fund was established. The University Trustees exercise oversight and control over these funds through official policy guidelines, annual budget review and approval and periodic internal audits of certain accounts.

The University's financial operations consist of two major expense categories: Educational and General and Auxiliary Enterprises. The Educational and General expense category includes academic programs, research, public service programs, student services programs, academic and institutional support programs, physical plant operations and financial aid. These activities are funded from student tuition and fees, Commonwealth and Federal appropriations, and grants and contracts. Auxiliary Enterprises are a set of self-sufficient services ancillary to the general educational mission of the University. These include such items as dining and residence halls, student health services and parking facilities. The Auxiliary Enterprises category is a revenue-based trust fund. No assurance can be

given that future trust fund revenues will continue to be sufficient to support self-amortizing projects or other Auxiliary Enterprises. The University reviews fees annually with the goal of having the Auxiliary Enterprises budget be self-sufficient.

Basis of Presentation

The financial statements have been prepared in accordance with U.S. accounting principles as prescribed by the Governmental Accounting Standards Board ("GASB") using the economic resources measurement focus and the accrual basis of accounting. These statements are reported on a combined basis and all intra-University transactions are eliminated.

The University's activities are considered to be a single business-type activity and accordingly, are reported in a single column in the financial statements. Business-type activities are those that are financed in whole or part by funds received from external parties for goods or services.

The University's operating activities consist of tuition and fees, grants and contracts, sales and services, auxiliary enterprises and other operating revenues. Other operating revenues include sales and services provided by the UMass Chan under its Commonwealth Medicine programs, which provide consulting and services in healthcare financing, administration and policy to federal, state and local agencies and not-for-profit health and policy organizations. Also included in other operating revenues are payments received by UMass Chan for educational services it provides to its clinical affiliate, UMass Memorial Medical Center ("UMass Memorial").

Revenues are reported net of discounts and allowances. As a result, student financial aid expenses are reported as an allowance against tuition and fees revenue while stipends and other payments made directly to students are recorded as scholarship and fellowship expenses on the statement of revenues, expenses and other changes to net position and are included in supplies and services on the statement of cash flows. Discounts and allowances for tuition and fees and Auxiliary Enterprises are calculated using the alternate method.

Operating expenses include, among other items, payroll, fringe benefits, utilities, supplies and services, depreciation, and amortization. Nonoperating revenues or expenses are those in which the University receives or gives value without directly giving or receiving equal value, such as State and Federal appropriations, CARES Act revenue, Federal Pell grants, private gifts, and investment income.

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and judgments that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the dates of the financial statements, and reported amounts of revenues and expenses recognized during the reporting periods. Actual results could differ from those estimates. The most significant areas that require management estimates relate to valuation of certain investments and derivative instruments, useful lives and related depreciation of capital assets, and accruals for pension and other postemployment related benefits.

Net position is classified into the following categories:

- **Invested in capital assets:** Capital assets, at historical cost, or fair market value on date of gift, net of accumulated depreciation and outstanding principal balances of debt attributable to the acquisition, construction or improvement of those assets.
- **Restricted nonexpendable:** Resources subject to externally imposed stipulations that they be maintained permanently by the University.
- **Restricted expendable:** Resources whose use by the University is subject to externally imposed stipulations. Such assets include restricted grants and contracts, the accumulated net gains/losses on true endowment funds, as well as restricted funds loaned to students, restricted gifts and endowment income and other similar restricted funds.

- **Unrestricted:** The net position that is not subject to externally imposed restrictions governing their use are classified as unrestricted net position. The University's unrestricted net position may be designated for specific purposes by management or the Board of Trustees. Substantially all of the University's unrestricted net position is designated to support academic and research initiatives or programs, auxiliary enterprises, quasi-endowments, or commitments to capital construction projects.

Effective for fiscal year 2020, the University adopted GASB Statement No. 84, Fiduciary Activities, ("GASB 84"). This statement establishes criteria for identifying fiduciary activities and requires that fiduciary activities be reported in a Statement of Fiduciary Net Position and a Statement of Changes in Fiduciary Position. GASB 84 permits business-type activities, such as the University, to report activities that would otherwise be considered fiduciary activities in the University's Statement of Net Position and Statement of Cash Flows as operating activities if upon receipt, the funds are normally expected to be held for three months or less. Given the majority of the fiduciary activities are custodial amounts held for three months or less, the University did not report these activities with a Statement of Fiduciary net Position or Statement of Changes in Fiduciary Position. These fiduciary activities were reclassified to the operating activities portion of the Statement of Cash Flows from noncapital financial activities at June 30, 2020 and 2019, respectively.

The University adopted GASB State No. 87, Leases ("GASB 87"), beginning in fiscal year 2022, and restated its fiscal year 2021 financial statements to conform to the new accounting standard. GASB 87 is the new lease accounting standard for U.S. government entities. GASB 87 requires organizations to record most leases on the balance sheet. GASB 87 replaces the former operating and capital lease categories with a single model for lease accounting based on a definition of leases as contracts that convey control of the right to use a non-financial asset. The new rules require lessees to recognize a lease liability and an intangible asset while lessors are required to recognize lease receivables and a deferred inflow of resources on their financial statements. Accordingly, the University no longer reports on capitalized leases.

In March 2020, the Governmental Accounting Standards Board (GASB) issued GASB Statement No. 94, Public-Private and Public-Public Partnerships (PPP) and Availability Payment Arrangements (APA). This standard establishes the definitions of Public-Private Partnerships, an arrangement in which a government (the transferor) contracts with an operator (a governmental or nongovernmental entity) to provide public services by conveying control of the right to operate or use a nonfinancial asset for a period of time in an exchange or exchange-like transaction. Some PPPs meet the definition of a service concession arrangement. This standard also provides guidance for accounting and financial reporting for availability payment arrangements (APA). As of and for the years ending June 30, 2023 and 2022, the University had no APAs.

The University adopted the Statement No. 94 effective July 1, 2021. Adoption of the standard had no effect on the University's financial statements.

In May 2020, the Governmental Accounting Standards Board (GASB) issued GASB Statement No. 96, Subscription-Based Information Technology Arrangements. This standard defines Subscription-Based Information Technology Arrangements (SBITA); establishes that a SBITA results in a right-to-use subscription asset (an intangible asset), and a corresponding subscription liability; and provides the capitalization criteria for outlays other than subscription payments, including implementation costs of a SBITA.

A SBITA is defined as a contract that conveys control of the right to use another party's (a SBITA vendor's) information technology (IT) software, alone or in combination with tangible capital assets (the underlying IT assets), as specified in the contract for a period of time in an exchange or exchange-like transaction.

Immaterial Correction

For fiscal year 2019, the University reported its proportionate share of activity related to post-employment benefits for its participation in the Commonwealth's Other Post-Employment Benefits ("OPEB") plan in accordance with GASB 75. The GASB 75 schedule of employer and non-employer allocations of the Commonwealth's OPEB Plan that was utilized to report information within the University's fiscal year 2019 financial statements in accordance with GASB 75 was subsequently revised. The University recorded an immaterial correction to its previously reported financial statements to properly reflect its revised proportionate share of activity related to post-employment.

SUMMARY OF OPERATIONS

The University's Combined and Condensed Statement of Net Position and Combined Statement of Revenues, Expenses and Changes in Net Position for fiscal years 2019 through 2023 appearing in the following tables and have been derived from the University's Annual Audited Financial Reports for Fiscal Years 2019 through 2023. The University's financial statements include prior year comparative information. Certain prior year amounts have been reclassified to conform with the current year presentation.

[Remainder of this page intentionally left blank.]

University
Combined and Condensed Statement of Net Position
As of June 30 (\$ thousands)

	<u>2019</u>	<u>2020</u>	<u>2021</u> ¹	<u>2022</u> ²	<u>2023</u>
ASSETS					
Current Assets	\$921,582	\$1,156,836	\$1,164,660	\$1,345,089	\$1,229,605
Noncurrent Assets					
Capital Assets, Net	5,164,200	5,206,569	5,243,969	5,549,054	5,615,301
All Other Noncurrent Assets	1,281,662	1,225,544	1,534,138	1,975,000	2,078,434
Total Assets	\$7,367,444	\$7,588,949	\$7,942,767	\$8,869,143	\$8,923,340
DEFERRED OUTFLOWS OF RESOURCES	\$357,541	\$531,271	\$551,553	\$433,998	\$603,926
LIABILITIES					
Current Liabilities	\$799,310	\$680,069	\$732,064	\$790,455	\$807,228
Noncurrent Liabilities	4,237,383	4,750,458	4,761,737	4,679,078	4,736,825
Total Liabilities	\$5,036,693	\$5,430,527	\$5,493,801	\$5,469,533	\$5,544,053
DEFERRED INFLOWS OF RESOURCES	\$215,910	\$256,926	\$411,451	\$1,085,656	\$939,241
NET POSITION					
Net Investment in Capital Assets	\$2,343,872	\$2,376,333	\$2,306,226	\$2,281,471	\$2,341,776
Restricted					
Nonexpendable	28,617	22,252	22,378	22,515	17,648
Expendable	206,023	223,803	232,756	262,669	265,329
Unrestricted	(106,130)	(189,621)	27,708	181,297	419,219
Total Net Position	\$2,472,382	\$2,432,767	\$2,589,068	\$2,747,952	\$3,043,972

¹ As restated due to adoption of GASB State No. 87, Leases.

² As restated due to adoption of GASB State No. 96, Subscription-Based Information Technology Arrangements.

[Remainder of this page intentionally left blank.]

University
Combined Statement of Revenues, Expenses and Changes in Net Position
For the Years Ended June 30 (\$ thousands)

REVENUES	<u>2019</u>	<u>2020</u>	<u>2021</u>¹	<u>2022</u>	<u>2023</u>
<i>Operating Revenues</i>					
Tuition and Fees ²	\$894,904	\$917,876	\$930,613	\$1,007,124	\$1,042,664
Grants and Contracts	593,086	581,850	667,149	719,479	746,350
Sales & Service, Educational Activities	34,984	31,248	30,253	40,907	41,388
Auxiliary Enterprises	441,795	378,314	163,821	434,129	475,591
Other Operating Revenues					
Sales & Service, Independent Operations	59,893	62,829	50,961	66,929	66,955
Sales & Service, Public Service Activities	291,085	337,709	334,567	321,954	377,375
Other	137,607	116,204	125,939	130,771	121,654
<i>Total Operating Revenues</i>	<u>\$2,453,354</u>	<u>\$2,426,030</u>	<u>\$2,303,303</u>	<u>\$2,721,293</u>	<u>\$2,871,977</u>
EXPENSES	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
<i>Operating Expenses</i>					
Educational and General					
Instruction	\$912,415	\$960,548	\$934,708	\$930,362	\$996,803
Research	490,887	485,759	550,593	551,367	586,292
Public Service	86,251	84,248	88,770	71,649	87,581
Academic Support	186,502	200,928	199,456	194,153	222,169
Student Services	160,751	157,842	141,107	211,088	240,039
Institutional Support	274,326	303,100	311,629	315,810	343,980
Operation and Maintenance of Capital Assets	248,581	241,880	221,750	242,749	259,873
Depreciation and Amortization	276,638	288,667	318,828	330,715	344,872
Scholarships and Fellowships	49,511	65,469	85,500	121,334	62,237
Auxiliary Enterprises	340,346	336,497	213,499	320,535	352,627
Other Expenditures					
Independent Operations	48,282	56,256	53,485	58,582	56,605
Public Service Activities	226,821	256,248	260,697	253,420	255,151
<i>Total Operating Expenses</i>	<u>3,301,311</u>	<u>3,437,442</u>	<u>3,380,022</u>	<u>3,601,764</u>	<u>3,808,229</u>
<i>Operating Loss</i>	<u>(\$847,957)</u>	<u>(\$1,011,412)</u>	<u>(\$1,076,719)</u>	<u>(\$880,471)</u>	<u>(\$936,252)</u>

¹ As restated due to adoption of GASB State No. 87, Leases.

² Net of scholarship allowances of \$409,759,000 at June 30, 2023, \$369,902,000 at June 30, 2022, \$345,128,000 at June 30, 2021, \$343,031,000 at June 30, 2020, and \$328,845,000 at June 30, 2019.

[Remainder of this page intentionally left blank.]

(continued)

NONOPERATING REVENUES/(EXPENSES)	<u>2019</u>	<u>2020</u>	<u>2021</u>¹	<u>2022</u>	<u>2023</u>
Federal Appropriations	\$7,004	\$6,774	\$5,953	\$5,588	6,255
State Appropriations	780,221	810,518	845,481	880,003	1,011,360
Gifts	43,705	41,996	41,262	67,948	43,881
Investment Income	48,943	32,762	58,383	24,292	64,606
Unrealized Gain (Loss) on Investments	18,082	(3,414)	(22,977)	(48,456)	3,549
Endowment Income Distributed for Operations	27,741	28,113	31,965	34,944	43,774
Interest on Indebtedness	(116,217)	(109,186)	(109,144)	(117,244)	(129,132)
Non-operating Federal Grants	84,454	115,601	173,592	221,628	100,533
Other Non-operating Income (Loss)	1,576	296	5,779	(667)	9,456
<i>Net Non-operating Revenues</i>	<u>\$895,509</u>	<u>\$923,460</u>	<u>\$1,030,294</u>	<u>\$1,068,036</u>	<u>\$1,154,282</u>
<i>Income/(Loss) Before Other Revenues, Expenses, Gains and Losses</i>	<u>\$47,552</u>	<u>(\$87,952)</u>	<u>(\$46,425)</u>	<u>\$187,565</u>	<u>\$218,030</u>
Capital Appropriations	\$25,500	\$51,525	\$62,592	\$87,062	\$29,690
Capital Grants, Contracts and Gifts	13,165	7,516	8,528	8,846	11,526
Endowment Return, Net of Amount Used for Operations	13,467	(2,917)	148,514	(148,089)	72,718
Disposal of Plant Facilities	(11,381)				
Other Additions (Deductions)	(4,805)	(7,787)	(16,869)	25,406	(35,944)
<i>Total Other Revenues, Expenses, Gains and Losses</i>	<u>\$35,946</u>	<u>\$48,337</u>	<u>\$202,765</u>	<u>(\$26,775)</u>	<u>\$77,990</u>
<i>Total Increase in Net Position</i>	<u>\$83,498</u>	<u>(\$39,615)</u>	<u>\$156,340</u>	<u>\$160,790</u>	<u>\$296,020</u>
NET POSITION					
Net Position at Beginning of Year	\$2,388,884	\$2,472,382	\$2,432,767	\$2,587,162	\$2,747,952
Cumulative effect of adoption of GASB 87			(1,945)		
Net Position at Beginning of Year, Adjusted	\$2,388,884	\$2,472,382	\$2,430,822	\$2,587,162	\$2,747,952
<i>Net Position at End of Year</i>	<u>\$2,472,382</u>	<u>\$2,432,767</u>	<u>\$2,587,162</u>	<u>\$2,747,952</u>	<u>\$3,043,972</u>

¹ As restated due to adoption of GASB State No. 87, Leases.

[Remainder of this page intentionally left blank.]

SUMMARY OF FINANCIAL RESULTS, FISCAL YEARS 2021, 2022 AND 2023

The following is a summary of the University's financial results for fiscal years 2021, 2022 and 2023.

Fiscal Year 2023

Financial Highlights

The University's net position (not including University Related Organizations) increased approximately \$296.0 million from \$2.7 billion in fiscal year 2022 to \$3.0 billion in fiscal year 2023.

The University expended approximately \$259.9 million on operation and maintenance of capital assets during fiscal year 2023.

Summary of Assets and Liabilities

At June 30, 2023, the University's total assets (not including University Related Organizations) were approximately \$8.9 billion, an increase of approximately \$54.2 million over the approximately \$8.8 billion in assets recorded in fiscal year 2022. The University's largest asset continues to be its net capital assets of \$5.6 billion at June 30, 2022 (compared to \$5.5 billion at June 30, 2021). Other significant assets include current and noncurrent investments.

University liabilities (not including University Related Organizations) totaled approximately \$5.54 billion at June 30, 2023, an increase of approximately \$74.5 million from the approximately \$5.47 billion in liabilities in fiscal year 2022.

The University's current assets of approximately \$1.2 billion in fiscal year 2023 were more than the current liabilities of approximately \$807.2 million, with a current ratio of 1.5 dollars in assets to every one dollar in liabilities. In fiscal year 2022, the current ratio was 1.7 (representing approximately \$1.3 billion in current assets and \$790.5 million in current liabilities).

The University's unrestricted and restricted expendable net assets in fiscal year 2023 totaled approximately \$684.5 million, which represented approximately 18.0% of total operating expenditures of approximately \$3.8 billion during fiscal year 2023.

In fiscal year 2023, the University's unrestricted net position totaled approximately \$419.2 million, after taking into account the impact of two GASB standards (GASB 68 and GASB 75) related to pensions and other post-employment benefits. These standards required the University to record its share of the Commonwealth's unfunded liabilities. In fiscal year 2023, unrestricted net position of \$1.7 billion (without taking into account GASB 68 and GASB 75) was offset by (\$417.6) million in unfunded pension liability and (\$818.7) million in unfunded other postretirement benefits liability, resulting in the \$419.2 million net unrestricted net position. Substantially all unrestricted net assets are designated to support academic, research, auxiliary enterprises or unrestricted funds functioning as endowments, or are committed to capital construction projects.

Summary of Operating Revenues and Operating Expenditures

The University's total operating revenues for fiscal year 2023 were approximately \$2.9 billion. This represents an increase of approximately \$150.7 million over the approximately \$2.7 billion in operating revenues in fiscal year 2022. The most significant sources of operating revenue for the University were tuition and fees (36.3%), grants and contracts (30.0%), auxiliary enterprises (16.6%), and other operating revenue, including public service activities at the Worcester Campus (19.7%).

In fiscal year 2023, University operating expenditures, including depreciation and amortization of approximately \$344.9 million, totaled approximately \$3.8 billion. Of this total, approximately \$3.1 billion or 82.6% was used to support educational and general activities of the University, including approximately \$586.3 million in research.

Commonwealth Appropriations

In fiscal year 2023, Commonwealth appropriations represented approximately 25.1% of all operating and non-operating revenues. The level of Commonwealth support is a key factor influencing the University's overall financial condition. Although the annual Commonwealth appropriation is unrestricted revenue, nearly all of the annual appropriation supports payroll and benefits for University employees.

In fiscal year 2023, the total Commonwealth appropriation, excluding capital appropriations, increased approximately \$131.4 million over fiscal year 2022.

Fiscal Year 2022

Financial Highlights

The University's net position (not including University Related Organizations) increased approximately \$160.8 million from \$2.6 billion in fiscal year 2021 to \$2.7 billion in fiscal year 2022.

The University expended approximately \$242.7 million on operation and maintenance of capital assets during fiscal year 2022.

Summary of Assets and Liabilities

At June 30, 2022, the University's total assets (not including University Related Organizations) were approximately \$8.9 billion, an increase of approximately \$529.3 million over the approximately \$8.4 billion in assets recorded in fiscal year 2021. The University's largest asset continues to be its net capital assets of \$5.5 billion at June 30, 2022 (compared to \$5.4 billion at June 30, 2021). Other significant assets include current and noncurrent investments.

University liabilities (not including University Related Organizations) totaled approximately \$5.5 billion at June 30, 2022, a decrease of approximately \$237.7 million from the approximately \$5.6 billion in liabilities in fiscal year 2021.

The University's current assets of approximately \$1.3 billion in fiscal year 2022 were more than the current liabilities of approximately \$790.5 million, with a current ratio of 1.7 dollars in assets to every one dollar in liabilities. In fiscal year 2021, the current ratio was 1.6 (representing approximately \$1.2 billion in current assets and \$732.1 million in current liabilities).

The University's unrestricted and restricted expendable net assets in fiscal year 2022 totaled approximately \$444.0 million, which represented approximately 8.1% of total operating expenditures of approximately \$3.6 billion during fiscal year 2022.

In fiscal year 2022, the University's unrestricted net position totaled approximately \$181.3 million, after taking into account the impact of two GASB standards (GASB 68 and GASB 75) related to pensions and other post-employment benefits. These standards required the University to record its share of the Commonwealth's unfunded liabilities. In fiscal year 2022, total unrestricted net position of \$1.5 billion (without taking into account GASB 68 and GASB 75) was offset by (\$427.5) million in unfunded pension liability and (\$871.0) million in unfunded other postretirement benefits liability, resulting in the \$181.3 million net unrestricted net position. Substantially all unrestricted net assets are designated to support academic, research, auxiliary enterprises or unrestricted funds functioning as endowments, or are committed to capital construction projects.

Summary of Operating Revenues and Operating Expenditures

The University's total operating revenues for fiscal year 2022 were approximately \$2.7 billion. This represents an increase of approximately \$418.0 million over the approximately \$2.3 billion in operating revenues in fiscal year 2021. The most significant sources of operating revenue for the University were tuition and fees (37.0%), grants and contracts (26.4%), auxiliary enterprises (16.0%), and other operating revenue, including public service activities at the Worcester Campus (19.1%).

In fiscal year 2022, University operating expenditures, including depreciation and amortization of approximately \$330.7 million, totaled approximately \$3.6 billion. Of this total, approximately \$3.0 billion or 82.4% was used to support educational and general activities of the University, including approximately \$551.4 million in research.

Commonwealth Appropriations

In fiscal year 2022, Commonwealth appropriations represented approximately 23.3% of all operating and non-operating revenues. The level of Commonwealth support is a key factor influencing the University's overall financial condition. Although the annual Commonwealth appropriation is unrestricted revenue, nearly all of the annual appropriation supports payroll and benefits for University employees.

In fiscal year 2022, the total Commonwealth appropriation, excluding capital appropriations, increased approximately \$34.5 million over fiscal year 2021.

Fiscal Year 2021

Financial Highlights

The University's net position (not including University Related Organizations) increased approximately \$156.3 million from \$2.4 billion in fiscal year 2020 to \$2.6 billion in fiscal year 2021.

The University expended approximately \$227.0 million on operation and maintenance of capital assets during fiscal year 2021.

Summary of Assets and Liabilities

At June 30, 2021, the University's total assets (not including University Related Organizations) were approximately \$7.9 billion, an increase of approximately \$353.8 million over the approximately \$7.6 billion in assets recorded in fiscal year 2020. The University's largest asset continues to be its net capital assets of \$5.2 billion at June 30, 2021 (compared to \$5.2 billion at June 30, 2020). Other significant assets include current and noncurrent investments.

University liabilities (not including University Related Organizations) totaled approximately \$5.5 billion at June 30, 2021, an increase of approximately \$63.3 million from the approximately \$5.4 billion in liabilities in fiscal year 2020.

The University's current assets of approximately \$1.2 billion in fiscal year 2021 were more than the current liabilities of approximately \$732.1 million, with a current ratio of 1.6 dollars in assets to every one dollar in liabilities. In fiscal year 2020, the current ratio was 1.7 (representing approximately \$1.2 billion in current assets and \$680.1 million in current liabilities).

The University's unrestricted and restricted expendable net assets in fiscal year 2021 totaled approximately \$260.4 million, which represented approximately 7.5% of total operating expenditures of approximately \$3.5 billion during fiscal year 2021.

In fiscal year 2021, the University's unrestricted net position totaled approximately \$27.7 million, after taking into account the impact of two GASB standards (GASB 68 and GASB 75) related to pensions and other post-employment benefits. These standards required the University to record its share of the Commonwealth's unfunded liabilities. In fiscal year 2021, total unrestricted net position of \$1,433.7 million (without taking into account GASB 68 and GASB 75) was offset by (\$477.8) million in unfunded pension liability and (\$928.2) million in unfunded other postretirement benefits liability, resulting in the \$27.7 million net unrestricted net position. Substantially all unrestricted net assets are designated to support academic, research, auxiliary enterprises or unrestricted funds functioning as endowments, or are committed to capital construction projects.

Summary of Operating Revenues and Operating Expenditures

The University's total operating revenues for fiscal year 2021 were approximately \$2.3 billion. This represents a decrease of approximately \$123.1 million over the approximately \$2.4 billion in operating revenues in fiscal year 2020. The most significant sources of operating revenue for the University were tuition and fees (40.4%), grants and contracts (29.0%), auxiliary enterprises (7.1%), and other operating revenue, including public service activities at the Worcester Campus (22.19%).

In fiscal year 2021, University operating expenditures, including depreciation and amortization of approximately \$300.2 million, totaled approximately \$3.4 billion. Of this total, approximately \$2.8 billion or 84.2% was used to support educational and general activities of the University, including approximately \$552.5 million in research.

Commonwealth Appropriations

In fiscal year 2021, Commonwealth appropriations represented approximately 24.6% of all operating and non-operating revenues. The level of Commonwealth support is a key factor influencing the University's overall financial condition. Although the annual Commonwealth appropriation is unrestricted revenue, nearly all of the annual appropriation supports payroll and benefits for University employees.

In fiscal year 2021, the total Commonwealth appropriation increased approximately \$35.0 million over fiscal year 2020.

Endowment and Fundraising

The University's endowment assets, which are held by the Foundation, have increased to approximately \$1,295.2 million at June 30, 2023 from approximately \$1,101.9 million at June 30, 2022. The amount raised in fiscal year 2023 totaled approximately \$57.3 million, including gifts, pledges, gifts-in-kind and private research grants. The number of endowed chairs has grown from four in 1995 to approximately 68 in 2023, enhancing the University's academic reputation. Fundraising is undertaken at the campus level, with the support of the University's Development Office. Each campus has an Advancement Office that undertakes development activities to support the applicable campus. The endowment funds for all five of the University's campuses are commingled into a pooled investment fund and are tracked by the Foundation. While the Foundation pools all gifts and grants received for investment purposes, such amounts remain available for use only by the campus that generated them.

The Foundation's total endowment return for fiscal year 2023, including realized and unrealized gains and losses, was a net gain of approximately \$146.4 million. The Foundation employs a market value unit method of accounting, whereby participating endowment funds enter and withdraw from the pooled investment fund based on monthly unit values. Changes in market value and monthly income are allocated proportionately to the respective campus. The effective spending rate for the endowment funds held by the Foundation was 3.5% for fiscal year 2023, which represents approximately 1.0% of the University's total operating and non-operating revenues.

The following table indicates the total amount of University endowment assets at June 30 of the years indicated.

University Endowment Assets*
(\$ thousands)

<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
\$948,195	\$1,013,070	\$1,204,035	\$1,101,885	\$1,295,214

* Approximately 72% of the endowment is restricted by donors.

CURRENT AND FUTURE CAPITAL PLANS

In September 2023, the University Trustees reviewed and approved a five-year capital plan for fiscal years 2024 through 2028 (the “FY24-28 Capital Plan”), including projects already in progress with prior approval of the University Trustees and the University President. The University generally has funded its capital plans through a combination of funds received from University operations, bonds issued by UMBA, bonds issued by the Massachusetts Development Finance Agency (“MDFA”), Commonwealth appropriations and private fund raising.

The University must follow certain procedures for capital spending as defined by the Commonwealth’s Executive Office for Administration and Finance (“EOAF”). Such spending may be financed through the issuance of Commonwealth general or special obligation bonds or other designated revenue, including transfers from budgeted funds. The Commonwealth’s Division of Capital Asset Management and Maintenance (“DCAMM”) manages the Commonwealth’s five-year capital-spending plan, which is approved by the Commonwealth’s Secretary of Administration and Finance. The University works closely with DCAMM to ensure that the priorities of the University are included in the Commonwealth’s five-year capital-spending plan.

The University must request UMBA to undertake, and EOAF must approve, any project that is financed through UMBA. EOAF also must verify that such projects have received approval by the University Trustees and are included in the University’s capital plan.

The University Trustees, University administration, and campus leadership have identified capital issues as instrumental to the University’s goal of continuing to improve educational quality at all five campuses by enhancing academic achievement and student experience. Following a period of limited investment in the University’s capital assets in the 1980s and 1990s, the Board of Trustees, the President’s office, and campus leadership identified capital issues as among the biggest challenges facing the University. The University believed that modern and functional facilities were essential to enhancing the University’s image, reputation, capacity and mission effectiveness, and a major commitment of University resources to capital projects followed. Given the average age of the University’s campus buildings, a significant need to maintain and upgrade capital assets is expected over the next decade. The University’s administration works closely with each of the campuses in developing the University’s capital plan to reflect the needs and goals of each of the campuses. To further improve project planning and implementation across the University, University administrators and UMBA have collaborated with campus leadership to design an integrated project assessment and tracking process. Within budgetary limitations and programmatic requirements, the University’s capital planning includes a concerted effort to incorporate the principles of energy efficiency and sustainability in all its capital projects.

Addressing deferred maintenance remains a priority within the FY24-FY28 Capital Plan, building on the University’s engagement in 2015 of Sightlines (now Gordian) to conduct an annual deferred maintenance analysis. The analysis is intended to ensure that deferred maintenance is being consistently reported across all campuses and to assist in developing a strategy for addressing deferred maintenance across the University. The annual analysis forms the basis for recommending projects as part of the University capital planning process outlined in the University Trustee policy.

In addition to the Board-approved capital plan, capital projects with project costs between \$2 million and \$10 million, which are funded from internal revenues, reserves and other non-borrowed sources, can be undertaken with the sole approval of the University’s President.

The projects within the capital plan are organized by project delivery and approval status, per University policy, as described below.

Traditional Delivery - projects that are funded by local campus funds, donations, University borrowing, or state funds and are owned and operated by the University. Traditional delivery projects require vote 1 and vote 2 approvals.

Alternative Delivery (P3) - projects with a long-term agreement between the University and private entity, where the private entity delivers, operates, and assumes most of the risk of the project. Alternative delivery projects require vote 1, vote 2, and vote 3 approvals, as well as the approval of the Governor.

- **Vote 1** – vote 1 approval is granted to a project that meets established criteria. An affirmative first vote would authorize UMBA along with the President’s Office and the campuses to perform a detailed project analysis, the form of which will depend on whether the project is selected for traditional or alternative delivery.
- **Vote 2** – vote 2 approval is granted to a project that has completed the detailed project analysis. For traditional projects, the second vote is considered “full approval” and the project is allowed to proceed to design and construction. For alternative delivery projects, an affirmative second vote authorizes UMBA to proceed with a procurement for alternative delivery and enter into a development agreement.
- **Vote 3** – An affirmative third vote approval authorizes the execution of the contract with the third party.

The following table summarizes the most recent quarterly update to the FY24-28 Capital Plan, including both projects that the Board voted to approve and projects approved by the University’s President.

University Campus	<u>Approval/ Vote 1</u>	<u>Approval/ Vote 2</u>	<u>Vote 3</u>	<u>Total Approved</u>
Amherst	\$132,000,000	\$550,600,000	\$301,800,000	\$984,400,000
Boston	83,732,000	196,657,000	0	280,389,000
Dartmouth	97,000,000	11,868,000	0	108,868,000
Lowell	63,000,000	195,731,000	0	258,731,000
Worcester	<u>45,900,000</u>	<u>487,114,000</u>	<u>0</u>	<u>533,014,000</u>
Total	\$421,632,000	\$1,441,970,000	\$301,800,000	\$2,165,402,000

Source: Quarterly Approved Project List update to the FY24-28 Capital Plan as of December 2023.

INDEBTEDNESS OF THE UNIVERSITY

The University is obligated, under various contractual arrangements, to make payments on indebtedness issued on its behalf, including indebtedness issued by UMBA and MDFA, as described below.

Bonds Issued by UMBA

As described in the front part of this Official Statement, UMBA was created for the general purpose of aiding and contributing to the performance of the educational and other purposes of the University by providing dormitories, dining commons and other buildings and structures for the use of the University, its students, faculty and staff and for lease to certain other entities related to the University.

As of June 30, 2023, UMBA had bonds outstanding (exclusive of commercial paper) in the aggregate principal amount of \$3.2 billion for which the University is contractually obligated to provide the payment of debt service or act as UMBA’s agent to collect rates, rents, fees and other charges. All such bonds bear a fixed rate of interest. Such bonds, like the University’s MDFA bonds described below, are not subject to acceleration. See “Annual Debt Service on UMBA and MDFA Bonds” below for the annual debt service payments on such bonds prior to giving effect to the issuance of the Bonds. UMBA’s project revenue bonds are secured by and payable from, in addition to

other moneys, all available funds of the University, including trust funds and other funds administered by the University as gifts, grants or trusts, or as provided in the University enabling act. Further, the University is obligated under the Contract to cause to be available each year sufficient accumulated unrestricted funds to pay debt service on UMBA bonds and certain expenses of UMBA. Such amounts for the last five fiscal years are set forth in the table below under “Spendable Cash and Investments.” As described below, previously such accumulated unrestricted funds were measured by reference, most recently, to the University’s “Unrestricted Net Assets” and previously to “Expendable Fund Balance” in the University’s annual financial statements. Changes in accounting rules resulted in “Unrestricted Net Assets” not sufficiently representing actual accumulated unrestricted funds available to pay debt service on UMBA bonds, and so the information presented has been restated to reflect “Spendable Cash and Investments,” which the University believes is a better measurement of such accumulated unrestricted funds. For details about the amounts represented in such table, see the footnote thereto.

Commercial Paper

UMBA maintains a commercial paper program, consisting of its \$100 million Commercial Paper Notes, Series 2013 A (the “Series 2013A Notes”), and its \$100 million Commercial Paper Notes, Series 2013 B (the “Series 2013B Notes” and together with the Series 2013A Notes, the “Notes”). Each series of the Notes are supported by a standby liquidity facility provided by TD Bank, N.A, each of which expire on August 3, 2025. UMBA may issue Notes under either series on a taxable or tax-exempt basis to further UMBA’s and the University’s efforts to establish a “just in time” borrowing program to fund the University’s capital plan as needed during construction periods. The Notes are secured under the Project Trust Agreement, and the Contract. The Notes are payable from the proceeds of rollover Notes, funds advanced under the applicable standby liquidity facility, bonds to be issued by UMBA in the future, or available funds of the University. As of June 30, 2023, UMBA had \$37.3 million in Notes outstanding. UMBA expects to extend or replace, as appropriate, the existing liquidity facilities on or prior to their respective expiration dates.

Bonds Issued by the Massachusetts Development Finance Agency

As of June 30, 2023, MDFA had bonds outstanding in the aggregate principal amount of approximately \$20.8 million, for which the University is contractually obligated to pay debt service.

[Remainder of this page intentionally left blank.]

Annual Debt Service on UMBA and MDFA Bonds

The table below sets forth the principal and interest due on bonds issued by UMBA and MDFA on behalf of the University on a fiscal year basis, after giving effect to the issuance of the Bonds.

Annual Debt Service on UMBA and MDFA Bonds

Fiscal Year Ending June 30	UMBA Bonds	MDFA Bonds	Total
2024 ¹	\$257,927,032	\$ 618,330	\$258,545,362
2025	258,314,822	712,650	259,027,472
2026	251,827,060	924,695	252,751,755
2027	250,030,536	798,991	250,829,527
2028	249,507,188	700,000	250,207,188
2029	248,419,835	700,000	249,119,835
2030	245,004,963	700,000	245,704,963
2031	239,468,800	20,350,000	259,818,800
2032	229,560,279	-	229,560,279
2033	221,777,080	-	221,777,080
2034	216,836,712	-	216,836,712
2035	219,465,593	-	219,465,593
2036	217,531,484	-	217,531,484
2037	216,619,123	-	216,619,123
2038	208,954,158	-	208,954,158
2039	204,284,330	-	204,284,330
2040	183,330,885	-	183,330,885
2041	182,097,658	-	182,097,658
2042	148,999,345	-	148,999,345
2043	149,181,495	-	149,181,495
2044	143,799,361	-	143,799,361
2045	118,937,874	-	118,937,874
2046	85,422,642	-	85,422,642
2047	70,726,422	-	70,726,422
2048	70,720,218	-	70,720,218
2049	58,541,943	-	58,541,943
2050	58,534,590	-	58,534,590
2051	58,545,789	-	58,545,789
2052	33,949,000	-	33,949,000
2053	33,947,250	-	33,947,250
2054	9,682,125	-	9,682,125
2055	9,686,250	-	9,686,250

¹ Includes \$183,608,991 of debt service paid to date in fiscal year 2024.

[Remainder of this page intentionally left blank.]

Spendable Cash and Investments

The following table sets forth the amount of spendable cash and investments in fiscal years 2019 through 2023. Spendable cash and investments reflect the available funds that can be used by the University to pay debt service and related costs. As noted above, neither the UMBA bonds nor the MDFA bonds are subject to acceleration upon a default.

Spendable Cash and Investments (\$ in thousands)

	Fiscal Year				
	2019	2020	2021	2022	2023
Spendable Cash and Investments*	\$ 1,563,723	\$1,577,064	\$2,220,624	\$2,354,542	\$2,193,930

* The amount shown above in the table is the sum of University cash and investments less debt service reserve funds, plus Foundation cash and investments, less University permanently restricted net assets, less Foundation permanently restricted net assets. Pledges receivable are not included in spendable cash and investments.

Additional Indebtedness

Under the terms of the trust agreements and financing agreements securing the above-described indebtedness issued by UMBA, the University may, without limit, issue additional indebtedness or request UMBA or MDFA to issue additional indebtedness on behalf of the University so long as such indebtedness is payable from all funds of the University permitted by law to be applied thereto. With certain exceptions described below, the University may not pledge, or permit to exist any lien on, any of its funds or revenues. The University may request UMBA to issue additional indebtedness on behalf of the University that is not payable from all funds of the University permitted by law to be applied thereto, provided: (i) the additional indebtedness is secured by (a) pledged revenues derived from the project or projects being financed, (b) new or increased student fees whether imposed by the University or UMBA, (c) existing pledged revenues, or (d) any combination of the foregoing; and (ii) the maximum annual debt service on all revenue indebtedness then outstanding, including the proposed additional indebtedness, does not exceed 10% of the amount shown in the then most recent audited financial statements of the University as total available revenues. Indebtedness of the University may not be subject to acceleration.

In November 2020, legislation was enacted to permit the University to borrow for its working capital needs, subject to the conditions that any amount borrowed for working capital is required to be repaid within 365 days and the principal amount outstanding cannot exceed 8% of the total approved operating budget for the fiscal year in which the borrowing occurs. The University has entered into an agreement providing a revolving line of credit in the principal amount of \$150 million, with Bank of America, N.A., as lender (the “Lender”). The line of credit expires in May 2024. As of June 30, 2023, there was no balance outstanding under the line of credit. Under the line of credit agreement, the Lender has the right to accelerate amounts outstanding under the line of credit upon the occurrence of an event of default.

In connection with the transaction under which the Board of Regents of the former Brandman University, now named UMass Global, was transferred to the University, UMass Global issued notes to Chapman University in an aggregate principal amount of \$154.1 million, which have a final maturity in September, 2031. As of June 30, 2023, the outstanding principal balance of the notes was \$112.2 million. The University has agreed to make any payments on such notes that UMass Global fails to make when due. Based on current UMass Global revenue projections, the University does not expect that any such payments will need to be made. See, “UNIVERSITY CAMPUSES – UMass Global”.

INSURANCE

The University, as an agency of the Commonwealth, is self-insured for property loss exposure, subject to appropriation from the Legislature. However, properties owned by UMBA, such as the Mullins Center, dining commons and most dormitories, are insured by UMBA. In addition, certain properties owned by other University Related Organizations and leased to the University are insured by the related organization. The University’s liability

for damages to third parties as a result of negligence by University employees is limited under Chapter 258 of the General Laws. The University maintains certain liability insurance policies, including Commercial General Liability, leased Automotive Liability, Directors and Officers and Comprehensive Crime policies. Employees of the University are covered for Worker's Compensation protection under Chapter 152 of the General Laws.

TECHNOLOGICAL INITIATIVES

The University has focused on continued security and consolidation of its environments. The University Information Technology Services (UITS) team has moved its main operations location – co-located with the UMass President's Office – from Shrewsbury to Westborough, Massachusetts over the last year. The move has provided increased collaboration, enhanced overall administration functionality, and better application services to the UMass President's Office. The UITS team is also in the process of moving the University data center and its functionality to the Amherst Campus. All currently run Enterprise Resource Planning (ERP) applications from the Peoplesoft suite will be moved by the end of fiscal year 2024. Therefore, service which impacts Student Administration, Human Resources and Finance will be moved to an upgraded environment within the Amherst facility. The UITS Enterprise Data and Analytics team has provided enhanced data reporting structures, models, and reporting to help better inform admission recruitment and trends. The team has also improved "real-time" financial data throughout the whole system and partners closely with the administration and finance teams within the President's Office. Finally, data security continues to be a priority within UITS with a multi-pronged strategy that includes: i. edge protection, ii. on-premise endpoint detection, and iii. cybersecurity training.

LITIGATION

The University is a defendant in various lawsuits; however, University management is of the opinion that the ultimate outcome of any such litigation, if decided adversely to the University, would not have a material effect on the financial position or financial results of the University.

Without limiting the foregoing, the University notes that a putative class action lawsuit was filed against the University in May 2020 in the Commonwealth's Suffolk Superior Court (*Spencer Holmes, et al. v. University of Massachusetts through its Board of Trustees, et al.*, Case No. 2084-cv-01025), claiming breach of contract and unjust enrichment, and seeking refunds of tuition and fees based on campus closings and the switch to online instruction in the Spring 2020 semester in response to the COVID-19 pandemic and the Commonwealth's orders regarding the same. On March 13, 2024, the plaintiffs' Motion to Voluntarily Dismiss with Prejudice was granted and the court closed the case.

EMPLOYEE RELATIONS

For fiscal year 2023, the University employed 26,207 full and part-time faculty, professional and clerical and maintenance support staff (including student employees), of which 10,792 were covered by collective bargaining units (not including post-doctoral employees, certain contract employees, graduate employees and undergraduate resident assistants). Of those covered, 4,025 were faculty, 3,377 were professional staff, 3,242 were clerical and maintenance support staff, and 148 were police officers. In total, the University currently has approximately 41 collective bargaining units (including two post-doctoral employee units, three graduate employee units and one undergraduate resident assistants unit). The majority of the bargaining agreements will expire on June 30, 2024. The University will begin negotiations with the respective collective bargaining units regarding new contract terms. Employees covered by University collective bargaining units cannot strike under Massachusetts law.

In general, University employees are covered by a contributory Massachusetts retirement system under Chapter 32 of the General Laws, the State Employees' Retirement System ("SERS" or "State Retirement Plan"). The State Retirement Plan is a defined benefit plan that provides retirement benefits based upon age at retirement, years and months of service, and the average of the highest three to five consecutive years of base salary. As an alternative to SERS, eligible employees have the option of participating in the Commonwealth's Optional Retirement Program (the "ORP"). The ORP is a defined contribution plan, administered by the DHE. Eligibility for participation in the ORP was expanded by Chapter 68, Section 44 of the Acts of 2011. Employees can also participate in various optional supplemental retirement programs, such as the University of Massachusetts 403(b) Elective Deferral Savings Plan and the Commonwealth's 457(b) Deferred Compensation Plan. Employees generally are eligible to participate in various

fringe benefit plans such as the dependent care assistance program and the health, dental, life and disability insurance plans. The majority of these benefits are sponsored by the Commonwealth. However, the University does sponsor a smaller subset of voluntary benefits for all employees (e.g. long-term care), as well as a wider range of voluntary benefits for employees of the Worcester Campus (e.g. dental/vision plans as well as life and long-term disability plans).

[Remainder of this page intentionally left blank.]

UNIVERSITY OF MASSACHUSETTS

By: /s/ Lisa A. Calise
Senior Vice President for
Administration & Finance and Treasurer

APPENDIX B

FINANCIAL STATEMENTS OF THE AUTHORITY

[Intentionally Left Blank]

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)

Financial Statements (with Independent Auditors' Report Thereon)

June 30, 2023 and 2022

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
TABLE OF CONTENTS

	Page
Independent Auditors' Report	1
Required Supplementary Information	
Management's Discussion and Analysis (unaudited)	4
Basic Financial Statements	
Statements of Net Position	11
Statements of Revenues, Expenses and Changes in Net Position	13
Statements of Cash Flows	14
Notes to Financial Statements	15
Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with <i>Government Auditing Standards</i>	35



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

Independent Auditors' Report

Members of the Board
University of Massachusetts Building Authority:

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of the University of Massachusetts Building Authority (the Authority), a component unit of the University of Massachusetts, as of and for the years ended June 30, 2023 and 2022, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements for the years then ended as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the financial position of the Authority as of June 30, 2023 and 2022, and the changes in its financial position and its cash flows for the years then ended in accordance with U.S. generally accepted accounting principles.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Authority and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with U.S. generally accepted accounting principles, and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Authority's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a



substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 Authority's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Authority's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis be presented to supplement the basic financial statements. Such information is the responsibility of management and, 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 GAAS 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 audits 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 Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 8, 2023, on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is 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 the Authority'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 the Authority's internal control over financial reporting and compliance.

KPMG LLP

Boston, Massachusetts
December 8, 2023

Management's Discussion and Analysis (unaudited)

This section of the annual financial statements of the University of Massachusetts Building Authority (the "Authority") presents a discussion and analysis of the Authority's financial activity for the fiscal years ended June 30, 2023 and 2022. This discussion and analysis have been prepared by management and should be read in conjunction with the Authority's financial statements and related note disclosures, which follow.

INTRODUCTION

The Authority is an independent body politic and corporate and a public instrumentality of the Commonwealth of Massachusetts (the "Commonwealth"), which was created by Chapter 773 of the Acts of 1960 of the Commonwealth, as amended (the "Enabling Act"). The Authority was created with the general purposes of providing dormitories, dining commons and other buildings and structures for use by the University of Massachusetts (the "University"), its students, staff and their dependents and other entities associated with the University as specified in the Enabling Act, as requested by authority of the Trustees of the University (the "Trustees").

The Authority is empowered to acquire, construct, remove, demolish, add to, alter, enlarge, reconstruct, remodel and do other work upon any building or structure and to provide and install furnishings, furniture, machinery, equipment, approaches, driveways, walkways, parking areas, planting, landscaping and other facilities therein. The Enabling Act authorizes the Authority to acquire property from the Commonwealth or others (but the Authority has no eminent domain power), to rent or lease as lessor or lessee any portion of a project, to operate projects, to employ experts and other persons, to enter into contracts, to borrow money to finance and refinance projects it undertakes, and to issue and sell its revenue bonds and notes which are payable solely from its revenues. The Authority's assets and projects are located on all five campuses of the University. The eleven members of the Authority are appointed by the Governor. Five of the members must be Trustees. Two of the other members must be graduates of the University. Non-trustee members serve terms of approximately six years. Trustee members serve as long as they are Trustees. Members whose terms expire continue as members until they are reappointed or replaced.

FINANCIAL HIGHLIGHTS

- The net position of the Authority remained \$1.21 billion in fiscal years 2023 and 2022.
- Capital spending and contributed construction assets totaled \$259.9 million in fiscal year 2023, representing a \$35.0 million increase compared to fiscal year 2022. A majority of the capital spending in fiscal year 2023 relates to continued investments in new buildings and renovation projects, which include: North Village Family Housing, ATC Renovations at Mt. Ida, Computer Sciences Laboratories, Goessmann Renovations, New Faculty Hire and Class Lab Renovations/Expansion, LGRT Math Department Renovations, Goodell Hall Renovations, Sustainable Engineering Laboratories, and the Energy Improvements at the Amherst campus; the Substructure Demolition & Quadrangle Development at the Boston campus; the Science & Engineering Building Renovation at the Dartmouth campus; the Olsen Hall Renovations, Olney Instructional Modernization and certain property acquisitions at the Lowell campus; and the New Education and Research Building at the Chan Medical School campus.

USING THE ANNUAL FINANCIAL REPORT

This discussion and analysis is intended to serve as an introduction to the Authority's basic financial statements. The Authority's financial statements comprise of two primary components: 1) the financial statements, and 2) the notes to the financial statements.

Management's Discussion and Analysis (unaudited)

Financial statements and notes

The University's financial statements are prepared in accordance with U.S. generally accepted accounting principles ("GAAP") as prescribed by the Governmental Accounting Standards Board ("GASB"), which establishes financial reporting standards for governmental entities. The Authority's financial statements report its activities as business-type using the economic resources measurement focus, and the full accrual basis of accounting. The Authority is a blended component unit of the University. Therefore, the results of the Authority's operations, its net position, and its cash flows are included in the University's financial statements. Further information on the operations of the Authority and significant accounting policies are summarized in Notes 1 and 2 of the accompanying financial statements.

The accompanying financial statements are designed to provide readers with a broad overview of the Authority's finances and are comprised of three basic statements.

The Statements of Net Position present information on all of the Authority's assets, deferred outflows, and liabilities, with the difference reported as net position. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the Authority is improving or deteriorating.

The Statements of Revenues, Expenses and Changes in Net Position present information that shows how the Authority's net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus, revenues and expenses are reported in this statement for some items that will only result in cash flows in future fiscal periods (e.g., the payments to vendors after year-end for services prior to year-end).

The Statements of Cash Flows are reported on the direct method. The direct method of cash flow reporting portrays net cash flows from operations as major classes of operating receipts (e.g., income from contracts) and disbursements (e.g., cash paid to vendors for services), as well as capital and related financing and noncapital financing, if any, and investing activities.

The notes provide additional information that is essential to a full understanding of the data provided in the financial statements. The notes provide information regarding the accounting policies the Authority has adopted as well as additional details of certain amounts contained in the financial statements.

NET POSITION

As noted earlier, over time the Authority's net position may serve as a useful indicator of the Authority's financial position. In the case of the Authority, assets and deferred outflows exceeded liabilities and deferred inflows by \$1.21 billion at the close of the most recent fiscal year.

A portion of the Authority's net position reflects its investment in capital assets (e.g., buildings, equipment and furnishings) less any related debt used to acquire those assets that is still outstanding for the most recent fiscal year. The Authority uses these capital assets to provide services to students, faculty and administration; consequently, these assets are not available for future spending. Although the Authority's investment in capital assets is reported net of related debt, it should be noted that the resources needed to repay this debt must be provided from other sources, since the capital assets themselves cannot be used to liquidate these liabilities. The Authority's primary sources of funds used to repay the debt are receipts related to the Authority's financial contracts with the University. These contracts generally call for the Authority to bill and collect all revenue from the projects and remit to the Trustee under the Authority's trust agreements (the "Bond Trustee") funds sufficient to cover debt service on its bonds, its costs of operations, and its financial obligations with respect to the projects.

Management's Discussion and Analysis (unaudited)

The Authority's net position (in thousands) is as follows:

Condensed Schedules of Net Position			
As of June 30, 2023, 2022, 2021			
(\$ in thousands)			
	2023	2022	2021
ASSETS			
Current assets	\$ 125,038	\$ 110,594	\$ 113,470
Noncurrent assets	4,605,729	4,724,610	4,391,284
Total assets	4,730,767	4,835,204	4,504,754
DEFERRED OUTFLOWS OF RESOURCES	100,624	109,949	119,261
LIABILITIES			
Current liabilities	250,892	218,306	208,182
Noncurrent liabilities	3,315,033	3,452,018	3,160,236
Total liabilities	3,565,925	3,670,324	3,368,418
DEFERRED INFLOWS OF RESOURCES	59,660	64,358	58,470
NET POSITION			
Net investment in capital assets	1,109,616	1,182,330	1,173,243
Unrestricted	96,190	28,141	23,885
Total net position	\$ 1,205,806	\$ 1,210,471	\$ 1,197,128

Current assets increased by \$14.4 million in fiscal year 2023 compared to 2022 primarily due to an increase in cash and cash equivalents by \$15.3 million. For the most part, the increase in cash and cash equivalents was due to an \$11.0 million nonrefundable deposit released from escrow to the Authority with regard to the disposition of the former Bayside Convention Center property. The increase was partially offset by \$3.2 million reduction in prepaids and other current assets mostly due to demolition costs that were expensed in fiscal year 2023. Current assets decreased by \$2.9 million in fiscal year 2022 compared to 2021. This was due for the most part as a result of the fiscal year 2021 BAB's subsidy for the 2010-2 bonds being received in fiscal year 2022 in the amount of \$3.6M. Also contributing to the decrease, was a reduction in intergovernmental receivables of \$17.8 million offset by the increase in restricted receivables of \$5.8 million and loans receivable of \$4.0 million.

Non-current assets decreased by \$118.9 million in fiscal year 2023 compared to fiscal year 2022 primarily due to the maturity of \$180.1 million of investments in US Treasuries and the \$18.8 million reduction in loan receivable, partially offset by the \$85.9 million increase in net capital assets. Non-current assets increased by \$333.3 million in fiscal year 2022 compared to fiscal year 2021 mostly due to a new bond issuance and corresponding increase in restricted cash of \$87.8 million, restricted investments of \$196 million. Also contributing to the year-over-year change was the increase

Management's Discussion and Analysis (unaudited)

in net capital assets including lease right-of-use assets of \$69.2 million offset by a decrease in loans receivable \$18.6 million.

Deferred outflows of resources totaled \$100.6 million and \$109.9 million at the end of fiscal year 2023 and 2022, respectively. The 2023 decrease relates to amortization of loss on bond refundings. Deferred outflows of resources totaled \$109.9 million and \$119.3 million at the end of fiscal year 2022 and 2021, respectively. The 2022 decrease relates to amortization of loss on bond refundings.

Current liabilities increased in fiscal year 2023 compared to 2022 by \$32.6 million primarily due to a \$12.6 million increase of the current portion of bonds payable, an increase of \$17.3 million in commercial paper notes and \$5.5 million increase in other current liabilities, partially offset by a decrease of \$1.4 million in accrued bond interest payable. Current liabilities increased in fiscal year 2022 compared to 2021 by \$10.1 million primarily due to a \$13.2 million increase of the current portion of bonds payable, an increase of \$2.9 million in accrued bond and lease interest payable, and \$3.5 million increase in other current liabilities, offset by a decrease of \$11.0 million of commercial paper notes.

Non-current liabilities decreased in fiscal year 2023 compared to 2022 by \$137.0 million due to a decrease of \$151.2 million in bonds payable and a decrease of \$3.2 million reduction in lease liability, partially offset by a \$17.4 million net increase in other non-current liabilities. The overall decrease is a result of a \$112 million bond principal payment, a \$24 million amortization of bond premium, partially offset by a \$2.1 million decrease in amortization of the EMKI unearned interest, and a \$20 million payment received from the Amherst P3 service concession agreement. The service concession agreement was executed in fiscal year 2023.

Non-current liabilities increased in fiscal year 2022 compared to 2021 by \$291.8 million primarily due to an increase in long term bonds payable of \$287.0 million and lease liability of \$7.1 million. This increase is offset by the decrease of \$2.3 million in unearned interest. During fiscal year 2022, the Authority issued \$399.9 million in new bonds with \$26.3 million of new bond premiums. This increase in long term debt includes principal payments of \$98.9 million and bond premium amortization of \$27.1 million and a reduction in reclass to current bonds payable of \$112.1 million.

Net investment in capital assets represents capital assets, net of accumulated depreciation and reduced by outstanding balances for bonds, notes, and other debt, as well as deferred outflows of resources and deferred inflows of resources, if any, that are attributable to the acquisition, construction, or improvement of those assets or related debt.

Unrestricted net position represents those funds that are not subject to restrictions, or for which restrictions have expired. In 2023, the Authority reported a \$96.2 million surplus in the unrestricted component of net position, a \$68.0 million increase from fiscal year 2022. In 2022, the Authority reported a \$28.1 million surplus in the unrestricted component of net position, a \$4.2 million increase from fiscal year 2021.

As of June 30, 2023 and 2022, there were no restricted net position balances.

The Authority's changes in net position (in thousands) are presented in the table below for the years ended June 30:

Management's Discussion and Analysis (unaudited)

Condensed Schedules of Revenues, Expenses, and Changes in Net Position			
As of June 30, 2023, 2022, 2021			
(\$ in thousands)			
	2023	2022	2021
OPERATING REVENUES			
Income from contracts for financial assistance, management, and services	\$ 245,084	\$ 213,074	\$ 131,254
Total operating revenues	245,084	213,074	131,254
OPERATING EXPENSES			
Facility operating costs	6,861	5,743	4,711
Depreciation and amortization	169,512	164,140	158,489
General and administrative expenses	6,761	7,414	7,318
Total operating expenses	183,134	177,296	170,517
Net operating gain/ (loss)	61,950	35,778	(39,264)
NON-OPERATING INCOME / (EXPENSES)			
Other non-operating income / (expense)	8,678	10,829	10,310
Interest expense	(125,216)	(114,102)	(109,213)
Total non-operating expenses	(116,538)	(103,274)	(98,903)
CAPITAL CONTRIBUTIONS	49,923	80,838	82,329
CHANGE IN NET POSITION	(4,665)	13,341	(55,839)
Net position at the beginning of the year	1,210,471	1,197,129	1,252,966
Net position at the end of the year	\$ 1,205,806	\$ 1,210,471	\$ 1,197,128

Income from contracts for financial assistance, management, and services are primarily related to contracts the Authority has with the University. The Authority has entered into various contracts with the University, acting by and through the Trustees, related to the management of certain Authority projects and the payment to the Authority of certain fees and operating costs. The Authority fixes fees, rents, rates and other charges for the use of its projects in amounts sufficient to provide for the debt service and other payments related to the Authority's obligations and for the Authority's operating expenses. These contracts generally call for the Trustees to bill and collect all revenue derived from the projects and remit to the Authority or to the Trustee under the Authority's trust agreements, funds sufficient to cover debt service on its bonds, its costs of operations, and its financial obligations with respect to the projects. The amounts fluctuate based on the debt service requirements of the Authority bonds in any particular year. Revenue increased by \$32.0 million in fiscal year 2023 compared to fiscal year 2022 primarily as a result of an increase in annual debt service.

Facility operating costs include operating costs of the Authority, rental expenses, and expenses paid by the Authority out of reserves for maintenance of Authority-owned buildings. Facility operating costs increased in fiscal year 2023 compared to fiscal year 2022 due to an increase in Authority operating costs and utilities.

Depreciation and amortization increased by \$5.4 million in fiscal year 2023 compared to fiscal year 2022 and \$5.7 million in fiscal year 2022 versus fiscal year 2021 as additional new capital assets were placed into service during those years and due to GASB 87 implementation.

Management's Discussion and Analysis (unaudited)

Interest expense represents interest paid to the holders of Authority issued debt. In fiscal year 2023 interest expense increased by \$11.1 million over fiscal year 2022 primarily due to scheduled interest payments. In fiscal year 2022 interest expense increased by \$4.9 million over fiscal year 2021 primarily due to additional interest payments on the new bond issuances, 2022-1 and 2022-2.

Capital contributions represent certain grants and gifts provided to the Authority for capital construction at the five campuses. During fiscal year 2023, the Authority received contributions totaling \$49.9 million. The University contributed \$34.2 million to fund various projects including, the Goessmann Hall and Worcester Dining Commons renovation at the Amherst campus, East Campus dormitory demolition project at Dartmouth, Olsen Hall Infrastructure Improvements project at Lowell. The Authority also received grants totaling \$15.7 million from the Commonwealth's Division of Capital Asset Management and Maintenance to fund projects at the Amherst, Dartmouth, and Lowell campuses.

During fiscal year 2022, the Authority received contributions totaling \$80.8 million. The University contributed \$15.3 million to fund various projects including, the Goessmann Hall and Worcester Dining Commons renovation at the Amherst campus, East Campus dormitory demolition project at Dartmouth, Olsen Hall Infrastructure Improvements project at Lowell. The Authority also received grants totaling \$65.6 million from the Commonwealth's Division of Capital Asset Management and Maintenance to fund projects at the Amherst, Dartmouth, and Lowell campuses.

CAPITAL ASSETS OF THE AUTHORITY

The Authority's investment in capital assets as of June 30, 2023 and 2022 amounted to \$4.0 billion and \$3.9 billion, net of accumulated depreciation and amortization of the Lease ROU asset. This investment in capital assets included land, buildings, improvements, furnishings, equipment, construction in progress as well as various office space leases where the Authority is a lessee.

Net capital assets increased by \$85.9 million or 2% in fiscal year 2023 as capital improvements and construction in progress outpaced depreciation expenses.

- Buildings and building components decreased by \$18.1 million, net of accumulated depreciation, in fiscal year 2023, primarily due to the decrease in projects placed in service during the fiscal year 2023 and an increase in projects in construction phase.
- Construction In Progress ("CIP") increased by \$109.5 million in fiscal year 2023 as capital spending on several major construction projects outpaced the projects which were completed and transferred to depreciable property. Projects with significant progress, some of which were completed during fiscal year 2023 include: North Village Family Housing, Goessmann Hall School of Health Sciences renovations, New Faculty Hire renovations, Energy Improvements and Computer and Information Science Building at the Amherst campus; the Substructure Demolition & Quadrangle Development at the Boston campus; the Science & Engineering Building renovation at the Dartmouth campus; Olsen Hall critical infrastructure capital repairs and the Olney Instructional Modernization at the Lowell campus; the New Education and Research Building at the Chan Medical School campus.
- Significant projects that remain in progress either in the design or construction phase at the end of the fiscal year 2023 included the Computer and Information Science Building, Goessmann Hall School of Health Sciences renovation at the Amherst campus; the Substructure Demolition & Quadrangle Development at the Boston campus; the Science & Engineering Building renovation at the Dartmouth campus; and the New Education and Research Building at the Chan Medical School campus.

DEBT OF THE AUTHORITY

The Authority carries debt in the form of bond obligations. This debt was \$3.4 billion and \$3.5 billion as of June 30, 2023 and 2022, respectively. The decrease of \$138.5 million in fiscal year 2023 is primarily due to \$98.9 million of principal payments, and the amortization of \$26.5 million of bond premiums.

The Authority utilizes the commercial paper program to finance projects until issuing long-term debt. During fiscal year 2023, the Authority issued \$17.3 million in new commercial paper to finance the Substructure Demolition & Quadrangle Development at the Boston campus, and two property acquisitions at the Lowell campus with interest rates from 2.00% to 4.55%.

As of June 30, 2023, the ratings assigned to the Authority's bonds are as follows: Aa2 by Moody's Investor Service, AA by Fitch Ratings, and AA- by Standard and Poor's Global Rating.

Management's Discussion and Analysis (unaudited)

THE UNIVERSITY OF MASSACHUSETTS CLUB

The Authority operates the University of Massachusetts Club (the "Club"). The Club is a private club open to membership for alumni, faculty, staff, and friends of the University and is located on the 32nd floor of One Street Beacon in Boston, Massachusetts.

REQUESTS FOR INFORMATION

This financial report is designed to provide a general overview of the Authority's finances for all those with an interest in them. Questions concerning any information provided in this report or requests for additional financial information should be addressed to the Chief Financial Officer, University of Massachusetts Building Authority, 100 Carlson Avenue, Newton, Massachusetts 02459. Additional information on the Authority can be found on its web site, www.umassba.net

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Statements of Net Position
June 30, 2023 and 2022
(\$ in thousands)

ASSETS	2023	2022
Current assets		
Cash and cash equivalents	\$ 38,488	\$ 23,209
Accounts receivable (net of allowances of \$139 at June 30, 2023 and \$13 at June 30, 2022)	1,531	140
Intergovernmental receivables		
Commonwealth of Massachusetts	343	1,166
U.S. government	1,374	1,411
University of Massachusetts	625	625
Loans receivable, current portion	16,387	15,918
Lease receivable, current portion	5,710	7,624
Prepays and other current assets	3,285	6,463
Restricted receivables - University of Massachusetts	57,295	54,038
Total current assets	125,038	110,594
Noncurrent assets		
Restricted cash and cash equivalents	285,116	282,520
Restricted investments	15,646	195,721
Loans receivable, non-current portion	185,483	204,293
Lease receivable, non-current portion, net	146,445	153,559
Capital assets, net	3,972,090	3,886,205
Other assets	949	2,312
Total noncurrent assets	4,605,729	4,724,610
Total assets	4,730,767	4,835,204
DEFERRED OUTFLOWS OF RESOURCES		
Debt refunding	100,624	109,949
Total deferred outflows of resources	100,624	109,949
Total assets and deferred outflows of resources	\$ 4,831,391	\$ 4,945,153

See accompanying notes to the financial statements.

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Statements of Net Position
June 30, 2023 and 2022
(\$ in thousands)

LIABILITIES	2023	2022
Current liabilities		
Accounts payable	\$ 21,287	\$ 27,391
Retainage payable to contractors	16,957	12,447
Bonds payable, current portion	124,725	112,085
Commercial paper notes	37,250	20,000
Accrued bond and lease interest payable	22,635	24,015
Lease liability, current portion	3,181	2,993
Other current liabilities	24,857	19,375
Total current liabilities	250,892	218,306
Noncurrent liabilities		
Bonds payable, net of current portion and unamortized bond premium	3,242,403	3,393,583
Lease liability, net of current portion	24,622	27,803
Other noncurrent liabilities	48,008	30,632
Total noncurrent liabilities	3,315,033	3,452,018
Total liabilities	3,565,925	3,670,324
DEFERRED INFLOWS OF RESOURCES		
Leases	59,660	64,358
Total deferred inflows of resources	59,660	64,358
Total liabilities and deferred inflows of resources	\$ 3,625,585	\$ 3,734,682
NET POSITION:		
Net investment in capital assets	1,109,616	1,182,330
Unrestricted	96,190	28,141
Total net position	\$ 1,205,806	\$ 1,210,471

See accompanying notes to the financial statements.

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Statements of Revenues, Expenses, and Changes in Net Position
For the Years Ended June 30, 2023 and 2022
(\$ in thousands)

REVENUES	2023	2022
Operating Revenues		
Income from contracts for financial assistance, management, and services	\$ 245,084	\$ 213,074
Total operating revenues	245,084	213,074
EXPENSES		
Operating expenses		
Facility operating costs	6,861	5,743
Depreciation	166,670	161,814
Amortization of Lease ROU Asset	2,842	2,326
Insurance	3,480	3,379
Professional fees	3,189	3,970
General and administrative expenses	92	64
Total operating expenses	183,134	177,296
Operating income	61,950	35,778
NONOPERATING REVENUES / (EXPENSES)		
Interest subsidy - U.S. government	7,226	7,444
Interest income	15,971	5,528
Interest expense	(125,216)	(114,102)
Other expenses	(14,519)	(2,143)
Total nonoperating expenses	(116,538)	(103,273)
CAPITAL CONTRIBUTIONS		
University of Massachusetts	34,190	15,252
Commonwealth of Massachusetts	15,733	65,586
Total capital contributions	49,923	80,838
Change in net position	(4,665)	13,343
NET POSITION		
Net position at beginning of year	1,210,471	1,197,128
Net position at end of year	\$ 1,205,806	\$ 1,210,471

See accompanying notes to the financial statements.

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Statements of Cash Flows
June 30, 2023 and 2022

	2023	2022
CASH FLOWS FROM OPERATING ACTIVITIES		
Cash received from income from contracts for financial assistance	\$ 240,702	\$ 205,854
Payments to vendors and suppliers	(18,460)	(15,946)
Payments of salaries and benefits	(4,218)	(3,734)
Net cash provided by operating activities	218,024	186,174
CASH FLOWS FROM CAPITAL AND OTHER FINANCING ACTIVITIES		
Capital asset expenditures	(237,010)	(216,830)
Repayment of bond principal	(112,085)	(98,895)
Interest payments to bondholders	(140,660)	(129,060)
Repayment of commercial paper obligations	-	(97,700)
Build America Bonds interest subsidy	7,263	11,080
Demolition costs	(11,058)	-
EMKI lease receipts	2,665	5,073
Cash received from other leases	3,707	4,295
Interest received	414	414
Interest paid on leases payable	(642)	(451)
Principal paid on leases payable	(2,992)	(1,376)
Sublease commission payments	-	(250)
Loans receivable receipts	15,917	13,788
Commercial paper advances	17,250	86,700
Deposits received (Bayside)	11,200	-
Capital contribution receipts	50,747	94,972
Proceeds from bond obligations	-	399,920
Proceeds from premiums	-	26,327
Net cash provided by (used in) capital financing activities	(395,284)	98,007
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of investments	-	(196,710)
Proceeds from the sale of investments	181,573	-
Interest income	13,562	848
Net cash provided by (used in) investing activities	195,135	(195,862)
CHANGE IN CASH AND CASH EQUIVALENTS	17,875	88,319
Cash and cash equivalents — beginning of the year	305,729	217,410
Cash and cash equivalents — end of the year	\$ 323,604	\$ 305,729
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES		
Operating income	\$ 61,950	\$ 35,778
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation, amortization and other	169,512	164,139
Loss on disposal of capital assets	(3,453)	(121)
Rental income	(2,851)	(3,106)
Changes in assets and liabilities:		
Accounts receivable, net	(1,531)	(5,143)
Prepays and other current assets	477	(2,640)
Other liabilities	(470)	-
Accounts payable — non-construction related	(5,610)	(2,733)
Net cash provided by operating activities	\$ 218,024	\$ 186,174
SUPPLEMENTAL DISCLOSURE OF NON-CASH CAPITAL AND RELATED FINANCING ACTIVITIES:		
Capital assets acquired and included in accounts and retainage payable and other liabilities	\$ 48,336	\$ 56,424
Lease assets acquired in exchange for lease obligations	-	10,230
	\$ 48,336	\$ 66,654

See accompanying notes to the financial statements.

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

1) OPERATIONS OF THE AUTHORITY

The University of Massachusetts Building Authority (the "Authority" or "UMBA") is a body politic and corporate and a public instrumentality of The Commonwealth of Massachusetts (the "Commonwealth"). The Authority was created by Chapter 773 of the Acts of 1960 of the Commonwealth, as amended (the "Enabling Act"). The purposes of the Authority are to provide dormitories, dining commons, and other buildings and structures for use by the University of Massachusetts (the "University"), its students, staff and their dependents, and other entities associated with the University as requested by authority of the Trustees of the University (the "Trustees").

The Enabling Act provides that the Authority shall have eleven members, five of whom shall also be trustees of the University. Members of the Authority are appointed by the Governor of the Commonwealth. Two of the other members must be graduates of the University. Non-trustee members serve terms of approximately six years while trustee members serve until they are no longer trustees of the University. Members whose terms have expired continue to be members until reappointed or replaced.

The major functions of the Authority include the issuance of bonds to finance projects requested by the Trustees; the planning and construction or renovations related to those projects; the setting and collection of fees, rents, rates, and other charges related to such projects; debt service administration; and maintenance and repair of its projects. In conjunction with its financings, the Authority has entered into contracts with the Commonwealth, acting by and through the Trustees, with respect to its projects that provide for payments for debt service and other costs of the financings as well as the operating costs of the Authority and its projects.

As stated in the Enabling Act, the Authority may sell bonds and notes, in either a public or private sale, at a price and with such terms as it may determine are in the best interest of the Authority, provided that the bonds of each issue mature no later than fifty years from their date and the sale and terms thereof have been approved by the Treasurer and Receiver-General and the Secretary of Administration and Finance of the Commonwealth or their designees.

The Authority is exempt from federal and state income tax under the doctrine of intergovernmental tax immunity found in the U.S. Constitution. The Authority qualifies as a public charity under Section 170(b)(1)(A)(iv) of the Internal Revenue Code. Accordingly, no provision for income taxes has been recorded in the accompanying financial statements.

The Authority's financial statements are included in the University's financial statements as a blended component unit.

2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a) *Basis of accounting*

The Authority's financial statements have been prepared using the economic resources measurement focus and the accrual basis of accounting. The financial statements of the Authority have been prepared in conformity with accounting principles generally accepted in the United States of America ("US GAAP") as applied to governmental entities. The Governmental Accounting Standards Board ("GASB") is the accepted standard setting body for establishing governmental accounting and financial reporting principles.

Under the economic resources measurement focus, the Authority distinguishes operating revenues and expenses from nonoperating revenues and expenses. Operating revenues and expenses result primarily from providing, operating, and maintaining Authority facilities for use by the University. The principal sources of operating revenues include income from contracts for financial assistance, which represents amounts needed for debt service and related expenses received from the University and fees charged to the University for services. Operating expenses for the Authority include facility operating costs, depreciation of capital assets, professional fees, and other administrative costs. All revenues and expenses not categorized as operating revenues and expenses are reported as nonoperating.

Under the accrual basis of accounting, revenues are recorded when earned and expenses are recorded when the liability is incurred, regardless of when the related cash flow takes place.

b) *Use of Estimates*

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

c) Restricted Assets

Certain proceeds of the Authority's bonds, as well as certain resources set aside for their repayment, are classified as restricted assets in the accompanying Statements of Net Position because their use is limited by bond trust agreements.

The following sets forth the restricted cash and cash equivalent and investment balances as of June 30 (\$ in thousands):

	<u>2023</u>	<u>2022</u>
Restricted cash and cash equivalents:		
Capital projects fund	\$ 285,116	\$ 282,520
Restricted investments:		
Capital projects fund	\$ 15,646	\$ 195,721

d) Capital Assets and Depreciation (excluding intangible right-to-use leases)

Property, plant, and equipment are stated at cost on the date of acquisition or at fair market value if contributed. Construction in progress is included as a capital asset. Construction in progress is stated at cost, which includes direct construction costs and other expenditures related to construction including capitalized interest, if any. All construction costs related to projects that are not yet completed are charged to construction in progress until such time as the projects are completed and placed in operation.

Depreciation is computed using the straight-line method over the estimated useful lives of the assets from the date the property is placed in operation. Land is not depreciated. The useful lives applicable to the Authority are as follows:

Buildings	12 to 50 years
Building, leasehold, and land improvements	3 to 20 years
Equipment	3 to 10 years
Furnishings	3 to 10 years

e) Cash and Cash Equivalents

Cash and cash equivalents include cash balances maintained in checking accounts, overnight repurchase agreements, and amounts held in permitted money market mutual funds with an original maturity date of three months or less. The Authority is authorized to invest in the Massachusetts Municipal Depository Trust ("MMDT"), a pooled money market-like fund, 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 holdings at amortized cost. As such, the Authority reports its position 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.

f) Investments

Investments in marketable securities are stated at fair value.

Realized and unrealized gains (losses) on investments, if any, include the net changes in the fair value of investments.

g) Net Position

Net position is reported in the following categories:

Net investment in capital assets — This category consists of capital assets, net of accumulated depreciation and reduced by outstanding balances for bonds, notes, and other debt, as well as deferred outflows of resources that are attributed to the acquisition, construction, or improvement of those assets.

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

Restricted component of net position — This category consists of assets whose use is restricted either through external restrictions imposed by creditors, grantors, contributors and the like, or through restrictions imposed by law through constitutional provisions or enabling legislation. At June 30, 2023 and 2022, there were no restricted net position balance.

Unrestricted component of net position — This category consists of net assets that do not meet the definition of the two preceding categories and are available to support the Authority's operations.

For purposes of net position classification, when both restricted and unrestricted resources are available for use, it is the Authority's policy to use restricted resources first and then unrestricted resources.

h) Capital Contributions

Capital contributions are for capital asset acquisition, facility development, and long-term planning studies and are reported in the accompanying Statements of Revenues, Expenses, and Changes in Net Position after nonoperating revenues and expenses as capital contributions when the associated capitalized expenditures are incurred.

i) Insurance

The Authority carries a full complement of third-party insurance, including workers' compensation, property, general liability, hire and non-owned auto coverage, an umbrella policy complemented with an excess policy, director and officers (D&O) complemented with an excess policy, crime coverage, and social engineering coverage.

In addition, the Owner-controlled Consolidated Insurance Program ("OCIP") was established to provide insurance coverage for contractors on selected Authority capital projects. This program provides workers' compensation and general liability insurance coverage for most contractors working on projects in the program. The program has a deductible component that is funded by the Authority. The deductible component is limited on both a per-occurrence basis and an aggregate basis for all OCIP-covered projects by stop-loss insurance.

This exposure is partially secured by and paid out of an escrow trust fund set up for this purpose as a requirement of the stop-loss insurer. The total deductible exposure, plus unpaid OCIP-related insurance premiums and expenses committed to the OCIP, is addressed by the Authority with an OCIP reserve of \$3.9 million and \$3.9 million as of June 30, 2023 and June 30, 2022, respectively, which is presented as other noncurrent liabilities in the accompanying Statements of Net Position.

j) Revenue Recognition

The Authority's major revenue source is fees for services that are primarily related to contracts with the University. The Authority has entered into various contracts with the University, acting by and through the Trustees, related to the management of certain Authority projects and the payment to the Authority of certain fees and operating costs. The Authority fixes fees, rents, rates, and other charges for the use of its projects in amounts sufficient to provide for the debt service and other payments related to the Authority's obligations and for the Authority's operating expenses. These contracts generally call for the University to bill and collect all revenue derived from the projects and remit to the Authority or to the Trustee under the Authority's trust agreements funds sufficient to cover debt service on its bonds, its costs of operations, and its financial obligations with respect to the projects. Revenue is recognized when earned consistent with the accrual basis of accounting and is included in income from contracts for financial assistance, management, and in the accompanying statement of revenues, expenses, and changes in net position.

The Authority records revenue associated with the interest rate subsidy provided by the United States Government related to the Authority's issuance of bonds under the Build America Bond ("BAB") program. Under the program, the Government provides a direct 35% subsidy of the interest rate paid to bondholders. During fiscal year 2013, the federal government implemented automatic budget cuts imposed through sequestration required pursuant to the Budget Control Act of 2011. In fiscal year 2022, the Authority's November 1, 2021 and May 1, 2022 original subsidy payments related to the Senior Series 2009-2 Project Revenue Build America Bonds and the Senior Series 2010-2 Project Revenue Build America Bonds were reduced by 5.7%.

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

k) Adoption of New Accounting Standards

In March 2020, the Governmental Accounting Standards Board (GASB) issued GASB Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*.

This standard establishes the definitions of Public-Private and Public-Public Partnerships, an arrangement in which a government (the transferor) contracts with an operator (a governmental or nongovernmental entity) to provide public services by conveying control of the right to operate or use a nonfinancial asset for a period of time in an exchange or exchange-like transaction. Some PPPs meet the definition of a service concession arrangement. This standard also provides guidance for accounting and financial reporting for availability payment arrangements (APA). As of and for the years ending June 30, 2023 and 2022, the Authority had no APAs. The Authority adopted Statement No. 94 effective July 1, 2021. Adoption of the standard had no effect on the Authority's financial statements. See note 9 for discussion of the Authority's Public-Private Partnership arrangements.

In May 2020, the GASB issued GASB Statement No. 96, *Subscription-Based Information Technology Arrangements*. This standard defines subscription-based information technology arrangements (SBITA) and establishes that a SBITA results in a right-to-use subscription asset—an intangible asset—and a corresponding subscription liability. The Authority adopted Statement No. 96 effective July 1, 2021. Adoption of the standard had no effect on the Authority's financial statements.

l) Lease Accounting

The Authority is a lessee for various noncancellable real estate leases and a lessor for various real estate and ground leases.

Short-term Leases

For lease arrangements with a maximum possible term of 12 months or less at commencement, the Authority recognizes an expense based on the provisions of the lease contract.

Leases Arrangements Other than Short Term

For all other leases (i.e., those that are not short term) where the Authority is a lessee, the Authority recognizes a lease liability and an intangible right-to-use lease asset.

For leases, where the Authority is a lessor, the Authority recognizes a lease receivable and a deferred inflow of resources.

Measurement of Lease Amounts

As a lessee, at lease commencement, the Authority initially measures the lease liability at the present value of payments expected to be made during the lease term.

Subsequently, the lease liability is reduced by the principal portion of lease payments made. The lease asset is initially measured as the initial amount of the lease liability, less lease payments made at or before the lease commencement date, plus any initial direct costs ancillary to placing the underlying asset into service, less any lease incentives received at or before the lease commencement date. Subsequently, the lease asset is amortized into amortization expense on a straight-line basis over the shorter of the lease term or the useful life of the underlying asset. If the Authority is reasonably certain of exercising a purchase option contained in a lease, the lease asset will be amortized over the useful life of the underlying asset.

As a lessor, at lease commencement, the Authority initially measures the lease receivable at the present value of payments expected to be received during the lease term. Subsequently, the lease receivable is reduced by the principal portion of lease payments made. The deferred inflows of resources are initially measured as the initial amount of the lease receivable plus any payments received at or before the commencement of the lease term that relate to future periods. Subsequently, the deferred inflows of resources are amortized into lease revenue on a straight-line basis over the shorter of the lease term or the useful life of the underlying lease receivable.

Key Estimates and Judgments

Key estimates and judgments include how the Authority determines (1) the discount rate it uses to calculate the present value of the expected lease payments, (2) lease term, and (3) lease payments.

- The Authority generally uses its estimated incremental borrowing rate (IBR) as the discount rate for leases unless the rate that the lessor/vendor charges is known. The Authority IBR for leases is based on the rate of

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

interest it would need to pay if it issued general obligation bonds to borrow an amount equal to the lease payments, respectively, under similar terms at the commencement or remeasurement date. To determine its IBR, the Authority used historical bond yield curves to determine the appropriate rate. For lease amendment effective February 1, 2023, the Authority applied the 4.93% IBR. For leases commencing during the fiscal year 2022, the Authority applied the 2.92% IBR.

- The lease includes the noncancellable period of the lease plus any additional periods covered by either the Authority or lessor unilateral option to (1) extend for which it is reasonably certain to be exercised, or (2) terminate for which it is reasonably certain not to be exercised. Periods in which both the Authority and the lessor/vendor/lessee have an option to terminate (or if both parties have to agree to extend) are excluded from the lease term.
- Payments are evaluated by the Authority to determine if they should be included in the measurement of the lease liabilities or lease receivables, including those payments that require a determination of whether they are reasonably certain of being made, such as purchase options, payments for termination penalties, and other payments.

Remeasurement of Lease Amounts

The Authority monitors changes in circumstances that may require remeasurement of a lease. When certain changes occur that are expected to significantly affect the amount of the lease liability or lease receivable, the liability or receivable is remeasured, and a corresponding adjustment is made to the lease asset (for lessee arrangements) or deferred inflows of resources (for lessor arrangements).

Presentation in Statement of Net Position

Right-to-use lease assets are reported with capital assets in the accompanying Statements of Net Position. Lease receivables are reported with current assets if lessor payments are due within one year. If lease receivables are greater than one year, they are reported with noncurrent assets.

m) Deferred Outflows of Resources and Deferred Inflows of Resources

Deferred outflows of resources are defined as a consumption of net assets that is applicable to a future reporting period. Deferred inflows of resources are defined as an acquisition of net assets that is applicable to a future reporting period. Deferred outflows of resources increase net position, similar to assets, whereas deferred inflows of resources decrease net position, similar to liabilities.

3) CASH DEPOSITS AND INVESTMENTS

Cash Deposits — Custodial Credit Risk

The Authority's cash and cash equivalents held on deposit consisted of the following as of June 30 (\$ in thousands):

	2023	2022
Cash	\$ 7,255	\$ 8,726
MMDT	316,349	297,003
Total cash and cash equivalents	<u>\$ 323,604</u>	<u>\$ 305,729</u>

Custodial credit risk is the risk that, in the event of a bank failure, the Authority will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. The Authority does not have a deposit policy for custodial credit risk. As of June 30, 2023 and 2022, the bank balances of uninsured deposits totaled \$7.0 million and \$8.5 million, respectively.

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

Investments

As of June 30, 2023, the Authority's investments consisted of the following:

Investment type	Investment Maturities (in Years)		
	Total	Less than 1	1 to 5
U.S. Treasuries	\$ 15,646	\$ 15,646	\$ -

As of June 30, 2022, the Authority's investments consisted of the following:

Investment type	Investment Maturities (in Years)		
	Total	Less than 1	1 to 5
U.S. Treasuries	\$ 195,721	\$ 180,486	\$ 15,235

Interest Rate Risk

The Authority has a formal investment policy that establishes minimum credit quality of certain instruments, outlines investment procedures, and provides for periodic reporting. Generally, the Authority holds its investments until maturity.

Credit Risk

Credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. The risk is measured by the assignment of a rating by a nationally recognized statistical rating organization.

The Enabling Act specifies the permitted investments of the Authority. These permitted investments include direct obligations of or obligations that are unconditionally guaranteed by the United States of America ("Treasuries"), obligations of an agency or organization created pursuant to an act of Congress of the United States as an agency or instrumentality thereof ("Agencies"), time deposits or certificates of deposits fully secured by Treasuries or Agencies, and Treasuries and Agencies subject to repurchase agreements. Other legislation allows the Authority to invest in MMDT. Additionally, in accordance with the Authority investment policy, the Authority's Bond Trustee may invest some of the Authority's funds in money market accounts, permitted and collateralized by Treasuries.

Investments – Custodial Credit Risk

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, a government will not be able to recover the value of the investment or collateral securities that are in the possession of an outside party. The Authority's Enabling Act does not contain legal or policy requirements that would limit the exposure to custodial credit risk, except that interest-bearing time deposits or certificates of deposit of banking institutions or trust companies must be continuously and fully secured by Treasuries or Agencies.

Fair Value Measurements

GASB No. 72, *Fair Value Measurements and Application*, sets forth the framework for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1 – inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Authority has the ability to access.

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

- Level 2 – inputs other than Level 1 that are observable, either directly or indirectly, and include:
 - quoted prices for similar assets or liabilities in active markets;
 - quoted prices for identical or similar assets or liabilities in inactive markets;
 - inputs other than quoted prices that are observable for the asset or liability; and,
 - inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- Level 3 – unobservable inputs that are supported by little or no market activity and that are significant to the fair value measurement. Unobservable inputs are developed based on the best information available in the circumstances and may include the Authority's own data.

All the Authority's investments at June 30, 2023 and 2022 consist of U.S. Treasury notes, which are considered level 1 investments.

4) CAPITAL ASSETS

A summary of changes in capital assets follows (\$ in thousands):

	Balance June 30, 2021	Additions	Retirements/ Adjustments	Balance June 30, 2022	Additions	Retirements/ Adjustments	Balance June 30, 2023
Land	\$ 121,817	\$ 754	\$ (1,093)	\$ 121,478	\$ 616	\$ -	\$ 122,094
Buildings	3,844,105	98,705	(1,324)	3,941,486	97,047	(17,281)	4,021,252
Building and land improvements	917,957	20,845	(9,322)	929,480	47,793	(13,007)	964,266
Equipment and furnishings	82,973	1,593	(1,986)	82,580	4,876	(3,219)	84,237
Construction in progress	191,339	217,962	(117,002)	292,299	242,513	(132,968)	401,844
Subtotal	5,158,191	339,859	(130,727)	5,367,323	392,845	(166,475)	5,593,693
Less accumulated depreciation:							
Buildings	(941,367)	(110,343)	1,616	(1,050,094)	(113,321)	15,499	(1,147,916)
Building and land improvements	(361,627)	(46,001)	10,355	(397,273)	(47,620)	10,303	(434,590)
Equipment and furnishings	(56,251)	(5,470)	1,985	(59,736)	(5,729)	3,218	(62,247)
Subtotal	(1,359,245)	(161,814)	13,956	(1,507,103)	(166,670)	29,020	(1,644,753)
Total capital assets, net excluding lease assets	3,798,946	\$ 178,045	\$ (116,771)	3,860,219	\$ 226,175	\$ (137,455)	3,948,940
Lease assets, net (Note 9)	18,081			25,986			23,150
Total capital assets, net as reported in the statements of net position	\$ 3,817,027			\$ 3,886,205			\$ 3,972,090

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

5) BONDS PAYABLE

The following is a summary of bonds outstanding for the year ended June 30, 2023 and the related activity during the fiscal year (\$ in thousands):

Bond Description	Original Borrowing	Current Maturity Year	Interest Rate	Outstanding June 30, 2022	Additions	Reductions	Outstanding June 30, 2023	Insured	Callable	Call Date Beginning
Project Revenue Bonds, Senior Series 2009-2 (Federally Taxable - Build America Bonds - Direct Pay to Issuer)	271,855	2039	6.42% to 6.57%	16,945	-	-	16,945	No	At Par	Anytime
Project Revenue Bonds, Senior Series 2009-3 (Federally Taxable)	28,570	2039	5.82% to 6.17%	22,400	-	(775)	21,625	No	*	Anytime
Project Revenue Bonds, Senior Series 2010-2 (Federally Taxable - Build America Bonds - Direct Pay to Issuer)	430,320	2040	3.80% to 5.45%	413,610	-	(17,125)	396,485	No	*	Anytime
Project Revenue Bonds, Senior Series 2010-3 (Federally Taxable)	3,005	2040	5.75%	2,420	-	(75)	2,345	No	*	Anytime
Project Revenue Bonds, Senior Series 2013-1	212,585	2039	2.00% to 5.00%	8,410	-	(5,845)	2,565	No	At Par	Anytime
Project Revenue Bonds, Senior Series 2013-2 (Federally Taxable)	71,970	2041	0.43% to 4.26%	29,590	-	(2,485)	27,105	No	At Par	Nov-23
Project and Refunding Revenue Bonds, Senior Series 2013-3	24,640	2023	4.00% to 5.00%	485	-	(485)	-	No	At Par	Anytime
Project Revenue Bonds, Senior Series 2014-1	293,890	2044	3.00% to 5.00%	62,935	-	(4,135)	58,800	No	At Par	Nov-24
Refunding Revenue Bonds, Senior Series 2014-3	67,635	2026	2.00% to 5.00%	24,345	-	(4,500)	19,845	No	At Par	Nov-24
Refunding Revenue Bonds, Senior Series 2014-4	157,855	2025	0.20% to 3.38%	8,700	-	(2,070)	6,630	No	*	Anytime
Project Revenue Bonds, Senior Series 2015-1	298,795	2045	4.00% to 5.00%	266,880	-	-	266,880	No	At Par	Nov-25
Refunding Revenue Bonds, Senior Series 2015-2	191,825	2036	3.00% to 5.00%	133,330	-	(25,620)	107,710	No	At Par	Nov-25
Refunding Revenue Bonds, Senior Series 2017-1	165,130	2047	4.00% to 5.25%	165,130	-	-	165,130	No	At Par	Nov-27

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

Bond Description	Original Borrowing	Current Maturity Year	Interest Rate	Outstanding June 30, 2022	Additions	Reductions	Outstanding June 30, 2023	Insured	Callable	Call Date Beginning
Refunding Revenue Bonds, Senior Series 2017-2	19,510	2027	1.58% to 3.37%	13,570	-	(1,570)	12,000	No	No	-
Refunding Revenue Bonds, Senior Series 2017-3	187,680	2038	3.00% to 5.00%	152,150	-	(3,650)	148,500	No	At Par	Nov-27
Direct Placement Project Revenue Bonds, Senior Series 2018-1	37,650	2043	2.00% to 2.93%	37,650	-	-	37,650	No	At Par	Anytime
Refunding Revenue Bonds, Senior Series 2019-1	208,725	2039	5.00%	208,725	-	-	208,725	No	At Par	May-29
Project Revenue Bonds, Senior Series 2020-1	200,840	2050	5.00%	200,840	-	-	200,840	No	At Par	Nov-29
Project Revenue Bonds, Senior Series 2020-2 (Federally Taxable)	129,830	2050	1.76 to 3.54%	127,845	-	(2,020)	125,825	No	At Par	Nov-29
Refunding Revenue Bonds, Senior Series 2020-3 (Federally Taxable)	319,345	2044	1.71 to 3.50%	315,665	-	(2,165)	313,500	No	At Par	Nov-29
Refunding Revenue Bonds, Senior Series 2020-4 (Federally Taxable)	329,930	2043	.43% to 3.013%	329,930	-	(9,345)	320,585	No	*	Anytime
Refunding Revenue Bonds, Senior Series 2021-1 (Federally Taxable)	312,330	2037	5.00%	291,750	-	(29,965)	261,785	No	At Par	May-31
Refunding Revenue Bonds, Senior Series 2021-2 (Federally Taxable)	46,585	2036	0.145% to 2.652%	30,835	-	(255)	30,580	No	At Par	May-31
Project Revenue Bonds, Senior Series 2022-1	188,650	2052	5.00%	188,650	-	-	188,650	No	At Par	May-32
Project Revenue Bonds, Senior Series 2022-2 (Federally Taxable)	211,270	2045	2.2% to 4.3%	211,270	-	-	211,270	No	At Par	May-32
Unamortized bond premium				241,608	-	(26,455)	215,153			
Total				\$ 3,505,668	\$ -	\$ (138,540)	\$ 3,367,128			

*These series of bonds are callable at the Make-Whole Redemption Price, which equals the greater of the outstanding principal balance or the present value of the scheduled future principal and interest payments; payments are discounted at the Treasury Rate plus 25 basis points (2009 Series Bonds) or 30 basis points (2010 Series Bonds).

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

The following is a summary of bonds outstanding for the year ended June 30, 2022 and the related activity during the fiscal year (\$ in thousands):

Bond Description	Outstanding June 30, 2021	Additions	Reductions	Outstanding June 30, 2022
Project Revenue Bonds, Senior Series 2009-2 (Federally Taxable - Build America Bonds - Direct Pay to Issuer)	\$ 16,945	\$ -	\$ -	\$ 16,945
Project Revenue Bonds, Senior Series 2009-3 (Federally Taxable)	23,135	-	(735)	22,400
Project Revenue Bonds, Senior Series 2010-2 (Federally Taxable - Build America Bonds - Direct Pay to Issuer)	430,320	-	(16,710)	413,610
Project Revenue Bonds, Senior Series 2010-3 (Federally Taxable)	2,490	-	(70)	2,420
Project Revenue Bonds, Senior Series 2013-1	13,735	-	(5,325)	8,410
Project Revenue Bonds, Senior Series 2013-2 (Federally Taxable)	32,010	-	(2,420)	29,590
Project and Refunding Revenue Bonds, Senior Series 2013-3	945	-	(460)	485
Project Revenue Bonds, Senior Series 2014-1	66,825	-	(3,890)	62,935
Refunding Revenue Bonds, Senior Series 2014-3	28,635	-	(4,290)	24,345
Refunding Revenue Bonds, Senior Series 2014-4	13,865	-	(5,165)	8,700

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

Bond Description	Outstanding June 30, 2021	Additions	Reductions	Outstanding June 30, 2022
Project Revenue Bonds, Senior Series 2015-1	266,880	-	-	266,880
Refunding Revenue Bonds, Senior Series 2015-2	157,765	-	(24,435)	133,330
Refunding Revenue Bonds, Senior Series 2017-1	165,130	-	-	165,130
Refunding Revenue Bonds, Senior Series 2017-2	15,100	-	(1,530)	13,570
Refunding Revenue Bonds, Senior Series 2017-3	155,630	-	(3,480)	152,150
Direct Placement				
Project Revenue Bonds, Senior Series 2018-1	37,650	-	-	37,650
Refunding Revenue Bonds, Senior Series 2019-1	208,725	-	-	208,725
Project Revenue Bonds, Senior Series 2020-1	200,840	-	-	200,840
Project Revenue Bonds, Senior Series 2020-2 (Federally Taxable)	129,830	-	(1,985)	127,845
Refunding Revenue Bonds, Senior Series 2020-3 (Federally Taxable)	317,795	-	(2,130)	315,665
Refunding Revenue Bonds, Senior Series 2020-4 (Federally Taxable)	329,930	-	-	329,930
Refunding Revenue Bonds, Senior Series 2021-1 (Federally Taxable)	302,270	-	(10,520)	291,750
Refunding Revenue Bonds, Senior Series 2021-2 (Federally Taxable)	46,585	-	(15,750)	30,835
Project Revenue Bonds, Senior Series 2022-1	-	188,650		188,650
Project Revenue Bonds, Senior Series 2022-2 (Federally Taxable)	-	211,270		211,270
Unamortized bond premium	242,430	26,327	(27,149)	241,608
Total	\$ 3,205,465	\$ 426,247	\$ (126,044)	\$ 3,505,668

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

Aggregate annual maturities of principal and interest on bonds outstanding as of June 30, 2023 are as follows (\$ in thousands):

	Bonds			Direct Placement Bonds		Total
	Principal	Interest	Interest Subsidy*	Principal	Interest	
Fiscal year-end						
2024	\$ 123,070	\$ 132,448	\$ (6,993)	\$ 1,655	\$ 754	\$ 250,934
2025	120,870	127,805	(6,729)	1,690	717	244,353
2026	116,885	122,850	(6,445)	1,725	684	235,699
2027	120,295	117,642	(6,153)	1,760	649	234,193
2028	125,125	112,292	(5,858)	1,790	615	233,964
2029–2033	647,160	476,601	(24,217)	8,320	3,730	1,111,594
2034–2038	687,235	331,724	(13,702)	9,595	2,429	1,017,281
2039–2043	630,010	177,452	(2,315)	11,115	901	817,163
2044–2048	366,985	74,200	-	-	-	441,185
2049–2053	176,690	18,410	-	-	-	195,100
	<u>\$ 3,114,325</u>	<u>\$ 1,691,424</u>	<u>\$ (72,412)</u>	<u>\$ 37,650</u>	<u>\$ 10,479</u>	<u>\$ 4,781,466</u>

*These interest rate subsidies are provided by the United States Government related to the Authority's issuance of bonds under the Build America Bond ("BAB") program. Under the BAB program, the Government provides a direct subsidy of the interest rate paid to bondholders up to 35%. The Authority's November 1, 2022, and May 1, 2023 subsidy payments related to the Senior Series 2009-2 Project Revenue Build America Bonds and the Senior Series 2010-2 Project Revenue Build America Bonds were 33.00%. For fiscal year 2024 through fiscal year 2043, the estimated subsidy reflected in the table above is 33.00%.

Bond Activity

The Authority did not issue any new bonds and there was no refunding activity in the fiscal year 2023.

In fiscal year 2022, the Authority issued \$188.7 million of Senior Series 2022-1 Project Revenue Bonds and \$211.3 million of Senior Series 2022-2 Project Revenue Bonds.

Bond Premium and Issuance Expenses

The Authority amortizes the premiums received as a reduction of interest expense over the life of the respective bond issue. No bond activity occurred in the fiscal year 2023, thus no new bond premium, discount or bond issuance costs were recorded in the fiscal year 2023. In the fiscal year 2022, the Authority received \$26.3 million as premiums at issuance.

In connection with the Authority's bond issues, the Authority incurred certain issuance costs associated with the bond offerings. In fiscal year 2022, issuance costs were \$2.42 million and were expensed in accordance with the provisions of GASB Statement No. 65, *Items Previously Reported as Assets and Liabilities*.

6) COMMERCIAL PAPER

The maximum aggregate principal amount of commercial paper which may be outstanding at one time is \$200,000,000. The Commercial Paper Notes Series 2013-A are secured by a standby liquidity facility agreement with TD Bank, that expires on August 3, 2025. As of June 30, 2023, the outstanding commercial paper had a term of 20 days with a maturity date July 20, 2023.

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

The following is a summary of commercial paper issues for the year ended June 30 (\$ in thousands):

	Balance June 30, 2022	Issues	Repayments	Balance June 30, 2023
CP series 2013-A tax exempt	\$ 20,000	\$ 11,000	\$ -	\$ 31,000
CP series 2013-A taxable	-	6,250	-	6,250
	\$ 20,000	\$ 17,250	\$ -	\$ 37,250

	Balance June 30, 2021	Issues	Repayments	Balance June 30, 2022
CP series 2013-A tax exempt	\$ -	\$ 30,700	\$ (10,700)	\$ 20,000
CP series 2013-A taxable	31,000	56,000	(87,000)	-
	\$ 31,000	\$ 86,700	\$ (97,700)	\$ 20,000

The Authority incurred fees associated with its commercial paper credit facility of \$997,677 and \$721,512 for fiscal years 2023 and 2022, respectively.

7) PLEDGED REVENUES

The Authority has pledged as security for its revenue bonds, the payments made by the University to the Authority to pay the debt service on its outstanding revenue bonds. The general purpose of such revenue bonds issued by the Authority is to finance the University's capital projects and are payable through fiscal year 2053. Such pledges remain in place until the revenue bonds outstanding are defeased or paid. The total amount of pledged revenues in fiscal year 2023 was \$259.2 million. Total debt service (principal and interest) paid during fiscal year 2023 on outstanding revenue bonds was \$250.9 million, representing 96.8% of pledged revenues.

8) CONTRIBUTIONS FROM THE UNIVERSITY OF MASSACHUSETTS AND THE COMMONWEALTH OF MASSACHUSETTS

During fiscal year 2023, the Authority received capital contributions from the University in the amount of \$34.2 million to fund the Goodell Hall, Engineering Building and Service Workers Honor Pavilion renovations at Amherst, the East Campus dormitory demolition project at the Dartmouth campus, the Olsen Hall Infrastructure improvements and various other projects at the Lowell campus. During fiscal year 2022, the Authority received capital contributions from the University in the amount of \$15.3 million to fund the Goessmann Hall School of Health Sciences renovations at Amherst, the East Campus dormitory demolition project at the Dartmouth campus, the Olsen Hall Infrastructure improvements and various other projects at the Lowell campus.

During fiscal years 2023 and 2022, the Authority received grants totaling \$15.7 million and \$65.6 million from the Commonwealth, respectively. These grants were from Division of Capital Asset Management and Maintenance to fund projects at the Amherst, Boston, Dartmouth and Lowell campuses.

As per the Authority's policy, these grants are shown in the Statements of Revenues, Expenses and Changes in Net Position as a capital contribution.

9) PUBLIC-PRIVATE PARTNERSHIPS AND LEASES

The Authority has entered into three Public-Private Partnerships (PPP), one of which meets the definition of a service concession arrangement (SCA,) the remaining two do not meet the definition of an SCA.

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

a) PPPs meeting the definition of an SCA

On July 7, 2022, the Authority entered into an SCA with Mass Ave Housing Partners LLC ("Project Company"), to carry out the design, construction, financing, operation, management, and maintenance of a portion of the Student Housing Project on the Amherst campus consisting of approximately 600 beds of undergraduate apartment-style housing and approximately 200 beds of graduate student apartment-style housing and related infrastructure, including parking. The Project Company will manage, maintain, and operate the Student Housing Facilities and be entitled to all user fees associated with the project as defined, for a term of 65-years. At the end of the arrangement, operation of the Student Housing Project will be transferred to the University. The estimated cost of construction of the Student Housing Project is \$250 million. In accordance with GASB Statement No. 94, the Authority will record an asset and corresponding deferred inflow for the cost of the Student Housing Project when the related assets are placed into service which is expected to occur in January, 2024.

In accordance with SCA agreements, the Authority received from the Project Company a lump-sum payment of \$20 million which is included in other noncurrent liabilities in the accompanying financial statements.

b) PPPs not meeting the definition of an SCA

On November 8, 2016, the Authority entered into an agreement with Commonwealth Educational Resources, Inc. (PCER), a Massachusetts not-for-profit corporation to construct and operate for 40 years a 1,082-bed student housing facility at its Boston campus (the "Boston Project"). The Boston Project reverts to the Authority in 2056. The Boston Project was financed with \$130.08 million of revenue bonds issued on October 26, 2016 (Series 2016 Bonds) by the Massachusetts Development Finance Agency ("MassDevelopment") pursuant to a Loan and Trust Agreement between MassDevelopment and PCER. Neither the Authority, University nor Boston campus have pledged revenues to secure the payment of the Series 2016 bonds or have any obligation with respect to payment of the Series 2016 bonds.

On November 14, 2018, the Authority entered into an agreement with Provident Commonwealth Educational Resources II, Inc. (PCER II), a Massachusetts not-for-profit corporation to construct and operate for 45 years a 1,210-bed student housing facility at its Dartmouth campus (the "Dartmouth Project"). The Dartmouth Project reverts to the Authority in 2064. The Dartmouth Project was financed with \$132.19 million of revenue bonds issued on November 14, 2018 (Series 2018 Bonds) by the Massachusetts Development Finance Agency ("MassDevelopment") pursuant to a Loan and Trust Agreement between MassDevelopment and PCER II. Neither the Authority, University nor Dartmouth campus have pledged revenues to secure the payment of the Series 2018 bonds or have any obligation with respect to payment of the Series 2018 bonds.

Management evaluated the applicability of relevant GASB guidance against the underlying Boston and Dartmouth Project agreements and indentures and has concluded that the associated debt should not be recognized on the financial statements of the Authority.

In accordance with GASB Statement No. 94, PPP's that do not meet the definition of an SCA are recorded based upon the operators' (PCER and PCER II) estimated carrying value of the underlying PPP assets as of the expected date of transfer in ownership to the Authority. At of June 30, 2023 and 2022, the estimated carrying value of the assets upon ownership transfer for the Boston Project (2056) and the Dartmouth Project (2064) were deemed immaterial and therefore no amounts have been recorded in the accompanying financial statements.

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

c) *Ground Leases*

Pursuant to the Boston and Dartmouth Project PPP agreements, the Authority entered into the following ground leases. For the Boston Project, commencing January 1, 2019, and continuing for a term of 40 years, the annual rental amount payable to the Authority is \$1.025 million. For the Dartmouth Project, commencing January 1, 2021, and continuing for a term of 45 years, the rental amount payable to the Authority is \$625,000, increasing by 3% every five years.

d) *Direct Financing Lease*

In accordance with the GASB 87 transition guidance, the Authority has not restated the underlying assets related to its direct finance lease.

On October 27, 2009, the Authority entered into an agreement to lease its facility located on Morrissey Boulevard in Dorchester, Massachusetts (the Facility) to the Edward M. Kennedy Institute for the United States Senate ("EMKI"), a charitable corporation registered in the District of Columbia. The lease agreement provides for an initial term of ninety-nine years commencing in October 2009, and thereafter, at the option of EMKI, may be extended for two additional ninety-nine-year periods.

EMKI has an option to purchase the Facility for one dollar at any time after the earlier of: (i) payment of no less than 51% or defeasement of the original amount of the associated revenue bonds. The University has right of first refusal in the event EMKI decides to sell or otherwise dispose of the ownership of the Facility.

The project was financed with \$74.38 million of revenue bonds. Rent is equal to the debt service on the outstanding bonds and payable semiannually through fiscal year 2043.

At June 30, 2023 and 2022, the Authority recorded gross lease receivable of approximately \$91.5 million and \$96.6 million, respectively related to the EMKI lease. Also at June 30, 2023 and 2022, the Authority recorded unearned interest income of approximately \$23.7 million and \$25.9 million, respectively related to the EMKI lease. The Authority presents the unearned interest income associated with the EMKI lease as other current liabilities of approximately \$2.2 million and \$2.2 million and other noncurrent liabilities of approximately \$21.5 million and \$23.7 million as of June 30, 2023 and 2022, respectively.

For the years ended June 30, 2023 and 2022, the Authority recognized \$2.2 million and \$2.3 million, respectively, of interest income related to its EMKI direct financing lease.

e) *Other Leases*

The Authority has executed long-term leases, as a lessee, with the Commonwealth, acting by and through the Trustees, covering the land on which facilities owned by the Authority are located on the University's campuses. These leases call for nominal annual payments to the Commonwealth. Certain of these leases renew automatically for subsequent 5- or 10-year periods unless the Authority notifies the University that it does not wish to renew. Other leases require the Authority to notify the University of its desire to renew. As of June 30, 2023, all leases with the Commonwealth were in good standing and any leases requiring action by the Authority during the year to facilitate their renewals were properly renewed.

As provided in the Enabling Act, each of the above-referenced leases also terminates when the Authority no longer has any bonds outstanding, at which time all Authority property becomes the property of the Commonwealth.

On April 1, 2014, the Authority entered into a lease, as lessee, with Massachusetts Mutual Life Insurance Company, as lessor, for space at Tower Square, 1500 Main Street, Springfield, Massachusetts. The lease, as amended, ends on July 31, 2024. Annual rent is \$320 thousand. The Authority subleases the space to the

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

University, as lessor, to be used as classroom space for its Springfield satellite campus with a monthly payment of \$26,728 through July 31, 2024.

On July 17, 2014, the Authority entered into a lease, as lessee, with One Beacon Street Limited Partnership for space at One Beacon Street, Boston, Massachusetts. The lease ends December 31, 2030. Annual rent payments range from \$2.10 million to \$2.55 million.

In April 2021, the Authority entered into a lease-leaseback agreement with the University. The purpose of which was to allow the Authority to control additional square footage at the One Beacon Street office building in order to facilitate a future sublease of a portion of that space to a third party. The term of the lease-leaseback agreement ends in December 2030. The lease-leaseback agreement was for the same square footage and at the same terms. In March 2022, the amount of square footage in the lease-leaseback agreement was revised such that the Authority became a net lessee to that agreement. Accordingly, at June 30, 2023 and 2022, the Authority, as net lessee, recorded a lease asset and corresponding lease liability for its net lease-leaseback agreement with the University.

Also in March 2022, the Authority identified and entered into a sublease, as lessor, with a third party (HYM) for certain of the square footage it controlled at the One Beacon Street office building. The HYM lease expires in December 2030 and requires annual rental payments in the range from \$0.6 million to \$0.7 million.

On May 12, 2022, the Authority entered into a lease agreement, as lessee, with the University to lease office space at Mt. Ida for the Authority's use. The lease ends in June 2051, and the annual rent payments range from \$150 thousand to \$600 thousand. Also on May 12, 2022 the Authority entered into a sublease agreement, as lessor, with the University of Massachusetts Foundation (the Foundation), a related party, to sublease 47% of office space at Mt Ida site through June 2051, for an up-front payment of \$3.5 million to cover rent payments from fiscal year 2022 through fiscal year 2039. Thereafter through June 2051, the Foundation's annual rent payment will be \$205 thousand/year.

A summary of lease asset activity during the year ended June 30 is as follows (\$ in thousands):

	Balance at 7/1/2021	Additions	Balance at 6/30/2022	Additions	Remeasure ments/ Deductions	Balance at 6/30/2023
Lease assets - office space:						
One Beacon - UMBA Lessee	\$ 18,916	\$ -	\$ 18,916	\$ -	\$ (2)	\$ 18,914
University (One Beacon) - UMBA Sublessee	-	4,762	4,762	-	-	4,762
Mass Mutual (Satellite) - UMBA Lessee	1,280	-	1,280	-	(1)	1,279
University (Mt. Ida) - UMBA sublessee	-	5,468	5,468	-	4	5,472
Total lease assets	\$ 20,196	\$ 10,230	\$ 30,426	\$ -	\$ 1	\$ 30,427
Less accumulated amortization:						
One Beacon - UMBA Lessee	(1,802)	(1,802)	(3,604)	(1,801)	-	(5,405)
University (One Beacon) - UMBA Sublessee	-	(180)	(180)	(539)	-	(719)
Mass Mutual (Satellite) - UMBA Lessee	(313)	(313)	(626)	(313)	-	(939)
University (Mt. Ida) - UMBA sublessee	-	(30)	(30)	(188)	4	(214)
Total accumulated amortization	(2,115)	(2,325)	(4,440)	(2,841)	4	(7,277)
Total lease assets, net	\$ 18,081	\$ 7,905	\$ 25,986	\$ (2,841)	5	\$ 23,150

Lease assets are reported as capital assets in the accompanying financial statements. See note 4 for rollforward of all of the Authority's capital assets.

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

Lease Liabilities

A summary of changes in the related lease liabilities during the year ended June 30, 2023, is as follows (\$ in thousands):

	Balance at 7/1/2022	Additions	Remeasurements/ Deductions	Balance at 6/30/2023	Amounts due within one year
Lease liability - office space:					
One Beacon - UMBA Lessee	\$ 20,068	\$ -	\$ (2,231)	\$ 17,837	\$ 2,313
University (One Beacon) - UMBA Sublessee	4,605	-	(447)	4,158	470
Mass Mutual (Satellite) - UMBA Lessee	660	-	(315)	345	318
University (Mt. Ida) - UMBA sublessee	5,463	-	-	5,463	80
Total lease liability	\$ 30,796	\$ -	\$ (2,993)	\$ 27,803	\$ 3,181

A summary of changes in the related lease liabilities during the year ended June 30, 2022, is as follows (\$ in thousands):

	Balance at 7/1/2021	Additions	Remeasurements/ Deductions	Balance at 6/30/2022	Amounts due within one year
Lease liability - office space:					
One Beacon - UMBA Lessee	\$ 21,349	\$ -	\$ (1,281)	\$ 20,068	\$ 2,231
University (One Beacon) - UMBA Sublessee	-	4,762	(157)	4,605	447
Mass Mutual (Satellite) - UMBA Lessee	971	-	(311)	660	315
University (Mt. Ida) - UMBA sublessee	-	5,468	(5)	5,463	-
Total lease liability	\$ 22,320	\$ 10,230	\$ (1,754)	\$ 30,796	\$ 2,993

Future annual lease payments are as follows (\$ in thousands):

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

	Principal amount	Interest amount	Total
Year ending June 30:			
2024	\$ 3,181	\$ 591	\$ 3,772
2025	3,022	527	3,549
2026	2,950	465	3,415
2027	2,904	404	3,308
2028	3,016	1,122	4,138
2029–2033	8,380	917	9,297
2034–2038	710	618	1,328
2039–2043	827	500	1,327
2044–2048	1,093	398	1,491
2049 and thereafter	1,720	79	1,799
Total to maturity	\$ 27,803	\$ 5,621	\$ 33,424

A summary of changes in the related lease receivable during the year ended June 30, 2023, is as follows (\$ in thousands):

	Balance at 7/1/2022	Additions	Deductions/ Corrections	Balance at 6/30/2023	Amounts due within one year
Lease receivable					
One Beacon office space lease	\$ 16,236	\$ -	\$ (2,683)	\$ 13,553	\$ 1,741
Dartmouth P3 ground lease	16,951	-	1,804	18,755	202
Boston P3 ground lease	24,981	-	260	25,241	477
Amherst Satellite office space lease	660	-	(314)	346	318
One Beacon office space HYM sublease	4,531	-	(449)	4,082	307
Mt Ida, office space Foundation sublease	1,202	-	-	1,202	-
Less: lease receivable allowance					
Dartmouth P3 ground lease	-	(2,307)	-	(2,307)	
Boston P3 ground lease	-	(266)	-	(266)	
Subtotal	64,561	(2,573)	(1,382)	60,606	3,045
EMKI direct financing lease	96,622	-	(5,073)	91,549	2,665
Total lease receivable, net of lease receivable allowance	\$ 161,183	\$ (2,573)	\$ (6,455)	\$ 152,155	\$ 5,710

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

A summary of changes in the related lease receivable during the year ended June 30, 2022, is as follows (\$ in thousands):

	Balance at 7/1/2021	Additions	Deductions	Balance at 6/30/2022	Amounts due within one year
Lease receivable					
One Beacon office space lease	\$ 17,257	\$ -	\$ (1,021)	\$ 16,236	\$ 1,788
Dartmouth P3 ground lease	16,951	-	-	16,951	-
Boston P3 ground lease	24,981	-	-	24,981	-
Amherst Satellite office space lease	971	-	(311)	660	315
One Beacon office space HYM sublease	-	4,531	-	4,531	448
Mt Ida, office space Foundation sublease	-	4,702	(3,500)	1,202	-
Subtotal	60,160	9,233	(4,832)	64,561	2,551
EMKI direct financing lease	101,694	-	(5,072)	96,622	5,073
Total lease receivable	\$ 161,854	\$ 9,233	\$ (9,904)	\$ 161,183	\$ 7,624

For the years ended June 30, 2023 and 2022, the Authority recognized \$2.9 million and \$3.2 million, respectively, of rental income and \$1.5 million and \$1.4 million, respectively interest revenue related to its lessor operating leases.

For the years ended June 30, 2023 and 2022, the Authority recognized \$0.7 million and \$0.5 million, respectively, of interest expense and \$2.8 million and \$2.3 million, respectively amortization of the ROU lease asset related to its lessee operating leases.

COMMITMENTS AND CONTINGENCIES

In June 2019, the Authority entered into an agreement to lease property located at 200 Mount Vernon Street ("Bayside project") in Dorchester, Massachusetts to an unrelated party (the Developer). The Developer plans to develop a mixed-use opportunity at the site. Under the terms of the agreement, the Developer, subject to certain contingencies, may enter into a 99-year ground lease for an initial fixed rent up-front payment of up to \$235 million, with a minimum payment of \$192.5 million.

At June 30, 2023, the Authority held the \$11.5 million that is a fully nonrefundable deposit. Subsequent to the year end, an additional \$11 million was released to the Authority as a nonrefundable deposit. The Authority has the ability to terminate the agreement at any time subject to the terms of the agreement.

The Authority has outstanding purchase commitments with contractors for the construction of certain facilities as of June 30, 2023 and 2022 of \$193.1 million and \$181.5 million, respectively.

As of June 30, 2023 and 2022, the Authority had a working capital deficiency of \$125.9 million and \$107.7 million, respectively. As stated in the various contracts between the Authority and the University, the University is required to provide necessary funding to the Authority to meet its obligations through June 30, 2024 and beyond.

From time to time, the Authority is involved in routine litigation that arises in the ordinary course of business. There are no significant legal proceedings to which the Authority is a party for which management believes the ultimate outcome would have a material adverse effect on the Authority's financial position.

UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY
(A Component Unit of the University of Massachusetts)
Notes to Financial Statements
June 30, 2023 and 2022

10) RELATED PARTY TRANSACTIONS

Related party transactions not previously disclosed are:

The following table details the amounts due to the various campuses of the University at June 30, which were recorded as part of accounts payable and other current liabilities in the accompanying Statements of Net Position (\$ in thousands):

	<u>2023</u>	<u>2022</u>
Campus		
Amherst Campus	\$ 495	\$ 336
Boston Campus	338	646
Dartmouth Campus	89	45
Lowell Campus	-	2
Chan Medical School	-	1,668
Total	<u>\$ 922</u>	<u>\$ 2,697</u>

The Authority has issued debt, the proceeds of which were loaned to the Worcester City Campus Corporation ("WCCC") for the purpose of University capital improvements. The current and noncurrent balance of the outstanding WCCC loan receivable amounted to \$15.9 million and \$162.2 million as of June 30, 2023, and \$15.9 million and \$180.6 million as of June 30, 2022. In fiscal year 2020, the Authority has issued debt, the proceeds of which were loaned to the University for the purpose of University capital improvements. The current and noncurrent balance of the outstanding University loan receivable amounted to \$0.5 million and \$23.3 million as of June 30, 2023. The noncurrent balance of the outstanding University loan receivable amounted to \$23.7 million as of June 30, 2022.

In May 2016, the Authority entered into an agreement with the University to loan \$3.7 million to the Authority for a term of fourteen years for the purposes of lease improvements. The current and noncurrent balance of the outstanding loan payable amounted to \$1.2 million and \$2.5 million as of June 30, 2023 and \$0.8 million and \$2.9 million as of June 30, 2022, reported within current and noncurrent other liabilities.

11) SUBSEQUENT EVENT

Subsequent to the year ended June 30, 2023, and through December 8, 2023, the Authority borrowed an additional \$15.0 million of tax-exempt commercial paper and rolled \$31.0 million of tax-exempt and \$6.25 million of taxable commercial paper with interest rates ranging from 3.95% to 5.67% with a maturity date of January 11, 2024, to fund construction projects at the Boston and Lowell campuses.

For purposes of determining the effects of subsequent events on these financial statements, management has evaluated events subsequent to June 30, 2023 and through December 8, 2023, the date on which the financial statements were issued.



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

**Independent Auditors' Report on Internal Control Over Financial Reporting and on
Compliance and Other Matters Based on an Audit of Financial Statements Performed in
Accordance With Government Auditing Standards**

Members of the Board
University of Massachusetts Building Authority:

We have audited, in accordance with the 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, the financial statements of the University of Massachusetts Building Authority (the Authority), a component unit of the University of Massachusetts, which comprise the statement of net position as of June 30, 2023, and the related statements of revenues, expenses and changes in net position, and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated December 8, 2023.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Authority's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the Authority's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Authority's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee.



Purpose of This Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Authority's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

KPMG LLP

Boston, Massachusetts
December 8, 2023

APPENDIX C

FINANCIAL REPORT OF THE UNIVERSITY, INCLUDING FINANCIAL STATEMENTS

[Intentionally Left Blank]



University of Massachusetts

Annual Financial Report 2023





Contents

University Administration	2
Letter from the President	3
Report of Independent Auditors	4
Management's Discussion and Analysis (unaudited)	8
Financial Statements	22
Statements of Net Position	22
Statements of Revenues, Expenses, and Changes in Net Position	23
Statements of Cash Flows	24
Component Unit Statements of Financial Position	26
Component Unit Statements of Activities	27
Notes to Financial Statements	28
Required Supplementary Information (unaudited)	78
Schedule of the University's Proportionate Share of the Net Pension Liability — Massachusetts State Employees' Retirement System	78
Schedule of the University's Contributions — Massachusetts State Employees' Retirement System	78
Schedule of the University's Proportionate Share of the Net Other Postemployment Benefits (OPEB) Liability — State Retirees' Benefit Trust	79
Schedule of the University's Contributions — State Retirees' Benefit Trust	79

University Administration

As of November 2023

BOARD OF TRUSTEES

Stephen R. Karam, Chair
Fall River, MA

Mary L. Burns, Vice Chair
Lowell, MA

Fahad K. Alden
(UML Student, Non-voting)
Bedford, MA

Christopher J. Brady
(UMA Student, Non-voting)
North Andover, MA

David M. Brunelle
Paxton, MA

Gerald G. Colella
Seabrook, NH

Jose M. Delgado
Springfield, MA

Michael E. Dooley
(UMB Student, Voting)
Norwood, MA

Robert Epstein
Boston, MA

Richard M. Kelleher
Duxbury, MA

Robert Lewis, Jr.
Boston, MA

Ann M. Maguire Keches
Boston, MA

Michael V. O'Brien
Southborough, MA

Noreen C. Okwara, MD
Lowell, MA

Imari K. Paris Jeffries, PhD
Boston, MA

Julie M. Ramos Gagliardi
Somerset, MA

Elizabeth D. Scheibel, JD
South Hadley, MA

Steven A. Tolman
Boston, MA

Amelia S. Toye
(UMCMS Student, Non-voting)
Shrewsbury, MA

Patrick Tutwiler, PhD
Secretary of Education,
Commonwealth of MA
Andover, MA

Jehan S. Worthy
(UMD Student, Voting)
New Bedford, MA

Charles F. Wu, MBA
Executive Fellow
Newton, MA

OFFICERS OF THE UNIVERSITY

Martin T. Meehan, JD
President

Javier A. Reyes, PhD
Chancellor, UMass Amherst

Marcelo Suárez-Orozco, PhD
Chancellor, UMass Boston

Mark A. Fuller, PhD
Chancellor, UMass Dartmouth

Julie Chen, PhD
Chancellor, UMass Lowell

Michael F. Collins, MD
Chancellor, UMass Chan Medical School;
Senior Vice President for Health Sciences

Lisa A. Calise
Senior Vice President for Administration
and Finance & Treasurer

Zunilka M. Barrett
Secretary to the Board of Trustees



Letter from the President

I am pleased to present the annual financial report of the University of Massachusetts, which details the university's financial position and activities over the past year and highlights our steadfast commitment to active fiscal management and accountability.

Despite the challenging economic environment of the last few years, we have maintained strong enrollment of nearly 74,000 students and graduated the Class of 2023 with roughly 22,000 students earning degrees. UMass continues to be the largest contributor of college graduates entering the Massachusetts economy.

Our Amherst, Boston, Dartmouth, and Lowell campuses continued to be nationally ranked top-tier institutions by the *U.S. News & World Report*, and UMass Chan Medical School was ranked among the best in the country.

Our focus continues to be on ensuring that UMass provides affordable, accessible, and excellent educational opportunities. In order to accomplish these goals, the university has employed innovative strategies ranging from improved data analytics to procurement reforms resulting in reduced costs to UMass.

These efforts have distinguished UMass as a well-managed university, and external evaluators have taken notice. The university has maintained an Aa2 credit rating with a stable outlook based on strong management, excellent strategic positions, and disciplined fiscal oversight.

I am proud of what our administration, faculty and staff have achieved this past fiscal year, and I'm confident that our university community is prepared to face the opportunities and challenges that lie ahead. Together, we will ensure UMass continues to fulfill its critical mission to "provide an affordable and accessible education of high quality and to conduct programs of research and public service that advance knowledge and improve the lives of the people of the Commonwealth, the nation, and the world."

Sincerely,

Martin T. Meehan
President

Report of Independent Auditors



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

Independent Auditors' Report

The Board of Trustees
University of Massachusetts:

Report on the Audit of the Financial Statements

Opinions

We have audited the financial statements of the business-type activities and the aggregate discretely presented component units of the University of Massachusetts (the University), as of and for the years ended June 30, 2023 and 2022, and the related notes to the financial statements, which collectively comprise the University's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and the aggregate discretely presented component units of the University, as of June 30, 2023 and 2022, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended in accordance with U.S. generally accepted accounting principles.

Basis for Opinions

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the University and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions. The financial statements of the University of Massachusetts Foundation, Inc. were not audited in accordance with *Government Auditing Standards*.

Emphasis of Matter

As discussed in Note 1, the financial statements of the University are intended to present the financial position, changes in financial position, and, where applicable, cash flows of only that portion of the business-type activities, each major fund, and the aggregate discretely presented component units of the Commonwealth of Massachusetts that is attributable to the transactions of the University. They do not purport to, and do not, present fairly the financial position of the Commonwealth of Massachusetts as of June 30, 2023 and 2022, the changes in its financial position, or, where applicable, its cash flows for the years then ended in accordance with U.S. generally accepted accounting principles. Our opinions are not modified with respect to this matter.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with U.S. generally accepted accounting principles, and for 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.

KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee.



Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and Government Auditing Standards will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 University's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis and required supplementary information as listed in the accompanying table of contents be presented to supplement the basic financial statements. Such information is the responsibility of management and, 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 GAAS, 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 audits 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 Information

Management is responsible for the other information included in the annual financial report. The other information comprises the University administration and letter from the president but does not include the basic financial statements and our auditors' report thereon. Our opinions on the basic financial statements do not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audits of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work



performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 12, 2023 on our consideration of the University'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 the University'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 the University's internal control over financial reporting and compliance.

KPMG LLP

Boston, Massachusetts
December 12, 2023



Management's Discussion and Analysis (unaudited)

June 30, 2023

Introduction

This Management's Discussion and Analysis (MD&A) provides an overview of the financial position and activities of the University of Massachusetts (the University or UMass) for the fiscal years ended June 30, 2023, 2022 and 2021, and should be read in conjunction with the accompanying financial statements and notes. The financial statements, notes and this discussion are the responsibility of management.

The University of Massachusetts was established in 1863 as the Massachusetts Agricultural College, located in Amherst. Since then it has grown into a system that is nationally and internationally known for the quality of its academic programs and the scope and excellence of its faculty research. From Nobel Prize-winning research in gene-silencing to research in critical areas such as renewable energy, nanotechnology, cybersecurity, life sciences and marine science, the University of Massachusetts is expanding the boundaries of knowledge and opening doors of discovery that benefit the Commonwealth of Massachusetts (Commonwealth), the nation and the world. UMass consistently ranks as one of the best, most innovative universities in the world.

UMass Amherst is the flagship campus of the University. True to its land-grant roots, UMass Amherst is engaged in research and creative work in all fields and is classified by the Carnegie Foundation for the Advancement of Teaching as a doctoral university with "very high research activity". Major areas of emphasis include climate science, food science, alternative energy, nano manufacturing, polymer science,

computer science and linguistics. UMass Amherst is ranked 32nd among the nation's top public schools in the 2024 *U.S. News & World Report*.

UMass Boston is nationally recognized as a model of excellence for urban public research universities. Located on Boston Harbor, it is the metropolitan area's only public research university. UMass Boston's distinguished intellectual contributions span the social sciences, education, health and wellness. With a student population that represents over 100 countries, UMass Boston is committed to educating people from modest-income backgrounds, first-generation college students and those from urban areas, here and abroad.

UMass Dartmouth distinguishes itself as a vibrant university dedicated to engaged learning and innovative research resulting in personal and lifelong student success. Located on 710 acres on the south coast of Massachusetts, UMass Dartmouth offers students high-quality academic programs through undergraduate majors and professional and doctoral programs, including the state's only public law school.

UMass Law, which is part of UMass Dartmouth and the only public law school in Massachusetts, is committed to providing an excellent, affordable, and accessible legal education that balances legal theory, doctrine, skills, experience, and professionalism. UMass Law prepares students to thrive in a changing profession and advances justice through research, writing, teaching, learning, and practice. UMass Law's February 2023 Massachusetts first-time bar passage rate was 57%, the fourth highest passage rate of the Massachusetts law schools.

UMass Lowell is ranked 84th among the nation's top public schools within the 2024 *U.S. News & World Report*, with programs supporting workforce and economic development through innovation, entrepreneurship and public-private partnerships. UMass Lowell prepares students emphasizing experiential learning through cooperative education, service and research.

UMass Chan Medical School founded in 1962 and situated in Worcester, is the Commonwealth's only public medical school and the University's Nobel-prize winning health sciences education and research campus. In September of 2021, the Medical School received an endowment gift of \$175 million from The Morningside Foundation with annual distributions from the fund to be used for unrestricted purposes by the Medical School. In recognition of this transformational gift, the Medical School was renamed to the UMass Chan Medical School (UMass Chan). UMass Chan's three graduate schools were also renamed in recognition of this gift: the T.H. Chan School of Medicine, the Morningside Graduate School of Biomedical Sciences, and the Tan Chingfen Graduate School of Nursing. Consistently ranked by *U.S. News & World Report* in the top 10 percent of medical schools in the U.S. for primary care training, UMass Chan has remained true to its founding mission while also becoming globally recognized in biomedical research.

Unique among medical schools, UMass Chan is also home to ForHealth Consulting (formerly Commonwealth Medicine), a health care consulting division that partners with states and the federal government in delivering health services to vulnerable populations; and MassBiologics, the only non-profit, FDA-licensed manufacturer of vaccines and biologics in the nation.

UMass Global, in September of 2021, the University acquired Brandman University to expand educational opportunities for adult learners. This agreement officially launched UMass Global (UMG), a nonprofit blended component unit of UMass that delivers expanded online educational opportunities to adult learners in Massachusetts, across the nation and around the globe through a strengthened technology platform and tailored student support services. In addition to providing new educational opportunities, UMass Global also streamlines efforts to build workforce development partnerships with local and national employers, community colleges, other educational partners, non-profits, government agencies, and the U.S. military.



Financial Management

Accountability Framework

The University has strengthened its long-term fiscal outlook by adopting a framework for financial accountability. The framework is based on four key tenets:

- **Oversight:** independent and objective assurance that analyzes data, processes, policies and controls
- **Internal Controls:** standard processes to provide reasonable assurance regarding achievement of objectives
- **Transparency:** reliable, timely information that is accessible and understandable
- **Risk Management:** systematic approach to identifying, assessing and managing risks across the organization.

FIGURE 1 –UMass Financial Accountability Framework



Through the accountability framework, the University continues to implement proactive financial management practices including:

- Maturing our systemwide Enterprise Risk Management Program to enable risk-informed prioritization of strategies and initiatives;
- Developing and evaluating multi-year financial forecasts to guide policy and programmatic decisions;
- Enhancing the functionality of UM-Plan, the University's budgeting application, to increase the transparency of budgeting;
- Reporting of complete and accurate financial results through a quarterly close process;
- Developing and evaluating quarterly projections to monitor performance and make resulting operational adjustments;
- Implementing real-time tracking and reporting of student admissions and enrollment data by student type and residency to quickly observe trends that may impact campus projections;

- Increasing level of proactive resource demand management, contract re-negotiation and sourcing efforts to limit cost exposures to the campuses;
- Implementing and tracking creative, high-impact cost containment strategies across our campuses, including expanding the University's shared services initiatives including implementation of a systemwide travel and expense platform;
- Updating and implementing a systemwide business and travel expense policy to increase transparency, enhance fiscal management and create consistency across our campuses;
- Implementing a capital policy and associated administrative standards to guide the development and implementation of campus and University master and five-year capital plans;
- Developing a reporting methodology for deferred maintenance targets and deploying a dashboard to track progress in meeting these targets;
- Implementing a reserve policy to mitigate unforeseen events, advance University priorities, and maintain strong credit ratings;
- Regularly tracking a suite of key financial ratios including operating margin, operating cash flow margin, operating liquidity, debt service and financial leverage ratios to evaluate the University's fiscal health and performance against peer institutions; and
- Launching a real-time, system-sourced dashboard to provide campuses access to key financial information on academic programs and financial aid, and assist them in their planning.

Using this framework, the University continues to work towards strategic goals to ensure financial sustainability, mitigate risk, deliver efficient operations, and to ensure access and affordability to students while improving our capacity to deliver quality service to our customers.

Shared Services Initiatives

In January 2020, the University assembled the Unified Procurement Services Team (UPST). Comprised of a team of procurement professionals from across the UMass system, they were tasked with providing high-quality services while driving transaction efficiency. The UPST supports the campuses in cost optimization through proactive commodity sourcing and contracting with innovative suppliers and partners that support the UPST in delivering on its "better, faster, and cheaper" mission. The team manages approximately \$1 billion in third-party spend annually and approximately 30,000 suppliers and partners. The UPST manages this through leveraging optimized technology, data-driven business intelligence, training, and enhanced operational processes.

Since its inception through June 2023, the UPST has achieved \$112.0 million in annualized cost benefits. This was achieved through more than 280 initiatives across all campuses and the UMass President's Office. The resulting system benefits reached almost seven times the target savings of \$16.5 million and five times the return on investment to date of \$23.4 million.

To continue 'better, faster, cheaper' services, a robust pipeline of process improvement, cost benefit and recovery projects has been developed. The UPST has identified dozens of additional projects to optimize services over the coming 18–24 months which are expected to result in continued savings, efficiencies, and process improvements for the University. Included in these projects, UMass is conducting system-wide proactive sourcing practices and contracts adoption, and deployment of updated vendor performance guidelines that continue to help UMass manage risk while optimizing cost benefits to the system. Programs to increase supplier diversity and environmental sustainability considerations across the vendor portfolio are rolling out to match the values of the University System.

Based on the success of the UPST, the University's Employee Services Team (EST) was established in October 2021 to provide payroll and human resource application management services to all campuses. In FY2023 the services were expanded to include employee travel and expense. As a result, a system-wide

effort to automate and integrate travel and expense technology began in FY2023 with the implementation of Concur. Concur is a market leading Travel & Expense (T&E) platform which will allow the University to build more visibility and governance across travel related expenditures and ensure UMass constituents can reduce the administrative burdens they have when conducting travel for University needs. This transformation of the travel and expense program aligns with updated policies and standards and, along with the implementation of modern technology for all employees, will drive even greater operational efficiencies.

Using the Annual Financial Report

The University's financial statements are prepared in accordance with U.S. generally accepted accounting principles as prescribed by the Governmental Accounting Standards Board (GASB), which establishes financial reporting standards for public colleges and universities. The University's significant accounting policies are summarized in Note 1 of the accompanying financial statements, including further information on the financial reporting entity.

This report includes the University's Statements of Net Position, Statements of Revenues, Expenses and Changes in Net Position, and the Statements of Cash Flows for the fiscal years ended June 30, 2023 and 2022, as well as certain required



supplementary information. The University's net position (the difference between assets, deferred outflows, deferred inflows, and liabilities) is one indicator of the University's financial health. Over time, increases or decreases in net position are indicators of the improvement in, or erosion of, an institution's financial health when considered together with non-financial factors such as enrollment levels and the condition of facilities.

Statements of Net Position include all assets and liabilities, as well as deferred inflows and outflows of resources of the University. Net position is further broken down into three categories: net investment in capital assets, restricted and unrestricted. Amounts reported in net investment in capital assets represent the historical cost of property and equipment, reduced by the balance of related debt outstanding and depreciation expense charged over the years. Net position is reported as restricted when constraints are imposed by third parties, such as donors or enabling legislation. Restricted net position is either non-expendable, as in the case of endowment gifts to be held in perpetuity, or expendable, as in the case of funds to be spent on scholarships and research. All other assets are unrestricted; however, they may be committed for use under contract or designation by the Board of Trustees (the Board). Note 16 to the accompanying financial statements depicts the designations of unrestricted net position at June 30, 2023 and 2022, respectively.

Statements of Revenues, Expenses and Changes in Net Position present the revenues earned and expenses incurred during the year. Activities are reported as either operating or non-operating, as prescribed by GASB. According to the GASB definitions, operating revenues and expenses include tuition and fees, grant and contract activity, auxiliary enterprises and activity for the general operations of the institution not including appropriations from state and federal sources. Non-operating revenues include appropriations, capital grants and contracts, gifts, investment income, and non-operating federal grants (such as Pell grants and COVID-19 related Higher Education Emergency Relief Fund grants). With a public university's dependency on support from the state, Pell grants, and gifts, it is common for institutions to have operating expenses exceed operating revenues. This is because the financial reporting model prescribed by GASB classifies state and federal appropriations, Pell grants, and gifts as non-operating revenues. Due to the materiality of the state appropriations upon which the University relies, these appropriation amounts are included in certain analyses throughout this MD&A as operating revenue. The utilization of capital assets is reflected in the financial statements as depreciation expense, which amortizes the cost of a capital asset over its expected useful life. Depreciation expense is considered an operating expense.



Statements of Cash Flows present cash receipts and payments of the University that have been included within current and noncurrent cash and cash equivalents, cash held by state treasurer and deposits with bond trustees.

Notes to the Financial Statements present additional information to support the financial statements. Their purpose is to clarify and expand on the information in the financial statements.

Required Supplementary Information (RSI) presents additional information that differs from the basic financial statements in that the auditor applies certain limited procedures in reviewing the information. In this report, RSI includes schedules of the University's proportionate share of the Massachusetts State Employees' Retirement System (MSERS) pension liability and other postemployment benefits (OPEB) liability, contributions to the MSERS pension and OPEB plans and related ratios, and this MD&A.

Reporting Entity

The financial statements of the University include financial activities of the following blended component units: the UMass Building Authority (Building Authority), Worcester City Campus Corporation and Subsidiaries (WCCC), UMass Global (UMG), UMass Medical School Foundation, UMass Amherst Foundation, and UMass Lowell Applied Research Corporation (UMLARC).

Separate Statements of Financial Position and Statements of Activities are presented in this report for the University's discretely presented component units, the University of Massachusetts Foundation, Inc. (UMF), and the University of Massachusetts Dartmouth Foundation, Inc. (UMDF). The statements for these entities are presented in accordance with Financial Accounting Standards Board (FASB) standards, which differ from GASB standards in certain areas such as reporting of pledges to endowment and net position.

For copies of publicly available financial statements for the above entities, please contact the University Controller's Office by email at controller-services@umassp.edu.

University of Massachusetts Foundation, Inc.

UMF was established in 1950 to foster and promote the growth, progress and general welfare of the University, and to solicit, receive and administer gifts and donations for such purposes. UMF maintains a portion of the University's investment portfolio, predominantly the endowment, quasi-endowment investments, and certain other investments. The total investments held at UMF on behalf of the University at June 30, 2023, 2022 and 2021 were \$1.0 billion, \$914.8 million and \$1.1 billion, respectively.

In addition to investments held on behalf of the University, UMF maintained an endowment balance of \$933.9 million, \$762.9 million and \$779.0 million at June 30, 2023, 2022 and 2021 respectively.

University of Massachusetts Dartmouth Foundation, Inc.

UMDF was established in 1973 to raise funds for the development and improvement of the academic and educational environment for students at the Dartmouth campus and the continued engagement of its alumni. In addition to holding investments for the University, UMF also holds a significant portion of the UMDF investments. The total investments of UMDF at June 30, 2023, 2022 and 2021 were \$66.7 million, \$61.6 million and \$76.1 million, respectively. Of those balances, \$66.3 million, \$61.2 million and \$74.4 million is invested with UMF at June 30, 2023, 2022 and 2021, respectively.

Financial Highlights

In March 2020, the World Health Organization declared a pandemic as a result of the novel coronavirus (COVID-19). As cases began to increase in the country and in Massachusetts, the University suspended in-person education and other campus-based activities and provided refunds to students for a portion of their residence and dining fees during FY2020. The University took significant budget actions across all campuses to address the resulting loss of revenue. These actions included salary freezes, furloughs, and targeted operating and personnel reductions as well as multiple non-personnel strategies including halting or delaying capital projects. Due to the ongoing pandemic, campus operations in FY2021 continued predominantly online and classes were held remotely. Some campus operations resumed in a limited fashion during the second half of FY2021, in accordance with CDC and Massachusetts guidelines. Beginning with the Fall semester of FY2022, all campuses resumed full campus operations.

The University was awarded \$255.6 million under the Coronavirus Aid, Relief, and Economic Security (CARES) Act, the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) and the American Rescue Plan of 2021 (ARPA), collectively provided under the Higher Education Emergency Relief Fund (HEERF). An additional \$3.0 million was awarded under the Governor's Emergency Education Relief Funds. The total funding is split into awards specifically for students and others specifically for use by the University to cover costs related to significant changes to the delivery of instruction due to the coronavirus, partial recovery of lost revenue, and can also be used to provide additional aid to students. The University provided emergency financial aid grants to students of \$2.4 million and \$72.3 million and \$27.1 million in FY2023, FY2022 and FY2021, respectively. An additional \$2.8 million, \$70.4 million and \$54.9 million was used to recover a portion of lost revenue and provide additional financial aid to students in FY2023, FY2022 and FY2021, respectively. There are no unexpended HEERF funds as of June 30, 2023.

In Fall 2021, the University acquired Brandman University in exchange for \$139.3 million. As part of the transaction, the University launched UMass Global (UMG), a private, nonprofit

institution, providing online degree and certificate programs in a wide range of disciplines, serving adult learners. UMG maintains a robust and scalable service and technology platform, allowing for the delivery of a wide variety of primarily online certificate and degree programs, including employer-funded degree programs and competency-based education (CBE). UMG offers over 80 degrees and certificates to benefit working professionals which are offered through fully online coursework.

Selected financial highlights for the fiscal year ended June 30, 2023 include:

- Postemployment benefit expenses related to GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (GASB 75) and GASB Statement No. 68, *Accounting and Reporting for Pensions* (GASB 68) have a significant impact on the operating margin results. Both plans, the Other Post-Employment Benefit Plan (OPEB) under GASB 75 and the Massachusetts State Employees' Retirement System (MSERS) under GASB 68, are administered by the Commonwealth. Annually, the University receives audited reports from the Commonwealth which provide the necessary information to report the University's allocations for OPEB and MSERS reporting purposes. Gains and losses from these GASB standards are heavily impacted by economic conditions and actuarial assumptions outside of the University's control. The University's operating expenses includes a gain of \$5.3 million as a result of GASB 75 and GASB 68.
- From FY2022 to FY2023, the University's operating revenues increased by \$150.7 million, largely due to increased out of state and international enrollment as part of the University's strategic initiatives to diversify the student body. Operating expenses increased by \$206.4 million primarily driven by increased wages and benefits along with increased expenses associated with increased grant activity during the fiscal year. Non-operating revenues increased \$86.3 million primarily attributed an increase in state appropriations, which offset the decline in nonoperating federal grants related to HEERF. As a result, the University's net position increased \$296.0 million from \$2.7 billion in FY2022 to \$3.0 billion in FY2023.
- For internal reporting purposes, both to senior management and its Board, the University utilizes a key performance indicator identified as 'operating margin.' Operating margin consists of gain before other revenues, expenses, gains and losses (\$218.0M) reduced by unrealized investment gains (\$3.6M). The operating margin is further adjusted for the GAAP effect of postemployment benefit plans (\$5.3M) as well as a non-GAAP element of postemployment benefit



plans which represents payments made subsequent to the measurement date of June 30, 2022 (\$56.8M). The resulting operating margins for the years ended June 30, 2023, 2022 and 2021 were \$152.3M, \$128.5M and \$68.3M, respectively.

Net Position

Condensed schedules of net position for the University at June 30, 2023, 2022, and 2021, respectively, are presented in **Figure 2**.

Assets totaled \$8.9 billion at both June 30, 2023 and 2022 and \$8.3 billion at June 30, 2021. These balances are primarily driven by capital assets net of accumulated depreciation, which have seen moderate growth in the three years presented, primarily as a result of additional resources being dedicated to address deferred maintenance.

Liabilities totaled \$5.5 billion at both June 30, 2023 and 2022 and \$5.7 billion at June 30, 2021. The majority of the University's long-term liabilities in all three years are long-term debt along with pension and OPEB liabilities.

Net position represents the difference between total assets and total liabilities, and in addition to capital, includes cash, liquid investments, as well as non-cash items and illiquid investments. Total net position was \$3.0 billion, \$2.7 billion and \$2.6 billion at June 30, 2023, 2022 and 2021, respectively. The largest component of net assets for the University remains the net investment in capital assets which remains consistent, around \$2.3 billion for the three years presented.

Unrestricted net position increased over the three years presented due to operating cost reductions, unfilled staffing and faculty positions, a return to pre-pandemic auxiliary operations, and increased non-operating revenues from pandemic related federal funding received under HEERF.

As of June 30, 2023, the University's endowment, held at UMF, experienced an increase of \$99.5 million from \$914.8 million in FY2022 to \$1.0 billion in FY2023. The increase is primarily the result of a period of market returns after a year of economic downturn in FY2022.

FIGURE 2 – Condensed Schedule of Net Position

As of June 30, 2023, 2022, and 2021 (\$ in thousands)

Net position	2023	2022	2021
Assets			
Current assets	\$ 1,229,605	\$ 1,345,089	\$ 1,172,142
Noncurrent assets – Capital assets, net	5,615,301	5,549,054	5,435,274
Noncurrent assets – All other noncurrent assets	2,078,434	1,975,000	1,712,544
Total assets	8,923,340	8,869,143	8,319,960
Deferred outflows of resources	603,926	433,998	551,553
Liabilities			
Current liabilities	807,228	790,455	740,806
Noncurrent liabilities	4,736,825	4,679,078	4,946,592
Total liabilities	5,544,053	5,469,533	5,687,398
Deferred inflows of resources	939,241	1,085,656	596,953
Net position			
Net investment in capital assets	2,341,776	2,281,471	2,307,233
Restricted – Nonexpendable	17,648	22,515	22,378
Restricted – Expendable	265,329	262,669	232,833
Unrestricted	419,219	181,297	24,718
Total net position	\$ 3,043,972	\$ 2,747,952	\$ 2,587,162

Revenues, Expenses, and Changes in Net Position

Condensed schedules of revenues, expenses, and changes in net position of the University for the three years ended June 30, 2023, 2022, and 2021, are presented in **Figure 3**.

FIGURE 3 – Condensed Schedules of Revenues, Expenses, and Changes in Net Position

For the years ended June 30, 2023, 2022, and 2021 (\$ in thousands)

Revenue and expense	2023	2022	2021
Operating revenues			
Tuition and fees, net of scholarships	\$ 1,042,664	\$ 1,007,124	\$ 930,613
Grants and contracts	746,350	719,479	667,149
Auxiliary enterprises	475,591	434,129	163,821
Other operating revenues	607,372	560,561	541,720
Total operating revenues	2,871,977	2,721,293	2,303,303
Operating expenses	3,808,229	3,601,764	3,380,022
Operating loss	(936,252)	(880,471)	(1,076,719)
Nonoperating revenues (expenses)			
Federal appropriations	6,255	5,588	5,953
State appropriations	1,011,360	880,003	845,481
Interest expense	(129,132)	(117,244)	(109,144)
Nonoperating federal grants	100,533	221,628	173,592
Other nonoperating income	165,266	78,061	114,412
Total nonoperating revenues (expenses)	1,154,282	1,068,036	1,030,294
Gain (loss) before other revenues, expenses, gains and losses	218,030	187,565	(46,425)
Other revenues, expenses, gains and losses			
Capital appropriations, grants and other sources	41,216	95,908	71,120
Endowment return, net of amount used for operations	72,718	(148,089)	148,514
Other additions (deductions)	(35,944)	25,406	(16,869)
Total other revenues, expenses, gains, and losses	77,990	(26,775)	202,765
Total increase in net position	296,020	160,790	156,340
Net position			
Effect on beginning net position due to GASB-87 restatement	-	-	(1,945)
Net position at the beginning of the year, as restated	2,747,952	2,587,162	2,432,767
Net position at the end of the year	\$ 3,043,972	\$ 2,747,952	\$ 2,587,162

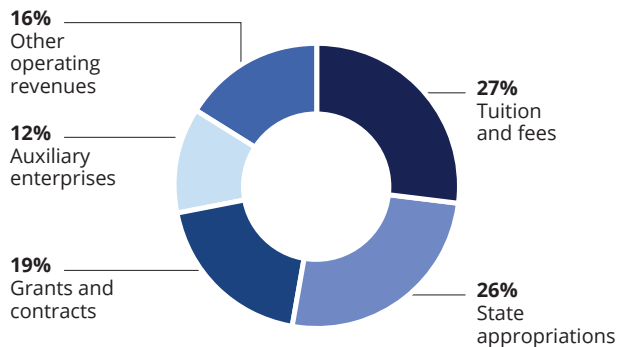
Operating Revenues and Expenses

While not classified on the financial statements as operating revenue, state appropriations serve as a primary source for funding the core mission of the University. State appropriations revenue, described in detail below, is used almost exclusively to fund payroll for University employees, and as such is considered to be operating revenue for management's planning and analysis purposes. The University's operating revenue, including state appropriations, increased by \$282.0 million to \$3.9 billion in FY2023, driven by increased state appropriations and student supporting operations. From FY2022 and FY2021, operating revenues increased \$452.5 million primarily due to auxiliary revenues returning to normal operations, increases in grants and contracts, and the addition of UMG's tuition and fee revenues.

As noted in **Figure 4**, over 50% of the University's FY2023 operating revenues were from tuition and fees and state appropriations. Auxiliary enterprises revenue includes housing and dining revenue. These three revenue categories make up the primary revenue sources and combined, make up 65% of the University's operating revenue

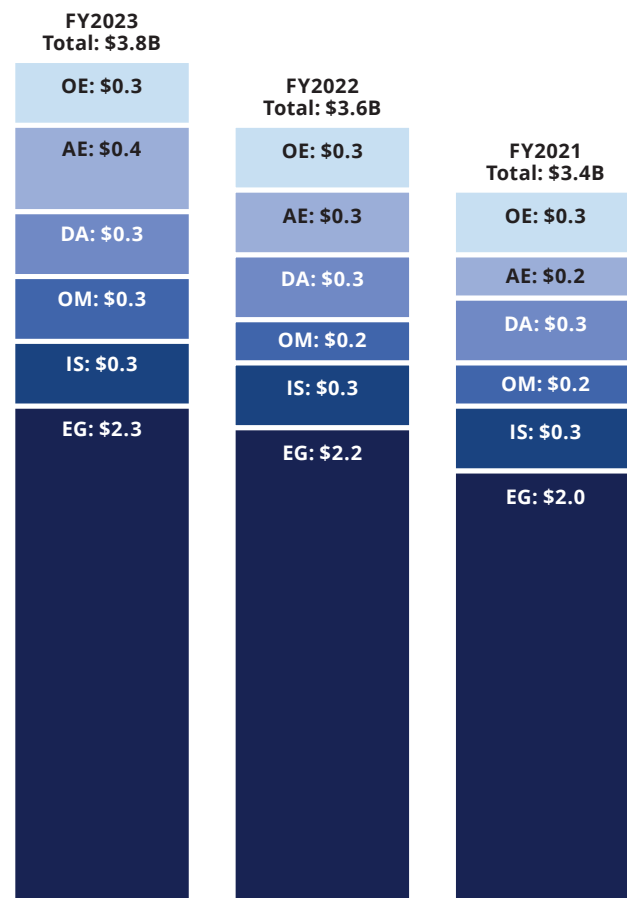
Other operating revenues includes revenues generated from ForHealth programs. These programs provide public consulting and services in health care financing, administration and policy to federal, state and local agencies and not-for-profit health and policy organizations. In addition to ForHealth activities, other operating revenues also include revenue earned by UMass Chan for educational services it provides to its clinical affiliate UMass Memorial Health Care, Inc. (UMass Memorial) as required by the enabling legislation enacted by the Commonwealth in 1997. Grants and contracts revenue includes federal, state and privately sponsored research and other programs.

FIGURE 4 – Fiscal Year 2023 Operating Revenues (including State Appropriations)



In FY2023, operating expenses, including depreciation and amortization, totaled \$3.8 billion, as compared to \$3.6 billion in FY2022 and \$3.4 billion in FY2021. Of the FY2023 total, \$2.3 billion or 60.5% was used to support the academic core activities of the University, including \$586.3 million in research. The education and general portion of the three-year operating expenses shown in **Figure 5**, represents expenses in the following functional categories: instruction, research, public service, academic support, student services and scholarships and fellowships.

FIGURE 5 – Three Year Operating Expenses by Function
(\$ in billions)



Key
 OE = Other expenditures
 AE = Auxiliary enterprises
 DA = Depreciation and amortization
 OM = Operation and maintenance of plant
 IS = Institutional support
 EG = Education and general

State Appropriations

In FY2023, state appropriations represented approximately 24% of all revenues. The level of state support is a key factor influencing the University's overall financial condition. Although the majority of state appropriations are unrestricted revenue, nearly 100% of the state appropriations support payroll and benefits for University employees. In addition to the direct state appropriation, there are several smaller appropriations that add to the total state support for the University. While these smaller line items are in support of campus-specific programs and do not support general University operations, they are included in the state appropriations line in the accompanying financial statements, and in the state appropriations line in **Figure 6**.

The Commonwealth pays fringe benefits for University employees paid from state appropriations. Therefore, such fringe benefit support is added to the state appropriations financial statement line item in the accompanying Statements of Revenues, Expenses and Changes in Net Position. The University pays the Commonwealth for the fringe benefit cost of the employees paid from funding sources other than state appropriations. These amounts are not included in state appropriations.

The University's state appropriations, including fringe benefits, increased in FY2023 by \$131.4 million from FY2022, primarily due to an increase in available state funding and associated fringe determined by the Commonwealth. The University's state appropriations including fringe benefits increased in FY2022 by \$34.5 million from FY2021 primarily due to an increase in available state funding and increases in collective bargaining determined by the Commonwealth.

Figure 6 details the state appropriations for the fiscal years ended June 30, 2023, 2022, and 2021.

FIGURE 6 – State Appropriations

For the years ended June 30, 2023, 2022, and 2021 (\$ in thousands)

Appropriation	2023	2022	2021
State appropriations	\$ 704,241	\$ 618,245	\$ 569,081
Plus: fringe benefits	307,119	261,758	276,400
Commonwealth support	\$ 1,011,360	\$ 880,003	\$ 845,481

State Capital Appropriations

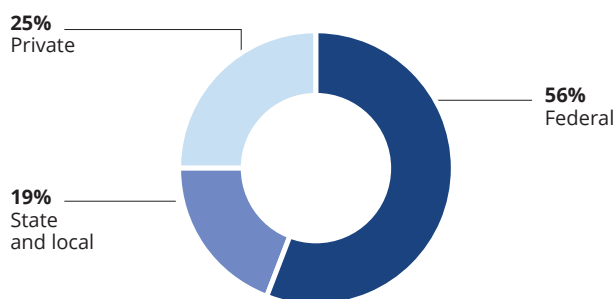
The University faces a financial challenge to maintain and upgrade its capital assets including its infrastructure, buildings and grounds. To have a successful capital program, the University must rely on a combination of revenue sources to fund its capital investments. In FY2023, FY2022 and FY2021, the capital support provided to the University through appropriations and grants from the Commonwealth was \$29.7 million, \$87.1 million and \$62.6 million, respectively. Capital appropriations provides funding in four distinct categories; major projects, critical repairs, critical infrastructure and readiness determination projects.

Grant and Contract Revenue

Among Massachusetts colleges and universities, the University ranks third in research and development expenditures, behind only the Massachusetts Institute of Technology (MIT) and Harvard University. Most research at the University is externally funded, with the federal government providing a majority of the funding through the National Institutes of Health, the National Science Foundation, and other agencies.

Collectively, UMass Amherst and UMass Chan account for approximately three-quarters of the University's total grants and contracts revenue of \$746.4 million, \$719.5 million and \$667.1 million at June 30, 2023, 2022 and 2021. **Figure 7** details the University's grant and contract revenues by source for the year ended June 30, 2023.

FIGURE 7 – Grant and Contract Revenue FY2023



Tuition and Fees

Effective for academic years 2023–2024 and 2022–2023, in-state undergraduate tuition was raised an average of 2.5%. Due to affordability considerations and impacts of the COVID-19 pandemic, in-state undergraduate tuition was frozen for the academic year 2021–2022. Affordability continues to be a priority of the University and increases in fees are considered in conjunction with Commonwealth support on an annual basis.

Enrollment

As shown in **Figure 8**, total enrollment in the fall of 2022 was 64,578 FTE (73,959 headcount students), a decrease of 0.3% from the fall of 2021 enrollment of 64,786 FTE (74,554 headcount students). Enrollment in the fall of 2020 was 66,070 FTE (75,065 headcount students). Although the University experienced a minor decline in the five-year enrollment of .01% from the fall of 2018 to the fall of 2022, other institutions of higher education have experienced more significant declines in enrollments over this period. This is consistent with the University's efforts to increase its reach across the Commonwealth and to recruit out-of-state and international students, and reflects the quality of education provided by the University of Massachusetts. Improving student retention remains a key focus of the University's strategic goals to help offset the declining enrollment.

Admission to the University is open to residents of the Commonwealth and non-residents on a competitive basis. Massachusetts residents accounted for 80.9% of the University's total undergraduate enrollment in the fall semester 2022, 82.7% in fall semester 2021 and 83.4% in fall 2020, as shown in **Figure 9**.

FIGURE 9 – Fall 2022 Undergraduate Enrollment by Residency

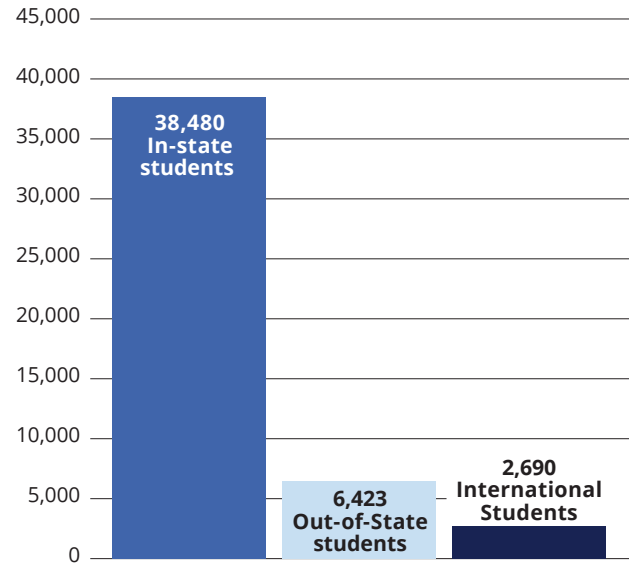
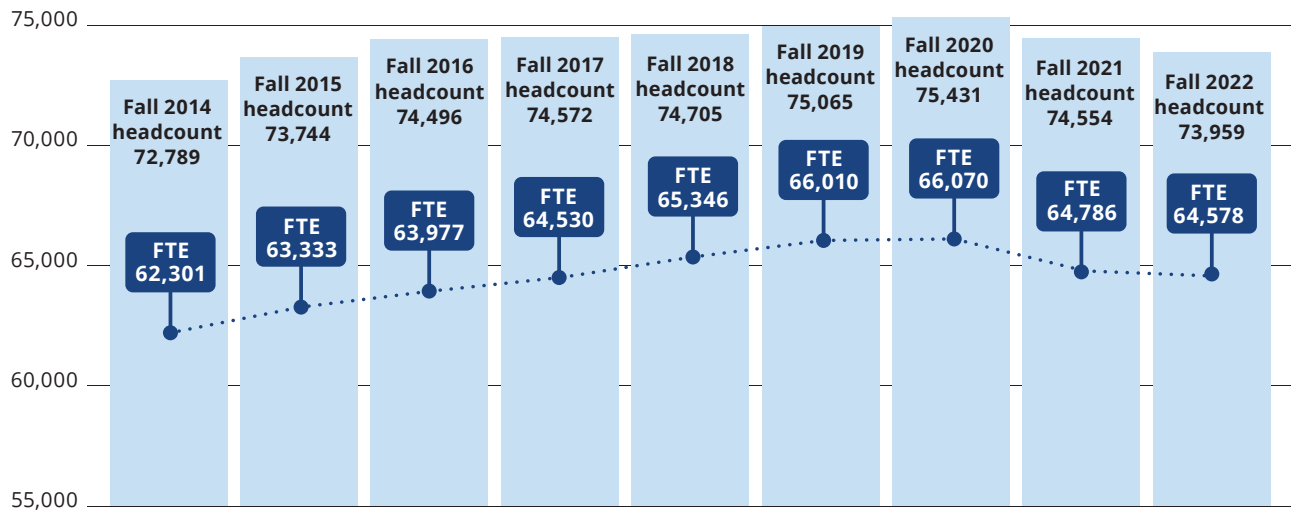


FIGURE 8 – Total Enrollment



Investments Held by UMF

As of June 30, 2023, the University's investments held at UMF increased by \$99.5 million from \$914.8 million to \$1.0 billion. The change in investment value is due to investment gains of \$104.8 million (14.0% annualized return), contributions of \$0.5 million and new university investments of \$19.4 million offset by distributions under the approved spending rule of \$25.3 million. This increase follows a year of economic decline in FY2022, where a return of -13.5% was experienced. During FY2021, a historic 37.1% return was experienced when the endowment grew by \$156.1 million to \$1.1 billion. Over the last decade, the endowment generated a 10-year annualized return of 7.0%, exceeding UMF's long-term return objective and reflecting the strategic growth of the portfolio's exposure to global equities and strong partnerships with high caliber investment managers. This ten-year return was produced with annual investment results that ranged from a low of -13.5% in FY2022 to a high of 37.1% in FY2021, underscoring the importance of having a long-term focus.

Long-Term Debt

Long-term debt, including commercial paper, is the University's largest liability at June 30, 2023, 2022 and 2021. The University had outstanding long-term debt of \$3.5 billion at June 30, 2023, \$3.7 billion at June 30, 2022 and \$3.3 billion at June 30, 2021. The principal issuer of the University's debt is the Building Authority. Additional issuers utilized by the University include

Massachusetts Health and Educational Facilities Authority (MHEFA), Massachusetts Development Financing Authority (MDFA), UMG and WCCC.

During FY2023, the University issued \$17.3 million in new commercial paper to finance the Substructure Demolition & Quadrangle Development at the Boston campus, and two property acquisitions at the Lowell campus with interest rates from 2.00% to 4.55%.

The debt financed through the Building Authority is being used for construction and renovation of residence halls and general education buildings, replacement of core infrastructure, and construction of academic, laboratory, and research facilities. The proceeds from the UMass MHEFA bonds were used to create an internal revolving loan program and to fund the construction of two new campus centers at the Boston and Lowell campuses (funded jointly with the Commonwealth).

For further details on outstanding balances with each issuer, refer to Note 10 of the accompanying financial statements.

University Bond Rating

The University relies on a carefully planned and executed debt strategy to support master and strategic planning at the campuses and for the University as a whole. Bonds issued by the University and the Building Authority are rated Aa2 stable by Moody's Investor Service, AA stable by Fitch Ratings, and AA- stable by Standard and Poor's Global Rating.



Standard and Poor reaffirmed the University's rating during FY2023. During FY2022, Moody's and Fitch re-affirmed the University's ratings, citing the University's flagship role in public higher education in Massachusetts, strong fiscal oversight, steady enrollment, positive operating performance, growth in financial resources and solid support from the Commonwealth.

Line of Credit

During FY2021, the University entered into a line of credit agreement with Bank of America and State Street Bank with a maximum loan amount of \$75.0 million each, for a total maximum loan amount of \$150.0 million. The line of credit had a maturity date of May 10, 2022.

During FY2022, the University amended and restated the line of credit agreement with Bank of America as the sole lender for a maximum loan amount of increasing the available line of credit to \$150.0 million (the "new line of credit") and allowed the State Street Bank line of credit to expire. The new line of credit had a maturity date of May 1, 2023.

During FY2023, the University amended the existing line of credit agreement with Bank of America maintaining a maximum loan amount of \$150.0 million. The line of credit has a maturity date of May 1, 2024.

As of June 30, 2023, the outstanding balance on the line of credit was \$0.

On July 26, 2023, the University entered a \$9.3 million letter of credit on behalf of UMass Global for the benefit of the Department of Education. This letter of credit is within the University's existing line of credit.

Limitations on Additional Indebtedness

The University may, without limit, issue additional indebtedness or request the Building Authority to issue additional indebtedness on behalf of the University so long as such indebtedness is payable from all available funds of the University. As noted in the Board of Trustee policy, each campus' debt service cannot exceed 8% of its total operating expenditures.

The Building Authority is authorized by its enabling act to issue bonds with the unconditional guarantee of the Commonwealth for the punctual payment of the interest and principal on the guaranteed bonds. The full faith and credit of the Commonwealth are pledged for the performance of its guarantee. The enabling act, as amended, currently limits to \$200.0 million the total principal amount of notes and bonds of the Building Authority that may be Commonwealth guaranteed and outstanding at any one time. During FY2021, the University retired its remaining Commonwealth guaranteed debt. As of June 30, 2023, the University does not have any outstanding Commonwealth guaranteed debt.

Capital Plan

A majority of the capital spending during FY2023 and FY2022 related to continued investments in deferred maintenance. In September 2021, the University's Board approved an updated five-year capital plan for FY2022–FY2026 totaling \$1.9 billion. The University's capital plan is funded through a combination of University operations, bonds issued by the Building Authority and MHEFA, Commonwealth appropriations, and private fundraising.

The University's five-year capital plan for FY2022–FY2026 includes major projects that were previously approved by the Board in prior-year capital plans. The University's capital approval process provides for a multi-step review process involving the President's Office, the Building Authority and the Board. Additional approvals have been put in place for any capital project seeking alternative funding and/or delivery options.

In the fall of FY2024 an updated FY2024–FY2028 Capital was presented for Board review and approval.

Factors Impacting Future Periods

There are a number of issues of University-wide importance that directly impact the financial operations of the University. The University continually monitors issues such as improving academic quality, ensuring enrollment stability, realizing strong financial results, investing in capital assets, expanding fundraising capacity, operating more efficiently, being the most effective University for students and the Commonwealth given the available resources, and measuring performance. Consideration of these items are of continuous importance to the Board and University leadership and impact the financial planning each year. Student enrollment, the level of state support, the impact of collectively bargained wage increases, rising fringe benefit costs, and the ability of student-fee supported activities to meet inflationary pressures determine the limits of program expansion, new initiatives and strategic investments, as well as the ability of the University to meet its core mission and ongoing operational needs.

Contacting the University

This financial report is designed to provide the University, the Commonwealth, the public and other interested parties with an overview of the financial results of the University and an explanation of the University's financial condition. If you have any questions about this report or require additional information, please contact the University Controller's Office by email at controller-services@umasssp.edu.

Financial Statements

Statements of Net Position

As of June 30, 2023 and 2022 (\$ in thousands). See accompanying notes to the financial statements.

Assets and liabilities	2023	2022
Assets		
Current assets		
Cash and cash equivalents	\$ 148,803	\$ 121,053
Cash held by state treasurer	31,211	25,054
Deposits with bond trustees	9,581	11,326
Accounts receivable, net	324,547	336,589
Lease receivable	15,145	16,464
Short-term investments	646,473	787,356
Other current assets	53,845	47,247
Total current assets	1,229,605	1,345,089
Noncurrent assets		
Cash held by state treasurer	10,915	30,177
Deposits with bond trustees	348,706	508,440
Accounts receivable, net	39,573	48,968
Lease receivable	301,213	317,654
Long-term investments	1,364,207	1,052,299
Other assets	13,820	17,462
Capital assets, net	5,615,301	5,549,054
Total noncurrent assets	7,693,735	7,524,054
Total assets	8,923,340	8,869,143
Deferred outflows of resources	603,926	433,998
Liabilities		
Current liabilities		
Accounts payable and accrued expenses	420,379	418,601
Unearned revenues and advances	138,381	126,065
Lease and subscription liability, current portion	19,631	22,061
Long-term debt, current portion	127,753	121,662
Commercial paper notes	37,250	20,000
Other current liabilities	63,834	82,066
Total current liabilities	807,228	790,455
Noncurrent liabilities		
Unearned revenues and advances	90,782	73,960
Lease and subscription liability	174,993	198,352
Long-term debt	3,360,817	3,545,711
Net pension liability	444,824	276,313
Net other postemployment benefits liability	559,807	485,141
Other long-term liabilities	105,602	99,601
Total noncurrent liabilities	4,736,825	4,679,078
Total liabilities	5,544,053	5,469,533
Deferred inflows of resources	939,241	1,085,656
Net position		
Net investment in capital assets	2,341,776	2,281,471
Restricted – Nonexpendable	17,648	22,515
Restricted – Expendable	265,329	262,669
Unrestricted	419,219	181,297
Total net position	\$ 3,043,972	\$ 2,747,952

Statements of Revenues, Expenses, and Changes in Net Position

For the years ended June 30, 2023 and 2022 (\$ in thousands). See accompanying notes to the financial statements.

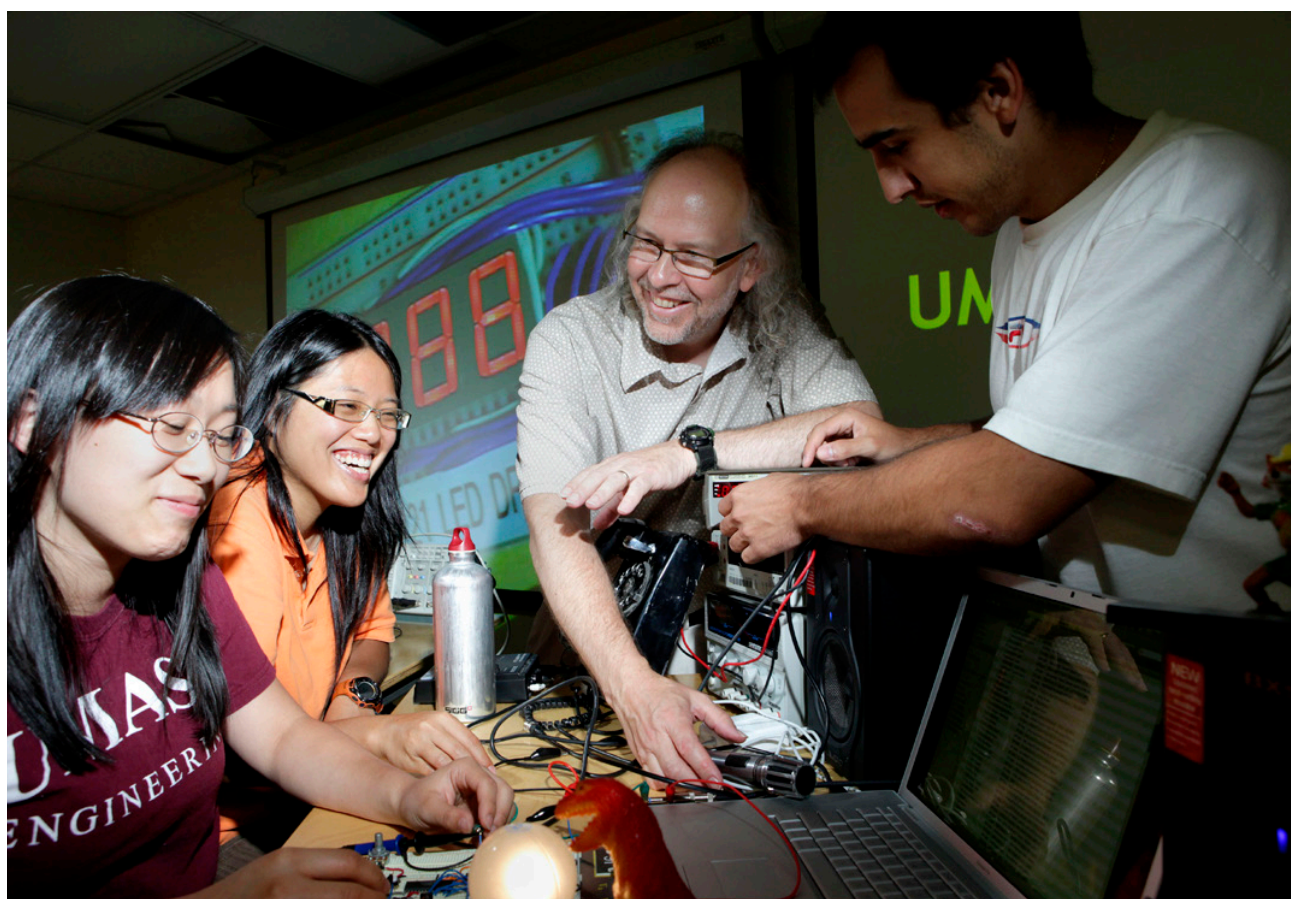
Revenues and expenses	2023	2022
Operating Revenues		
Tuition and fees (net of scholarship allowances of \$409,759 at June 30, 2023 and \$369,902 at June 30, 2022)	\$ 1,042,664	\$ 1,007,124
Grants and contracts	746,350	719,479
Sales and services, educational activities	41,388	40,907
Auxiliary enterprises	475,591	434,129
Other operating revenues:		
Sales and services, independent operations	66,955	66,929
Sales and services, public service activities	377,375	321,954
Other	121,654	130,771
Total operating revenues	2,871,977	2,721,293
Operating expenses		
Educational and general		
Instruction	996,803	930,362
Research	586,292	551,367
Public service	87,581	71,649
Academic support	222,169	194,153
Student services	240,039	211,088
Institutional support	343,980	315,810
Operation and maintenance of capital assets	259,873	242,749
Depreciation and amortization	344,872	330,715
Scholarships and fellowships	62,237	121,334
Auxiliary enterprises	352,627	320,535
Other expenditures		
Independent operations	56,605	58,582
Public service activities	255,151	253,420
Total operating expenses	3,808,229	3,601,764
Operating loss	(936,252)	(880,471)
Nonoperating revenues (expenses)		
Federal appropriations	6,255	5,588
State appropriations	1,011,360	880,003
Gifts	43,881	67,948
Investment return, net	68,155	(24,164)
Endowment return used for operations	43,774	34,944
Interest expense	(129,132)	(117,244)
Nonoperating federal grants	100,533	221,628
Other nonoperating income (loss)	9,456	(667)
Net nonoperating revenues	1,154,282	1,068,036
Gain (loss) before other revenues, expenses, gains, and losses	218,030	187,565
Other revenues, expenses, gains and losses		
Capital appropriations	29,690	87,062
Capital grants, contracts and gifts	11,526	8,846
Endowment return, net of amount used for operations	72,718	(148,089)
Other additions (deductions)	(35,944)	25,406
Total other revenues, expenses, gains, and losses	77,990	(26,775)
Total increase in net position	296,020	160,790
Net position at beginning of year	2,747,952	2,587,162
Net position at end of year	\$ 3,043,972	\$ 2,747,952

Statements of Cash Flows

For the years ended June 30, 2023 and 2022 (\$ in thousands). See accompanying notes to the financial statements.

Cash flow	2023	2022
Cash flows from operating activities		
Tuition and fees	\$ 1,137,320	\$1,106,745
Grants and contracts	764,887	724,415
Payments to suppliers	(1,100,129)	(1,055,007)
Payments to employees	(1,885,577)	(1,766,320)
Payments for benefits	(602,773)	(561,537)
Payments for scholarships and fellowships	(96,537)	(122,685)
Loans issued to students and employees	(1,673)	(10,746)
Collections of loans to students and employees	4,377	18,619
Auxiliary enterprises	475,471	434,311
Sales and services, educational	41,599	40,750
Sales and services, independent operations	66,955	66,929
Sales and services, public service activities	395,386	312,617
Student related fiduciary activities inflows	13,633	15,012
Student related fiduciary activities outflows	(10,285)	(11,583)
Other receipts, net	136,998	131,112
Net cash used for operating activities	(660,348)	(677,368)
Cash flows from noncapital financing activities		
Federal appropriations	6,255	5,588
State appropriations	1,011,360	880,003
Grants, contracts and gifts for other than capital purposes	45,338	73,268
Nonoperating federal grants	100,533	221,628
Other noncapital financing activities	(356)	(816)
Net cash provided by noncapital financing activities	1,163,130	1,179,671
Cash flows from capital and other financing activities		
Proceeds from debt issuances	17,250	486,620
Proceeds from premiums received	-	26,327
Bond issuance costs paid	-	(2,423)
Capital appropriations	29,690	87,062
Capital grants and contracts	10,069	3,525
Proceeds from sales of capital assets	1,136	47,586
Purchases of capital assets and construction	(444,906)	(378,227)
Lease receipts	10,793	18,200
Interest on leases	-	5,180
Principal paid on debt and leases	(123,523)	(210,816)
Interest paid on debt and leases	(155,939)	(135,125)
Net cash used for capital financing activities	(655,430)	(52,091)
Cash flows from investing activities		
Proceeds from sales and maturities of investments	2,282,738	1,263,822
Interest on investments	62,974	25,990
Purchases of investments	(2,339,898)	(1,474,851)
Cash received from acquisition of subsidiary	-	76,943
Net cash provided by (used for) investing activities	5,814	(108,096)
Net (decrease) increase in cash and cash equivalents	(146,834)	342,116
Cash and cash equivalents – beginning of the year	696,050	353,934
Cash and cash equivalents – end of the year	549,216	696,050

Cash flow	2023	2022
Reconciliation of operating loss to net cash used for operating activities		
Operating loss	(936,252)	(880,471)
Adjustments to reconcile loss to net cash used for operating activities:		
Depreciation and amortization expense	344,872	330,715
Changes in assets and liabilities:		
Accounts receivable, net	21,423	4,532
Other assets	869	(430)
Accounts payable and accrued expenses	(36,885)	(17,623)
Unearned revenues and advances	29,137	668
Other liabilities	(13,279)	15,352
Postemployment benefits liability, net	(62,196)	(107,520)
Fiduciary transactions	1,005	2,366
Changes in deferred inflows related to future revenues	(9,015)	(24,957)
Changes in deferred outflows related to future revenues	(27)	-
Net cash used for operating activities	(660,348)	(677,368)
Supplemental disclosure of noncash activities		
Assets acquired and included in accounts payable and other liabilities	65,997	41,364
Assets acquired in exchange for lease obligation	12,895	32,775
Gain (loss) on disposal of capital assets	(17,671)	(10,845)
Extinguishment of debt	41,907	-
Donated assets	35	241



Component Unit Statements of Financial Position

As of June 30, 2023 and 2022 (\$ in thousands). See accompanying notes to the financial statements.

Component units	2023	2022
Assets		
Cash	\$ 1,377	\$ 2,654
Pledges receivable, net	153,424	170,929
Other receivables	54	873
Investments of the Foundations	2,006,597	1,731,288
Prepaid expenses and other assets	4,192	6,644
Land, property, plant and equipment, net	18,709	15,213
Total assets	2,184,353	1,927,601
Liabilities		
Accounts payable and accrued expenses	4,366	3,316
Deferred revenue	1,460	11,845
Right of use liability	13,499	-
Obligations to beneficiaries of split-interest agreements	2,723	2,335
Assets held on behalf of others	1,033,099	935,331
Total liabilities	1,055,147	952,827
Net assets		
Without donor restrictions	60,266	52,776
With donor restrictions	1,068,940	921,998
Total net assets	1,129,206	974,774
Total liabilities and net assets	\$ 2,184,353	\$ 1,927,601



Component Unit Statements of Activities

For the years ended June 30, 2023 (with summarized financial information for the year ended June 30, 2022) (\$ in thousands).

Component units	Without donor restriction	With donor restriction	Total 2023	Total 2022
Support and revenue				
Gifts, bequests and grants	\$ 880	\$ 59,753	\$ 60,633	\$ 285,594
Other contributions	25,141	13,825	38,966	11,408
Total investment income, including net gains (losses) - net of fees	110,314	103,901	214,215	(289,134)
Investment management fee	12,582	-	12,582	12,528
Other income	28	-	28	-
Net assets released from restrictions	29,564	(29,564)	-	-
Total support and revenue	178,509	147,915	326,424	20,396
Expenses				
Distributions to University	53,015	184	53,199	42,664
Program services	6,967	-	6,967	5,546
Fundraising support	3,982	-	3,982	4,706
Administrative and general, Foundation	5,559	356	5,915	4,172
Administrative and general, University	2,430	-	2,430	1,185
Total expenses	71,953	540	72,493	58,273
Excess of support and revenue over expenses	106,556	147,375	253,931	(37,877)
Less: Fiscal year activity related to assets held on behalf of University	(99,483)	-	(99,483)	164,968
Less: Fiscal year activity related to assets held on behalf of Edward M. Kennedy Institute	1,715	-	1,715	7,879
Transfers to (from) other funds	45	(45)	-	-
Change in value of split interest agreements	(457)	(388)	(845)	-
Other	(886)	-	(886)	(854)
Change in net assets	7,490	146,942	154,432	134,116
Net assets, beginning of year	52,776	921,998	974,774	840,658
Net assets, end of year	\$ 60,266	\$ 1,068,940	\$ 1,129,206	\$ 974,774

Notes to Financial Statements

1. Summary of Significant Accounting Policies

Reporting Entity

The University of Massachusetts (University or UMass), a federal land grant institution, is governed by Massachusetts General Laws Chapter 75. Its Board of Trustees (Board or Trustees) consists of nineteen voting members and three non-voting members. The voting members consist of two full-time students, the Secretary of Education of the Commonwealth of Massachusetts (Commonwealth) and sixteen members appointed by the governor. The non-voting members consist of student representatives who may only participate in open meetings of the full Board of Trustees.

The University is a business-type activity of the Commonwealth. The financial balances and activities included in these financial statements are, therefore, also included in the Commonwealth's annual comprehensive financial report.

On September 2, 2021 the University completed the transfer of control of Brandman University to UMass. This launched the University of Massachusetts Global (UMG), that delivers expanded online education opportunities to adult learners.

The financial statements of the University include the campuses of Amherst, Boston, Dartmouth, Lowell, Chan Medical School (UMass Chan), and the President's Office of the University, UMG, Worcester City Campus Corporation (WCCC), University of Massachusetts Lowell Applied Research Corporation (UMLARC), the University of Massachusetts Amherst Foundation (UMass Amherst Foundation), University of Massachusetts Medical School Foundation (UMMSF) as well as the University of Massachusetts Building Authority (Building Authority).

The Building Authority is a public instrumentality of the Commonwealth created by Chapter 773 of the Acts of 1960 (referred to as the Enabling Act), whose purpose is to provide dormitories, dining commons, and other buildings and structures for use by the University. The UMLARC is a legally separate 501(c)(3) non-profit corporation which promotes efficient and effective applied research and development by entering into grants, contracts, and other contractual mechanisms for services. UMLARC also provides analytic and technology solutions to government and non-government entities to extend the impact of the University's technology enterprise. UMG is a California based not-for-profit institution of higher learning. WCCC is a tax-exempt organization founded to support research and real property activities for the University. The UMass Amherst Foundation supports private fundraising on behalf of the faculty and students of the Amherst campus. The UMMSF supports fundraising and philanthropic activities of the UMass Chan. These component units are blended in the financial statements of the University because of the significance and exclusivity of their financial relationships with the University. Refer to Note 18 for condensed financial information for these blended component units.

The University also includes the financial information of the University's discretely presented component units, the University of Massachusetts Foundation, Inc. (UMF) and the University of Massachusetts Dartmouth Foundation, Inc. (UMDF). In these financial statements, UMF and UMDF are collectively known as the Foundations. These are related tax-exempt organizations founded to foster and promote the growth, progress and general welfare of the University.

Basis of Presentation

The accompanying financial statements have been prepared in accordance with U.S. generally accepted accounting principles (GAAP) as prescribed by the Governmental Accounting Standards Board (GASB) using the economic resources measurement focus and the accrual basis of accounting. The Foundations' financial statements are prepared in accordance with accounting and reporting requirements prescribed by the Financial Accounting Standards Board (FASB). As such, certain revenue recognition criteria and presentation features are different from GASB revenue recognition criteria and presentation features. No modifications have been made to the Foundations' financial information in the University's financial reporting entity for these differences.

The University's activities are considered to be a single business-type activity and accordingly, are reported in a single column in the financial statements. Business-type activities are those that are financed in whole or in part by funds received from external parties for goods or services.

On the Statements of Revenues, Expenses and Changes in Net Position, the University's operating activities consist of tuition and fees, grants and contracts, sales and services, auxiliary enterprise and other operating revenues. Other operating revenues include sales and services provided by UMass Chan under its ForHealth Consulting program (ForHealth), formally Commonwealth Medicine. ForHealth provides consulting and services in health care financing, administration and policy to federal, state and local agencies and not-for-profit health and policy organizations. Also included in other operating revenues are payments received by UMass Chan for educational services it provides to its clinical affiliate, UMass Memorial Medical Center (UMass Memorial).

Operating expenses include, among other items, payroll, fringe benefits, utilities, supplies and services, depreciation, and amortization. Nonoperating revenues or expenses are those in which the University receives or gives value without directly giving or receiving equal value, such as State and Federal appropriations, COVID-19 related Higher Education Emergency Relief Fund (HEERF) revenue, Federal Pell grants, private gifts, and investment income.

Revenues for exchange transactions are recognized when earned and expenses are recognized when incurred. Restricted grant revenue is recognized only when all eligibility requirements have been met. The University applies restricted net assets first when an expense or outlay is incurred for purposes for which both restricted and unrestricted net assets are available.

The University receives unconditional promises to give through private donations or pledges from corporations, foundations, alumni and other supporters of the University. Revenue is recognized when a pledge is received and all eligibility requirements, including time and purpose requirements, are met. Endowment pledges are not recorded until paid because the inherent time restriction has not been met until the funds are able to be invested in perpetuity.

Net Position

Net position is classified into the following categories:

- **Net investment in capital assets:** Capital assets, at historical cost or fair market value on the date of gift, net of accumulated depreciation and outstanding principal balances of debt attributable to the acquisition, construction or improvement of those assets.
- **Restricted nonexpendable:** Resources subject to externally imposed stipulations that they be maintained permanently by the University.
- **Restricted expendable:** Resources whose use by the University is subject to externally imposed stipulations. Such assets include restricted grants and contracts, the accumulated net gains/losses on true endowment funds, as well as restricted funds loaned to students, restricted gifts and endowment income, and other similar restricted funds.
- **Unrestricted:** The net position that is not subject to externally imposed restrictions governing their use. The University's unrestricted net position may be designated for specific purposes by management or the Board of Trustees. Substantially all of the University's unrestricted net position is designated to support academic and research initiatives or programs, auxiliary enterprises, quasi-endowments, or commitments to capital construction projects. Note 16 describes these designations in more detail.

Cash and Cash Equivalents

Cash and cash equivalents consist primarily of demand deposit accounts, savings accounts and money market accounts with an original maturity date of three months or less.

Massachusetts Municipal Depository Trust

The University is authorized to invest in the Massachusetts Municipal Depository Trust ("MMDT"), a pooled money market-like fund, established under Massachusetts General Laws, Chapter 29, Section 38A. MMDT is an external investment pool that meets the criteria to report its holdings at amortized cost. As such, the University reports its position 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.

Accounts Receivable, Net

Accounts receivable consist of receivables for tuition and fees, grants and contracts, student loans, pledges and ForHealth related activities. The University establishes an allowance for accounts receivable based on management's expectation regarding the collection of the receivables and the University's historical experience for collections.

Investments

Investments are reported at fair value. Short-term investments consist of deposits with original maturities of less than one year and are available for current use. Securities received as gifts are recorded at estimated fair value at the date of the gift. Investment return includes dividends, interest income, unrealized gains and losses and is recognized on the accrual basis. Also included are realized gains and losses, cost is determined on a specific identification basis.

Endowment

UMF maintains and administers the University's endowment assets and other long-term investments. UMF utilizes the pooled investment concept whereby all invested funds are included in one investment pool, unless otherwise required by the donor.

Pooled investment funds will receive an annual distribution, based on the endowment fund's average market value for the preceding twelve quarters on a one-year lag. Only quarters with funds on deposit are included in the average. In addition, a prudence rule is utilized, limiting spending from a particular endowment fund to be no lower than 93% of its carrying value. The spending rate approved for the years ended June 30, 2023 and 2022 was 4%.

Capital Assets

Capital assets (excluding intangible right-to-use lease and subscription assets) are stated at cost on the date of acquisition or, in the case of gifts, fair value upon date of donation. Construction in progress is stated at cost, which includes direct construction costs and other expenditures related to construction. All construction costs related to projects which are not yet completed are charged to construction in progress until such time as the projects are completed and placed in operation. Repairs and maintenance costs are expensed as incurred, whereas major improvements that extend the estimated useful lives of the assets are capitalized as additions to capital assets. The University does not capitalize works of art, historical treasures or library books.

The University capitalizes assets with useful lives greater than one year and acquisition costs greater than or equal to \$5,000. The University computes depreciation using the straight-line method over the asset's useful life and applies a half year convention in the year the asset is acquired or placed in service. Land is not depreciated.

Table 1 presents the range of useful lives for the University's depreciable assets:

TABLE 1 – Depreciable Assets

Depreciable asset category	Useful life
Land improvements	20 years
Buildings	12–50 years
Infrastructure	50 years
Building improvements	3–20 years
Equipment, furniture and IT infrastructure	3–15 years
Software	5 years

Newly Implemented Accounting Standards

i) In March 2020, the Governmental Accounting Standards Board (GASB) issued GASB Statement No. 94, *Public-Private and Public-Public Partnerships (PPP) and Availability Payment Arrangements (APA)*. This standard establishes the definitions of Public-Private Partnerships, an arrangement in which a government (the transferor) contracts with an operator (a governmental or nongovernmental entity) to provide public services by conveying control of the right to operate or use a nonfinancial asset for a period of time in an exchange or exchange-like transaction. Some PPPs meet the definition of a service concession arrangement. This standard also provides guidance for accounting and financial reporting for availability payment arrangements (APA). As of and for the years ending June 30, 2023 and 2022, the University had no APAs.

The University adopted the GASB Statement No. 94 effective July 1, 2021. Adoption of the standard had no effect on the University's financial statements.

See Note 9 for discussion of the University's Public-Private Partnership arrangements.

ii) In May 2020, the Governmental Accounting Standards Board (GASB) issued GASB Statement No. 96, *Subscription-Based Information Technology Arrangements*. This standard defines Subscription-Based Information Technology Arrangements (SBITA); establishes that a SBITA results in a right-to-use subscription asset (an intangible asset), and a corresponding subscription liability; and provides the capitalization criteria for outlays other than subscription payments, including implementation costs of a SBITA.

A SBITA is defined as a contract that conveys control of the right to use another party's (a SBITA vendor's) information technology (IT) software, alone or in combination with tangible capital assets (the underlying IT assets), as specified in the contract for a period of time in an exchange or exchange-like transaction.

The University adopted GASB Statement No. 96 effective July 1, 2021, which resulted in adjustment to its previously reported assets and liabilities as shown in **Table 2** (\$ in thousands):

TABLE 2 – Adjustment to Previously Reported Assets and Liabilities

(\$ in thousands)

Net position	Assets	Liabilities
Balance as of July 1, 2021, as previously reported	\$ 8,849,275	\$ 5,449,665
Plus: Implementation of GASB Statement No. 96	19,868	19,868
Balance as of July 1, 2021, as restated	\$ 8,869,143	\$ 5,469,533

Leasing

The University determines if an arrangement is a lease at inception. The University has leases under which it is obligated as a lessee and leases for which it is a lessor. The University is a lessee for various noncancellable real estate. In addition, the University is a lessor of various leases of buildings, office space and ground leases.

Short-term Leases — For leases arrangements with a maximum possible term of 12 months or less at commencement, the University recognizes expense based on the provisions of the lease contract.

Lease Arrangements Other Than Short-Term — For all other leases (i.e. those that are not short-term), the University recognizes a lease liability, and an intangible right-to-use lease asset.

For leases, where the University is a lessor, the University recognizes a lease receivable and a deferred inflow of resources.

Measurement of Lease Amounts —

- **Lessee:** At lease commencement, the University initially measures the lease liability at the present value of payments expected to be made during the lease term.

Subsequently, the lease liability is reduced by the principal portion of lease payments made. The lease asset is initially measured as the initial amount of the lease liability, less lease payments made at or before the lease commencement date, plus any initial direct costs ancillary to placing the underlying asset into service, less any lease incentives received at or before the lease commencement date. Subsequently, the lease asset is amortized into depreciation and amortization expense on a straight-line basis over the shorter of the lease term or the useful life of the underlying asset. If the University is reasonably certain of exercising a purchase option contained in a lease, the lease asset will be amortized over the useful life of the underlying asset.

- **Lessor:** At lease commencement, the University initially measures the lease receivable at the present value of payments expected to be received during the lease term.

Subsequently, the lease receivable is reduced by the principal portion of lease payments made. The deferred inflows of resources are initially measured as the initial amount of the lease receivable plus any payments received at or before the commencement of the lease term that relate to future periods. Subsequently, the deferred inflows of resources are amortized into lease revenue on a straight-line basis over the shorter of the lease term or the useful life of the underlying lease receivable.

Key Estimates and Judgments — Key estimates and judgments include how the University determines (1) the discount rate it uses to calculate the present value of the expected lease payments, (2) lease term, and (3) lease payments.

When available, the University will use the interest rate explicitly or implicitly stated in the lease contract. If the rate is not provided within the contract, the University will use its incremental borrowing rate (IBR), based on the University's applicable bond rates. The University's IBR for leases is based on the rate of interest it would need to pay if it issued general obligation bonds to borrow an amount equal to the lease payments, under similar terms, as of the lease commencement or amendment dates.

The lease includes the noncancellable period of the lease plus any additional periods covered by either a University or lessor unilateral option to (1) extend for which it is reasonably certain to be exercised, or (2) terminate for which it is reasonably certain not to be exercised. Periods in which both the University and the lessor/vendor have an option to terminate (or if both parties have to agree to extend) are excluded from the lease term.

Payments are evaluated by the University to determine if they should be included in the measurement of the lease liabilities, including those payments that require a determination of whether they are reasonably certain of being made, such as purchase options, payments for termination penalties, and other payments.

Remeasurement of Lease Amounts — The University monitors changes in circumstances that may require remeasurement of a lease. When certain changes occur that are expected to significantly affect the amount of the lease liability or lease receivable, the liability or receivable is remeasured, and a corresponding adjustment is made to the lease asset (for lessee arrangements) or deferred inflows of resources (for lessor arrangements).

Presentation in Statements of Net Position — Lease assets are reported with capital assets and lease liabilities are reported within current and non-current liabilities in the Statements of Net Position. Lease receivables are reported with current and non-current assets and deferred inflows of resources in the Statements of Net Position.

Subscription Based Liabilities

The University determines if an arrangement is a subscription-based information technology arrangements (SBITA) at inception and books the corresponding liability. The University has the right to use SBITA assets largely consisting of system-wide IT arrangements. Upon identification of an SBITA the University recognizes a subscription based liability and an intangible right-to-use subscription asset.

Measurement of Subscription Based Liabilities Amounts — At SBITA commencement, the University initially measures the subscription based liability at the present value of payments expected to be made during the SBITA term.

Subsequently, the subscription based liability is reduced by the principal portion of payments made. The subscription asset is initially measured as the initial amount of the liability, less payments made at or before the SBITA commencement date, plus any initial direct costs ancillary to placing the underlying asset into service, less any lease incentives received at or before the lease commencement date. Subsequently, the lease asset is amortized into depreciation and amortization expense on a straight-line basis over the shorter of the lease term or the useful life of the underlying asset.

Key Estimates and Judgments — Key estimates and judgments include how the University determines (1) the discount rate it uses to calculate the present value of the expected subscription payments, (2) subscription term, and (3) subscription payments.

When available, the University will use the interest rate explicitly or implicitly stated in the SBITA contract. If the rate is not provided within the contract, the University will use its incremental borrowing rate (IBR), based on the University's applicable bond rates. The University's IBR for SBITA agreements is based on the rate of interest it would need to pay if it issued general obligation bonds to borrow an amount equal to the SBITA payments, under similar terms, as of the SBITA commencement or amendment dates.

Presentation in Statements of Net Position — SBITA assets are reported with capital assets and subscription based liabilities are reported within current and non-current liabilities in the Statements of Net Position.



Deferred Outflows and Inflows of Resources

The University accounts for certain transactions that result in the consumption or acquisition in one period that are applicable to future periods as deferred outflows and deferred inflows, respectively, to distinguish them from assets and liabilities. Deferred outflows of resources increase net position, similar to assets and deferred inflows of resources decrease net position, similar to liabilities.

The components of deferred outflows and inflows of resources as of June 30, 2023 and 2022 (\$ in thousands) are presented in **Tables 3 and 4**:

TABLE 3 – Deferred Outflows of Resources

As of June 30, 2023 and 2022 (\$ in thousands)

Deferred outflow	2023	2022
Debt refunding	\$ 105,652	\$ 115,519
Certain asset retirement obligations	1,186	1,159
Excess consideration provided for acquisition	40,653	45,435
Impact of changes in assumptions and investment value:		
Pension liability	148,222	115,027
Other postemployment benefits liability	308,213	156,858
Total deferred outflows of resources	\$ 603,926	\$ 433,998

TABLE 4 – Deferred Inflows of Resources

As of June 30, 2023 and 2022 (\$ in thousands)

Deferred inflow	2023	2022
Future lease revenues	\$ 215,696	\$ 232,271
Sale of future revenues	35,436	44,451
Experience gains for:		
Pension liability	121,000	266,206
Other postemployment benefits liability	567,109	542,728
Total deferred inflows of resources	\$ 939,241	\$ 1,085,656

Compensated Absences

Employees earn the right to be compensated during absences for annual vacation leave and sick leave. Upon retirement, termination, or death, certain employees are compensated for unused sick and vacation leave, subject to certain limitations, at their current rate of pay. Within the Statements of Net Position, a liability is recorded for vacation and sick leave benefits earned as of the fiscal year-end. The recorded liability is classified as current and noncurrent on the Statements of Net Position based on the amount estimated to be paid to eligible employees in one year and beyond one year, respectively.

Unearned Revenue and Advances

Unearned revenue consists of amounts billed or received in advance of the University providing goods or services. Unearned revenue is subsequently earned as qualifying expenses are incurred.

Advances include funds advanced to the University by the U.S. government under the Federal Perkins Loan Program (the Program). Under federal law, the authority for colleges and universities to make new loans under the Program ended on September 30, 2017, and final distributions were permitted through June 30, 2019. The University's Statements of Net Position include both the notes receivable from students and the related refundable liability to the Federal government.

Tuition and Fees, Net of Scholarship Allowances

Student tuition and fees, housing, dining, and other similar auxiliary revenues are reported net of any related scholarships and fellowships applied to student accounts. However, scholarships and fellowships paid directly to students are separately reported as scholarships and fellowships expense.

Included within scholarship and fellowship expense are student disbursements related to the Higher Education Emergency Relief Fund (HEERF) award (detailed below in Note 1q) which included emergency financial aid to students. The University provided emergency financial aid grants to students of \$2.4 million and \$72.3 million for the years ended June 30, 2023 and 2022, respectively.

Grants and Contracts

The University receives grants and contracts for research and other activities including medical service reimbursements from federal and state government agencies. The University records revenue at the point all eligibility requirements (e.g. allowable costs are incurred) are met.

The University records the recovery of indirect costs applicable to research programs and other activities which provide for the full or partial reimbursement of such costs, as revenue. Recovery of indirect costs for the years ended June 30, 2023 and 2022 was \$170.8 million and \$173.4 million, respectively, and is a component of grants and contracts revenue on the Statements of Revenues, Expenses, and Changes in Net Position.

As a result of the COVID-19 pandemic, the University was awarded \$255.6 million of COVID-19 assistance, collectively provided under the Higher Education Emergency Relief Fund (HEERF). An additional \$3.0 million was awarded under the Governor's Emergency Education Relief Funds. Under Section 18004(a)(1) of the CARES Act, Section 314(a)(1) of CRRSAA and ARPA, the University provided emergency financial aid grants to students of \$2.4 million and \$72.3 million for the years ended June 30, 2023 and 2022, respectively. These funds were recognized as revenue under nonoperating federal grants. An additional, \$2.8 million and \$70.4 million for the years ended June 30, 2023 and 2022, respectively, was used to recover a portion of lost revenue and additional financial aid to students. These funds were also recorded under non-operating federal grant revenue. There are no unexpended HEERF funds as of June 30, 2023.

Auxiliary Enterprises

An auxiliary enterprise is an activity that exists to furnish a service to students, faculty or staff acting in a personal capacity, and that charges a fee for the use of goods and services.

Fringe Benefits for Current Employees and Postemployment Obligations

The University participates in the Commonwealth's fringe benefit programs, including active employee and postemployment health insurance, unemployment compensation, pension, and workers' compensation benefits. Health insurance and pension costs for active employees and retirees are paid through a fringe benefit rate charged to the University by the Commonwealth. Workers' compensation costs are assessed separately based on actual University experience.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the dates of the financial statements, and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from these estimates. The most significant areas that require management estimates relate to valuation of certain investments and derivative instruments, useful lives and related depreciation of capital assets, and accruals for pension and other postemployment related benefits.

Income Tax Status

The University is exempt from Federal and state income tax under the doctrine of intergovernmental tax immunity. The University qualifies as a public charity eligible to receive charitable contributions under Section 170(b)(1)(A)(v) of the Internal Revenue Code, as amended (the Code).

The University and its component units are required to assess uncertain tax positions and have determined that there were no such positions that are material to the financial statements as of June 30, 2023 and 2022, respectively.

Reclassifications

Certain reclassifications were made in the prior year to conform to current year presentation.

2. Cash Held by State Treasurer

Accounts payable, accrued salaries and outlays for capital projects funded by state-appropriated funds totaled \$42.1 million and \$55.2 million at June 30, 2023 and June 30, 2022. The University has recorded a comparable amount of cash held by the State Treasurer for the benefit of the University, which will be subsequently utilized to pay for allowable expenditures. The cash is held in the State Treasurer's pooled cash account. The Commonwealth requires all bank deposits in excess of insurance coverage by the FDIC to be collateralized with a perfected pledge of eligible collateral. Eligible collateral must be pledged in an amount equal to 102% of the amount of the deposits that exceed FDIC insurance. Sufficient collateral to cover total Commonwealth deposits in excess of the FDIC insured amount must be pledged and held in safekeeping by a custodian that is approved by and under the control of the Commonwealth Treasurer and Receiver - General.

3. Deposits with Bond Trustees

Deposits with bond trustees primarily consist of unspent bond proceeds, amounts held for the future payment of debt service on such borrowings and designated funds from the University's pool loan program.

At June 30, 2023 and 2022, deposits with bond trustees are presented in **Table 5** (\$ in thousands):

TABLE 5 – Deposits with Bond Trustees

As of June 30, 2023 and 2022 (\$ in thousands)

Deposits	2023	2022
Cash	\$ 26,291	\$ 27,042
MMDT	316,350	297,003
U.S. Treasury Securities	15,646	195,721
Total deposits with bond trustees	\$ 358,287	\$ 519,766

At June 30, 2023 and 2022, amounts restricted by bond trust agreements for capital projects and other purposes were \$339.3 million and \$501.5 million, respectively.

Custodial Credit Risk — The custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, a government will not be able to recover the value of investment or collateral securities that are in the possession of an outside party. As of June 30, 2023 and 2022, the bank balances of uninsured deposits totaled \$7.0 million and \$8.5 million, respectively.

Interest Rate Risk — Interest rate risk is the extent that changes in interest rates of debt investments will adversely affect the fair value of an investment. These investments include certain short-term cash equivalents, various long-term items and restricted assets by maturity in years. The University minimizes the risk of the fair value of securities falling due to changes in interest rates by ensuring securities have effective maturities of less than a year. MMDT and permitted money market accounts have effective maturities of less than one year, thereby limiting the interest rate risk.

Credit Risk — Credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. The risk is measured by the assignment of a rating by a nationally recognized statistical rating organization. MMDT and permitted money market accounts are not rated.

4. Investments

The investment portfolio of the University reflected on the Statements of Net Position for the years ended June 30, 2023 and 2022, respectively, are shown in **Tables 6 and 7** (\$ in thousands):

TABLE 6 – Investment Portfolio

As of June 30, 2023 and 2022 (\$ in thousands)

Investment type	2023	2022
Short-term investments	\$ 646,473	\$ 787,356
Long-term investments	1,364,207	1,052,299
Total	\$ 2,010,680	\$ 1,839,655

Investment policies are established by the Board. The goals of these policies are to preserve capital, provide liquidity, and generate investment income. The University has statutory authority under Massachusetts General Laws, Chapter 75 to collect, manage, and disburse its trust funds. UMF holds certain investments on behalf of the University, referred to as foundation agency funds.

The investment holdings of the University, including foundation agency funds, as of June 30, 2023 and 2022, are summarized in **Table 7** (\$ in thousands):

TABLE 7 – Investment Holdings of the University

As of June 30, 2023 and 2022 (\$ in thousands)

University investment holdings	2023	2022
University managed funds		
Cash and cash equivalents	\$ -	\$ 54,009
Money market and other investments	176,000	333,002
MMDT	300,000	262,000
Fixed income investments	511,356	269,203
Commercial ventures and intellectual property	2,457	2,564
Annuity life income funds	6,548	4,041
Total University managed funds	996,361	924,819
Foundation agency funds		
Pooled investments – Fund I	845,245	777,573
Short term pool	169,074	137,263
Total Foundation agency funds	1,014,319	914,836
Total University investments	\$ 2,010,680	\$ 1,839,655

Pooled Investments — Fund I represents the endowment funds and University operating cash held at the UMF. The endowment funds include both donor-restricted endowments and quasi-endowments. The investment horizon for this portfolio is 5 to 10 years.

Short-Term Pool represents a portion of the operating cash balances of the University that have been transferred to UMF for investment purposes only. This portfolio has a high degree of liquidity. The asset allocation is 25% U.S. equities and 75% short-term corporate bonds. The University Treasurer has the authority to request the return of funds at any time to meet the operating needs of the University.

In addition to Foundation agency funds, the Foundations' assets also include investments not reported within the University's Statements of Net Position. Total investments of the Foundations as of June 30, 2023 and 2022, are summarized in **Table 8** (\$ in thousands):

TABLE 8 – Investment Holdings of the Foundations

As of June 30, 2023 and 2022 (\$ in thousands)

Foundations investment holdings	2023	2022
Foundations non-agency funds		
Cash and cash equivalents	\$ 44,394	\$ 40,544
Money market and other investments	9,808	9,195
Fixed income investments	389	384
Pooled investments – Fund I	933,933	762,925
Annuity life income funds	3,754	3,404
Total Foundations non-agency funds	992,278	816,452
Foundation agency funds (detailed in Table 7)	1,014,319	914,836
Total Foundations investments	\$ 2,006,597	\$ 1,731,288

Custodial Credit Risk — Investment securities are exposed to custodial credit risk if they are uninsured or not registered in the name of the University and are held by either the counterparty or the counterparty's trust department or agent but not in the University's name.

The carrying amounts of cash balances with uninsured or uncollateralized deposits were \$5.3 million and \$109.6 million, at June 30, 2023 and 2022, respectively.

The University held non-money market investments with a fair market value of \$1.5 billion and \$1.1 billion at June 30, 2023 and 2022, respectively. In the event of negligence due to the University's custodian and/or investment manager(s), it is expected that the investment balances would be fully recovered. However, these amounts are subject to both interest rate risk and credit risk.

Concentration of Credit Risk — As of June 30, 2023 and 2022, there is no concentration of investments from one issuer equal to or greater than 5% of the portfolio. Investments issued or guaranteed by the U.S. government, as well as investments in mutual funds and other pooled investments are excluded from consideration when evaluating concentration risk.

Credit Risk — The University's Investment Policy and Guidelines Statement allows each portfolio manager full discretion within the parameters of the investment guidelines specific to that manager. Nationally recognized statistical rating organizations, such as Standards & Poor's (S&P) assign credit ratings to security issues and issuers that indicate a measure of potential credit risk to investors.

Table 9 presents the debt investments, excluding U.S. Treasury funds, at fair value by credit quality of the University's investment portfolio as of June 30, 2023 (\$ in thousands):

TABLE 9 – S&P Quality Ratings FY2023

As of June 30, 2023 (\$ in thousands)

Debt securities	AAA	AA	A	BBB	BB	Unrated	Total
Government agency bonds	\$ -	\$ 29,013	\$ -	\$ -	\$ -	\$ 6,901	\$ 35,914
Asset backed securities	59,880	401	2,970	3,643	-	506	67,400
Commercial mortgage-backed securities	21,315	-	-	1,215	-	1,781	24,311
Commercial Paper	-	-	-	-	-	10,520	10,520
Government mortgage-backed securities	-	-	-	-	-	22,412	22,412
Non-government backed collateralized mortgage obligations	2,934	-	-	-	-	82	3,016
Corporate bonds	3,815	19,288	88,086	62,340	406	337	174,272
Municipal and provincial bonds	630	6,920	483	-	-	343	8,376
Index linked government bonds	-	-	-	-	-	951	951
Bond funds, including exchange traded funds	18	361	1,078	-	-	126,385	127,842
Total debt securities	\$ 88,592	\$ 55,983	\$ 92,617	\$ 67,198	\$ 406	\$ 170,218	\$ 475,014

Table 10 presents the debt investments, excluding U.S. Treasury funds, at fair value by credit quality of the University's investment portfolio as of June 30, 2022 (\$ in thousands):

TABLE 10 – S&P Quality Ratings FY2022

As of June 30, 2022 (\$ in thousands)

Debt securities	AAA	AA	A	BBB	BB	Unrated	Total
Government agency bonds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,929	\$ 6,929
Asset backed securities	20,697	1,258	3,869	3,366	-	679	29,869
Commercial mortgage-backed securities	23,103	-	-	1,432	-	2,019	26,554
Government mortgage-backed securities	-	-	-	-	-	16,354	16,354
Non-government backed collateralized mortgage obligations	3,304	-	-	-	-	99	3,403
Corporate bonds	1,312	2,273	41,162	70,506	379	376	116,008
Municipal and provincial bonds	235	4,061	1,549	356	-	351	6,552
Index linked government bonds	-	-	-	-	-	522	522
Bond funds, including exchange traded funds	20	904	603	-	-	103,635	105,162
Total debt securities	\$ 48,671	\$ 8,496	\$ 47,183	\$ 75,660	\$ 379	\$ 130,964	\$ 311,353

Interest Rate Risk — The University's Investment Policy and Guidelines Statement establishes targets for the preferred duration of the fixed income component of the investment portfolio by limiting investments through targeted allocations to different asset classes.

Table 11 presents the fair value of the debt investments component of the University's investment portfolio by investment maturity as of June 30, 2023 (\$ in thousands):

TABLE 11 – Investment Maturity (in years), FY2023

As of June 30, 2023 (\$ in thousands)

Debt securities	Less than 1	1 to 5	6 to 10	More than 10	Total
U.S. Treasury securities	\$ 21,878	\$ 174,975	\$ 18,179	\$ -	\$ 215,032
Government agency bonds	8	29,461	4,833	1,612	35,914
Asset backed securities	11,755	53,922	1,723	-	67,400
Commercial mortgage-backed securities	8,007	15,738	566	-	24,311
Commercial Paper	10,520	-	-	-	10,520
Government mortgage-backed securities	1,546	15,222	5,644	-	22,412
Non-government backed collateralized mortgage obligations	-	3,016	-	-	3,016
Corporate bonds	32,273	136,372	5,627	-	174,272
Municipal and provincial bonds	1,274	5,602	1,500	-	8,376
Index linked government bonds	-	951	-	-	951
Bond funds, including exchange traded funds	-	126,754	1,070	18	127,842
Total debt securities	\$ 87,261	\$ 562,013	\$ 39,142	\$ 1,630	\$ 690,046

Table 12 presents the fair value of the debt investments component of the University's investment portfolio by investment maturity as of June 30, 2022 (\$ in thousands):

TABLE 12 – Investment Maturity (in years), FY2022

As of June 30, 2022 (\$ in thousands)

Debt securities	Less than 1	1 to 5	6 to 10	More than 10	Total
U.S. Treasury securities	\$ -	\$ 89,244	\$ 29,756	\$ 4,515	\$ 123,515
Government agency bonds	-	440	978	5,511	6,929
Asset backed securities	6,369	20,351	3,149	-	29,869
Commercial mortgage-backed securities	5,617	19,135	1,802	-	26,554
Government mortgage-backed securities	2,760	4,908	8,686	-	16,354
Non-government backed collateralized mortgage obligations	-	3,403	-	-	3,403
Corporate bonds	16,126	88,470	11,033	379	116,008
Municipal and provincial bonds	3,627	2,574	351	-	6,552
Index linked government bonds	-	522	-	-	522
Bond funds, including exchange traded funds	-	104,023	1,119	20	105,162
Total debt securities	\$ 34,499	\$ 333,070	\$ 56,874	\$ 10,425	\$ 434,868

Fair Value Measurement — Fair value represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The University categorizes these assets and liabilities measured at fair value using a three-tiered hierarchy based on the valuation methodologies employed. The hierarchy is defined as follows:

Level 1 — Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that are available at the measurement date.

Level 2 — Inputs to the valuation methodology include:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable for the asset or liability;
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

Level 3 — Inputs to the valuation methodology are unobservable and significant to the fair value measurement. Unobservable inputs reflect the University's own assumptions about the inputs market participants would use in pricing the asset or liability (including assumption about risk). Unobservable inputs are developed based on the best information available in the circumstances and may include the University's own data.

When available, quoted prices are used to determine fair value. When quoted prices in active markets are available, investments are classified within Level 1 of the fair value hierarchy. The University's Level 1 investments primarily consist of investments in U.S. Treasury obligations, equity securities, and mutual funds. When quoted prices in active markets are not available, fair values are based on evaluated prices received from the University's investment custodian in conjunction with a third-party service provider and are reported within Level 2 of the fair value hierarchy. The inputs for Level 2 include, but are not limited to, pricing models such as benchmarking yields, reported trades, broker-dealer quotes, issuer spreads and benchmarking securities, among others. The University's Level 2 investments primarily consist of investments in U.S. government and agency obligations, asset-backed securities, and corporate debt securities that did not trade on the University's fiscal year end date.

As a practical expedient to estimate the fair value of the University's interests, certain investments in commingled funds and limited partnerships are reported at the net asset value (NAV) determined by the fund managers. Because these investments are not readily marketable, their estimated fair values may differ from the values that would have been assigned had a ready market for such investments existed, and such differences could be material. As of June 30, 2023 and 2022, the University had no plans or intentions to sell such investments at amounts different from NAV.



Table 13 summarizes the fair value of the University's investments by type as of June 30, 2023 (\$ in thousands):

TABLE 13 – Fair Value Hierarchy of Investments, FY2023

As of June 30, 2023 (\$ in thousands)

Investment	Investments measured at NAV	Investments classified in the fair value hierarchy Level 1	Investments classified in the fair value hierarchy Level 2	Investments classified in the fair value hierarchy Level 3	Total
Money market funds	\$ -	\$ 212,555	\$ -	\$ -	\$ 212,555
Debt securities					
U.S. Treasury securities	-	215,032	-	-	215,032
Government agency bonds	-	-	35,914	-	35,914
Asset backed securities	-	-	67,400	-	67,400
Commercial mortgage-backed securities	-	-	24,311	-	24,311
Commercial Paper	-	-	10,520	-	10,520
Government mortgage-backed securities	-	-	22,412	-	22,412
Non-government backed collateralized mortgage obligations	-	-	3,016	-	3,016
Corporate bonds	-	-	174,271	1	174,272
Non US Corporate bonds	-	-	-	-	-
Municipal and provincial bonds	-	-	8,376	-	8,376
Index linked government Bonds	-	-	951	-	951
Bond funds, including exchange traded funds	-	127,842	-	-	127,842
Total debt securities	-	342,874	347,171	1	690,046
Equity securities					
Domestic equities	-	144,055	-	1,785	145,840
International equities	-	37,450	-	-	37,450
Total equity securities	-	181,505	-	1,785	183,290
Alternative investments					
Multi-strategy hedge funds					
Equity	299,003	-	-	-	299,003
Long/short	148,353	-	-	-	148,353
Fixed income	39,717	-	-	-	39,717
Absolute return	36,987	-	-	-	36,987
Real assets	9,581	-	-	-	9,581
Private equity and venture capital	69,991	-	-	-	69,991
Private debt	13,933	-	-	-	13,933
Private real estate	7,224	-	-	-	7,224
Total alternative investments	624,789	-	-	-	624,789
Total investments at fair value	624,789	736,934	347,171	1,786	1,710,680
MMDT	-	-	-	-	300,000
Total investments at cost	-	-	-	-	300,000
Total investments	\$ 624,789	\$ 736,934	\$ 347,171	\$ 1,786	\$ 2,010,680

Table 14 presents unfunded commitments, redemption terms, restrictions, and notice period for investments that have been valued using NAV as a practical expedient as of June 30, 2023 (\$ in thousands):

TABLE 14 – Alternative Investments, FY2023

As of June 30, 2023 (\$ in thousands)

Alternative investments	NAV	Unfunded commitments	Redemption terms	Notice period	Redemption restrictions
Multi-strategy hedge funds					
Equity	\$ 299,003	\$ -	Daily to annual	1-90 days	Lock-up provisions range from none to 2 years.
Long/short	148,353	-	Quarterly to annual	45-90 days	Lock-up provisions range from none to 2 years.
Fixed income	39,717	-	Quarterly to semi-annual	60-90 days	No lock-up restrictions
Absolute return	36,987	-	Quarterly to annual	45-65 days	No lock-up restrictions
Real assets	9,581	-	Annual	90 days	No lock-up restrictions
Private equity and venture capital	69,991	30,392	Closed end funds	*	Not redeemable
Private debt	13,933	8,933	Closed end funds	*	Not redeemable
Private real estate	7,224	1,353	Closed end funds	*	Not redeemable
Total	\$624,789	\$ 40,678			

* The University has made commitments to various private equity and venture debt partnerships. The University expects these funds to be called over the next 1-5 years. Liquidity is expected to be received in the next 1-9 years.



Table 15 summarizes the fair value of the University's investments by type as of June 30, 2022 (\$ in thousands):

TABLE 15 – Fair Value Hierarchy of Investments, FY2022

As of June 30, 2022 (\$ in thousands)

Investment	Investments measured at NAV	Investments classified in the fair value hierarchy Level 1	Investments classified in the fair value hierarchy Level 2	Investments classified in the fair value hierarchy Level 3	Total
Money market funds	\$ -	\$ 424,859	\$ -	\$ -	\$ 424,859
Debt securities					
U.S. Treasury securities	-	123,515	-	-	123,515
Government agency bonds	-	-	6,929	-	6,929
Asset backed securities	-	-	29,869	-	29,869
Commercial mortgage-backed securities	-	-	26,554	-	26,554
Government mortgage-backed securities	-	-	16,354	-	16,354
Non-government backed collateralized mortgage obligations	-	-	3,403	-	3,403
Corporate bonds	-	-	115,966	42	116,008
Municipal and provincial bonds	-	-	6,552	-	6,552
Index linked government Bonds	-	-	522	-	522
Bond funds, including exchange traded funds	-	105,162	-	-	105,162
Total debt securities	-	228,677	206,149	42	434,868
Equity securities					
Domestic equities	-	93,934	-	1,635	95,569
International equities	-	29,611	-	-	29,611
Total equity securities	-	123,545	-	1,635	125,180
Alternative investments					
Multi-strategy hedge funds					
Equity	218,694	-	-	-	218,694
Long/short	150,695	-	-	-	150,695
Fixed income	31,424	-	-	-	31,424
Absolute return	34,678	-	-	-	34,678
Real assets	6,508	-	-	-	6,508
Private equity and venture capital	74,198	-	-	-	74,198
Private debt	14,521	-	-	-	14,521
Private real estate	8,021	-	-	-	8,021
Total alternative investments	538,739	-	-	-	538,739
Total investments at fair value	538,739	777,081	206,149	1,677	1,523,646
Cash and cash equivalents	-	-	-	-	54,009
MMDT	-	-	-	-	262,000
Total investments at cost	-	-	-	-	316,009
Total investments	\$ 538,739	\$ 777,081	\$ 206,149	\$ 1,677	\$ 1,839,655

Table 16 presents unfunded commitments, redemption terms, restrictions, and notice period for investments that have been valued using NAV as a practical expedient as of June 30, 2022 (\$ in thousands):

TABLE 16 – Alternative Investments, FY2022

As of June 30, 2022 (\$ in thousands)

Alternative investments	NAV	Unfunded commitments	Redemption terms	Notice period	Redemption restrictions
Multi-strategy hedge funds					
Equity	\$ 218,694	\$ -	Daily to annual	1–90 days	Lock-up provisions range from none to 2 years.
Long/short	150,695	-	Quarterly to annual	45–90 days	Lock-up provisions range from none to 2 years.
Fixed income	31,424	-	Quarterly to semi-annual	60–90 days	No lock-up restrictions
Absolute return	34,678	-	Quarterly to annual	45–65 days	No lock-up restrictions
Real assets	6,508	-	Annual	90 days	No lock-up restrictions
Private equity and venture capital	74,198	20,191	Closed end funds	*	Not redeemable
Private debt	14,521	9,515	Closed end funds	*	Not redeemable
Private real estate	8,021	1,411	Closed end funds	*	Not redeemable
Total	\$ 538,739	\$ 31,117			

* The University has made commitments to various private equity and venture debt partnerships. The University expects these funds to be called over the next 1–5 years. Liquidity is expected to be received in the next 1–9 years.

5. Accounts Receivable, Net

Accounts receivable as of June 30, 2023 and 2022 are presented in **Table 17** (\$ in thousands):

TABLE 17 – Accounts Receivable, Net

As of June 30, 2023 and 2022 (\$ in thousands)

Accounts receivable	2023	2022
Student tuition and fees	\$ 71,110	\$ 68,216
Student loans	21,780	26,731
Pledges	47,751	50,458
Grants and contracts	141,953	129,634
ForHealth program	57,520	75,374
UMass Memorial	14,583	9,791
Other	37,967	57,239
Total accounts receivable	392,664	417,443
Less: allowance for doubtful accounts and discount to present value for pledges	(28,544)	(31,886)
Accounts receivable, net	\$ 364,120	\$ 385,557

6. UMass Memorial Medical Center

In 1998, the University entered into an Amended and Restated Definitive Agreement (Definitive Agreement) whereby the University separated its clinical health care operations from its ongoing academic operations. As part of the Definitive Agreement, the University entered into a 99-year Academic Affiliation and Support Agreement (Affiliation Agreement), expiring on June 30, 2097, with UMass Memorial (successor to the clinical operations) whereby UMass Memorial is required to make annual inflation adjusted payments to the University provided the University continues to operate a medical school. For the years ending June 30, 2023 and 2022, the inflation adjusted income recognized totaled approximately \$21.6 million and \$20.4 million and was recorded as other operating revenue in the accompanying financial statements.

Other provisions of the Definitive agreement include terms for reimbursement of shared services, cross-funded employees, and other agreed upon activities. For the years ended June 30, 2023 and 2022, the reimbursements received for services provided to UMass Memorial, which offset the University's operating expenses, were \$156.3 million and \$154.4 million, respectively. Included in these amounts are payroll paid by the University on behalf of UMass Memorial in an agency capacity, recorded as an offset to operating expenses, in the amount of \$111.0 million and \$109.9 million for the years ended June 30, 2023 and 2022, respectively.

As of June 30, 2023 and 2022, the University has recorded a receivable, from UMass Memorial, in the amount of \$14.6 million and \$9.8 million. The University has recorded a payable of \$3.7 million and \$4.8 million at June 30, 2023 and 2022, respectively.

7. Capital Assets

Table 18 represents the University's capital assets activity for the ended years June 30, 2023 and 2022 (\$ in thousands):

TABLE 18 – Capital Assets Activity

For the years ended June 30 (\$ in thousands)

Asset	As of 2021	Additions*	Retirements / adjustments	As of 2022	Additions	Retirements / adjustments	As of 2023
Land	\$ 169,987	\$ 19,288	\$ (801)	\$ 188,474	\$ 656	\$ (18,500)	\$ 170,630
Buildings and improvements	7,679,548	210,606	(23,447)	7,866,707	256,063	(68,635)	8,054,135
Software	126,068	2,439	-	128,507	5,999	(482)	134,024
Equipment and furniture	686,659	73,091	(42,942)	716,808	48,112	(55,465)	709,455
Library books	32,623	-	(6,983)	25,640	-	(7,197)	18,443
Right of use assets (note 9)	212,934	52,643	(3,308)	262,269	12,895	(32,139)	243,025
Total	8,907,819	358,067	(77,481)	9,188,405	323,725	(182,418)	9,329,712
Accumulated depreciation/ amortization	(3,751,483)	(363,736)	65,251	(4,049,968)	(339,888)	117,635	(4,272,221)
Total	5,156,336	(5,669)	(12,230)	5,138,437	(16,163)	(64,783)	5,057,491
Construction in progress	278,938	306,844	(175,165)	410,617	379,571	(232,378)	557,810
Total capital assets, net	\$ 5,435,274	\$ 301,175	\$ (187,395)	\$ 5,549,054	\$ 363,408	\$ (297,161)	\$ 5,615,301

* Includes assets of \$53.3 million from acquisition of Brandman University

8. Business Acquisition

Effective September 1, 2021 the University acquired Brandman University in exchange for \$139.3 million and the assumption of all Brandman's existing liabilities totaling \$59.2 million. The acquisition included all of the assets of Brandman University totaling \$150.7 million.

The transaction resulted in deferred outflows of resources of \$47.8 million as of the acquisition date. The deferred outflows of resources are being amortized over a 10-year period. As of June 30, 2023 and 2022 there were \$40.7 and \$45.4 million, respectively of deferred outflows of resources remaining associated with the acquisition.

9. Public–Private Partnerships and Leases

The University has entered into three Public-Private Partnerships (PPP), one of which meets the definition of a service concession arrangement (SCA), the remaining two do not meet the definition of an SCA.

PPPs Meeting the Definition of an SCA

On July 7, 2022, the University entered into an SCA with Mass Ave Housing Partners LLC (Project Company), to carry out the design, construction, financing, operation, management, and maintenance of a portion of the Student Housing Project on the Amherst campus consisting of approximately 600 beds of undergraduate apartment-style housing and approximately 200 beds of graduate student apartment-style housing and related infrastructure, including parking. The Project Company will manage, maintain, and operate the Student Housing Facilities and be entitled to all user fees associated with the project as defined, for a term of 65-years. At the end of the arrangement, operation of the Student Housing Project will be transferred to the University. The estimated cost of construction of the Student Housing Project is \$250.0 million. In accordance with GASB Statement No. 94, the University will record an asset and corresponding deferred inflow for the cost of the Student Housing Project when the related assets are placed into service which is expected to occur in the third quarter of FY2024.

In accordance with SCA agreements, the University received from the Project Company a lump-sum payment of \$20.0 million which is included in other noncurrent liabilities in the accompanying financial statements.

PPPs Not Meeting the Definition of an SCA

On November 8, 2016, the University entered into an agreement with Provident Commonwealth Educational Resources, Inc. (PCER), a Massachusetts not-for-profit corporation to construct and operate for 40 years a 1,082-bed student housing facility at its Boston campus (Boston Project). The Boston Project reverts to the University in 2056.

The Boston Project was financed with \$130.1 million of revenue bonds issued on October 26, 2016 (Series 2016 Bonds) by the Massachusetts Development Finance Agency (MassDevelopment) pursuant to a Loan and Trust Agreement between MassDevelopment and PCER. Neither the Authority, University nor Boston campus have pledged revenues to secure the payment of the Series 2016 bonds or have any obligation with respect to payment of the Series 2016 bonds.

On November 14, 2018, the University entered into an agreement with Provident Commonwealth Educational Resources II, Inc. (PCER II), a Massachusetts not-for-profit corporation to construct and operate for 45 years a 1,210-bed student housing facility at its Dartmouth campus (Dartmouth Project). The Dartmouth Project reverts to the University in 2064.

The Dartmouth Project was financed with \$132.19 million of revenue bonds issued on November 14, 2018 (Series 2018 Bonds) by the Massachusetts Development Finance Agency (MassDevelopment) pursuant to a Loan and Trust Agreement between MassDevelopment and PCER II. Neither the Authority, University nor Dartmouth campus have pledged revenues to secure the payment of the Series 2018 bonds or have any obligation with respect to payment of the Series 2018 bonds.

Management evaluated the applicability of relevant GASB guidance against the underlying Boston and Dartmouth Project agreements and indentures and has concluded that the associated debt should not be recognized on the financial statements of the University.

In accordance with GASB Statement No. 94, PPP's that do not meet the definition of an SCA are recorded based upon the operators' (PCER and PCER II) estimated carrying value of the underlying PPP assets as of the expected date of transfer in ownership to the University. At of June 30, 2023 and 2022, the estimated carrying value of the assets upon ownership transfer for the Boston

Project (2056) and the Dartmouth Project (2064) were deemed immaterial and therefore no amounts have been recorded in the accompanying financial statements.

Ground Leases

Pursuant to the Boston and Dartmouth Project PPP agreements, the University entered into the following ground leases. For the Boston Project, commencing January 1, 2019, and continuing for a term of 40 years, the annual rental amount payable to the University is \$1.0 million. For the Dartmouth Project, commencing January 1, 2021, and continuing for a term of 45 years, the rental amount payable to the University is \$625.0 thousand, increasing by 3% every five years.

As of June 30, 2023 and 2022 the University has current receivables past due of \$3.9 million and \$2.3 million, respectively, related to the Boston and Dartmouth ground leases.

Direct Financing Lease

In accordance with the GASB 87 transition guidance, the University has not restated the underlying assets related to its direct finance lease.

On October 27, 2009, the University entered into an agreement to lease its facility located on Morrissey Boulevard in Dorchester, Massachusetts (the Facility) to the Edward M. Kennedy Institute for the United States Senate (EMKI), a charitable corporation registered in the District of Columbia. The lease agreement provides for an initial term of ninety-nine years commencing in October 2009, and thereafter, at the option of EMKI, may be extended for two additional ninety-nine-year periods.

EMKI has an option to purchase the Facility for one dollar at any time after the earlier of: (i) payment of no less than 51% or defeasement of the original amount of the associated revenue bonds. The University has right of first refusal in the event EMKI decides to sell or otherwise dispose of the ownership of the Facility.

The project was financed with \$74.4 million of revenue bonds. Rent is equal to the debt service on the outstanding bonds and payable semiannually through fiscal year 2043.

At June 30, 2023 and 2022, the University recorded gross lease receivable of approximately \$91.5 million and \$96.6 million, respectively related to the EMKI lease. Also at June 30, 2023 and 2022, the University recorded unearned interest income of approximately \$23.7 million and \$25.9 million, respectively related to the EMKI lease. The University presents the unearned interest income associated with the EMKI lease as other current liabilities of approximately \$2.2 million and \$2.2 million and other noncurrent liabilities of approximately \$21.5 million and \$23.7 million as of June 30, 2023 and 2022, respectively.

For the years ended June 30, 2023 and 2022, the University recognized \$2.2 million and \$2.3 million, respectively, of interest income related to its EMKI direct financing lease.

Lessee Leases and Subscriptions

The University is a lessee for various noncancellable real estate.

The University has executed long-term leases with the Commonwealth, acting by and through the Trustees, covering the land on which facilities owned by the Building Authority are located on the University's campuses. These leases call for nominal annual payments to the Commonwealth. Certain of these leases renew automatically for subsequent five- or ten-year periods unless the Building Authority notifies the University that it does not wish to renew. Other leases require the Building Authority to notify the University of its desire to renew. As of June 30, 2023, all leases with the Commonwealth were in good standing and any leases requiring action by the Building Authority during the year to facilitate their renewals were properly renewed.

As provided in the Enabling Act, each of the above-referenced leases also terminates when the Building Authority no longer has any bonds outstanding, at which time all Building Authority property becomes the property of the Commonwealth.

In addition, the University has entered into SBITA's for various information technology agreements and are identified in **Table 19** under subscriptions.

Table 19 presents a summary of right of use asset activity during the year ended June 30:

TABLE 19 – Right of Use Asset Activity

For the years ended June 30 (\$ in thousands)

Asset	As of 2021*	Additions	Remeasurements / terminations	As of 2022	Additions	Remeasurements / terminations	As of 2023
Right of use assets							
Real estate	\$ 212,934	\$ 24,880	\$ (2,556)	\$ 235,258	\$ 1,342	\$ (32,148)	\$ 204,452
Equipment	-	114	-	114	190	(60)	244
SBITA subscriptions	19,868	7,781	(752)	26,897	11,363	69	38,329
Total	232,802	32,775	(3,308)	262,269	12,895	(32,139)	243,025
Accumulated amortization	(19,181)	(35,380)	2,556	(52,005)	(25,549)	19,278	(58,276)
Total right of use assets, net	\$ 213,621	\$ (2,605)	\$ (752)	\$ 210,264	\$ (12,654)	\$ (12,861)	\$ 184,749

* Restated to reflect GASB-96 implementation



Lease and Subscription Liabilities

Table 20 presents a summary of changes in the related lease and subscription liabilities during the year ended June 30, 2023 (\$ in thousands):

TABLE 20 – Lease and Subscription Liabilities, FY2023

For the year ended June 30, 2023 (\$ in thousands)

Liability	As of 2022	Additions	Remeasurements	Deductions	As of 2023	Due in one year
Real estate	\$ 199,837	\$ 1,342	\$ (13,805)	\$ (12,823)	\$ 174,551	\$ 12,095
Equipment	819	190	(816)	(40)	153	37
SBITA subscriptions	19,757	10,178	-	(10,015)	19,920	7,499
Total lease and subscription liability	\$ 220,413	\$ 11,710	\$ (14,621)	\$ (22,878)	\$ 194,624	\$ 19,631

Table 21 presents a summary of changes in the related lease and subscription liabilities during the year ended June 30, 2022 (\$ in thousands):

TABLE 21 – Lease and Subscription Liabilities, FY2022

For the year ended June 30, 2022 (\$ in thousands)

Liability	As of 2021*	Additions	Remeasurements	Deductions	As of 2022	Due in one year
Real estate	\$ 200,805	\$ 7,150	\$ 6,223	\$ (14,341)	\$ 199,837	\$ 12,911
Equipment	-	119	755	(55)	819	2,136
SBITA subscriptions	19,868	5,657	-	(5,768)	19,757	7,014
Total lease and subscription liability	\$ 220,673	\$ 12,926	\$ 6,978	\$ (20,164)	\$ 220,413	\$ 22,061

* Restated to reflect GASB-96 implementation

Future annual lease and subscription payments are presented in **Table 22** (\$ in thousands):

TABLE 22 – Future Annual Lease Payments

As of June 30, 2023 (\$ in thousands)

Fiscal year	Principal	Interest	Total
2024	\$ 19,631	\$ 5,022	\$ 24,653
2025	16,948	4,566	21,514
2026	13,860	4,154	18,014
2027	12,111	3,815	15,926
2028	11,754	3,525	15,279
2029–2033	55,679	13,214	68,893
2034–2038	51,262	6,080	57,342
2039–2043	10,451	992	11,443
2044–2048	2,928	78	3,006
Total	\$ 194,624	\$ 41,446	\$ 236,070

For the years ended June 30, 2023 and 2022, the University recognized \$4.9 million and \$4.7 million, respectively, of interest expense related to its leases and subscriptions.

Lessor Leases

The University is a lessor of various leases of buildings, office space and ground leases.

Lease Receivables

Table 23 presents a summary of changes in the related lease receivable during the year ended June 30, 2023 (\$ in thousands):

TABLE 23 – Lease Receivables, FY2023

For the year ended June 30, 2023 (\$ in thousands)

Receivable	As of 2022	Additions	Remeasurements	Deductions	As of 2023	Due in one year
Real estate leases	\$ 237,497	\$ -	\$ (476)	\$ (12,212)	\$ 224,809	\$ 12,480
Direct financing arrangement	96,622	-	-	(5,073)	91,549	2,665
Total lease receivable	\$ 334,119	\$ -	\$ (476)	\$ (17,285)	\$ 316,358	\$ 15,145

Table 24 presents a summary of changes in the related lease receivable during the year ended June 30, 2022 (\$ in thousands):

TABLE 24 – Lease Receivables, FY2022

For the year ended June 30, 2022 (\$ in thousands)

Receivable	As of 2021*	Additions	Remeasurements	Deductions	As of 2022	Due in one year
Real estate	\$ 189,368	\$ 59,546	\$ 1,710	\$ (13,127)	\$ 237,497	\$ 11,391
Direct financing arrangement	101,694	-	-	(5,072)	96,622	5,073
Total lease receivable	\$ 291,062	\$ 59,546	\$ 1,710	\$ (18,199)	\$ 334,119	\$ 16,464

* Restated to reflect GASB-96 implementation

For the years ended June 30, 2023 and 2022, the University recognized \$18.4 million and \$20.7 million, respectively, of revenue related to its lessor operating leases, which is included in auxiliary enterprise revenue, other operating revenue and other nonoperating income in the accompanying financial statements.



10. Long-Term Debt

Table 25 represents the outstanding long-term debt as of June 30, 2023, and the related activity during the fiscal year (\$ in thousands):

TABLE 25 – Long-Term Debt, FY2023

For the year ended June 30, 2023 (\$ in thousands)

Debt	Original borrowing	Maturity Date	Interest rate	As of 2022	Additions	Reductions	As of 2023
Building Authority							
Series 2009-2	\$ 271,855	2039	6.4–6.6%	\$ 16,945	\$ -	\$ -	\$ 16,945
Series 2009-3	28,570	2039	5.8–6.2%	22,400	-	(775)	21,625
Series 2010-2	430,320	2040	3.8–5.5%	413,610	-	(17,125)	396,485
Series 2010-3	3,005	2040	5.8%	2,420	-	(75)	2,345
Series 2013-1	212,585	2043	2.0–5.0%	8,410	-	(5,845)	2,565
Series 2013-2	71,970	2043	0.4–4.3%	29,590	-	(2,485)	27,105
Series 2013-3	24,640	2043	4.0–5.0%	485	-	(485)	-
Series 2014-1	293,890	2044	3.0–5.0%	62,935	-	(4,135)	58,800
Series 2014-3	67,635	2029	2.0–5.0%	24,345	-	(4,500)	19,845
Series 2014-4	157,855	2025	0.2–3.4%	8,700	-	(2,070)	6,630
Series 2015-1	298,795	2045	4.0–5.0%	266,880	-	-	266,880
Series 2015-2	191,825	2036	3.0–5.0%	133,330	-	(25,620)	107,710
Series 2017-1	165,130	2047	4.0–5.3%	165,130	-	-	165,130
Series 2017-2	19,510	2027	1.6–3.4%	13,570	-	(1,570)	12,000
Series 2017-3	187,680	2038	3.0–5.0%	152,150	-	(3,650)	148,500
Series 2018-1	37,650	2043	2.0–2.9%	37,650	-	-	37,650
Series 2019-1	208,725	2039	5.0%	208,725	-	-	208,725
Series 2020-1	200,840	2050	5.0%	200,840	-	-	200,840
Series 2020-2	129,830	2050	1.8–3.5%	127,845	-	(2,020)	125,825
Series 2020-3	319,345	2044	1.7–3.5%	315,665	-	(2,165)	313,500
Series 2020-4	329,930	2043	0.4%–3.0%	329,930	-	(9,345)	320,585
Series 2021-1	312,330	2037	5.0%	291,750	-	(29,965)	261,785
Series 2021-2	46,585	2036	0.2%	30,835	-	(255)	30,580
Series 2022-1	188,650	2052	5.0%	188,650	-	-	188,650
Series 2022-2	211,270	2045	2.2–4.3%	211,270	-	-	211,270
Unamortized bond premium				241,608	-	(26,455)	215,153
Total Building Authority				3,505,668	-	(138,540)	3,367,128
MHEFA/MDFA							
Series A	20,000	2030	variable	20,000	-	-	20,000
Total MHEFA/MDFA				20,000	-	-	20,000
WCCC MHEFA/MDFA							
Series 2005-D	99,325	2029	5.0–5.3%	425	-	-	425
Unamortized bond premium				15	-	(4)	11
Total WCCC MHEFA/MDFA				440	-	(4)	436
MDFA							
CREBs	1,625	2027	3.5%	478	-	(96)	382
Total bonds payable				3,526,586	-	(138,640)	3,387,946
UMG							
Working capital note	21,100	2025	2.2%	21,100	-	(5,000)	16,100
Building note	37,000	2027	2.2%	37,000	-	(37,000)	-
Change in control note	96,000	2031	0.0%	96,000	-	-	96,000
Unamortized discount				(13,313)	-	1,837	(11,476)
Total notes payable				140,787	-	(40,163)	100,624
Total long-term debt				\$3,667,373	\$ -	\$ (178,803)	\$3,488,570

Table 26 represents the outstanding long-term debt as of June 30, 2022, and the related activity during the fiscal year (\$ in thousands):

TABLE 26 – Long-Term Debt, FY2022

For the year ended June 30, 2022 (\$ in thousands)

Debt	Original borrowing	Maturity date	Interest rate	As of 2021	Additions	Reductions	As of 2022
Building Authority							
Series 2009-2	\$ 271,855	2039	6.4–6.6%	\$ 16,945	\$ -	\$ -	\$ 16,945
Series 2009-3	28,570	2039	5.8–6.2%	23,135	-	(735)	22,400
Series 2010-2	430,320	2040	3.8–5.5%	430,320	-	(16,710)	413,610
Series 2010-3	3,005	2040	5.8%	2,490	-	(70)	2,420
Series 2013-1	212,585	2043	2.0–5.0%	13,735	-	(5,325)	8,410
Series 2013-2	71,970	2043	0.4–4.3%	32,010	-	(2,420)	29,590
Series 2013-3	24,640	2043	4.0–5.0%	945	-	(460)	485
Series 2014-1	293,890	2044	3.0–5.0%	66,825	-	(3,890)	62,935
Series 2014-3	67,635	2029	2.0–5.0%	28,635	-	(4,290)	24,345
Series 2014-4	157,855	2025	0.2–3.4%	13,865	-	(5,165)	8,700
Series 2015-1	298,795	2045	4.0–5.0%	266,880	-	-	266,880
Series 2015-2	191,825	2036	3.0–5.0%	157,765	-	(24,435)	133,330
Series 2017-1	165,130	2047	4.0–5.3%	165,130	-	-	165,130
Series 2017-2	19,510	2027	1.6–3.4%	15,100	-	(1,530)	13,570
Series 2017-3	187,680	2038	3.0–5.0%	155,630	-	(3,480)	152,150
Series 2018-1	37,650	2043	2.0–2.9%	37,650	-	-	37,650
Series 2019-1	208,725	2039	5.0%	208,725	-	-	208,725
Series 2020-1	200,840	2050	5.0%	200,840	-	-	200,840
Series 2020-2	129,830	2050	1.8–3.5%	129,830	-	(1,985)	127,845
Series 2020-3	319,345	2044	1.7–3.5%	317,795	-	(2,130)	315,665
Series 2020-4	329,930	2043	0.4%–3.0%	329,930	-	-	329,930
Series 2021-1	312,330	2037	5.0%	302,270	-	(10,520)	291,750
Series 2021-2	46,585	2036	0.2%	46,585	-	(15,750)	30,835
Series 2022-1	188,650	2052	5.0%	-	188,650	-	188,650
Series 2022-2	211,270	2045	2.2–4.3%	-	211,270	-	211,270
Unamortized bond premium				242,430	26,327	(27,149)	241,608
Total Building Authority				3,205,465	426,247	(126,044)	3,505,668
MHEFA/MDFA							
Series A	20,000	2030	variable	20,000	-	-	20,000
Total MHEFA/MDFA				20,000	-	-	20,000
WCCC MHEFA/MDFA							
Series 2005-D	99,325	2029	5.0–5.3%	425	-	-	425
Unamortized bond premium				20	-	(5)	15
Total WCCC MHEFA/MDFA				445	-	(5)	440
MDFA							
Clean renewable energy bonds	1,625	2027	3.50%	572	-	(94)	478
Total bonds payable				3,226,482	426,247	(126,143)	3,526,586
UMG*							
Working capital note	21,100	2025	2.2%	-	21,100	-	21,100
Building note	37,000	2027	2.2%	-	37,000	-	37,000
Change in control note	96,000	2031	0.0%	-	96,000	-	96,000
Unamortized discount				-	(14,814)	1,501	(13,313)
Total notes payable				-	139,286	1,501	140,787
Total long-term debt				\$ 3,226,482	\$ 565,533	\$ (124,642)	\$ 3,667,373

* Includes debt incurred through Brandman University acquisition

Pledged Revenues

The University is obligated under its contracts for financial assistance, management and services with the Building Authority to collect rates, rents, fees and other charges with respect to such facilities sufficient to pay principal and interest on the Building Authority's bonds and certain other costs such as insurance on such facilities.

The University's spendable cash and investments secures the obligations of the University with respect to the MHEFA/MDFA Series A Bonds. The University is required to certify annually that there are sufficient funds in spendable cash and investments to cover the debt service on the Series A Bonds.

Principal and Interest

Principal and interest, which is estimated using rates in effect at June 30, 2023, on bonds and notes payable for the next five fiscal years and in subsequent five-year periods are presented in **Table 27** (\$ in thousands):

TABLE 27 – Principal and Interest on Long-term Debt

(\$ in thousands)

Fiscal Year	Bonds – principal	Bonds – interest	Bonds – interest subsidy*	Direct placement bonds – principal	Direct placement bonds – interest	Notes payable – principal	Notes payable – interest	Total
2024	\$ 123,166	\$ 133,916	\$ (6,993)	\$ 1,655	\$ 754	\$ -	\$ 354	\$ 252,852
2025	121,066	129,233	(6,729)	1,690	718	6,100	304	252,382
2026	117,306	124,241	(6,445)	1,725	684	10,000	138	247,649
2027	120,389	118,994	(6,153)	1,760	649	12,000	-	247,639
2028	125,125	113,607	(5,858)	1,790	615	21,000	-	256,279
2029–2033	667,160	482,081	(24,217)	8,320	3,730	63,000	-	1,200,074
2034–2038	687,235	334,153	(13,702)	9,595	2,429	-	-	1,019,710
2039–2043	630,010	178,353	(2,315)	11,115	901	-	-	818,064
2044–2048	366,985	74,200	-	-	-	-	-	441,185
2049–2053	176,690	18,410	-	-	-	-	-	195,100
Total	\$ 3,135,132	\$ 1,707,188	\$ (72,412)	\$ 37,650	\$ 10,480	\$ 112,100	\$ 796	\$ 4,930,934

* These interest rate subsidies are provided by the United States Government related to the Authority's issuance of bonds under the Build America Bond (BAB) program. Under the BAB program, the Government provides a direct subsidy of the interest rate paid to bondholders up to 35%. The University's November 1, 2022, and May 1, 2023 subsidy payments related to the Senior Series 2009-2 Project Revenue Build America Bonds and the Senior Series 2010-2 Project Revenue Build America Bonds were both 33.0%. For fiscal year 2024 through fiscal year 2043, the estimated subsidy reflected in the table above is 33.00%.

Bond Activity

The Authority did not issue any new bonds and there was no refunding activity in FY2023.

In FY2022, the University issued \$188.7 million of Senior Series 2022-1 Project Revenue Bonds and \$211.3 million of Senior Series 2022-2 Project Revenue Bonds.

Bond Premium (Discount) and Issuance Expenses

The University amortizes the premiums received as a reduction of interest expense over the life of the respective bond issue. No bond activity occurred in FY2023, thus no new bond premium, discount or bond issuance costs were recorded in FY2023. In FY2022, the University received \$26.3 million as premiums at issuance.

In connection with the University's bond issues, the University incurred certain issuance costs associated with the bond offerings. In FY2022, issuance costs were \$2.4 million and were expensed in accordance with the provisions of GASB Statement No. 65, *Items Previously Reported as Assets and Liabilities*.

The \$96.0 million note payable does not have a stated interest rate. As a result, this note has imputed an interest rate, which resulted in a discount of \$14.8 million to be amortized over the life of the note payable. As of June 30, 2023, the remaining amount to be amortized is \$11.5 million.

Notes Payable

In FY2022, the University entered into three notes payable as part of the Brandman University acquisition agreement. A working capital note payable of \$21.1 million, a building note payable for \$37.0 million and a change in control note payable of \$96.0 million.

Commercial Paper

The maximum aggregate principal amount of commercial paper which may be outstanding at one time is \$200.0 million. The Commercial Paper Series 2013-A are secured by a new standby liquidity facility agreement with TD Bank, NA that expires on August 3, 2025. As of June 30, 2023, the outstanding commercial paper had a term of 20 days with a maturity date July 20, 2023

TABLE 28 – Commercial Paper

As of June 30 (\$ in thousands)

Commercial paper	As of June 30, 2021	Additions	Reductions	As of June 30, 2022	Additions	Reductions	As of June 30, 2023
Commercial paper	\$ 31,000	\$ 86,700	\$ (97,700)	\$ 20,000	\$ 17,250	\$ -	\$ 37,250

The University incurred total fees of \$1.0 million and \$0.7 million in FY2023 and FY2022, respectively, associated with the use of commercial paper.

Line of Credit

During FY2022, the University amended the existing line of credit agreement with Bank of America maintaining a maximum loan amount of \$150.0 million. The line of credit has an updated maturity date of May 1, 2024.

As of June 30, 2023, the outstanding balance on the line of credit was \$0.

11. Other Liabilities

Table 29 shows current and long-term portions of other liabilities as recorded in the Statements of Net Position (\$ in thousands):

TABLE 29 – Current Portion and Total Other Liabilities

As of June 30 (\$ in thousands)

Other Liabilities	As of June 30, 2022	Current portion as of June 30, 2022	As of June 30, 2023	Current portion as of June 30, 2023
Compensated absences*	\$ 129,152	\$ 104,112	\$ 132,131	\$ 106,583
Workers' compensation*	19,656	3,544	19,965	3,853
Unearned revenues	180,763	120,833	213,585	134,432
Advances and deposits	19,262	5,232	15,578	3,950
Other liabilities	139,995	82,066	127,340	63,834

* The University includes compensated absences and workers' compensation short-term liabilities within accounts payable and accrued expenses on the Statements of Net Position.

12. Fringe Benefits

During the years ended June 30, 2023 and 2022, the Commonwealth paid \$467.7 million and \$430.9 million, respectively, for the University's portion of fringe benefit costs which includes pension expense, health insurance for active employees and retirees, and terminal leave. Of this amount, the University reimbursed the Commonwealth \$145.8 million and \$158.0 million during the years ended June 30, 2023 and 2022, respectively. The remaining portion is included in revenue as state appropriations.

13. Benefit Plans

Defined Benefit Plan

The Massachusetts State Employees' Retirement System (MSERS) is a public employee retirement system (PERS) that administers a cost-sharing multi-employer defined benefit plan covering substantially all employees of the Commonwealth including University employees.

MSERS provides retirement, disability, survivor and death benefits to members and their beneficiaries. Massachusetts General Laws (MGL) establishes uniform benefit and contribution requirements for all contributory PERS. These requirements provide for superannuation retirement allowance benefits up to a maximum of 80% of a member's highest three-year to five-year average annual rate of regular compensation depending on the date of hire. Benefit payments are based upon a member's age, length of creditable service, and group creditable service, and group classification. The authority for amending these provisions rests with the Legislature.

The MSERS' funding policies were established by Chapter 32 of 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.

Member contributions for MSERS vary depending on the most recent date of membership, as shown in **Table 30**:

TABLE 30 – Membership Contributions

Hire date	% of Compensation
Prior to 1975	5% of regular compensation
1975 – 1983	7% of regular compensation
1984 – 6/30/1996	8% of regular compensation
7/1/1996 – present	9% of regular compensation except for State Police which is 12% of regular compensation
1979 – present	An additional 2% of regular compensation in excess of \$30,000

In addition, members within this group who join the system on or after April 2, 2012 will have their withholding rate reduced to 6% after achieving 30 years of creditable service.

The University makes contributions on behalf of the employees through a fringe benefit charge assessed by the Commonwealth. The fringe benefit charge amounted to \$185.1 million and \$178.9 million for the years ended June 30, 2023 and 2022, respectively. Annual covered payroll was 76.6% and 76.9% of annual total payroll for the University for the years ended June 30, 2023 and 2022, respectively.

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

The net pension liability as of June 30, 2023 was determined based on a measurement date of June 30, 2022 from an actuarial valuation as of January 1, 2022 rolled forward to June 30, 2022. The net pension liability measured as of June 30, 2022 was determined based on a measurement date of June 30, 2021 from an actuarial valuation as of January 1, 2021 rolled forward to June 30, 2021. There are no significant changes known which would impact the total pension liability between the measurement date and the reporting date, other than typical plan experience.

At June 30, 2023 and 2022, the University reported a liability of \$444.8 million and \$276.3 million, respectively, for its proportionate share of MSERS net pension liability, respectively. The University's proportion of the net pension liability was based on a projection of the University's long-term share of contributions to the pension plan relative to the total projected contributions of all participating entities, actuarially determined. The University's proportion of the pension plan at measurement dates of June 30, 2022 and 2021 was 3.2% and 2.6%, respectively.

For the fiscal years ended June 30, 2023 and 2022, the University recognized a net pension expense of \$28.1 million and net pension benefit of \$5.3 million, respectively.

The University reported its proportionate share of MSERS's deferred outflows of resources and deferred inflows of resources related to pensions from the following sources as of June 30, 2023 and 2022 (\$ in thousands), as presented in **Tables 31** and **32**:

TABLE 31 – University's Proportionate Share of MSERS, FY2023

As of June 30, 2023 (\$ in thousands)

Pension resource	Deferred outflows of resources	Deferred inflows of resources
Changes of assumptions	\$ 12,247	\$ -
Changes in proportion due to internal allocation	86,900	100,064
Employer contributions after measurement date	37,980	-
Differences between expected and actual experience	11,065	17,362
Net difference between projected and actual investment earnings on pension plan investments	-	2,371
Changes in proportion from Commonwealth	30	1,203
Total	\$ 148,222	\$ 121,000

TABLE 32 – University's Proportionate Share of MSERS, FY2022

As of June 30, 2022 (\$ in thousands)

Pension resource	Deferred outflows of resources	Deferred inflows of resources
Changes of assumptions	\$ 18,837	\$ -
Changes in proportion due to internal allocation	41,536	136,997
Employer contributions after measurement date	45,010	-
Differences between expected and actual experience	9,534	20,005
Net difference between projected and actual investment earnings on pension plan investments	-	108,331
Changes in proportion from Commonwealth	110	873
Total	\$ 115,027	\$ 266,206

Amounts reported as deferred outflows of resources relating to pension resulting from the University's contributions subsequent to the measurement date will be recognized as a reduction to pension expense (benefit) in the next fiscal year. The remaining difference between the University's balances of deferred outflows and inflows of resources will be recognized in pension expense (benefit) as presented in **Table 33**:

TABLE 33 – Amortization of Pension Expense in Future Years

(\$ in thousands)

Year ended June 30	Pension
2024	\$ (937)
2025	(8,691)
2026	(22,671)
2027	21,541
Total	\$ (10,758)

Actuarial Assumptions

Significant actuarial assumptions used at each respective measurement date are presented in **Table 34**:

TABLE 34 – Actuarial Assumptions

Assumption	June 30, 2022	June 30, 2021
Investment rate of return	7.00%	7.00%
Interest rate credited to the annuity savings fund	3.50%	3.50%
Cost of living increases on the first \$13,000 per year	3.00%	3.00%
Salary increases*	4.0% to 9.0%	4.0% to 9.0%
Mortality rates:		
Pre-retirement	RP-2014 Blue Collar Employees Scale MP-2020 **	RP-2014 Blue Collar Employees Scale MP-2020 **
Post-retirement	RP-2014 Blue Collar Healthy Annuitant Scale MP-2020 **	RP-2014 Blue Collar Healthy Annuitant Scale MP-2020 **
Disability	RP-2014 Blue Collar Healthy Annuitant Scale MP-2020 ***	RP-2014 Blue Collar Healthy Annuitant Scale MP-2020 ***

* Salary increases were based on analysis of past experiences depending on group and length of service

** Set forward one year for females.

*** Set forward one year

Investment Allocation

Investment assets of MSERS are with the Pension Reserves Investment Trust (PRIT) Fund. 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 PRIT Fund's target asset allocation as of June 30, 2022 and 2021 are summarized in **Tables 35** and **36**:

TABLE 35 – Target Asset Allocation as of June 30, 2022

Asset class	Target allocation	Long-term expected real rate of return
Global equity	38.00%	4.20%
Core fixed income	15.00%	0.50%
Private equity	15.00%	7.30%
Portfolio completion strategies	10.00%	2.70%
Real estate	10.00%	3.30%
Value added fixed income	8.00%	3.70%
Timber / natural resources	4.00%	3.90%
Total	100.00%	

TABLE 36 – Target Asset Allocation as of June 30, 2021

Asset class	Target allocation	Long-term expected real rate of return
Global equity	39.00%	4.80%
Core fixed income	15.00%	0.30%
Private equity	13.00%	7.80%
Portfolio completion strategies	11.00%	2.90%
Real estate	10.00%	3.70%
Value added fixed income	8.00%	3.90%
Timber / natural resources	4.00%	4.30%
Total	100.00%	

Discount Rate

The discount rate used to measure the total pension liability was 7.00% for both June 30, 2022 and 2021. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rates and the Commonwealth's contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rates. Based on those assumptions, the 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.

Sensitivity Analysis

Table 37 illustrates the impact of a 1% change in the discount rate for the net pension liability at June 30, 2023 and 2022 (\$ in thousands):

TABLE 37 – Sensitivity Analysis of Discount

As of June 30, 2023 and 2022 (\$ in thousands)

Fiscal year ended	1% Decrease	Current discount rate	1% Increase
June 30, 2023	\$ 613,514	\$ 444,824	\$ 302,088
June 30, 2022	422,938	276,313	155,799

Defined Contribution Plan

Non-vested faculty and certain other employees of the University can opt out of MSERS and participate in a defined contribution plan, the Optional Retirement Plan (ORP), administered by the Commonwealth's Department of Higher Education. As of June 30, 2023 and 2022, there were 2,255 and 2,191 participants in the ORP, respectively. Employees contribute at the same rate as members in MSERS and the Commonwealth matches 5% of employee contributions. The Commonwealth contributed \$9.6 million and \$8.9 million in 2023 and 2022, respectively. University employees contributed \$23.1 million and \$21.3 million in 2023 and 2022, respectively.

The MSERS and ORP retirement contributions of employees who become members of MSERS or ORP after January 1, 2011 are subject to a state compensation limit. Effective January 1, 2011, the University established a defined contribution plan, the University of Massachusetts 401(a) Retirement Gap Plan (Gap Plan). Employees with MSERS or ORP membership dates after January 1, 2011 are eligible to participate in the Gap Plan. Eligible employees begin participation in the Gap Plan when their regular compensation exceeds the state compensation limit in effect for the plan year, at which point their contributions to MSERS or ORP are required to stop for the remainder of the plan year. Employee contributions to the Gap Plan are mandatory and at the same rate as MSERS and ORP; the University contributes 5%. As of June 30, 2023 and 2022, the plan assets of the Gap Plan were \$10.2 million and \$8.8 million, respectively.

In addition, UMG offers a defined contribution retirement plan. Employees working at least 20 hours a week are eligible to participate in the plan after 90 days of employment. UMG contributes 3% of each employee's eligible annual salary, as defined by the plan. Eligible employees may contribute up to 6% of their eligible salary and UMG matches their contributions. UMG's total contribution to the plan was \$3.1 million for FY 2023 and \$2.8 million for the period from September 1, 2021 to June 30, 2022.

Other component units may opt to offer defined contribution retirement plans. These are not material in relation to the University as a whole and detailed plan information are therefore not presented.

14. Other Postemployment Benefits

The Commonwealth administers the State Retirees' Benefit Trust, a single employer defined Postemployment Benefits Other Than Pensions (OPEB) Plan (the Plan). Benefits are managed by the Group Insurance Commission (GIC) and investments are managed by the Pension Reserves Investment Management Board (PRIM).

Benefits Provided

Under Chapter 32A of the MGL 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/benefit costs, which are comparable to contributions required from employees.

Employer and employee contribution rates are set in MGL. The Commonwealth recognizes its share of the costs on an actuarial basis. As of June 30, 2023 and 2022, the retirees' share of premium costs is between 10% – 20%, depending on the date of hire.

OPEB Liabilities, OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

The total OPEB liability as of June 30, 2023 was determined based on a measurement date of June 30, 2022 from an actuarial valuation as of January 1, 2022 rolled forward to June 30, 2022. The total OPEB liability as of June 30, 2022 was determined based on a measurement date of June 30, 2021 from an actuarial valuation as of January 1, 2021 rolled forward to June 30, 2021. There are no significant changes known which would impact the total OPEB liability between the measurement date and the reporting date, other than typical plan experience.

As of June 30, 2023 and 2022, the University reported a liability of \$559.8 million and \$485.1 million, respectively, for its proportionate share of the OPEB liability. The University's proportion of the OPEB liability was based on a projection of the University's long-term share of contributions to the OPEB plan relative to the total projected contributions of all participating entities, actuarially determined. The University's proportion of the OPEB plan at measurement dates of June 30, 2022 and 2021 was 4.19% and 3.03%, respectively.

For the fiscal years ended June 30, 2023 and 2022, the University recognized a net OPEB benefit of \$26.5 million and \$35.3 million, respectively.

The University reported its proportionate share of deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources as of June 30, 2023 and 2022, respectively, as shown in **Tables 38** and **39** (\$ in thousands):

TABLE 38 – University's Proportionate Share of OPEB, FY2023

As of June 30, 2023 (\$ in thousands)

OPEB resources	Deferred outflows of resources	Deferred inflows of resources
Changes of assumptions	\$ 41,232	\$ 202,606
Changes in proportion due to internal allocation	236,707	269,056
Employer contributions after measurement date	18,861	-
Differences between expected and actual experience	10,305	92,682
Investment earnings on OPEB plan investments	851	-
Changes in proportion from Commonwealth	257	2,765
Total	\$ 308,213	\$ 567,109

TABLE 39 – University's Proportionate Share of OPEB, FY2022

As of June 30, 2022 (\$ in thousands)

OPEB resources	Deferred outflows of resources	Deferred inflows of resources
Changes of assumptions	\$ 40,744	\$ 95,435
Changes in proportion due to internal allocation	82,095	353,890
Employer contributions after measurement date	21,091	-
Differences between expected and actual experience	12,384	85,400
Investment earnings on OPEB plan investments	-	5,896
Changes in proportion from Commonwealth	544	2,107
Total	\$ 156,858	\$ 542,728

Amounts reported as deferred outflows of resources relating to OPEB resulting from the University's contributions subsequent to the measurement date will be recognized as a reduction to OPEB expense (benefit) in the next fiscal year. The remaining difference between the University's balances of deferred outflows and inflows of resources related to OPEB will be recognized in OPEB expense (benefit), as shown in **Table 40**:

TABLE 40 – Amortization of OPEB Expense in Future Years

(\$ in thousands)

Year ended June 30	Pension
2024	\$ (66,375)
2025	(65,523)
2026	(62,293)
2027	(58,520)
2028	(25,046)
Total	\$ (277,757)

Actuarial Assumptions

Significant actuarial assumptions used at the 2022 measurement date are as follows:

Long-term rate of return on investment: 7.00%

Annual healthcare cost trend rates:

Developed based on the most recent published SAO-Getzen trend rate model, version 2022_f4.

Short-term: Based on review of the plan's historical trend rates during fiscal years 2021 and 2022, along with industry surveys, separately for non-Medicare and Medicare benefits. The industry surveys were used to predict short-term future per capita cost increases.

Long-term: Based on the most recent published SAO-Getzen model for trend rates beginning in 2023 and thereafter, based on the plan's long-term inflation assumption and reasonable macro-economic assumptions for the growth of health care expenditures during this period relative to the general economy. See **Table 41** for annual healthcare cost trend rates.

TABLE 41 – Annual Healthcare Cost Trend Rates

Year	Medicare benefits	Non-Medicare benefits
2022	5.00%	7.60%
2023	6.80%	9.11%
2024	6.79%	8.82%
2025	4.99%	6.72%
2026	4.99%	6.43%
2031	4.97%	4.97%
2041	4.78%	4.78%
2051	4.62%	4.62%
2061	4.53%	4.53%
2071	4.15%	4.15%
2075+	3.94%	3.94%

Getzen long run growth factors:

- Inflation: 2.50%
- Real GDP Growth: 1.40%
- Excess Medical Growth: 1.00%

Mortality rates:

RP-2014 Blue Collar Employees projected with Scale MP-2020 from the central year, with females set forward one year

Participation rates:

- 100% of employees currently electing healthcare coverage are assumed to elect coverage at retirement.
- 35% of employees currently opting out of active health coverage are assumed to elect to enroll in retiree coverages.
- 85% of current and future vested terminated participants will elect health care benefits at age 55 or if later, the participant's current age.
- Retirees who currently elect to waive their coverage are assumed to remain uncovered in the future.
- 100% of spouses are assumed to elect to continue coverage after retiree's death.
- Current non-Medicare eligible retirees and spouses (if covered) under age 65 who are in a POS/PPO plan are assumed to move to an Indemnity plan if they are Medicare eligible at 65. All others are assumed to remain in their currently elected product type (Indemnity/POS/PPO/HMO).
- Future retirees are assumed to enroll in the existing plan in the same proportion as the current retiree mix, as shown in **Table 42**. These proportions are established separately for non-Medicare and Medicare coverage for each product type.

TABLE 42 – Future Enrollment Proportions

Plan	Retirement age under 65	Retirement age over 65
Indemnity	28.0%	96.0%
POS/PPO	62.0%	0.0%
HMO	10.0%	4.0%

Significant actuarial assumptions used at the 2021 measurement date are as follows:

Long-term rate of return on investment: 7.00%**Annual healthcare cost trend rates:**

Developed based on the most recent published SAO-Getzen trend rate model, version 2021_b.

Short-term: Based on review of the plan's historical trend rates during fiscal years 2020 and 2021, along with industry surveys, separately for non-Medicare and Medicare benefits. The industry surveys were used to predict short-term future per capita cost increases.

Long-term: Based on the most recent published SAO-Getzen model for trend rates beginning in 2022 and thereafter, based on the plan's long-term inflation assumption and reasonable macro-economic assumptions for the growth of health care expenditures during this period relative to the general economy. See **Table 43** for annual healthcare cost trend rates.

TABLE 43 – Annual Healthcare Cost Trend Rates

Year	Medicare benefits	Non-Medicare benefits
2021	4.40%	7.30%
2022	4.49%	7.06%
2023	4.57%	6.83%
2024	4.66%	6.59%
2025	4.75%	6.36%
2030	5.18%	5.18%
2040	5.18%	5.18%
2050	5.18%	5.18%
2060	4.83%	4.83%
2070	4.38%	4.38%
2075+	4.04%	4.04%

Getzen long run growth factors:

- Inflation: 2.50%
- Real GDP Growth: 1.50%
- Excess Medical Growth: 1.10%

Mortality rates:

RP-2014 Blue Collar Employees projected with Scale MP-2020 from the central year, with females set forward one year

Participation rates:

- 100% of employees currently electing healthcare coverage are assumed to elect coverage at retirement.
- 35% of employees currently opting out of active health coverage are assumed to elect to enroll in retiree coverages.
- 85% of current and future vested terminated participants will elect health care benefits at age 55 or if later, the participant's current age.
- Retirees who currently elect to waive their coverage are assumed to remain uncovered in the future.
- 100% of spouses are assumed to elect to continue coverage after retiree's death.
- Current non-Medicare eligible retirees and spouses (if covered) under age 65 who are in a POS/PPO plan are assumed to move to an Indemnity plan if they are Medicare eligible at 65. All others are assumed to remain in their currently elected product type (Indemnity/POS/PPO/HMO).
- Future retirees are assumed to enroll in the existing plan in the same proportion as the current retiree mix, as shown in **Table 44**. These proportions are established separately for non-Medicare and Medicare coverage for each product type.

TABLE 44 – Future Enrollment Proportions

Plan	Retirement age under 65	Retirement age over 65
Indemnity	28.0%	96.0%
POS/PPO	60.0%	0.0%
HMO	12.0%	4.0%



Investment Allocation

Investment assets of the 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 are summarized in **Tables 45** and **46**:

TABLE 45 – Target Asset Allocation as of June 30, 2022

Asset class	Target allocation	Long-term expected real rate of return
Global equity	38.00%	4.20%
Core fixed income	15.00%	0.50%
Private equity	15.00%	7.30%
Portfolio completion strategies	10.00%	2.70%
Real estate	10.00%	3.30%
Value added fixed income	8.00%	3.70%
Timber / natural resources	4.00%	3.90%
Total	100.00%	

TABLE 46 – Target Asset Allocation as of June 30, 2021

Asset class	Target allocation	Long-term expected real rate of return
Global equity	39.00%	4.80%
Core fixed income	15.00%	0.30%
Private equity	13.00%	7.80%
Portfolio completion strategies	11.00%	2.90%
Real estate	10.00%	3.70%
Value added fixed income	8.00%	3.90%
Timber / natural resources	4.00%	4.30%
Total	100.00%	

Discount Rate

The discount rates used to measure the total OPEB liability as of June 30, 2022 and 2023 were 4.30% and 2.77%, respectively. These rates were based on a blend of the Bond Buyer Index rates of 3.54% and 2.16%, respectively, as of the measurement dates June 30, 2022 and 2021 and the long term rate of return on Plan investments of 7.00%. The 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 2041. Therefore, the long-term expected rate of return on plan investments was not applied to all periods of projected benefit payments to determine the total OPEB liability as of June 30, 2022 and 2021.

Sensitivity Analysis of Discount

Table 47 presents the net OPEB liability of the Commonwealth calculated using the discount rate, as well as what 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 (\$ in thousands):

TABLE 47 – Sensitivity Analysis of Discount

As of June 30, 2022 and 2021 (\$ in thousands)

Fiscal year ended	1% Decrease	Current discount rate	1% Increase
June 30, 2022	\$ 653,075	\$ 559,807	\$ 483,194
June 30, 2021	576,343	485,141	411,679

Sensitivity Analysis of Healthcare Cost Trend Rate

Table 48 presents the net OPEB liability of the Commonwealth, 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 (\$ in thousands):

TABLE 48 – Sensitivity Analysis of Healthcare Cost Trend Rate

As of June 30, 2022 and 2021 (\$ in thousands)

Fiscal year ended	1% Decrease	Current discount rate	1% Increase
June 30, 2022	\$ 469,278	\$ 559,807	\$ 674,405
June 30, 2021	397,231	485,141	599,717



15. Operating Expenses and Interest

Table 49 summarizes the University's operating and interest expenses by natural and functional classification for the year ended June 30, 2023 (\$ in thousands):

TABLE 49 – Operating Expenses and Interest, FY2023

For the year ended June 30, 2023 (\$ in thousands)

Expense / interest	Compensation and benefits	Supplies and services	Scholarships and fellowships	Depreciation and amortization	Interest	Total
Educational and general						
Instruction	\$ 862,872	\$ 133,931	\$ -	\$ -	\$ -	\$ 996,803
Research	346,938	239,354	-	-	-	586,292
Public service	62,464	25,117	-	-	-	87,581
Academic support	152,317	69,852	-	-	-	222,169
Student services	155,380	84,659	-	-	-	240,039
Institutional support	258,715	85,265	-	-	-	343,980
Operation and maintenance of plant	122,529	137,344	-	-	-	259,873
Depreciation and amortization	-	-	-	344,872	-	344,872
Scholarships and fellowships	-	-	62,237	-	-	62,237
Auxiliary enterprises	161,242	191,385	-	-	-	352,627
Other expenditures						
Independent operations	22,880	33,725	-	-	-	56,605
Public service activities	117,473	137,678	-	-	-	255,151
Total operating expenses	\$ 2,262,810	\$ 1,138,310	\$ 62,237	\$ 344,872	\$ -	\$ 3,808,229
Interest expense	-	-	-	-	129,132	129,132
Total operating expenses and interest	\$ 2,262,810	\$ 1,138,310	\$ 62,237	\$ 344,872	\$ 129,132	\$ 3,937,361



Table 50 summarizes the University's operating expenses and interest by natural and functional classification for the year ended June 30, 2022 (\$ in thousands):

TABLE 50 – Operating Expenses and Interest, FY2022

For the year ended June 30, 2022 (\$ in thousands)

Expense / interest	Compensation and benefits	Supplies and services	Scholarships and fellowships	Depreciation and amortization	Interest	Total
Educational and general						
Instruction	\$ 814,334	\$ 116,028	\$ -	\$ -	\$ -	\$ 930,362
Research	320,970	230,397	-	-	-	551,367
Public service	53,090	18,559	-	-	-	71,649
Academic support	134,984	59,169	-	-	-	194,153
Student services	137,545	73,543	-	-	-	211,088
Institutional support	234,661	81,149	-	-	-	315,810
Operation and maintenance of plant	109,063	133,686	-	-	-	242,749
Depreciation and amortization	-	-	-	330,715	-	330,715
Scholarships and fellowships	-	-	121,334	-	-	121,334
Auxiliary enterprises	141,473	179,062	-	-	-	320,535
Other expenditures						
Independent operations	23,860	34,722	-	-	-	58,582
Public service activities	105,589	147,831	-	-	-	253,420
Total operating expenses	\$ 2,075,569	\$ 1,074,146	\$ 121,334	\$ 330,715	\$ -	\$ 3,601,764
Interest expense	-	-	-	-	117,244	117,244
Total operating expenses and interest	\$ 2,075,569	\$ 1,074,146	\$ 121,334	\$ 330,715	\$ 117,244	\$ 3,719,008

16. Unrestricted Net Position

According to the University's reserve policy, unrestricted net position is designated for certain purposes. Below are the designations used by the University, as described in the University's policy:

- **Unexpended plant and facilities:** funds designated for capital projects, equipment and the major renovations of all existing buildings including research, education and general, and auxiliary.
- **Auxiliary enterprises:** funds related to self-supporting activities which provide non-instructional support in the form of goods and services to students, faculty, and staff upon payment of a specific user charge or fee.
- **Education and general:** funds designated for operational requirements, academic initiatives, research, faculty recruitment, and University initiatives.
- **Quasi-endowment:** funds related to unrestricted resources invested in the Foundation's pooled endowment fund, intended to be invested for the long-term unless otherwise approved by the Board of Trustees or a designated authority.
- **Stabilization:** funds designated to provide budgetary stabilization for operations due to unforeseen and/or uncontrollable circumstances to ensure responsible long-term financial stability.
- **Other unrestricted:** funds undesignated for a specific use or purpose.

Table 51 summarizes the University's unrestricted net position as of June 30, 2023 and 2022 (\$ in thousands):

TABLE 51 – Unrestricted Net Position

As of June 30, 2023 and 2022 (\$ in thousands)

Unrestricted resources	2023	2022
Unexpended plant and facilities	\$ 467,237	\$ 418,477
Auxiliary enterprises	123,013	89,237
Education and general	469,562	410,252
Quasi-endowment	412,813	379,143
Stabilization	157,467	152,667
Other unrestricted	25,432	30,023
Subtotal	1,655,524	1,479,799
Unfunded portion of pension liabilities	(417,602)	(427,492)
Unfunded portion of postretirement benefits other than pension liabilities	(818,703)	(871,010)
Total unrestricted net position	\$ 419,219	\$ 181,297

17. Commitments and Contingencies

In June 2019, the University entered into an agreement to lease property located at 200 Mount Vernon Street in Dorchester, Massachusetts to an unrelated party (the Developer). The Developer plans to develop a mixed-use opportunity at the site. Under the terms of the agreement, the Developer, subject to certain contingencies, may enter into a 99-year ground lease for an initial fixed rent upfront payment of up to \$235.0 million, with a minimum payment of \$192.5 million.

At June 30, 2023, the University held the \$11.5 million that is a fully nonrefundable deposit. Subsequent to the year end, an additional \$11.0 million was released to the University as a nonrefundable deposit. The University has the ability to terminate the agreement at any time subject to the terms of the agreement.

The University has outstanding purchase commitments with contractors for the construction of certain facilities as of June 30, 2023 and 2022 of \$193.1 million and \$181.5 million, respectively.

From time to time, the University is involved in routine litigation that arises in the ordinary course of business. There are no significant legal proceedings to which the University is a party for which management believes the ultimate outcome would have a material adverse effect on the University's financial position.

18. Blended Component Units

Condensed information for the University's blended component units, the Building Authority, WCCC and UMG as of June 30, 2023 (\$ in thousands), is presented in **Tables 52, 53 and 54**:

TABLE 52 – Condensed Information from the Statements of Net Position, FY2023

As of June 30, 2023 (\$ in thousands)

Condensed Information from the Statements of Net Position	Building Authority	Eliminations	WCCC	Eliminations	UMG	Eliminations
Capital assets, net	\$ 3,972,090	\$ (449,531)	\$ 362,905	\$ -	\$17,902	\$ -
Lease receivable	152,155	(2,706)	165,542	-	-	-
Other assets	606,522	227,945	149,240	-	36,086	-
Deferred outflows	100,624	374	7,304	-	-	-
Total assets and deferred outflows	4,831,391	(223,918)	684,991	-	53,988	-
Debt, including commercial paper	3,404,378	(158,431)	289,273	-	100,624	-
Lease liability	27,803	(23,767)	-	-	11,846	-
Other liabilities	133,744	(11,504)	14,989	-	23,714	-
Deferred inflows	59,660	(2,579)	157,281	-	-	-
Total liabilities and deferred inflows	3,625,585	(196,281)	461,543	-	136,184	-
Total net position	\$1,205,806	\$ (27,637)	\$223,448	\$ -	\$ (82,196)	\$ -

TABLE 53 – Condensed Information from the Statements of Revenues, Expenses, and Changes in Net Position, FY2023

For the year ended June 30, 2023 (\$ in thousands)

Condensed Information from the Statements of Revenues, Expenses, and Changes in Net Position	Building Authority	Eliminations	WCCC	Eliminations	UMG	Eliminations
Other revenues	\$ 318,204	\$ (279,269)	\$ 99,295	\$ (62,979)	\$ 105,457	\$ -
Total revenues	318,204	(279,269)	99,295	(62,979)	105,457	-
Operation and maintenance of capital assets	6,861	(21,279)	28,538	(27,995)	-	-
Depreciation	169,512	(26,409)	18,978	-	7,343	-
Interest expense	125,216	(132,012)	9,294	-	2,560	-
Other expenses	21,280	(96,969)	25,025	(32,139)	113,385	-
Total expenses	322,869	(276,669)	81,835	(60,134)	123,288	-
Increase (decrease) in net position	\$ (4,665)	\$ (2,600)	\$ 17,460	\$ (2,845)	\$ (17,831)	\$ -

TABLE 54 – Condensed Information from the Statements of Cash Flows, FY2023

For the year ended June 30, 2023 (\$ in thousands)

Condensed Information from the Statements of Cash Flows	Building Authority	Eliminations	WCCC	Eliminations	UMG	Eliminations
Net cash provided by (used in) operating activities	\$ 206,966	\$ (2,600)	\$ 27,688	\$ (2,845)	\$ (18,891)	\$ -
Net cash provided by (used in) investing activities	195,135	-	(5,585)	-	77	-
Net cash provided by noncapital financing activities	-	-	-	-	510	-
Net cash (used in) provided by capital and other financing activities	(384,226)	-	(16,739)	-	(7,459)	-
Change in cash and cash equivalents	\$ 17,875	\$ (2,600)	\$ 5,364	\$ (2,845)	\$ (25,763)	\$ -

Condensed information for the University's blended component units, the Building Authority and WCCC, is presented below as of June 30, 2022 is presented in **Tables 55, 56 and 57** (\$ in thousands):

TABLE 55 – Condensed Information from the Statements of Net Position, FY2022

As of June 30, 2022 (\$ in thousands)

Condensed Information from the Statements of Net Position	Building Authority	Eliminations	WCCC	Eliminations	UMG	Eliminations
Capital assets, net	\$ 3,886,205	\$ (457,933)	\$ 377,949	\$ -	\$ 50,197	\$ -
Lease receivable	161,183	(8,360)	174,211	-	-	-
Other assets	787,816	213,692	141,208	-	61,097	-
Deferred outflows	109,949	(284)	8,120	-	-	-
Total assets and deferred outflows	4,945,153	(252,885)	701,488	-	111,294	-
Debt, including commercial paper	3,525,668	(200,883)	311,871	-	140,787	-
Lease liability	30,796	(10,068)	-	-	5,671	-
Other liabilities	113,860	(13,708)	14,501	-	29,201	-
Deferred inflows	64,358	(3,189)	169,128	-	-	-
Total liabilities and deferred inflows	3,734,682	(227,848)	495,500	-	175,659	-
Total net position	\$ 1,210,471	\$ (25,037)	\$ 205,988	\$ -	\$ (64,365)	\$ -

TABLE 56 – Condensed Information from the Statements of Revenues, Expenses, and Changes in Net Position, FY2022

For the year ended June 30, 2022 (\$ in thousands)

Condensed Information from the Statements of Revenues, Expenses, and Changes in Net Position	Building Authority	Eliminations	WCCC	Eliminations	UMG	Eliminations
Other revenues	\$ 306,884	\$ (153,122)	\$ 97,388	\$ (52,816)	\$ 101,936	\$ -
Total revenues	306,884	(153,122)	97,388	(52,816)	101,936	-
Operation and maintenance of capital assets	5,743	(1,055)	26,632	(25,118)	-	-
Depreciation	164,139	(23,001)	17,771	-	4,292	-
Interest expense	114,102	(105,069)	9,717	-	2,702	-
Other expenses	9,557	(7,714)	20,455	(27,698)	111,480	(420)
Total expenses	293,541	(136,839)	74,575	(52,816)	118,474	(420)
Increase (decrease) in net position	\$ 13,343	\$ (16,283)	\$ 22,813	\$ -	\$ (16,538)	\$ 420

TABLE 57 – Condensed Information from the Statements of Cash Flows, FY2022

For the year ended June 30, 2022 (\$ in thousands)

Condensed Information from the Statements of Cash Flows	Building Authority	Eliminations	WCCC	Eliminations	UMG	Eliminations
Net cash provided by (used in) operating activities	\$ 186,174	\$ (16,283)	\$ 2,948	\$ -	\$ (26,682)	\$ 420
Net cash provided by (used in) investing activities	(195,862)	-	(33,474)	-	-	-
Net cash provided by noncapital financing activities	-	-	-	-	2,915	-
Net cash provided by (used in) capital and other financing activities	98,007	-	33,133	-	(2,957)	-
Change in cash and cash equivalents	\$ 88,319	\$ (16,283)	\$ 2,607	\$ -	\$ (26,724)	\$ 420

The UMass Amherst Foundation, UMass Medical School Foundation and the UMLARC are not material in relation to the other blended component units nor the University as a whole and is therefore not presented in the above condensed information.

19. Discretely Presented Component Units

As described in Note 1, UMF and UMDF are discretely presented component units. These Foundations are presented in the aggregate in the accompanying financial statements. Following is supplemental information on UMF's non-agency investments, which is not included in its entirety elsewhere in these financial statements.

This note excludes agency funds held with the Foundation that are not the University's in the amount of \$18.8 million and \$20.5 million as of June 30, 2023 and 2022. UMF's investment portfolio represents approximately 74.7% of the aggregate discretely presented component units. This note does not include investment information for UMDF assets not held by UMF given the immaterial nature of UMDF's balances and activities.

Investments

UMF's disclosure regarding investments in debt and equity securities, owned by the University, is captured in Note 4. Additional disclosure related to UMF's non-agency investments is noted below.

Custodial Credit Risk

UMF maintains depository, payroll, disbursement, receipt, and imprest accounts. In addition to bank account deposits, UMF held money market instruments which are classified as investments. Interest bearing and money market accounts carry Federal Deposit Insurance Corporation (FDIC) insurance up to \$250,000 per account. None of the accounts are collateralized above the FDIC insured amounts.

Concentration of Credit Risk — As of June 30, 2023 and 2022, there is no concentration of investments from one issuer equal or greater than 5% of the portfolio. Investments issued or guaranteed by the U.S. government, as well as investments in mutual funds and other pooled investments are excluded from consideration when evaluating concentration risk.



Credit Risk — UMF's investment policy allows each portfolio manager full discretion within the parameters of the investment guidelines specific to that manager. Nationally recognized statistical rating organizations, such as Standards & Poor's (S&P) assign credit ratings to security issues and issuers that indicate a measure of potential credit risk to investors.

Table 58 below presents the debt investments at fair value by credit quality of UMF's non-agency investment portfolio as of June 30, 2023 (\$ in thousands):

TABLE 58 – Debt Investments by Credit Quality, FY2023

As of June 30, 2023 (\$ in thousands)

Debt securities	2023	S&P rating
U.S. Treasury securities	\$ 58,308	AAA
Total debt securities	\$ 58,308	

Table 59 presents the debt investments at fair value by credit quality of UMF's non-agency investment portfolio as of June 30, 2022 (\$ in thousands):

TABLE 59 – Debt Investments by Credit Quality, FY2022

As of June 30, 2022 (\$ in thousands)

Debt securities	2023	S&P rating
U.S. Treasury securities	\$ 67,367	AAA
Bond funds, including exchange traded funds	2,046	Not Rated
Total debt securities	\$ 69,413	

Interest Rate Risk — UMF's Investment Policy and Guidelines Statement establishes targets for the preferred duration of the fixed income component of the investment portfolio by asset class by limiting investments through targeted allocations to different asset classes.

Table 60 presents the fair value by investment maturity of the debt investments of UMF's non-agency investment portfolio as of June 30, 2023(\$ in thousands):

TABLE 60 – Debt Investments by Maturity, FY2023

As of June 30, 2023 (\$ in thousands)

Debt securities	Less than 1 year	1 to 5 years	6 to 10 years	More than 10 years	Total
U.S. Treasury securities	\$ 1,850	\$ 56,458	\$ -	\$ -	\$ 58,308
Total debt securities	\$ 1,850	\$ 56,458	\$ -	\$ -	\$ 58,308

Table 61 presents the fair value by investment maturity of the debt investments of UMF's non-agency investment portfolio as of June 30, 2022 (\$ in thousands):

TABLE 61 – Debt Investments by Maturity, FY2022

As of June 30, 2022 (\$ in thousands)

Debt securities	Less than 1 year	1 to 5 years	6 to 10 years	More than 10 years	Total
U.S. Treasury securities	\$ -	\$ 41,264	\$ 21,381	\$ 4,722	\$ 67,367
Bond funds, including exchange traded funds	40	2,006	-	-	2,046
Total debt securities	\$ 40	\$ 43,270	\$ 21,381	\$ 4,722	\$ 69,413

Fair Value Measurement — UMF's fair value measurement disclosure is captured in Note 4. Additional disclosure related to UMF's non-agency investments is as noted below.

Table 62 summarizes the fair value of UMF's non-agency investments by type as of June 30, 2023 (\$ in thousands):

TABLE 62 – Fair Value Hierarchy of Non-Agency Investments, FY2023

As of June 30, 2023 (\$ in thousands)

Non-agency investments	Investments measured at NAV	Investments classified in the fair value hierarchy Level 1	Investments classified in the fair value hierarchy Level 2	Investments classified in the fair value hierarchy Level 3	Total
Money market funds	\$ -	\$ 86,564	\$ -	\$ -	\$ 86,564
Debt securities					
U.S. Treasury securities	-	58,308	-	-	58,308
Total debt securities	-	58,308	-	-	58,308
Equity securities					
Domestic equities	-	112,817	-	-	112,817
International equities	-	39,158	-	-	39,158
Total equity securities	-	151,975	-	-	151,975
Alternative investments					
Multi-strategy hedge funds					
Equity	321,265	-	-	-	321,265
Long/short	159,451	-	-	-	159,451
Fixed income	42,688	-	-	-	42,688
Absolute return	39,494	-	-	-	39,494
Real assets	9,938	-	-	-	9,938
Private equity	76,906	-	-	-	76,906
Private debt	14,975	-	-	-	14,975
Private real estate	7,765	-	-	-	7,765
Annuity & Life Income Pooled Funds	3,754	-	-	-	3,754
Total alternative investments	676,236	-	-	-	676,236
Total investments	\$ 676,236	\$ 296,847	\$ -	\$ -	\$ 973,083

Table 63 summarizes the fair value of UMF's non-agency investments by type as of June 30, 2022 (\$ in thousands):

TABLE 63 – Fair Value Hierarchy of Non-Agency Investments, FY2022

As of June 30, 2022 (\$ in thousands)

Non-agency investments	Investments measured at NAV	Investments classified in the fair value hierarchy Level 1	Investments classified in the fair value hierarchy Level 2	Investments classified in the fair value hierarchy Level 3	Total
Money market funds	\$ -	\$ 65,637	\$ -	\$ -	\$ 65,637
Debt securities					
U.S. Treasury securities	-	67,367	-	-	67,367
Bond funds, including exchange traded funds	-	2,046	-	-	2,046
Total debt securities	-	69,413	-	-	69,413
Equity securities					
Domestic equities	-	65,685	-	-	65,685
International equities	-	29,907	-	-	29,907
Total equity securities	-	95,592	-	-	95,592
Alternative investments					
Multi-strategy hedge funds					
Equity	228,635	-	-	-	228,635
Long/short	157,063	-	-	-	157,063
Fixed income	31,830	-	-	-	31,830
Absolute return	36,059	-	-	-	36,059
Real assets	8,807	-	-	-	8,807
Private equity	76,036	-	-	-	76,036
Private debt	14,686	-	-	-	14,686
Private real estate	8,388	-	-	-	8,388
Annuity & life income pooled funds	3,404	-	-	-	3,404
Total alternative investments	564,908	-	-	-	564,908
Total investments	\$ 564,908	\$ 230,642	\$ -	\$ -	\$ 795,550

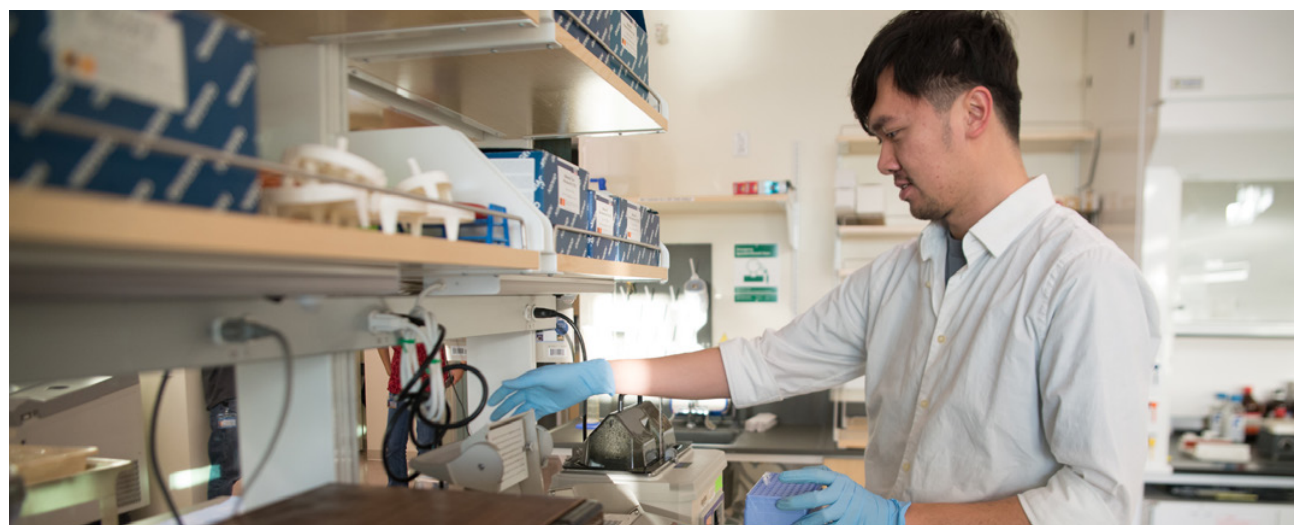


Table 64 presents unfunded commitments, redemption frequency and notice period for non-agency investments that have been valued using NAV as a practical expedient as of June 30, 2023 (\$ in thousands):

TABLE 64 – Alternative Non-Agency Investments, FY2023

As of June 30, 2023 (\$ in thousands)

Alternative investments	NAV	Unfunded commitments	Redemption terms	Notice period	Redemption restrictions
Common trust funds	\$ 3,754	\$ -	daily		No lock-up restrictions
Multi-strategy hedge funds					
Equity	321,265	-	daily to annual	1–90 days	Lock-up provisions range from none to 2 years.
Long/short	159,451	-	quarterly to annual	45–90 days	Lock-up provisions range from none to 2 years.
Fixed income	42,688	-	quarterly to semi-annual	**	No lock-up restrictions
Absolute return	39,494	-	quarterly to annual	45–65 days	No lock-up restrictions
Real assets	9,938	-	annual	90 days	No lock-up restrictions
Private equity and venture capital	76,906	32,666	closed end funds	*	Not redeemable
Private debt	14,975	9,601	closed end funds	*	Not redeemable
Private real estate	7,765	1,454	closed end funds	*	Not redeemable
Total	\$676,236	\$ 43,721			

* UMF has made commitments to various private equity and venture debt partnerships. The University expects these funds to be called over the next 1–5 years. Liquidity is expected to be received in the next 1–9 years.

** Includes fund(s) that restrict redemptions such that redemptions are at the sole discretion of the Fund. Redemption terms require 60 to 90 days notice.



Table 65 presents unfunded commitments, redemption frequency and notice period for non-agency investments that have been valued using NAV as a practical expedient as of June 30, 2022 (\$ in thousands):

TABLE 65 – Alternative Non-Agency Investments, FY2022

As of June 30, 2022 (\$ in thousands)

Alternative investments	NAV	Unfunded commitments	Redemption terms	Notice period	Redemption restrictions
Common trust funds	\$ 3,404	\$ -	Daily		No lock-up restrictions
Multi-strategy hedge funds					
Equity	228,635	-	Daily to quarterly	1–90 days	Lock-up provisions range from none to 2 years.
Long/short	157,063	-	Quarterly to annual	45–90 days	Lock-up provisions range from none to 2 years.
Fixed income	31,830	-	Quarterly to semi-annual	**	No lock-up restrictions
Absolute return	36,059	-	Quarterly to annual	45–65 days	No lock-up restrictions
Real assets	8,807	-	Annual	90 days	No lock-up restrictions
Private equity and venture capital	76,036	21,115	Closed end funds	*	Not redeemable
Private debt	14,686	9,839	Closed end funds	*	Not redeemable
Private real estate	8,388	1,476	Closed end funds	*	Not redeemable
Total	\$564,908	\$ 32,430			

* UMF has made commitments to various private equity and venture debt partnerships. The University expects these funds to be called over the next 1–5 years. Liquidity is expected to be received in the next 1–9 years.

** Includes fund(s) that restrict redemptions such that redemptions are at the sole discretion of the Fund. Redemption terms require 60 to 90 days notice.

20. Related Party Transactions

Members of the University's Board of Trustees and Officers may, from time to time, be associated, either directly or indirectly, with companies doing business with the University. The University requires an annual disclosure of significant financial interests in, family relationships, significant management function, or substantial business with entities doing business with the University by members of the University's Board of Trustees and Officers. When such relationships exist, measures are taken to assess potential conflicts of interest to protect the best interests of the University and ensure compliance with relevant conflict of interest laws and policy. The University's conflict of interest policy also requires, among other things, that no member of the Board of Trustees or Officer may participate in any decision in which they (or an immediate family member) has a material financial interest.

21. Subsequent Events

Subsequent to the year ended June 30, 2023, and through December 12, 2023, the University borrowed an additional \$15.0 million of tax-exempt commercial paper and rolled \$31.0 million of tax-exempt and \$6.25 million of taxable commercial paper with interest rates ranging from 3.95% to 5.67% with a maturity date of January 11, 2024, to fund construction projects at the Boston and Lowell campuses.

On July 26, 2023, the University entered a \$9.3 million letter of credit on behalf of UMass Global for the benefit of the U.S. Department of Education. This letter of credit is within the University's existing line of credit.

For purposes of determining the effects of subsequent events on these financial statements, management has evaluated events subsequent to June 30, 2023 and through December 12, 2023, the date the financial statements were issued.

Required Supplementary Information (unaudited)

For the last ten years* (\$ in thousands)

*Until a full ten year trend is compiled, the University is presenting only information for the years for which information is available.

Schedule of the University's Proportionate Share of the Net Pension Liability — Massachusetts State Employees' Retirement System

Based on the measurement date, June 30

Liability	2022	2021	2020	2019	2018	2017	2016	2015	2014
University's proportion of the net pension liability	3.20%	2.65%	3.76%	3.60%	3.09%	3.28%	3.12%	3.59%	3.49%
University's proportionate share of the net pension liability	\$ 444,824	\$ 276,313	\$ 644,879	\$ 526,739	\$ 409,319	\$ 420,234	\$ 429,871	\$ 408,418	\$ 237,134
University's covered-employee payroll	\$ 1,318,298	\$ 1,216,914	\$ 1,264,971	\$ 1,247,098	\$ 1,242,525	\$ 1,168,661	\$ 1,156,082	\$ 1,139,719	\$ 1,061,132
University's proportionate share of the net pension liability as a percentage of its covered-employee payroll	33.74%	22.71%	50.98%	42.24%	32.94%	35.96%	37.18%	35.83%	22.35%
Plan fiduciary net position as a percentage of total pension liability	71.05%	77.54%	62.48%	66.28%	67.91%	67.21%	63.48%	67.87%	76.32%

Schedule of the University's Contributions — Massachusetts State Employees' Retirement System

For the fiscal year ended June 30

Contributions	2023	2022	2021	2020	2019	2018	2017	2016	2015
Contractually required contribution	\$ 37,980	\$ 45,010	\$ 31,495	\$ 40,617	\$ 35,843	\$ 28,292	\$ 25,618	\$ 22,386	\$ 22,386
Contributions in relation to the contractually required contribution	(37,980)	(45,010)	(31,495)	(40,617)	(35,843)	(28,292)	(25,618)	(22,386)	(22,386)
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
University's covered-employee payroll	\$ 1,397,536	\$ 1,318,298	\$ 1,216,914	\$ 1,264,971	\$ 1,247,098	\$ 1,242,525	\$ 1,168,661	\$ 1,156,082	\$ 1,139,719
Contributions as a percentage of covered-employee payroll	2.72%	3.41%	2.59%	3.21%	2.87%	2.28%	2.19%	1.94%	1.96%

Schedule of the University's Proportionate Share of the Net Other Postemployment Benefits (OPEB) Liability — State Retirees' Benefit Trust

Based on the measurement date, June 30

Liabilities	2022	2021	2020	2019	2018 (restated)	2017
University's proportion of the net OPEB	4.19%	3.03%	4.01%	5.43%	4.82%	4.67%
University's proportionate share of the net OPEB	\$ 559,807	\$ 485,141	\$ 829,808	\$ 992,991	\$ 895,669	\$ 817,357
University's covered-employee payroll	\$ 1,318,298	\$ 1,216,914	\$ 1,264,971	\$ 1,247,098	\$ 1,242,525	\$ 1,168,661
University's proportionate share of the net OPEB as a percentage of its covered-employee payroll	42.46%	39.87%	65.60%	79.62%	72.08%	69.94%
Plan fiduciary net position as a percentage of total OPEB liability	13.00%	10.70%	6.40%	6.96%	6.01%	4.80%

Schedule of the University's Contributions — State Retirees' Benefit Trust

For the fiscal year ended June 30

Contributions	2023	2022	2021	2020	2019	2018
Contractually required contribution	\$ 18,861	\$ 21,091	\$ 16,538	\$ 21,040	\$ 26,137	\$ 21,421
Contributions in relation to the contractually required contribution	(18,861)	(21,091)	(16,538)	(21,040)	(26,137)	(21,421)
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
University's covered-employee payroll	\$ 1,397,536	\$ 1,318,298	\$ 1,216,914	\$ 1,264,971	\$ 1,247,098	\$ 1,242,525
Contributions as a percentage of covered-employee payroll	1.35%	1.60%	1.36%	1.66%	2.10%	1.72%



This page is intentionally left blank





University of Massachusetts

Amherst • Boston • Dartmouth • Lowell • Medical • Law

Controller's Office University of Massachusetts President's Office 50 Washington Street, Suite 3000, Westborough, MA

APPENDIX D
SUMMARY OF LEGAL DOCUMENTS

[Intentionally Left Blank]

SUMMARY OF CERTAIN PROVISIONS OF THE PROJECT TRUST AGREEMENT

The pledge and assignment made by the Authority in the Project Trust Agreement secures only bonds issued under the Project Trust Agreement and not bonds issued under any other trust agreement.

The following is a summary of certain provisions of the Project Trust Agreement. Such summary does not purport to be complete, and reference is made to the Project Trust Agreement for a complete statement of its provisions.

DEFINITIONS

Capitalized words or terms used in this Summary of Certain Provisions of the Project Trust Agreement and not defined shall have the meaning given to the applicable word or term elsewhere in this Official Statement.

“Account” shall mean any account created pursuant to the Agreement.

“Accreted Amount” shall mean, as of the date of computation and with respect to any Capital Appreciation Bond, the original principal amount of such Capital Appreciation Bond upon the initial issuance of the Series of Bonds of which such Bond is a part plus the interest accrued on such Bond compounded as provided in the applicable Series Resolution.

“Agreement,” “Trust Agreement” or “Project Trust Agreement” shall mean the Trust Agreement dated as of November 1, 2000 between the Authority and U.S. Bank Trust Company, National Association, as Trustee, and each agreement supplemental thereto.

“Annual Series Requirement” as applied to a Series of Guaranteed Bonds shall mean one-twelfth of the largest amount of Principal and Interest Payments due on account of the Outstanding Guaranteed Bonds of such Series of Bonds in any calendar year after the calendar year in which such Series of Guaranteed Bonds was issued.

“Appropriations” shall mean amounts made available for expenditure by the University Trustees pursuant to appropriations or other spending authorizations in the Commonwealth's annual operating budgets, including without limitation supplementary and deficiency budgets and any tuition retention authorization, and amounts otherwise available for expenditure by the University Trustees.

“Architect” as applied to a Project shall mean the person or firm, if any, employed by the Authority as architect for such Project.

“Authorized Officer” shall mean the Chairman, Vice Chairman, Secretary-Treasurer, Assistant Secretary-Treasurer or Executive Director of the Authority or any other person so designated by resolution of the Authority.

“Bond” or “Bonds” shall mean any bond or bonds or all bonds, as the case may be, issued under the Agreement and authorized by a Series Resolution.

“Business Day” shall mean any day other than a Saturday, Sunday or day on which the New York Stock Exchange or banking institutions are authorized or required by law or executive order to be closed for commercial banking purposes in New York or Massachusetts, or in any city in which is located the designated corporate trust office of the Trustee.

“Capital Appreciation Bond” shall mean any Bond so identified in the Series Resolution applicable thereto and on which interest is compounded and is payable only at maturity or upon earlier redemption of such Bond.

“Code” shall mean the Internal Revenue Code of 1986, as amended. References to provisions of the Code include applicable successor provisions of the Code or applicable successor provisions of any recodification of the internal revenue laws of the United States.

“Commonwealth” shall mean The Commonwealth of Massachusetts.

“Commonwealth Guaranty” shall mean the guaranty by the Commonwealth pursuant to the Enabling Act of the payment of principal of and interest on Bonds so guaranteed. *“Commonwealth Guaranty”* shall not include a Credit Facility.

“Contract” shall mean the Second Amended and Restated Master Contract for Financial Assistance, Management and Services dated as of May 1, 2019 by and among the Authority, the University and the Commonwealth, as such Contract may be supplemented from time to time to make additional Projects and Authority bonds or notes subject to the terms thereof.

“Cost of the Project” as applied to a Project shall mean and include, without intending hereby to limit or restrict any definition of such term under the Enabling Act (as in effect on the date of the Agreement and as it may be amended from time to time), the cost, whenever incurred, of carrying out the Project and placing it in operation, including, but not limited to, the cost of construction of new buildings or structures and the cost of acquiring, adding to, altering, enlarging, leasing, reconstructing, remodeling and doing other work in or upon or respecting existing buildings and structures, if any, included in the Project, the cost of providing and installing in or in respect of any such building or structure furniture, furnishings, machinery, equipment, facilities, approaches, driveways, walkways, parking areas, planting and landscaping, the cost of leasing or otherwise acquiring land, other property, rights, easements and interests acquired for or in respect to any of the foregoing, the cost of demolishing or removing any buildings or structures on land so acquired or interests in which are so acquired and the cost of site preparation; the cost of architectural and engineering services, plans, specifications, surveys, estimates of cost and of revenues; other expenses necessary or incident to determining the feasibility or practicability of the Project; administrative expense, legal expense and such other expenses, including, but not limited to, the fees and expenses (including reasonable attorneys' fees and expenses) of the Trustee, fees and expenses of financial advisers and other experts, printing and advertising costs and the like, taxes and other governmental charges lawfully levied or assessed, the cost of preliminary architectural and engineering services, plans, specifications, surveys, estimates of cost and revenues, other expenses necessary or incident to determine the feasibility or practicability of other projects for which written requests shall have been made by authority of the University Trustees and premiums for policies of insurance, fidelity bonds and the like covering property and risks of and related to the Project, as may be necessary or incident to the aforesaid, to the financing or refinancing thereof and to the issuance therefor of notes or Bonds or both under the provisions of the Enabling Act and interest for such period as the Authority may deem advisable but ending not later than eighteen months after the University Trustees shall have accepted the project for occupancy on money borrowed to pay all or part of the Cost of the Project.

“Counsel” shall mean an attorney or firm of attorneys admitted to practice law in the highest court of any state in the United States of America or in the District of Columbia.

“Counsel's Opinion” shall mean an opinion signed by an attorney or firm of attorneys (who may be general or special counsel to the Authority or bond counsel to the Authority) selected by the Authority and satisfactory to the Trustee.

“Credit Facility” shall mean any instrument, including without limitation a letter of credit, guaranty, standby loan commitment, insurance policy or surety bond, or any combination thereof, under which the Authority or the Trustee is entitled to receive moneys for the payment of one or more of principal of, Redemption Price of and interest on any Bond, fees and expenses of the Trustee, amounts payable from any reserve fund established pursuant to the Agreement, amounts for the replenishment of any reserve fund established pursuant to the Agreement, the purchase price of Bonds tendered pursuant to the applicable Series Resolution and any other amounts which the Authority or the Trustee is entitled to receive under such instrument. *“Credit Facility”* shall not include the Commonwealth Guaranty or Derivatives.

“Current Expenses” as applied to a Project shall mean and include (a) the fees and expenses (including reasonable attorneys' fees and expenses) of the Trustee under the Agreement and of any escrow or like agent appointed by the Authority with respect to the payment of bonds or Bonds issued to finance the Project or to refund any bonds or Bonds issued for such purpose or for the purpose of refunding other refunding bonds or Bonds related to such Project, exclusive of such fees and expenses as are included in the Cost of the Project; (b) the rent, not included in the Cost of the Project, payable by the Authority under any lease of property included in the Project, as such lease may be amended or extended; (c) premiums (or accruals on account thereof), not included in the Cost of the Project, for policies of insurance maintained in force by the Authority with respect to the Project (or a proportionate part of such premiums in the event that a single policy or policies of insurance shall cover property or risks pertaining to more than one Project (or shall include one or more Other Projects) of the Authority); and (d) that portion of the general operating and administrative expenses of the Authority as the Authority shall deem properly allocable to the Project, which general operating and administrative expenses shall include, without limiting the generality of the foregoing, any amount required to be rebated by the Authority (or by any other entity with respect to moneys held by the Authority) to the United States of America by the Code or other applicable law and not provided by other moneys of the Authority available therefor, legal and other professional expenses of the Authority, expenses incurred under Section 207 of the Agreement and reasonable payments to governmental or other benefit or retirement funds for the benefit of its employees, provided, however, that the total amount which may be so allocated in any year shall not exceed such limitation, if any, as may be imposed by the Contract pertaining to the Project; but such term shall not include (x) Maintenance, Repair and Operating Expenses; (y) any reserves for extraordinary maintenance or repair of the Project or any allowance for depreciation, or (z) any deposits or transfers to the credit of the special funds created by the Agreement and designated *“Debt Service Fund,” “Rate Stabilization Fund,” “Section 10 Reserve Fund”* and *“Property Fund”* or to the credit of any reserve fund created pursuant to the Agreement by a Series Resolution

“Current Interest Bond” shall mean any Bond other than a Capital Appreciation Bond.

“Debt Service Reserve Fund” shall mean any fund established by a Series Resolution to provide a reserve for the payment of one or more of principal of, Sinking Fund Installments premium and interest on a Series of Bonds and the purchase price of Bonds of such Series tendered pursuant to the applicable Series Resolution that is not a Section 10 Reserve Fund.

“Debt Service Reserve Requirement” shall mean, with respect to a Debt Service Reserve Fund, the Debt Service Reserve Requirement established for such Debt Service Reserve Fund by the Series Resolution creating such Debt Service Reserve Fund.

“Derivative” shall mean contracts that derive their value from the value, or changes in value, of another financial instrument or index and shall include without limitation (a) interest rate swaps, swaptions, forward swaps, interest rate caps, interest rate floors, options, puts, calls and other contracts to hedge payment, rate spread or similar exposure, (b) forwards and (c) contracts to exchange cash flows or a series of payments. *“Derivatives”* shall not include a Credit Facility.

“Enabling Act” shall mean Chapter 773 of the Acts of 1960 of the Commonwealth, as amended.

“Engineer” as applied to a Project shall mean the person or firm, if any, employed by the Authority as engineer for such Project.

“Expendable Fund Balance” (see Unrestricted Net Assets).

“Facilities Trust Agreement” shall mean the Trust Agreement dated as of December 1, 2000 between the Authority and State Street Bank and Trust Company (which has been succeeded as Trustee by U.S. Bank National Association).

“Favorable Opinion of Bond Counsel” shall mean, with respect to any action relating to the Bonds the occurrence of which requires such an opinion, a written legal opinion of bond counsel to the Authority addressed to the Authority, the Trustee, the Insurer and the Remarketing Agent to the effect that such action is permitted under the applicable Series Resolution and the Trust Agreement and will not jeopardize the exclusion of interest on the Bonds from gross income for federal income tax purposes or the exemption from taxation of the Bonds, their transfer and the income therefrom, including any profit made on the sale thereof, provided by the Enabling Act.

“Fiscal Year” shall mean the twelve-month period beginning on each July 1, or any other twelve-month period designated by the Authority from time to time as its fiscal year.

“Fixed Rate Bond” shall mean a Bond bearing interest at a rate fixed to the stated maturity of such Bond, including any such Bond the interest rate on which has been converted to a rate fixed to the maturity thereof from a rate that is subject to adjustment from time to time.

“Fund” shall mean any Fund created pursuant to the Agreement.

“Guaranteed Bonds” shall mean Bonds that are guaranteed by the Commonwealth Guaranty.

“interest” unless otherwise indicated, shall mean with respect to any Bond (a) the interest on any Current Interest Bond and (b) the interest on any Capital Appreciation Bond, which interest is expressed as the difference between the applicable Accreted Amount on any applicable date and the principal amount of such Capital Appreciation Bond on the date of initial issuance of the Series of Bonds of which such Capital Appreciation Bond is a part.

“interest rate,” “rate of interest,” “bear interest at the rate” or other like expressions shall mean the rate of interest on any Current Interest Bond and the rate (expressed as a yield to maturity) at which interest accrues on any Capital Appreciation Bond.

“Investment Obligations” shall mean and include any of the following: (a) direct obligations of, or obligations the payment of the principal of and interest on which are unconditionally guaranteed by, the United States of America; (b) obligations of the Federal National Mortgage Association, the Government National Mortgage Association, the Federal Financing Bank, the Federal Intermediate Credit Banks, Federal Banks for Cooperatives, Federal Land Banks, Federal Home Loan Banks, Farmers Home Administration and Federal Home Loan Mortgage Corporation, or of any other agency or corporation

which has been or is hereafter created pursuant to an act of the Congress of the United States as an agency or instrumentality thereof; (c) interest-bearing time deposits or certificates of deposit of banking institutions or trust companies (including the Trustee) organized under the laws of any state of the United States or any national banking association, provided that such deposits or certificates shall be continuously and fully (a) insured by the Federal Deposit Insurance Corporation or any successor thereof, or (b) secured by obligations described in clauses (a) and (b) having a market value, exclusive of accrued interest, at least equal to the aggregate amount of such deposits or certificates; (d) any of the securities described in clauses (a) and (b) which are subject to repurchase agreements with any bank or trust company organized under the laws of any state of the United States or any national banking association; (e) any other investment in which funds of the Authority are permitted from time to time to be invested by the Enabling Act; and (f) the Massachusetts Municipal Depository Trust; and (g) any subcategories of any of the investments described in clauses (a), (b), (c), (d), (e) or (f) above that may be required by the issuer of a Credit Facility.

“Maintenance, Repair and Operating Expenses” as applied to a Project or Other Project shall mean and include any reasonable and necessary expenses for services, facilities, supplies, materials and utilities necessary for or incident to the maintenance, repair and operation of the Project or Other Project and the facilities and services provided thereby, billing and collecting fees, rents, rates and other charges for the use of the Project or Other Project or any room or accommodation therein or facility or service provided thereby and keeping books of account with respect to such maintenance, repair and operation. The term may also, if the Contract with respect to a Project or Other Project shall provide for application of Revenues therefrom to pay for the following costs, include the costs incurred in maintaining those activities which, and associations and organizations which, or the activities of which, are a part of the activities at the University and are subject to regulation by the University Trustees and which take place, use or are performed in a building or structure included in such Project or Other Project or are a part of a general program of the University including such activities, associations or organizations which take place, use or are performed in such building or structure. The term shall also include reserves for the foregoing expenses and costs if and to the extent that the Contract in effect with respect to a Project, if any, or a resolution of the Authority with respect to a Project or Other Project provides for such reserves. The term shall not include Current Expenses.

“Moody's” shall mean Moody's Ratings, a corporation organized and existing under the laws of the State of Delaware, its successors and assigns, and, if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, *“Moody's”* shall be deemed to refer to any other nationally recognized securities rating agency designated by the Authority by notice to the Trustee, with the consent of the Insurer.

“Multi-Series Debt Service Reserve Fund” shall have the same meaning as the term Debt Service Reserve Fund, except that a Multi-Series Debt Service Reserve Fund shall secure more than one Series of Bonds (and any one or more of such Series so secured may be issued at different times or under different Series Resolutions from one or more other such Series so secured).

“Multi-Series Debt Service Reserve Requirement” shall mean, with respect to a Multi-Series Debt Service Reserve Fund, the Multi-Series Debt Service Reserve Requirement established for such Multi-Series Debt Service Reserve Fund by the Series Resolution creating such Multi-Series Debt Service Reserve Fund.

“Non-Guaranteed Bonds” shall mean Bonds that are not guaranteed by the Commonwealth Guaranty.

“Other Project” shall have the same meaning as the word *“Project”* except that Other Project shall apply to a project with respect to which a Series of Bonds shall not have been issued under the Agreement.

“Outstanding,” when used with reference to Bonds, shall mean, as of any date, Bonds theretofore or thereupon being authenticated and delivered under the Agreement except: (a) any Bonds cancelled by the Trustee or surrendered to the Trustee for cancellation at or prior to such date; (b) Bonds (or portions of Bonds) for the payment or redemption of which moneys, equal to the principal amount or Redemption Price thereof, as the case may be, with interest to the date of maturity or redemption date, shall be held in trust under the Agreement and set aside for such payment or redemption (whether at or prior to the maturity or redemption date), provided that if such Bonds (or portions of Bonds) are to be redeemed, notice of such redemption shall have been given in accordance with the Agreement or provision satisfactory to the Trustee shall have been made for the giving of such notice; (c) Bonds in lieu of or in substitution for which other Bonds shall have been authenticated and delivered pursuant to the Agreement; and (d) Bonds deemed to have been paid as provided in the Agreement.

“Person” shall include associations, corporations and other entities, including public bodies, as well as natural persons.

“Pledged Funds” shall mean one or both of (a) Trust Funds of the University pledged to secure (i) all or a portion of one or more Series of Bonds and (ii) the payment of other amounts specified in the Contract or other document by which such pledge is made as secured by such Trust Funds, and (b) Appropriations pledged to secure (i) all or a portion of one or more Series of Bonds and (ii) the payment of other amounts specified in the Contract or other document by which such pledge is made as secured by such Appropriations.

“principal” and *“principal amount,”* unless otherwise indicated, shall mean with respect to any Bond (a) the principal amount of any Current Interest Bond and (b) the principal amount on the date of initial issuance of the applicable Series of any Capital Appreciation Bond (and after such date of initial issuance the word *“principal”* and the term *“principal amount”* shall mean with respect to a Capital Appreciation Bond the portion of the applicable Accreted Amount not constituting interest). Without limiting the generality of the foregoing, when the word *“principal”* or the term *“principal amount”* is followed by a reference to the Accreted Amount, the word *“principal”* or the term *“principal amount”* shall mean the principal amount of any Current Interest Bond.

“principal” and the term *“principal amount”* shall mean, with respect to any obligation other than a Bond, any amount constituting principal, however expressed, of such obligation.

“Principal and Interest Payments” as applied to a Series of Bonds for a particular time period or as of a particular date shall mean the principal amount of and interest on the Bonds of such Series Outstanding which is due to be paid during such period or on such date, such amount to be determined in accordance with the following when applicable: if the Authority shall by the resolution authorizing the issue of a Series of Bonds authorize the issue of all or any of such Bonds as Term Bonds, such principal amount of Bonds as will be paid or prepaid from a Sinking Fund Installment shall be treated as if it matured on the date such Sinking Fund Installment is required to be made and not on the maturity date of such Bonds.

“Principal Office” or *“principal office”* shall mean, when used with respect to the Trustee, the principal corporate trust office of the Trustee in Boston, Massachusetts, or, if the Trustee shall no longer perform its duties under the Trust Agreement at such office, the corporate trust office where at the applicable time the Trustee performs its duties under the Trust Agreement.

“Project” or “Projects” shall mean the construction of new buildings or structures and the acquisition, addition to, alteration, enlargement, reconstruction, remodeling and other work in or upon or respecting existing buildings or structures, the provision and installation therein or in respect thereof of furnishings, furniture, machinery, equipment, facilities, approaches, driveways, walkways, parking areas, planting and landscaping, the acquisition of land, other property, rights, easements and interests acquired for or in respect to any thereof, the demolition or removal of any buildings or structures, including buildings or structures owned by the Commonwealth, on land so acquired or interests in which are so acquired and site preparation, with respect to which a Series of Bonds shall be issued under the Agreement. The word shall also mean whenever appropriate, such land, buildings or structures and such appurtenances.

“purchaser” shall mean the person or persons, one or more, named as the purchaser or purchasers of a Series of Bonds in the Series Resolution and any successors to its or their business. If a named or successor purchaser shall discontinue its business without a successor, the word thereafter shall mean the remaining purchaser or purchasers, whether named or successor.

“Record Date” shall mean, for each Series of Bonds, such date or dates as may be set forth as a Record Date in the applicable Series Resolution.

“Redemption Price” shall mean, (a) with respect to any Current Interest Bond, the principal amount thereof, plus the applicable premium, if any, payable upon redemption thereof pursuant to this Agreement and the applicable Series Resolution, and (b) with respect to any Capital Appreciation Bond, the Accreted Amount thereof on the redemption date, plus the applicable premium, if any, payable upon redemption thereof pursuant to the Agreement and the applicable Series Resolution.

“Registered Owner” shall mean the person shown from time to time as registered owner of a Bond in the books kept by the Trustee as Bond Registrar.

“Revenues” as applied to a Project shall mean (a) all moneys received or receivable by the Authority in payment of fees, rents, rates and other charges for the use and occupancy of, and for the services and facilities provided by, the Project including, without limitation, the moneys which the University Trustees are required to remit to the Authority or the Trustee under a Contract, and all other income derived by the Authority from the operation, ownership or control thereof. The word Revenues shall also include any other revenues or Secondary Revenues pledged as security for the Bonds. The word Revenues shall not include (a) Pledged Funds, (b) any amount paid or payable under the Commonwealth Guaranty or (c) any amount paid or payable under a Credit Facility or a Derivative.

“Secondary Revenues” shall mean all revenues received by the Authority from Other Projects or other property financed by bonds issued by the Authority under the Enabling Act under a trust agreement other than the Agreement which revenues are pledged under such trust agreement, upon and after the payment in full of all bonds, including refunding bonds, issued under such trust agreement and of all other sums, if any, then payable to the trustee under the provisions of the trust agreement securing such bonds, or upon deposit by the Authority with such trustee of funds or securities sufficient and in trust to pay, or to provide for the payment when due, of such amounts.

“Section 10 Reserve Fund” shall mean the Section 10 Reserve Fund established by the Agreement.

“Section 19C Payments” shall mean any amount required by Section 19C of the Enabling Act to be paid by the Authority to the Treasurer and Receiver-General of the Commonwealth from Revenues.

“Senior Bonds” shall mean all Bonds of each Series that is a Senior Series.

“Senior Series” shall mean any Series designated as a Senior Series in the applicable Series Resolution.

“Series” shall mean the Bonds designated as a Series in a Series Resolution.

“Sinking Fund Installment” shall mean with respect to Bonds of any particular Series and maturity and any payment date on such Bonds, the principal amount thereof required to be redeemed prior to maturity on such payment date pursuant to the provisions of the applicable Series Resolution.

“S&P” shall mean S&P Global Ratings, its successors and assigns, and, if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, *“S&P”* shall be deemed to refer to any other nationally recognized securities rating agency designated by the Authority by notice to the Trustee.

“Special Record Date” shall have the meaning set forth in the Agreement.

“Specific Revenue Projects” shall mean such projects as designated by the Authority in the Contract for which specific fees will be set by the Authority.

“Spendable Cash and Investments” shall mean, effective May 1, 2019, the sum of University cash and investments less debt service reserve funds, plus University of Massachusetts Foundation, Inc. cash and investments, less University permanently restricted net assets, less University of Massachusetts Foundation, Inc. permanently restricted net assets; provided that in the event of future modifications to the University's financial statements that provide for a different presentation of such information, the University may further modify the definition of Spendable Cash and Investments.

“Subordinate Series” shall mean any Series designated as a Subordinate Series in the applicable Series Resolution.

“Term Bonds” shall mean Bonds subject to redemption prior to maturity by application of Sinking Fund Installments.

“Trustee” shall mean the Trustee appointed under the Agreement and its successor or successors.

“Trust Funds” shall mean any funds held by the University Trustees as trust funds under the provision of Section 11 of Chapter 75 of the Massachusetts General Laws and any funds administered by the University Trustees as gifts, grants or trusts under the provisions of clause (e) of the fifth paragraph of Section 1A of Chapter 75 of the Massachusetts General Laws.

“University” shall mean the University of Massachusetts continuing under Chapter 75 of the Massachusetts General Laws.

“University Trustees” shall mean the board of trustees established by and existing under Section 1A of Chapter 75 of the Massachusetts General Laws for the University or, if such board of trustees shall hereafter be abolished, the board, body, commission or other entity succeeding to the principal functions thereof or to which the powers given by said Chapter 75 with respect to the University shall be given by law.

“Unrestricted Net Assets” (previously referred to as the *“Expendable Fund Balance”*) shall mean the accumulation of excess unrestricted revenues over expenditures with respect to the University for all prior years and for each current year from the unrestricted current fund, the quasi endowment fund, the unexpended unrestricted plant fund and the unrestricted renewal and replacement plant fund. As of May 1, 2019, the term *“Unrestricted Net Assets”* means *“Spendable Cash and Investments”*).

“Variable Rate Bond” shall mean a Bond the interest rate on which is subject to adjustment from time to time and shall include but not be limited to a so-called “multi-modal” Bond, i.e.. a Bond that provides that the intervals at which the interest rate on such Bond is adjusted may be changed from time to time.

PLEDGE AND ASSIGNMENT OF THE AUTHORITY PURSUANT TO THE AGREEMENT

Pursuant to the Agreement, the Authority assigns and pledges to the Trustee and grants to the Trustee a security interest in:

(a) all rights of the Authority, including such rights under any Contract, to receive all Revenues pledged under the Agreement;

(b) all moneys paid or payable for deposit in or on deposit in any Fund, Account or subaccount created under the Agreement, all investments received or receivable for deposit in or on deposit in any Fund, Account or subaccount created under the Agreement and all interest or other income on such investments paid or payable for deposit in or on deposit in any Fund, Account or subaccount created under the Agreement and all rights of the Authority to receive any such moneys, investments and interest or other income (except that moneys and securities on deposit in the Rebate Fund created under the Agreement and all interest or other income received thereon are held for the benefit of the United States of America and not for the benefit of the Registered Owners and do not secure the Bonds), subject to the application of amounts held in such Funds, Accounts and Subaccounts for the purposes and in the manner set forth in the Agreement;

(c) subject to clause (a) and clause (b) under “Particular Covenants - Payment of Lawful Charges” below, (i) the Revenues from each Project and (ii) the Revenues, including without limitation Secondary Revenues, derived from Other Projects and from such other property of the Authority, if any, as the Authority may hereafter designate by resolution; provided, however, that the assignment and pledge made by the Agreement of and the security interest granted by the Agreement in such Revenues from each Project and such Revenues, including Secondary Revenues, derived from Other Projects does not include any part thereof to be used for Current Expenses or reserves therefor, Maintenance, Repair and Operating Expenses or reserves therefor or Section 19C Payments or reserves therefor; and provided further that the assignment and pledge of and security interest in any such Secondary Revenues shall be, first, for (A) the reimbursement to the Commonwealth of any amounts theretofore paid by the Commonwealth on account of principal of or interest on any Guaranteed Bonds or other bonds of the Authority guaranteed by the Commonwealth under Section 10 of the Enabling Act and (B), if and only if the Commonwealth has made no such payments or has been reimbursed therefor, to the payment of the principal, interest and premium, if any, at maturity or upon redemption or purchase, for (1) all Bonds issued under the Agreement, or (2) all bonds of the Authority issued other than under the Agreement, or (3) all such Bonds and bonds of the Authority, as the Authority may determine, at the time any Revenues from an Other Project become Secondary Revenues, by resolution approved by the University Trustees with a view to achieving reasonable uniformity in charges for like rooms, accommodations and services at the University, to the extent provided in the Agreement; and

(d) (i) all Pledged Funds paid or payable and all rights of the Authority to receive such Pledged Funds, (ii) all amounts paid or payable under the Commonwealth Guaranty with respect to Guaranteed Bonds and all rights of the Authority to receive such amounts, (iii) all amounts paid or payable under any Credit Facility and all rights of the Authority to receive such amounts and (iv) all amounts paid or payable under any Derivative and all rights of the Authority to receive such amounts.

The assignment and pledge made by the Agreement and the security interest granted by the Agreement shall be for the equal and proportionate benefit and security of all the present and future Registered Owners of the Bonds issued and to be issued under the Agreement, without preference, priority or distinction as to lien or otherwise, except as otherwise provided in the Agreement, of any one Bond over any other Bond, and that the Revenues, including any Secondary Revenues, pledged as security for the Bonds shall immediately be subject to the lien of such pledge for the benefit of the Trustee and the Registered Owners of the Outstanding Bonds as provided in the Agreement without any physical delivery thereof to the Trustee or any further act.

BONDS PERMITTED TO BE ISSUED UNDER THE AGREEMENT; VARIOUS PROVISIONS OF BONDS

(a) Any bonds the Authority is authorized by the Enabling Act to issue may be issued under the Agreement. The Bonds of each Series may be Fixed Rate Bonds or Variable Rate Bonds, as set forth in the applicable Series Resolution.

(b) As provided in the applicable Series Resolution:

(i) Bonds may be issued as Guaranteed Bonds or Non-Guaranteed Bonds, but Guaranteed Bonds and Non-Guaranteed Bonds shall not be issued as part of the same Series;

(ii) some or all of the Bonds of a Series may be secured by one or more Credit Facilities, and any such Credit Facility may be replaced;

(iii) Bonds may be issued as Current Interest Bonds or Capital Appreciation Bonds, and a Series of Bonds may combine both Current Interest Bonds and Capital Appreciation Bonds;

(iv) a Series of Bonds may be (A) a Senior Series, which Senior Series shall not be subordinate to any other Series and shall be issued on a parity with each other, if any Senior Series previously, contemporaneously or subsequently issued, or (B) a Subordinate Series;

(v) a Subordinate Series shall be subordinate to all Senior Series, may be of any level of subordination to other Subordinate Series previously, contemporaneously or subsequently issued and shall be on a parity with each other, if any, Subordinate Series of the same level previously, contemporaneously or subsequently issued; a Subordinate Series shall bear as part of its designation (in the form provided in the Agreement) whichever of the following is applicable: (A) "Subordinate Series Level 2," which Subordinate Series shall be (1) subordinate to each other, if any, Senior Series previously, contemporaneously or subsequently issued, (2) on a parity with each, if any, Subordinate Series Level 2 previously, contemporaneously or subsequently issued and (3) superior to each other, if any, Subordinate Series of a lower level previously, contemporaneously or subsequently issued, (B) "Subordinate Series Level 3," which Subordinate Series shall be (1) subordinate to each other, if any, Senior Series and Subordinate Series Level 2 previously, contemporaneously or subsequently issued, (2) on a parity with each other, if any, Subordinate Series Level 3 previously, contemporaneously or subsequently issued and (3) superior to each other, if any, Subordinate Series of a lower level previously, contemporaneously

or subsequently issued or (C) “Subordinate Series Level 4” or “Subordinate Series Level 5” and so on in ascending numerical order depending on the level or subordination of such Subordinate Series, and each such Subordinate Series shall be subordinate to, on a parity with and superior to other Series depending on its level of subordination in accordance with the pattern described in (A) and (B) above;

(vi) a Subordinate Series may be any level of subordination, and a Subordinate Series of a given level may be issued after or before one or more Series of higher levels of subordination or one or more Senior Series are issued (and it is not necessary that any such Series of any higher level of subordination or any Senior Series shall ever be issued), but any such Subordinate Series shall not be subordinate to any Series but each Senior Series and each Subordinate Series of a higher level of subordination previously, contemporaneously or subsequently issued, (e.g., a Subordinate Series Level 4 may be issued after or before the issuance of a Senior Series or any or all of a Subordinate Series Level 2, Level 3 or Level 5, but a Subordinate Series Level 4 shall not be subordinated to any Series except Senior Series and Subordinate Series Level 2 and Subordinate Series Level 3);

(vii) the interest on a Series of Bonds may be excludable from or includable in gross income for federal income tax purposes;

(viii) a Series of Bonds may be secured by a Debt Service Reserve Fund or a Multi-Series Debt Service Reserve Fund, and all Guaranteed Bonds shall be secured by the Section 10 Reserve Fund as provided in the Agreement or by whatever reserve fund may be required by the Enabling Act as in existence at the time of the issuance of the applicable Series of Guaranteed Bonds; provided, that if at the time a Series of Guaranteed Bonds is issued under the Agreement the Enabling Act does not require any reserve fund for such Series, such Series shall not be required to be (but may be) secured by a reserve fund;

(ix) a Series of Bonds may be secured by Pledged Funds;

(x) the Authority may enter into one or more Derivatives with respect to a Series of Bonds in connection with the initial issuance thereof; provided, however, that the Authority may also enter into Derivatives with respect to a Series of Bonds after the initial issuance thereof if bond counsel to the Authority delivers an opinion to the effect that such action is permitted by the Enabling Act, would not adversely affect the interest of any Registered Owner and would not adversely affect the exclusion of the interest on the Bonds from gross income for federal income tax purposes; and

(xi) more than one Series of Bonds may be issued under a single Series Resolution,

(c) With respect to the Series of Bonds on a parity with each other:

If on any date one or more of principal, Sinking Fund Installments and interest are due on such Series of Bonds moneys in the applicable subaccount in the Interest Account, the Principal Account, or the Sinking Fund Account are insufficient to pay any such amount in full, taking account of any amounts deposited in any such subaccount from the Property Fund or the Optional Redemption Account as permitted by the Agreement, but without regard to any amount drawn from any Debt Service Reserve Fund, Multi-Series Debt Service Reserve Fund or Section 10 Reserve Fund to pay all or a portion of such deficiency or any amount drawn under a Credit Facility to pay all or a portion of such deficiency, moneys in any such subaccount in which a deficiency exists shall be applied to the applicable amount due from such subaccount pro rata, without regard to any amounts to be applied to such deficiency with respect to

one or more such Series from any Debt Service Reserve Fund, Multi-Series Debt Service Reserve Fund, Section 10 Reserve Fund or Credit Facility; provided, however, that (a) any deficiency in any such subaccount resulting from any amount due under a Derivative not being paid in full when due shall be allocated only to the payment due on the Series of Bonds to which such Derivative pertains and shall not cause a deficiency in the payment due on any other Series of Bonds, (b) any moneys that would have been applied in accordance with such pro rata application to any Bonds secured by a direct pay Credit Facility that in fact pays all principal of, Sinking Fund Installments and interest then due on such Bonds shall be applied to reimburse the issuer of such direct pay Credit Facility for (but not in excess of) the amount paid thereunder, and (c) any moneys that would have been applied in accordance with such pro rata application to Bonds with respect to which all or a portion of the principal, Sinking Fund Installments or interest due on such Bonds was paid pursuant to a Derivative shall be applied pro rata to the payment of (i) any amount due from or on account of the Authority pursuant to such Derivative for any such payment of principal, Sinking Fund Installment or interest and (ii) the principal, Sinking Fund Installments or interest on such Bonds not paid pursuant to such Derivative.

Each Guaranteed Bond shall have the Commonwealth Guaranty endorsed thereon in the form set forth in the applicable Series Resolution and duly executed by the manual or facsimile signature of an officer of the University Trustees and shall be entitled to the benefit of the pledge by the Commonwealth of its full faith and credit for its guaranty of the payment of the principal of and interest on such Bonds as the same become due and payable.

As to any Bond, the Registered Owner thereof shall be deemed and regarded as the absolute owner thereof for all purposes, and, except as otherwise provided by law, no one of the Authority, the Trustee or the Bond registrar shall be affected by any notice to the contrary. Payment of or on account of the principal or Redemption Price of and interest on any Bond shall be made only to or upon the order of the Registered Owner, registered assigns or the legal representative of the Registered Owner. All such payments shall be valid and effectual to satisfy and discharge the liability upon such Bond including the interest thereon to the extent of the sum or sums so paid.

All Bonds paid, redeemed or purchased, either at or before maturity, shall be delivered to the Trustee when such payment, redemption or purchase is made, and such Bonds shall thereupon be cancelled. All Bonds cancelled under any of the provisions of the Agreement shall be held by the Trustee until the Agreement shall be discharged; provided, however, that Bonds so cancelled may at any time be destroyed by the Trustee, if the Trustee shall execute a certificate of destruction in duplicate describing the Bonds so destroyed, and one executed certificate shall be filed with the Executive Director of the Authority and the other executed certificate shall be retained by the Trustee.

REDEMPTION OF BONDS

Redemption of Bonds of any Series

If and to the extent that the Authority shall so provide in a Series Resolution, the Bonds of any Series authorized thereunder may be made redeemable, by application of Sinking Fund Installments or otherwise, at the option of the Authority, prior to their respective maturities either in whole or in part, on any date or dates as may be fixed in such Series Resolution, from any moneys that may be made available for such purpose, at the Redemption Price or Redemption Prices fixed by the Authority in such Series Resolution, together with the interest accrued thereon to the date fixed for redemption.

No optional redemption of less than all of the Outstanding Bonds may be made unless all interest accrued on all Outstanding Bonds to the redemption date shall have been paid or set aside for payment.

If the moneys made available from time to time for the purpose of redeeming Bonds (other than by Sinking Fund Installments) are not sufficient to redeem all of the Outstanding Bonds at the Redemption Prices then in effect, they shall be applied to Bonds of such Series, maturity and tenor as the Authority, in its discretion, may select, unless otherwise provided in any Series Resolution. If less than all the Bonds of a particular Series, maturity and tenor are to be redeemed, the particular Bonds and portions of Bonds of such Series, maturity and tenor to be redeemed shall be selected at random by the Trustee in such manner as the Trustee in its discretion may determine; provided, however, that any Bond may be redeemed in a principal amount equal to the minimum denomination in which it may be issued under the applicable Series Resolution or any integral multiple thereof, and that, in selecting Bonds for redemption, the Trustee shall treat each Bond as representing that number of Bonds which is obtained by dividing the principal amount of each Bond by such minimum denomination.

Redemption Notice

The Trustee shall give notice of the redemption of any Bonds, specifying the date of redemption, the portions of the principal amounts thereof to be redeemed, the Redemption Price and any other matters specified in the applicable Series Resolution, by mailing, postage prepaid, not more than such number of days nor less than such number of days prior to the redemption date as shall be set forth in the applicable Series Resolution, copies thereof to the Registered Owners of any Bonds, or portions thereof, to be redeemed and to such other persons and at such times as may be set forth in the applicable Series Resolution; provided, however, that failure of any Registered Owner to receive such notice so mailed to such Registered Owner or any defect therein shall not affect the validity of proceedings for the redemption of any Bonds, and failure to mail such notice to any Registered Owner entitled thereto shall not affect the validity of the proceedings for the redemption of any Bonds as to which no such failure occurred. In case any Bond is to be redeemed in part only, the notice of redemption which relates to such Bond shall state also that on or after the redemption date, upon surrender of such Bond, a Bond or Bonds in aggregate principal amount equal to the unredeemed portion of such Bond will be issued described below under "Partial Redemptions."

Effect of Calling for Redemption

Notice having been given in the manner and under the conditions described above under "Redemption Notice", the Bonds or portions of Bonds so called for redemption shall, on the redemption date designated in such notice, become and be due and payable at the Redemption Price of such Bonds or portions of Bonds on such date. On the date so designated for redemption, notice having been given and moneys for payment of the Redemption Price of and interest accrued to the date of redemption on the Bonds so called for redemption being available therefor, interest on such Bonds shall cease to accrue, such Bonds or portions of Bonds shall cease to be entitled to any lien, benefit or security under the Agreement, and the Registered Owners of such Bonds or portions of Bonds shall have no rights in respect thereof except to receive payment of the Redemption Price thereof upon presentation and surrender of the same and interest accrued thereon to the date of redemption and, to the extent described above in "Redemption Notice," to receive Bonds for any unredeemed portions of Bonds.

Partial Redemptions

In case part but not all of an Outstanding Bond shall be selected for redemption, the Registered Owner thereof or the attorney or legal representative of such Registered Owner shall present and surrender such Bond to the Trustee for payment of the Redemption Price of the principal amount thereof so called for redemption, and the Authority shall execute (and, if any such Bond is a Guaranteed Bond cause the guaranty of the Commonwealth to be endorsed on) and the Trustee shall authenticate and

deliver to or upon the order of such Registered Owner or the attorney or legal representative of such Registered Owner, without charge therefor, for the unredeemed portion of the principal amount of the Bond so surrendered, a Bond or Bonds aggregating in principal amount said unredeemed portion.

ESTABLISHMENT AND APPLICATION OF FUNDS AND ACCOUNTS

Funds and Accounts

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

- (1) Note Payment Fund
- (2) Construction Fund
- (3) Preliminary Expense Fund
- (4) Revenue Fund
- (5) Debt Service Fund Interest Account

Interest Account (and within the Interest Account a single subaccount with respect to all Senior Bonds, and if and when the first Subordinate Series of a given level is issued, a single subaccount with respect to all Bonds of any Subordinate Series of such level)

Principal Account (and within the Principal Account a single subaccount with respect to all Senior Bonds, and if and when the first Subordinate Series of a given level is issued, a single subaccount with respect to all Bonds of any Subordinate Series of such level)

Sinking Fund Account (and within the Sinking Fund Account a single subaccount with respect to all Senior Bonds, and if and when the first Subordinate Series of a given level is issued, a single subaccount with respect to all Bonds of any Subordinate Series of such level)

Optional Redemption Account

- (6) Section 10 Reserve Fund
- (7) Property Fund

General Account

Insurance Proceeds Account

Capital Improvements Reserve Account (and within the Capital Improvements Reserve Account a separate subaccount for each Project or each group of Projects with respect to which the Authority by certificate of an Authorized Officer directs from time to time that a separate subaccount be established within the Capital Improvements Reserve Account)

Multi-Purpose Reserve Account

(8) Rate Stabilization Fund

(9) Rebate Fund

Other Funds, Accounts and subaccounts (including without limitation Accounts within the Funds established under the Agreement as set forth in the preceding paragraph and subaccounts within the Accounts established under the Agreement as set forth in the preceding paragraph) may from time to time be established under the Agreement as directed by a Series Resolution or other resolution of the Authority, and moneys shall be deposited in and disbursed from such Funds, Accounts and Subaccounts as provided in such Series Resolution or other resolution.

Without limiting the generality of the previous paragraph, a Series Resolution under which is issued one or more Series of Bonds subject to tender for purchase may establish an Account (a “Purchase Account”) for each such Series into which moneys (which moneys may but need not include moneys in the Revenue Fund) shall be deposited as provided in such Series Resolution to be applied to the payment of the purchase price of Bonds of the applicable Series tendered as provided in the Series Resolution.

If a Series Resolution so provides, moneys (which moneys may but need not include Revenues) may be deposited in a Purchase Account prior to being deposited in the Revenue Fund or, if already on deposit in the Revenue Fund, prior to being deposited in the Debt Service Fund or in other Funds and Accounts as described below in “Revenue Fund.” Moneys in a Purchase Account representing amounts received under a Credit Facility or under a Derivative or the proceeds of the remarketing of Bonds tendered for purchase as provided in the applicable Series Resolution shall be applied to pay the purchase price only of Bonds of the Series to which the applicable Purchase Account pertains. Other moneys in a Purchase Account shall be applied as follows: if, on any date on which such moneys in a Purchase Account are to be applied to pay the purchase price of Bonds of the Series to which such Purchase Account obtains, any one or more other Purchase Accounts pertaining to Bonds of the same level (e.g. Senior Series, Subordinate Series Level 2) does not contain sufficient moneys to pay the purchase price due on such date of Bonds to which such one or more other Purchase Accounts pertain, such moneys in all Purchase Accounts pertaining to Bonds of the same level shall be applied pro rata to the payment of the purchase price of such Bonds due on such date. In addition, if and to the extent permitted by the applicable Series Resolution, moneys in any Purchase Account may be applied to reimburse the issuer of a Credit Facility for amounts received by the Trustee pursuant to such Credit Facility to be applied to the payment of the purchase price upon tender as provided in the applicable Series Resolution of Bonds for which such Purchase Account was established or to pay any amount due from or on account of the Authority under a Derivative for payments made pursuant to such Derivative for the payment of the purchase price upon tender as provided in the applicable Series Resolution of Bonds for which such Purchase Account was established.

Note Payment Fund

For each Series of Bonds the proceeds of which are to be applied in whole or in part to the payment of notes of the Authority, deposits to the credit of the Note Payment Fund shall be made as required by the provisions of the applicable Series Resolution. Monies so deposited in the Note Payment Fund shall be held by the Trustee in trust and shall be applied to the payment of the notes referred to in the Series Resolution and, pending such application, shall be subject to a lien and charge in favor of the holders of the Bonds Outstanding under the Agreement until paid out or transferred as provided in the Agreement. Upon payment in full of such notes, the Trustee shall withdraw any excess monies then on

deposit in the Note Payment Fund and deposit or disburse the same as provided in the applicable Series Resolution.

Construction Fund

For each Series of Bonds the proceeds of which are to be applied in whole or in part to the Cost of a Project (or for moneys held under any other trust agreement entered into by the Authority to be applied to the Cost of a Project) there may be established within the Construction Fund a separate Account for each such Project (or for two or more or all of such Projects) to the credit of which such deposits shall be made as are required by the provisions of the applicable Series Resolution or other resolution of the Authority or as designated in a certificate of an Authorized Officer. Any moneys received, other than as Revenues, from any other source, including but not limited to all grants and loans received from the federal government or any agency thereof for or in aid of the planning, construction or financing of any such Project and all contributions of money, property, labor, or other things of value available under the terms of any such grant or contribution, for the carrying out of such Project may also be deposited to the credit of the appropriate Account within the Construction Fund (or a subaccount therein) or otherwise be held in trust and be disbursed and applied, all as the Authority may determine.

The moneys in each such Account within the Construction Fund shall be held by the Trustee in trust and shall be applied to the payment of the Cost of the Project and, pending such application, shall be subject to a lien and charge in favor of the Registered Owners of the Outstanding Bonds of the Series the proceeds of which are on deposit in such Account until paid out or transferred as provided in the Agreement. The Agreement contains various requirements for disbursement of moneys from Accounts or subaccounts within the Construction Fund, including without limitation requisitions containing certifications with respect to the use of such moneys in accordance with applicable requirements of the Code.

The Trustee shall upon receipt of written instructions from an Authorized Officer (which instructions and any prior modification thereof may be modified from time to time by further written instructions of an Authorized Officer delivered to the Trustee) and without requisition from the Authority or other further authority than is contained herein, on such date or dates as may be specified in the most recent such instructions delivered by such Authorized Officer, withdraw from any Account within the Construction Fund such amounts as may therein be specified to be withdrawn on the applicable date for payment of interest on the Bonds then Outstanding and shall deposit such amount to the credit of the applicable subaccount in the Interest Account.

Preliminary Expense Fund

For each Series of Bonds from the proceeds of which an amount is specified in the Series Resolution authorizing such Series of Bonds to be applied to the cost of architectural and engineering services, plans, specifications, surveys, estimates of cost and of revenues and other expenses necessary or incident to determine the feasibility or practicability of projects for which written requests shall have been made by authority of the University Trustees, the amount so specified shall be deposited to the credit of the Preliminary Expense Fund. The moneys in the Preliminary Expense Fund shall be held by the Trustee in trust and, pending the application thereof, shall be subject to a lien and charge in favor of the Registered Owners of the Bonds from the proceeds of which such deposits were made until paid out or transferred as provided in the Agreement.

Upon receipt of a certificate of an Authorized Officer directing that all or a portion of the moneys in the Preliminary Expense Fund be transferred to any Account or Accounts with the Construction Fund, accompanied by an opinion of bond counsel to the Authority to the effect that such transfer is permitted

by the Enabling Act and will not adversely affect the exclusion of interest on the Bonds from gross income for federal income tax purposes, the Trustee shall withdraw moneys then on deposit to the credit of the Preliminary Expense Fund in the amounts specified in such certificate and deposit the same to the credit of the appropriate Account or Accounts within the Construction Fund in the amount or amounts specified in such certificate.

Upon receipt of a certificate of an Authorized Officer stating that all or a portion of the moneys in the Preliminary Expense Fund are not needed either for the purposes specified in the first paragraph under "Preliminary Expense Fund" or for transfer to any Account or Accounts within the Construction Fund and directing the withdrawal of such moneys from the Preliminary Expense Fund for the payment or deposit for or other application to the purposes specified in such certificate, and upon receipt of an opinion of bond counsel to the Authority to the effect that the application of the moneys to be withdrawn to the purposes set forth in such certificate is permitted by the Enabling Act and will not adversely affect the exclusion of interest on the Bonds from gross income for federal income tax purposes, the Trustee shall withdraw from then the Preliminary Expense Fund the amount specified in such certificate and pay, deposit or apply the same as specified in such certificate.

Completion of a Project

When the construction of a Project the Cost of which shall have been paid in part or in whole from the proceeds of Bonds shall have been completed, or when for any other reason amounts on deposit in a particular Account within the Construction Fund are no longer needed to pay for the Cost of one or more Projects for which it was established, written notice thereof shall be promptly given to the Trustee by a certificate of an Authorized Officer. Any such notice with respect to the completion of a Project shall state the date of completion of the Project, the cost of the Project and the amount, if any, to be reserved for the payment of any remaining part of the Cost of the Project and the Cost of other Projects to be paid from such Account, and shall be accompanied by a Counsel's Opinion to the effect that there are no uncanceled mechanics', laborers', contractors' or materialmen's liens on any property pertaining to the Project in existence or on file in any public office where the same should be filed in order to be valid liens against any part of such property, and that, in the opinion of the signer, the time within which such liens can be created or filed has expired.

Upon receipt of such notice and, if applicable, such Counsel's Opinion, the balance in the applicable Account within the Construction Fund, not reserved by the Authority for the payment of any remaining part of the Cost of the Project or Projects, shall be withdrawn by the Trustee and applied or deposited as follows: (a) at the Authority's request, as set forth in such certificate, deposited in the amount set forth in such certificate to the credit of any other Account or Accounts existing within the Construction Fund for one or more Projects (including such an Account established simultaneously with the giving of such notice) which the applicable Series of Bonds was issued to finance, if the Authority shall by a certificate of an Authorized Officer certify that the amounts then on deposit in such other Account or Accounts are not sufficient to pay in full the projected costs of the applicable Project or Projects and if such certificate is accompanied by an opinion of bond counsel to the Authority to the effect that such deposit of such moneys is permitted by the Enabling Act and will not adversely affect the exclusion of the interest on the Bonds from gross income for federal income tax purposes; (b) deposited or applied in the amounts and for the purposes as otherwise set forth in such certificate, provided that such certificate is accompanied by an opinion of bond counsel to the Authority to the effect that the deposit or application of such moneys as provided in such certificate is permitted by the Enabling Act and will not adversely affect the exclusion of the interest on the Bonds from gross income for federal income tax purposes; and (c) so much thereof as is not deposited pursuant to (a) or (b) shall be deposited to the credit of the Optional Redemption Account.

Revenue Fund

All Revenues received by the Trustee shall be deposited in the Revenue Fund immediately upon receipt by the Trustee; provided, however, that Revenues designated in writing by an Authorized Officer to be applied to Current Expenses, Maintenance, Repair and Operating Expenses or Section 19C Payments may be deposited in any account of the Authority designated in writing by such Authorized Officer. The moneys in the Revenue Fund shall be held by the Trustee in trust and applied as provided below and, pending such application, so much thereof as is not held for Current Expenses or reserves therefor, Maintenance Repair and Operating Expenses or reserves therefor or Section 19C Payments or reserves therefor shall be subject to a lien and charge in favor of the Registered Owners of the Bonds issued and Outstanding under the Agreement.

Payments from the Revenue Fund shall be made at any time for Current Expenses, Maintenance, Repair and Operating Expenses or Section 19C Payments pursuant to requisitions as provided in the Agreement.

On the fifteenth day of each month (or if such fifteenth day is not a business day, on the next succeeding business day), and again on the last business day of each month preceding an Interest Payment Date, and on each other date provided in any Series Resolution, the Trustee shall withdraw from the Revenue Fund all moneys held for the credit of the Revenue Fund on the day of such withdrawal in excess of the amount required on the date of such withdrawal as a reserve for Current Expenses, Maintenance, Repair and Operating Expenses and Section 19C Payments. The amount so required as a reserve for Current Expenses, Maintenance, Repair and Operating Expenses and Section 19C Payments shall be as directed by the Authority but not more than the excess of (a) the amount stated in the then current Annual Schedule for such Current Expenses, Maintenance, Repair and Operating Expenses and Section 19C Payments filed by the Authority with the Trustee as described below in "Particular Covenants - Annual Schedule of Projected Expenses," over (b) the aggregate of the payments made by the Trustee from the Revenue Fund on account of such amounts during the period commencing with the July 1 next preceding the applicable withdrawal pursuant to the preceding sentence and ending with the last day of the month preceding such withdrawal.

The Trustee shall deposit the moneys withdrawn from the Revenue Fund as aforesaid to the credit of the Accounts and Funds as follows:

first, with respect to the Senior Bonds, in the following order of priority:

(a) to the credit of the subaccount established for Senior Bonds in the Interest Account in the Debt Service Fund so much, or the whole if required, of the moneys so withdrawn from the Revenue Fund, until the amount on deposit in the such subaccount, plus any amount to be withdrawn from any Construction Fund as described above in the last paragraph in "Construction Fund" and deposited in such subaccount to be applied to the payment of interest due on any Series of Senior Bonds on the next following Interest Payment Date, shall equal (i) the interest payable on such Interest Payment Date on all Senior Bonds then Outstanding and (ii) the aggregate of all other amounts, if any, required to be on deposit in such subaccount on such Interest Payment Date by each Series Resolution containing such a requirement applicable to Outstanding Senior Bonds; provided, however, that no deposit need be made to the credit of such subaccount with respect to any amount of such interest payable pursuant to a Derivative;

(b) to the credit of the subaccount established for Senior Bonds in the Principal Account in the Debt Service Fund so much, or the whole if required, of the balance of the moneys so withdrawn from the Revenue Fund until the amount on deposit in such subaccount, (a) if the withdrawal is made

during a six-month period next preceding a November 1, shall equal (i) the aggregate principal amount of Senior Bonds maturing on such November 1, plus (ii) one-half of the aggregate principal amount of Senior Bonds maturing on the next May 1, plus (iii) the aggregate of all other amounts, if any, required to be on deposit in such subaccount on such November 1 by each Series Resolution containing such a requirement applicable to Outstanding Senior Bonds, or (b) if the withdrawal is made during a six-month period preceding a May 1, shall equal (i) the aggregate principal amount of Senior Bonds maturing on such May 1, plus (ii) one-half of the aggregate principal amount of Senior Bonds maturing on the next November 1, plus (iii) the aggregate of all other amounts, if any, required to be on deposit in such subaccount on such May 1 by each Series Resolution continuing such a requirement applicable to Outstanding Senior Bonds;

(c) To the credit of the subaccount established for Senior Bonds in the Sinking Fund Account in the Debt Service Fund so much, or the whole if required, of the balance of moneys so withdrawn from the Revenue Fund until the amount, determined after taking into account as provided in the Agreement the principal amount of Term Bonds constituting Senior Bonds theretofore purchased, on deposit to the credit of such subaccount, (a) if the withdrawal is made during a six-month period next preceding a November 1, shall equal (i) the Sinking Fund Installments on Senior Bonds due on such November 1, plus (ii) one-half of the Sinking Fund Installments on Senior bonds due on the next May 1, plus (iii) the aggregate of all other amounts, if any required to be on deposit in such subaccount on such November 1, by each Series Resolution continuing such a requirement applicable to Outstanding Senior Bonds, or (b) if the withdrawal is made during a six-month period preceding a May 1, shall equal (i) the Sinking Fund Installments of Senior Bonds due on such May 1, plus (ii) one-half of the Sinking Fund Installments due on Senior Bonds on the next November 1, plus (iii) the aggregate of all other amounts, if any, required to be on deposit in such subaccount on such May 1 by each Series Resolution continuing such a requirement applicable to Outstanding Senior Bonds;

(d) in each calendar year commencing with the first full calendar year succeeding the calendar year in which the first Series of Guaranteed Bonds constituting Senior Bonds shall be issued under the Agreement, to the credit of the Section 10 Reserve Fund so much, or the whole if required, of the balance of the moneys so withdrawn from the Revenue Fund until the amount withdrawn and deposited to the credit of the Section 10 Reserve Fund in such calendar year shall equal the aggregate of the Annual Series Requirements in effect for such calendar year in respect of all Series of Guaranteed Bonds constituting Senior Bonds Outstanding on the first day of such calendar year, plus, or, at the option of the Authority, minus, as the case may be, the deficiency or excess of the amount on deposit to the credit of the Section 10 Reserve Fund on the first day of such calendar year, including in such amount interest accrued but unpaid on Investment Obligations in which such amount may then be invested, under or over the aggregate of all Annual Series Requirements in effect for prior calendar years in respect of such Guaranteed Bonds constituting Senior Bonds. No deposit need be made with respect to any Annual Series Requirement or portion thereof deposited pursuant to the applicable Series Resolution out of the proceeds of a Series of Guaranteed Bonds constituting Senior Bonds. If there shall have been any prior application of moneys held in the Section 10 Reserve Fund to the payment of principal of or Sinking Fund Installments or interest on Guaranteed Bonds constituting Senior Bonds, the amount of any deficiency in the amount thereafter on deposit to the credit of the Section 10 Reserve Fund resulting from such application shall be taken into account in computing the amount required to be deposited to the credit of the Section 10 Reserve Fund in any calendar year thereafter only to the extent that it is, in the judgment of the Authority, practicable to do so. The Annual Series Requirement as to any Series of Guaranteed Bonds shall be in effect for and only for the twelve calendar years next succeeding the calendar year in which Guaranteed Bonds of such Series were initially issued; for each calendar year thereafter on the first day of which Guaranteed Bonds of such Series shall be Outstanding, the aggregate of such prior Annual Series Requirements shall be included in the measure of the amount required to be on deposit to the credit of the Section 10 Reserve Fund with respect to such calendar year but no

additional deposit shall be required with respect to such prior Annual Series Requirements except as may be required to restore any deficiency as aforesaid. If on the first day of any calendar year the amount on deposit in the Section 10 Reserve Fund equals or exceeds the sum of (i) the aggregate of all Annual Series Requirements in effect for prior calendar years, plus (ii) the Annual Series Requirements for such calendar year, in each case in respect of all Series of Guaranteed Bonds constituting Senior Bonds of which Guaranteed Bonds are Outstanding, no deposit need be made under this clause (d) with respect to Guaranteed Bonds constituting Senior Bonds;

(e) pro rata. to the credit of each Debt Service Reserve Fund securing Senior Bonds and each Multi-Series Debt Service Reserve Fund securing Senior Bonds, (i) with respect to amounts other than amounts to replenish any withdrawal made for the payment of principal or Redemption Price of or interest on any Senior Bonds, so much, or the whole if required, of the balance of the moneys so withdrawn from the Revenue Fund until the amount deposited in each thereof in the fiscal year in which the applicable withdrawal from the Revenue Fund is made equals the amount, if any, required to be so deposited in such fiscal year by the one or more applicable Series Resolutions, and (ii) with respect to amounts to replenish any withdrawal made from any thereof for the payment of principal or Redemption Price of or Interest on any Senior Bonds, so much, or the whole if required, of the balance of the moneys so withdrawn from the Revenue Fund, until the amount on deposit in each thereof from which any withdrawal for such purpose has been made, equals the applicable Debt Service Reserve Requirement or Multi-Series Debt Service Reserve Requirement, as the case may be, of each thereof;

second, with respect to the Bonds, if any, of all Subordinate Series Level 2 (“Level 2 Bonds”), in the order of priority provided in first above (except that in depositing moneys under this second, the term “Level 2 Bonds” shall be substituted for the term “Senior Bonds” in first above; and

third, with respect to the Bonds, if any, of all Subordinate Series Level 3 (“Level 3 Bonds”), in the order of priority provided in first above (except that in depositing moneys under this third, the term “Level 3 Bonds” shall be substituted for the term “Senior Bonds” in first above;

and so on for the Bonds, if any, of each other Subordinate Series, in descending order, (i.e.. Subordinate Series Level 4, and then Subordinate Series Level 5 and so on), substituting in each case the appropriate designation of the Bonds (e.g.. “Level 4 Bonds” or “Level 5 Bonds”) on account of which the deposit is being made for the term “Senior Bonds” in first above.

After deposits have been so made with respect to all Series of Bonds issued under the Agreement as provided above, the balance of moneys, if any, withdrawn from the Revenue Fund as aforesaid shall be deposited to the credit of the following Funds and Accounts in the following order of priority;

(f) so much, or the whole if required, of the balance of moneys so withdrawn from the Revenue Fund, to the credit of such Account or Accounts in the Property Fund as may have been established for any reserve or reserves mentioned below in clause (d) in “Particular Covenants - Rate Covenant,” pro rata. until the amount deposited in each such Account in the fiscal year in which the applicable withdrawal is made from the Revenue Fund equals the amount, if any, set forth in a certificate of an Authorized Officer to be deposited in such Account or Accounts during such fiscal year;

(g) so much, or the whole if required, of the balance of moneys so withdrawn from the Revenue Fund, to the credit of each other Account in the Property Fund (other than the Multi-Purpose Reserve Account), pro rata until the amount on deposit in each such Account in the fiscal year in which the applicable withdrawal is made from the Revenue Fund equals the amount, if any, set forth in a certificate of an Authorized Officer to be on deposit in such Account during such fiscal year;

(h) so much, or the whole, if required, of the balance of the moneys so withdrawn from the Revenue Fund, to the credit of the Multi-Purpose Reserve Account, until the amount deposited in such Account in the fiscal year in which the applicable withdrawal is made from the Revenue Fund equals the amount, if any, set forth in a certificate of an Authorized Officer to be deposited in such Account during such fiscal year; provided, that the Authority may also deposit in the Multi-Purpose Reserve Account from time to time any other moneys of the Authority not required to be otherwise deposited;

(i) to the credit of the Rate Stabilization Fund, so much, or the whole if required, of the balance of moneys so withdrawn from the Revenue Fund as may be specified from time to time in a certificate of an Authorized Officer; and

(j) the remainder, if any, to the credit of the Optional Redemption Account.

Debt Service Fund

The moneys in each Account in the Debt Service Fund shall be held in trust and applied as provided in the Agreement and in the applicable Series Resolution and, pending such application, are pledged to, and shall be subject to a lien and charge in favor of, the Registered Owners of the Bonds issued and Outstanding under the Agreement. The Trustee shall apply the moneys held from time to time for the credit of the Accounts in the Debt Service Fund as follows:

(a) as to moneys held in each subaccount in the Interest Account, to the payment of interest on the Bonds with respect to which the applicable subaccount was established, on or after the date when due to each Registered Owner of such Bonds as of the applicable Record Date or Special Record Date, as such interest becomes due and payable;

(b) as to moneys held in each subaccount in the Principal Account, to the payment, on or after the date when due, of the principal of all matured Bonds with respect to which the applicable subaccount was established;

(c) as to moneys held in each subaccount in the Sinking Fund Account, to the application on the due date of each Sinking Fund Installment to the redemption of the Term Bonds with respect to which the applicable subaccount was established, to the extent the same are then subject to redemption by application of Sinking Fund Installments, in the manner provided by the applicable Series Resolution and the Agreement; and

(d) as to moneys held in the Optional Redemption Account, to the redemption or purchase of Bonds as provided below.

The Trustee upon the written direction of an Authorized Officer of the Authority shall apply moneys held in any subaccount in the Sinking Fund Account to the purchase of Term Bonds with respect to which the applicable subaccount was established whenever such Bonds may, with reasonable diligence, be purchasable at prices not exceeding the Redemption Price payable for such Bonds on the next Sinking Fund Installment due date for such Bonds; provided, however, that no such purchase shall be made within the period of forty-five (45) days next preceding the next Sinking Fund Installment due date for such Bonds.

The Trustee upon the written direction of an Authorized Officer of the Authority shall also apply moneys held in the Optional Redemption Account to the purchase, arranged as is mutually agreeable to the Trustee and the Authority, of Bonds then Outstanding at a price not to exceed (a) the Redemption Price payable to the holders of such Bonds on the next redemption date if such Bonds shall have been

called for redemption on such date, or, (b) if such Bonds have not been called for redemption on such date, (i) the Redemption Price applicable on such date to Bonds subject to optional redemption on such date, and (ii) as to Bonds not subject to optional redemption on such date, the Redemption Price applicable to such Bonds on the first date such Bonds are subject to optional redemption.

Notwithstanding the foregoing provision, no such purchase shall be made at any time when the amounts on deposit to the credit of the Interest Account, the Principal Account and the Sinking Fund Account are less than the amounts then respectively required to be on deposit therein, and provided further, that no such purchase of any Term Bond shall be made within the period of forty-five (45) days next preceding the next Sinking Fund Installment due date with respect to such Term Bond and no such purchase of any other Bond shall be made within the period of ten (10) days next preceding any date upon which notice of redemption of such Bonds is scheduled to be mailed.

The principal amount of all Term Bonds purchased as aforesaid shall be deemed to constitute deposits in the applicable subaccount in the Sinking Fund Account and shall be applied, first, against the amounts of such Sinking Fund Installments with respect to such Term Bonds theretofore due and not paid as the Authority shall designate by a certificate of an Authorized Officer, and second, against one or more such Sinking Fund Installments (including any portion of any such Sinking Fund Installment) not yet due as the Authority shall designate by a certificate of an Authorized Officer.

If a Series Resolution shall provide for the redemption at the option of the Authority of any Series of Bonds authorized thereunder, and if at any time on or after the earliest date specified in such Series Resolution for such redemption the amounts on deposit to the credit of the Interest Account, the Principal Account and the Sinking Fund Account shall be equal to or greater than the amounts then respectively required to be so on deposit with respect to any Series of which Bonds will be redeemed, and if the moneys held in the Optional Redemption Account shall equal or exceed (a) the Redemption Price of all Bonds theretofore called for redemption and not redeemed, plus (b) the Redemption Price payable at the next redemption date of Bonds in the aggregate principal amount or Accreted Amount equal to not less than the smallest authorized denomination of the Bonds subject to redemption, plus (c) all necessary and proper expenses to be incurred in connection with the redemption of Bonds on such date, the Trustee shall, if the Authority shall so direct by Certificate of an Authorized Officer (which certificate shall set forth the Series, maturities and principal amounts or Accreted Amounts of each maturity of the Bonds to be redeemed), call Bonds as set forth in such certificate for redemption on the next available redemption date; provided, however, that the aggregate principal amount and Accreted Amount of Bonds to be redeemed set forth in such certificate shall not be greater than the aggregate principal amount and Accreted Amount which will most nearly exhaust the moneys so held in the Optional Redemption Account; and provided further that Bonds shall not be designated for redemption in such certificate unless such Bonds are subject to redemption on the applicable redemption date. Such call and the redemption of Bonds and portions of Bonds so called shall be made pursuant to the provisions of the Agreement.

Interest on Bonds redeemed from moneys in the Optional Redemption Account shall be paid from moneys on deposit in the applicable subaccount in the Interest Account.

If on the date for application of moneys held in the Principal Account or in the Sinking Fund Account, the moneys so held are less than the amount required for application under whichever applies of clauses (b) or (c) of the first paragraph above in "Debt Service Fund," or if by a Certificate of an Authorized Officer the Authority directs that some or all of the moneys in the Optional Redemption Account be applied to the payment of principal or Sinking Fund Installments due on the Bonds, the Trustee shall apply moneys then held in the Optional Redemption Account (except such moneys as to which notice of redemption has already been given) by transfer to the Principal Account or to the Sinking Fund Account, as the case may be, to the extent of the deficiency therein or as directed by such certificate,

whichever is applicable; provided that bond counsel to the Authority delivers an opinion to the effect that such application of such moneys is permitted by the Enabling Act and will not jeopardize the exclusion of interest or the Bonds from gross income for federal income tax purposes.

Notwithstanding any other provision of the Agreement, if and to the extent permitted by the applicable Series Resolution, (a) moneys in any subaccount in the Interest Account, Principal Account or Sinking Fund Account may be applied to reimburse the issuer of a Credit Facility for amounts received by the Trustee pursuant to such Credit Facility to be applied to the payment of, respectively, interest on, principal of or any Sinking Fund Installment on the Bonds for which such subaccount was established or to pay any amount due from or on account of the Authority under a Derivative for payments made pursuant to such Derivative to be applied to the payment of, respectively, interest on, principal of or any Sinking Fund Installment on the Bonds for which such subaccount was established, and (b) moneys in the Optional Redemption Account may be applied to reimburse the issuer of a Credit Facility for amounts received by the Trustee pursuant to such Credit Facility to be applied to the payment of all or any portion of the Redemption Price of Bonds redeemed on account of moneys in the Optional Redemption Account or to pay any amounts due from or on account of the Authority under any Derivative for payments pursuant to such Derivative to be applied to the payment of all or any portion of the Redemption Price of bonds redeemed on account of moneys in the Optional Redemption Account.

Section 10 Reserve Fund; Other Reserve Funds; Moneys Received Pursuant to the Commonwealth Guaranty or a Credit Facility; Pledged Funds

(a) The moneys in the Section 10 Reserve Fund shall be held in trust and applied as provided below and, pending such application, are pledged to, and shall be subject to a lien and charge in favor of, the Registered Owners of the Guaranteed Bonds Outstanding.

The Trustee shall apply the moneys held from time to time for the credit of the Section 10 Reserve Fund to the payment to the appropriate subaccount in the Debt Service Fund of an amount equal to the excess of (a) the aggregate of amounts required at any Interest Payment Date to pay interest then due on Guaranteed Bonds and, if such date is also a maturity date or a Sinking Fund Installment due date for any Guaranteed Bonds, the principal of all such Guaranteed Bonds then matured or the amount of the Sinking Fund Installment then due with respect to Guaranteed Bonds, as the case may be, over (b) moneys then held for the credit of the appropriate subaccount or subaccounts in the Debt Service Fund, after any transfer thereto from the Optional Redemption Account, or from the Property Fund or from the Rate Stabilization Fund or from all of the foregoing, and available for the payment of such interest, principal or Sinking Fund Installment, respectively. If moneys in the Section 10 Reserve Fund are insufficient to pay in full the amounts specified above, such moneys shall be paid, first, to Guaranteed Bonds constituting Senior Bonds, and second to Guaranteed Bonds constituting Level 2 Bonds, and third to Guaranteed Bonds constituting Level 3 Bonds, and so on in descending level of subordination. If moneys in the Section 10 Reserve Fund are insufficient to pay in full the amounts to be paid with respect to all Guaranteed Bonds constituting Senior Bonds, or all Guaranteed Bonds of any applicable level of subordination, such moneys shall be applied to all Guaranteed Bonds of all Senior Series or all Guaranteed Bonds of all Series of the applicable level of subordination, as the case may be, as described below in "Defaults; Remedies - Application of Funds."

If on the first day of any calendar year or at any other time the amount on deposit in the Section 10 Reserve Fund exceeds the aggregate of the Annual Series Requirements for the present year and all prior years with respect to all Guaranteed Bonds Outstanding, the Authority may by a certificate of an Authorized Officer direct that all or a portion of such excess (other than any part of such excess consisting of interest received and profits realized in excess of losses from investments of moneys held in the Section 10 Reserve Fund, which shall be applied as described below in "Security for Deposits and

Investments of Funds - Investments”) be withdrawn from the Section 10 Reserve Fund and deposited in the Revenue Fund to be applied to the payment of interest coming due in such year on such Guaranteed Bonds, provided that such certificate is accompanied by an opinion of bond counsel to the Authority that such application or payment is permitted by applicable law and will not adversely affect the exemption from gross income for federal income tax purposes of the interest on the Bonds.

At any time when the amount on deposit in the Section 10 Reserve Fund equals or exceeds (a) the aggregate of the twelve Annual Series Requirements to be in effect with respect to any particular Series of Guaranteed Bonds of which Bonds are then Outstanding plus (b) all Annual Series Requirements in effect for all prior years and for the then current year with respect to all Series of Guaranteed Bonds of which Bonds are Outstanding, and when such aggregate plus any other moneys held under the Agreement available for the purpose shall equal or exceed the aggregate amount required to pay in full the principal and Redemption Price of and interest on all Bonds of such particular Series then Outstanding (and, if the Bonds of such particular Series are to be redeemed, the necessary and proper expenses to be incurred in connection with such redemption), the Authority may by a certificate of an Authorized Officer direct the Trustee to apply to such payment an amount from the Section 10 Reserve Fund not exceeding such aggregate; provided, however that moneys “available for the purpose” as such phrase is used above in this paragraph shall mean, (x) as to moneys in the subaccounts applicable to such particular Series in the Interest Account, Principal Account and Sinking Fund Account, moneys in excess of the amount then required to be on deposit in each of such subaccounts with respect to all outstanding Guaranteed Bonds to which such subaccounts apply other than Guaranteed Bonds of such particular Series and (y) as to moneys in the Optional Redemption Account, any Account in the Property Fund and the Rate Stabilization Fund, moneys in any such Fund or Account described in a Certificate of an Authorized Officer to be so applied (such direction to be in accordance with the provisions of the Agreement with respect to the use of the moneys in any such Fund, Account or subaccount).

All deposits to the Section 10 Reserve Fund shall be apportioned if directed by a certificate of an Authorized Officer to separate Accounts to be created therein, one account for each Series of Guaranteed Bonds Outstanding (the “Section 10 Series Accounts”), for purposes of compliance by the Authority with the Code and to such subaccounts, as so directed, as are necessary or desirable to comply with the Code. The portion of each deposit attributed to the Account of a particular Series will be the proportion of the total deposit that the Annual Series Requirement for such Series bears to the aggregate Annual Series Requirements for all Series of Guaranteed Bonds of the same level (i.e., Senior Bonds, Subordinate Series Level 2, etc.).

Any withdrawal from the Section 10 Reserve Fund shall be made in portions taken from all Section 10 Series Accounts in such proportion from each such Account as each such Account bears to the total balance of the Section 10 Reserve Fund prior to the making of such withdrawal, unless otherwise directed by a certificate of an Authorized Officer accompanied by an opinion of bond counsel to the Authority to the effect that the instructions for withdrawal set forth in such certificate will not adversely affect the exclusion from gross income for federal tax purposes of the interest on the Bonds.

(b) Moneys in any Debt Service Reserve Fund or Multi-Series Debt Service Reserve Fund shall be applied as set forth in the one or more applicable Series Resolutions.

(c) Moneys received pursuant to the Commonwealth Guaranty shall be held in a separate Account and applied as promptly as practicable to the payment of principal and interest due on the Guaranteed Bonds on account of which such moneys were received.

(d) Moneys received by the Trustee pursuant to a Credit Facility shall be held in a separate Account and shall be applied as provided in the one or more applicable Series Resolutions or in such Credit Facility.

(e) Pledged Funds received by the Trustee shall be held in a separate Account and applied as provided in the one or more applicable Series Resolutions.

Property Fund

In addition to the Accounts and subaccounts established in the Property Fund described above in “Funds and Accounts,” the Agreement establishes and authorizes to be established Accounts in the Property Fund for such reserves as the Authority may establish as described below in clause (d) in “Particular Covenants - Rate Covenant.” Subject to the following paragraph, the Trustee shall credit all moneys deposited in the Property Fund to such Account therein (or, as to the Capital Improvements Reserve Account, to such subaccount or subaccounts therein) as the Authority may by certificate of an Authorized Officer direct and, in the absence of such a certificate, to the General Account.

The Trustee shall deposit in the Insurance Proceeds Account all proceeds of an insurance policy or policies upon any Project paid by reason of any insured casualty, except that if the Project to which the proceeds apply has not yet reached completion, such proceeds shall be deposited to the related Account of the Construction Fund; provided, that any such proceeds which are proceeds of “use or occupancy” insurance, so-called, or any other insurance providing for payments in place of income or for operating expenses, in either case as certified by an Authorized Officer, shall be deemed Revenues and be deposited to the credit of the Revenue Fund.

The moneys held in each Account in the Property Fund shall be held in trust and applied as provided below and, pending such application, are pledged to, and shall be subject to a lien and charge in favor of, the Registered Owners of the Bonds issued and Outstanding under the Agreement.

The Trustee shall apply the moneys held from time to time for the credit of each Account in the Property Fund as follows:

(a) as to any Account created for a reserve as described below in clause (d) in “Particular Covenants - Rate Covenants,” to the payment from time to time of amounts as provided by the pertinent resolution of the Authority and for the purposes therein provided in accordance with a certificate of an Authorized Officer;

(b) as to the General Account, to the payment from time to time as deemed appropriate by the Authority of Maintenance, Repair and Operating Expenses of any Project not otherwise provided for;

(c) as to the Insurance Proceeds Account, to payment, in accordance with the provisions described below in “Particular Covenants - Insurance on Projects,” for the repair, restoration or reconstruction of the damage or destruction on account of which the funds were received, or for the doing of such other work in respect of such Project as the Authority may determine in accordance with the provisions described below under “Particular Covenants - Insurance on Projects”;

(d) as to any subaccount in the Capital Improvements Reserve Account, to the payment from time to time of the costs of capital improvements or capital repairs with respect to any Project to which the applicable subaccount pertains;

(e) as to the Multi-Purpose Reserve Account, to any lawful purpose for which the Authority may expend funds (and the Trustee may rely on a statement to such effect in the certificate of an Authorized Officer directing such application that the amounts set forth in such certificate will be so applied);

(f) to the extent of moneys so held in any Account in the Property Fund which are not the proceeds of any insurance policy or policies or investment earnings on such proceeds, to transfer to any one or more subaccounts in the Interest Account, the Principal Account or the Sinking Fund Account, one or more, as the case may be, in the Debt Service Fund if and to the extent that moneys held in any such subaccount on a date for application thereof, together with money available in the Rate Stabilization Fund, shall be less than the amount then required for application from such subaccount; and

(g) to the extent of moneys so held in any Account in the Property Fund which are not the proceeds of any insurance policy or policies or investment earnings on such proceeds, to the redemption of Bonds as may be directed from time to time by a certificate of an Authorized Officer.

The Authority may, by a certificate of an Authorized Officer approved by the University Trustees and accompanied by an opinion of bond counsel to the Authority to the effect that the instructions in such certificate are permitted by the Enabling Act and will not adversely affect the exclusion of the interest on the Bonds from gross income for federal income tax purposes, direct that amounts be transferred from any one or more subaccounts in the Capital Improvements Reserve Account to any other one or more subaccounts in the Capital Improvements Reserve Account or to one or more Capital Improvements Reserve Accounts or like accounts (or, if applicable, one or more subaccounts in any such Capital Improvements Reserve Account or like account) established under any other trust agreement under which the Authority has issued bonds).

Rate Stabilization Fund

Amounts shall be deposited in the Rate Stabilization Fund from the Revenue Fund in the Authority's discretion as provided in the Agreement in order to minimize the variation over time in the fees, rents, rates and other charges fixed in accordance with the provisions described below in "Particular Covenants — Rate Covenant." At any time, upon the direction of the Authority as evidenced by a Certificate of an Authorized Officer, amounts on deposit in the Rate Stabilization Fund may be withdrawn and deposited in the Revenue Fund or applied to the redemption of Bonds.

Notwithstanding the foregoing paragraph, if at any time the amounts on deposit and available therefor in the Debt Service Fund are insufficient to pay the principal and Redemption Price of and interest on the Bonds then due, the Trustee shall withdraw from the Rate Stabilization Fund and deposit in the appropriate subaccount within the Debt Service Fund the amount necessary to meet such deficiency.

Rebate Fund

For each Series of Bonds subject to the rebate requirements of the Code, there shall be established within the Rebate Fund a separate account, for the benefit of the United States of America, and such subaccounts therein as are provided in the applicable Series Resolution, as amended from time to time, or as may be directed by a certificate of an Authorized Officer.

The Trustee shall deposit in the applicable account in the Rebate Fund such amounts as are required pursuant to such Series Resolution, invest the same as set forth therein, and keep such records as shall enable the Authority to satisfy its rebate obligations for such Series under the Code. The Authority

shall direct the Trustee to pay to the United States from the Rebate Fund on the Authority's behalf such amounts as are required to be paid pursuant to the Code, all as set forth in the applicable Series Resolution, provided that any deficiency in the amounts required to be deposited into the Rebate Fund, or in any required payment from the Rebate Fund to the United States, shall be made up by the Authority, and provided further that no amount in the Rebate Fund shall be paid to the Authority or transferred to any other Fund or Account except as permitted by the Agreement, the Series Resolution and the Code.

The provisions described in this paragraph, as modified by the applicable Series Resolution, shall survive the defeasance of the Agreement, or of any Series of Bonds to which such provisions apply, and such provisions and the provisions pertaining to rebate in any Series Resolution shall be subject to amendment without the consent of any Registered Owner to reflect any applicable amendment to the Code with respect to rebate.

SECURITY FOR DEPOSITS AND INVESTMENTS OF FUNDS

Deposits with Trustee

All moneys deposited under the Agreement with the Trustee shall be held in trust and applied in accordance with the provisions of the Agreement, and shall not be subject to lien or attachment by any creditor of the Authority or the Trustee.

All moneys deposited with the Trustee under the Agreement shall be continuously secured, for the benefit of the Authority and the Registered Owners of the Bonds in such manner as may then be required or permitted by applicable state or federal laws and regulations regarding the security for, or granting a preference in the case of, the deposit of trust funds; provided, however, that it shall not be necessary for the Trustee to give security for any moneys which shall be invested in Investment Obligations.

All moneys deposited with the Trustee shall be credited to the particular Fund, Account or subaccount to which such moneys belong.

Investments

Moneys held for the credit of the Note Payment Fund shall, as nearly as may be practicable, be continuously invested and reinvested by the Trustee in Investment Obligations which shall mature, or which shall be subject to redemption by the holder thereof at the option of such holder, not later than the day or days preceding the date or dates of payment of the notes for the payment of which such moneys in the Note Payment Fund are held.

Moneys held for the credit of each Account within the Construction Fund shall, as nearly as may be practicable, be continuously invested and reinvested by the Trustee in Investment Obligations which shall mature, or which shall be subject to redemption by the holder thereof at the option of such holder, not later than the respective dates as set forth in a schedule furnished by an Authorized Officer of the Authority to the Trustee at the time moneys are first deposited in such Account, as such schedule may thereafter be amended, when moneys held for the credit of such Account will be required for the purposes intended.

Moneys held for the credit of the Revenue Fund shall, as nearly as may be practicable, be continuously invested and reinvested by the Trustee in Investment Obligations which shall mature, or which shall be subject to redemption by the holder thereof at the option of such holder, as to moneys not in excess of the amount then required as the reserve for Current Expenses, not later than the day or days

preceding the date or dates upon which moneys are to be applied to the payment of Current Expenses, Maintenance, Repair and Operating Expenses and Section 19C Payments as set forth in a schedule filed by the Authority with the Trustee, or, as to moneys held in the Revenue Fund and to be transferred to other Funds, Accounts and subaccounts as described above in "Establishment and Application of Funds and Accounts - Revenue Fund," not later than the day preceding the date of such transfer.

Moneys held for the credit of each subaccount in the Debt Service Fund shall, as nearly as may be practicable, be continuously invested and reinvested by the Trustee in Investment Obligations which shall mature, or which shall be subject to redemption at the option of the holder thereof, as to moneys so held in any subaccount in the Interest Account in an amount not in excess of the amount payable as interest from such subaccount at the next Interest Payment Date, not later than the day prior to such Interest Payment Date, or, as to moneys so held in any subaccount in the Principal and Sinking Fund Accounts, in amounts not respectively in excess of the amount payable from such subaccount as principal of Bonds maturing at the next maturity date or of the amount of the Sinking Fund Installment next falling due, not later than the day prior to the date of such maturity or such due date, as the case may be, or, as to other moneys, if any, so held, not later than twelve (12) months after the date of any such investment.

Moneys held for the credit of the Section 10 Reserve Fund and the Rate Stabilization Fund shall, as nearly as may be practicable, be continuously invested and reinvested by the Trustee in Investment Obligations, provided that amounts on deposit in the Section 10 Series Account for any Series of Outstanding Guaranteed Bonds, or in any subaccounts, shall not be invested in excess of the yield or yields as set forth in the investment instructions delivered to the Trustee from time to time by an Authorized Officer, except as permitted by an opinion of bond counsel to the Authority to the effect that investments may be made at the yield or yields set forth in such opinion without adversely affecting the exclusion from gross income of the interest on such Series of Guaranteed Bonds or any other Bonds.

Moneys in any Debt Service Reserve Fund or Multi-Series Debt Service Reserve Fund shall be invested as provided in the one or more applicable Series Resolutions.

Moneys held for the credit of each Account or subaccount in the Property Fund shall, as nearly as may be practicable, be continuously invested and reinvested by the Trustee in Investment Obligations which shall mature, or which shall be subject to redemption by the holder thereof at the option of such holder, on the dates specified from time to time in a certificate of an Authorized Officer delivered to the Trustee.

Notwithstanding any other provisions of the Agreement, the Authority may at any time deliver to the Trustee by a certificate of an Authorized Officer additional or different instructions from those set forth above regarding the investment of moneys held under the Agreement, provided that such instructions do not jeopardize the exclusion from gross income for federal income tax purposes of the interest on any Bond (as to which the Authority may rely on an opinion of bond counsel to the Authority), and provided that such additional or different instructions do not violate the requirements of the issuer of any Credit Facility with respect to the moneys to which such instructions apply. The Trustee shall comply with such instructions if (a) the Authority certifies in such certificate that such instructions do not jeopardize the exclusion from gross income for federal income tax purposes of the interest on any Bond; (b) no investment is directed to be made in any investments other than Investment Obligations; (c) the Authority certifies in such certificate that such instructions do not violate the requirements of the issuer of any Credit Facility with respect to the moneys to which such instructions apply; and (d) the Trustee's liability as set forth in the Agreement is not modified.

Investment Obligations purchased as an investment of moneys in any Fund, Account or subaccount may be purchased and held with Investment Obligations purchased as an investment of

moneys in any other Fund, Account or subaccount as a part of a single investment fund but shall be deemed at all times to be a part of the Fund, Account or subaccount for which they were purchased, and the interest accruing thereon and any profit or loss realized from such investments shall be charged pro rata to each such Fund, Account or subaccount; provided, however, (a) that interest received and profits realized in excess of losses realized in any fiscal year from investments of moneys held in the Note Payment Fund shall be deemed to be proceeds of the corresponding Series of Bonds and, except to the extent provided in the Series Resolution authorizing the issuance of such Bonds to be applied to the payment of notes issued by the Authority, shall be transferred, upon the first to occur of (i) payment in full of the pertinent notes or (ii) the end of a fiscal year, to the corresponding Account within the Construction Fund, (b) that, subject to the provisions described above in "Establishment and Application of Funds and Accounts - Rebate Fund," all such interest and profits from the investment of moneys held in Construction Fund Accounts shall be retained in such Accounts, (c) that, subject to the provisions described above in "Establishment and Application of Funds and Accounts - Rebate Fund," all such interest and profits from the investment of moneys held in any Debt Service Reserve Fund or Multi-Series Debt Service Reserve Fund shall be applied as provided in the one or more Series Resolutions governing the application of moneys held in the applicable Debt Service Reserve Fund or Multi-Series Debt Service Reserve Fund and (d) that, subject to the provisions described above in "Establishment and Application of Funds and Accounts - Rebate Fund," such interest and profits from investments of moneys held in any other Fund, Account or subaccount, except as otherwise provided in a Series Resolution or in the Agreement, shall constitute Revenues and shall be transferred to the Revenue Fund. Such interest received and profits realized in excess of losses realized in any calendar year from investments of moneys held in the Section 10 Reserve Fund shall, subject to the provisions described above in "Establishment and Application of Funds and Accounts - Rebate Fund," and if and only if the amount on deposit to the credit of the Section 10 Reserve Fund on the first day of such calendar year (or on any other date of such calendar year if bond counsel to the Authority delivers an opinion to the effect that such is permitted by the Enabling Act) exceeds the aggregate of all Annual Series Requirements in effect for the Guaranteed Bonds then Outstanding for all calendar years through and including such calendar year, constitute Revenues to the extent of the amount of such excess and shall be transferred as received to the Revenue Fund to be applied to the payment of interest on Guaranteed Bonds, unless a certificate of an Authorized Officer directs that any such interest or profits be held in the Section 10 Reserve Fund. Interest and profits derived from the investment of moneys, which interest and profits are held in the Revenue Fund or which are not subject to being transferred thereto, shall, to the extent available, be deemed to be included among the amounts first requisitioned or otherwise withdrawn and expended from any Fund, Account or subaccount. The Trustee shall sell at the best price obtainable or present for redemption any obligations so purchased whenever it shall be necessary so to do in order to provide moneys to meet any payment or transfer from any such Fund, Account or subaccount. Neither the Trustee nor the Authority shall, in the absence of bad faith, be liable on account of or responsible for the results of any such investment.

In computing the amount in any Fund, Account or subaccount held by the Trustee under the Agreement, Investment Obligations shall be valued at par if purchased at par or at amortized value if purchased at other than par. Amortized value, when used with respect to an obligation purchased at a premium above or a discount below par, means the value as of any given time obtained by dividing the total premium or discount at which such obligation was purchased by the number of days remaining to maturity on such obligation at the date of such purchase and by multiplying the amount thus calculated by the number of days having passed since such purchase; and (1) in the case of an obligation purchased at a premium by deducting the product thus obtained from the purchase price; and (2) in the case of any obligation purchased at a discount by adding the product thus obtained to the purchase price. Valuation on any particular date shall include the amount of interest then earned or accrued to such date on any Investment Obligations.

Investment Advice

The Authority shall direct all investments of moneys held under the Agreement, or the Authority may, at its expense, appoint as an investment adviser a person registered under the federal Investment Advisers Act of 1940 and having a favorable reputation for competence and experience in investing in Investment Obligations to instruct the Trustee with respect to investment and reinvestment of all or a portion of the moneys held under the Agreement. The Trustee shall have no liability of any kind to the Authority, to any Registered Owner or to any other person for or on account of any investment transaction it shall carry out in accordance with investment instructions given as provided in the Agreement. The Trustee may carry out all investment transactions through its own facilities.

PARTICULAR COVENANTS

Rate Covenant

The Authority covenants that it will establish and revise rules and regulations to insure the use and occupancy of, and will fix, revise, adjust and collect fees, rents, rates and other charges for the use of, each Project and of all Other Projects and other property of the Authority the Revenues from which are pledged under the Agreement, in such manner and at such levels as may be necessary so that the aggregate of (i) the proceeds from such fees, rents, rates and other charges for the use of all Projects, Other Projects and other property the Revenues from which are pledged under the Agreement, (ii) all other Revenues from such Project, Other Projects and property and (iii) all appropriations, contributions, gifts and grants received by the Authority or made for the benefit of the Authority or any such Project, Other Project or property and available and applied for the purpose, will provide Revenues sufficient in each fiscal year

(a) to pay the Maintenance, Repair and Operating Expenses of such Projects, Other Projects and property, provided, that in the case of a Project with respect to which a Contract is in effect that includes undertakings by the University Trustees respecting maintenance, repair and operation thereof, such undertakings shall be deemed to fulfill the covenant of the Authority as to the sufficiency of Revenues therefor;

(b) (i) to provide for making deposits to the credit of the appropriate Accounts in the Debt Service Fund in amounts in such fiscal year equal in the aggregate to the total of (A) all interest becoming due and payable in such fiscal year on all Bonds then Outstanding, (B) the principal amount of all such Bonds maturing in such fiscal year, (C) the Sinking Fund Installments, if any, becoming due in such fiscal year in respect of all such Bonds and (D) other amounts, if any, payable in such fiscal year on the account of all such Bonds or required to be deposited in such Fiscal Year to any Account in the Debt Service Fund, and (ii) to provide for the payment of the purchase price of Bonds tendered as provided in the one or more applicable Series Resolutions;

(c) to pay the Current Expenses of the Authority properly allocable to such Projects, Other Projects and property;

(d) to create and maintain such funds, accounts and reserves, if any, as may be provided for in any Series Resolution authorizing the issuance of Bonds or in a resolution thereafter adopted;

(e) to pay the amounts of any Section 19C Payments to be paid in such fiscal year; and

(f) to provide for making deposits to the credit of (i) the Section 10 Reserve Fund in amounts which, together with amounts deposited in the preceding fiscal year for such purpose or to be deposited in the subsequent fiscal year for such purpose will equal in the aggregate the reserve required by Section 10

of the Enabling Act to be established and maintained in such Fund in respect of each calendar year constituting a portion of such fiscal year and (ii) each Debt Service Reserve Fund or Multi-Series Debt Service Reserve Fund in amounts, if any, required by the one or more applicable Series Resolutions;

except that

(g) as to any Project or Other Projects the Bonds or other indebtedness issued by the Authority to finance or refinance which shall have been paid or provided for in full, as described below in "Defeasance," such Revenues need only be sufficient to pay the amounts required under clauses (a), (c), (d) and (e) above;

and, so far as consistent with the foregoing requirements, so as to maintain reasonable uniformity of charges for like rooms or other accommodations, facilities and services at the University whether or not contained in or provided by a Project of the Authority.

The Authority covenants that if the amounts deposited to the credit of any Account in the Debt Service Fund, in the Section 10 Reserve Fund and any other reserve fund securing any Bonds in any fiscal year shall be less than the amounts respectively referred to above for such fiscal year, it will revise and adjust the aforesaid fees, rents, rates and other charges so as to provide funds sufficient, with all other moneys available for the purpose, to provide the payments and deposits specified above to be made from Revenues.

To the extent provided in the Enabling Act, any establishment or revision of said rules and regulations and any fixing, revision or adjustment of said fees, rents, rates or other charges by the Authority shall require the approval of the University Trustees, and the Authority covenants that it will use its best efforts to obtain such approval whenever required.

Annual Schedule of Projected Expenses

The Authority shall file with the Trustee an annual schedule of projected expenses (the "Annual Schedule of Projected Expenses" or "Schedule") as follows:

(a) With or before the first remittance to the Trustee of moneys to be deposited in the Revenue Fund, the Authority shall file with the Trustee an initial Schedule signed by an Authorized Officer setting forth the amount estimated by the Authority to be payable from the Revenue Fund as Current Expenses, Maintenance, Repair and Operating Expenses and Section 19C Payments during the period commencing with the date thereof and ending on the next following June 30.

(b) On or before each June 15, commencing with the June 15 next preceding the end of the period covered by said initial Schedule, the Authority shall file with the Trustee a Schedule similarly signed setting forth the amount estimated by the Authority to be payable from the Revenue Fund as Current Expenses, Maintenance, Repair and Operating Expenses and Section 20 Payments during the period commencing on the next following July 1 and ending twelve months thereafter.

(c) If at any time prior to June 30 in any period covered by the initial or any subsequent Schedule, as the same may have theretofore been amended, the aggregate of the amounts paid from the Revenue Fund since and including the next preceding July 1 as Current Expenses, Maintenance, Repair and operating Expenses and Section 19C Payments shall exceed the amount set forth in such Schedule, the Authority shall file an amended Schedule similarly signed increasing accordingly the estimated amount to be payable as Current Expenses, Maintenance, Repair and Operating Expenses and Section

19C Payments during the balance of such period. Each amended Schedule filed by the Authority under this clause shall supersede all initial, annual and amended Schedules filed prior thereto.

Debt Service Payments and Payment of Purchase Price

The Authority covenants that it will promptly pay the principal of and the interest on every Bond and the purchase price of every Bond tendered as provided in the applicable Series Resolution at the place, on the dates and in the manner provided in the Agreement and in said Bond and Series Resolution, and any premium required for the retirement of said Bond by purchase or redemption, according to the true intent and meaning thereof. Except as otherwise provided in the Agreement, such principal, interest, purchase price and premium are payable solely from Revenues and Funds pledged under the Agreement.

The Authority covenants that it will perform and observe each and every agreement, condition, covenant and obligation on its part to be performed and observed under each Contract providing for the Commonwealth Guaranty to the end that the Commonwealth Guaranty therein provided and the pledge of the full faith and credit of the Commonwealth for such Commonwealth Guaranty shall remain in full force and effect and binding upon the Commonwealth as authorized by the Enabling Act and provided by such Contract, said Commonwealth Guaranty and pledge being evidenced by the guaranty executed on each applicable Guaranteed Bond by an officer of the University Trustees.

Completion of Projects

The Authority covenants that it will with reasonable expedition complete each Project in conformity with law and all requirements of all governmental authorities having jurisdiction thereover. The Authority further covenants that upon completion or occupancy of each Project financed by a Series of Bonds issued under the Agreement, if and to the extent that there is no obligation of the University Trustees under a Contract to undertake the operation and maintenance of any such Project, the Authority will thereafter operate and maintain, or otherwise provide for the operation and maintenance of, such Project.

Land Covenant

(a) The Authority covenants that each Project constructed or acquired by it is or will be located on lands as to which either (i) the same are leased by the Authority from the Commonwealth for the purpose by a good and valid lease or leases continuing or renewable at the option of the Authority for a term not shorter than the last maturity of any Bond of the Series pertaining to such Project, or (ii) good and marketable title to which is owned by the Authority in fee simple or the right to use and occupy which is vested in the Authority by valid franchises, licenses, easements, rights of way or other rights expiring not earlier than the last maturity of any such Bond.

(b) The foregoing covenant shall not apply to a Project consisting of the construction, alteration, enlargement, reconstruction, rehabilitation, remodeling and other work on any building, structure or other facility (including without limitation parking lots) not owned or leased by the Authority as lessee or sublessee and not involving the acquisition of such building, structure or facility by the Authority.

Compliance with Contracts

The Authority covenants that it will perform and observe each and every agreement, condition, covenant and obligation on its part to be performed and observed under each Contract, and will use its best efforts to enforce like performance and observation on the part of the Commonwealth and the University Trustees, to the end that the obligation of the Commonwealth and the University Trustees

thereunder, among other things, to remit to the Authority or to the Trustee Revenues, to operate and maintain the Project and to make necessary repairs to and restoration and reconstruction of the same shall continue in full force and effect. The Authority covenants that, from and to the extent of, but not in excess of, the Revenues of each Project owned by it and any other funds available to it for the purpose, it will cure any deficiencies in the maintenance of such Project and will make all necessary repairs, restoration and reconstruction not made by the Commonwealth pursuant to the applicable Contract and that it will observe and perform all of the terms and conditions contained in the Enabling Act.

Payment of Lawful Charges

The Authority covenants that it will not create or suffer to be created any lien or charge upon any Project or any part thereof or upon the Revenues therefrom except the lien and charge upon such Revenues under the Agreement, and that, from the same or other available funds, it will pay or cause to be discharged, or will make adequate provision to satisfy and discharge, as promptly as possible after the same shall accrue, all lawful claims and demands for labor, materials, supplies or other objects which, if unpaid, might by law become a lien upon any Project or any part thereof or the Revenues therefrom; provided, however, that nothing in the foregoing provisions in this subsection shall (a) require the Authority to pay or cause to be discharged, or make provision for, any such lien or charge so long as the validity thereof shall be contested in good faith, or (b) prohibit (i) the University Trustees or the University from using any funds of the University in accordance with law and in compliance with any Contract or any other agreement applicable to the University Trustees or the University or (ii) the Expendable Fund Balance of the University from being used in accordance with law and *in* compliance with any Contract or any other agreement applicable to the University Trustees; and provided, further, that if on any date the Authority holds or there is held for the account of the Authority Revenues in excess of the Revenues required by the provisions described above in "Rate Covenant" for the remainder of the fiscal year in which such date occurs, the Authority may apply such excess to any lawful purpose of the Authority as the Authority may from time to time determine.

Use of Other Funds for Projects; Sale of Projects

Notwithstanding any other provision of the Agreement, the Authority may permit the Commonwealth or any of its agencies, departments or political subdivisions, to pay the cost of maintaining, repairing and operating any Project out of funds other than Revenues of such Project whether pursuant to the pertinent Contract or otherwise.

The Authority may also, if and to the extent now or hereafter permitted by law, sell any Project owned by the Authority or any portion thereof; provided, that if such sale is of an entire Project, the proceeds therefrom shall be in an amount sufficient, with all other moneys then held by the Trustee hereunder and available for the purpose, (a) to pay or provide for the payment in full at the first date upon which such payment may be made of all amounts then required for the payment of the principal or Redemption Price of and interest on the Bonds then Outstanding issued to finance or refinance the cost of such Project (and the determination of which Bonds of the applicable Series were so issued shall be made by the Authority in any reasonable manner if the Project was financed or refinanced by Bonds issued as part of a Series that financed or refinanced more than one Project and shall be evidenced to the Trustee by a certificate of an Authorized Officer) and (b) to pay all necessary and proper expenses payable in connection with such payment; provided, further, that if such sale is of a portion of a Project, the proceeds therefrom shall be an amount sufficient, with any other moneys then held by the Trustee under the Agreement and available for the purpose, (a) to pay or provide for the payment in full at the first date upon which such payment may be made of the principal or Redemption Price of and interest on a principal amount of Bonds then Outstanding of the Series issued to finance or refinance the Cost of such Project bearing the same proportion to the principal amount of all such Bonds then Outstanding that (as

reasonably determined by the Authority and evidenced to the Trustee by a Certificate of an Authorized Officer) the Cost of the portion of such Project to be sold bore to the Cost of the Project and (b) to pay all necessary and proper expenses payable in connection with such payment. The proceeds of any such sale shall be deposited by the Authority with the Trustee and shall be deposited by the Trustee to the credit of the Optional Redemption Account.

Insurance on Projects

The Authority covenants that (a) during the construction, alteration, enlargement, reconstruction, rehabilitation or remodeling of or other work upon each Project it will carry such builder's risk insurance, if any, as it may deem reasonable therefor, and (b) from and after the time when the contractors or any of them engaged in constructing any part of each Project shall cease to be responsible, pursuant to the provisions of the respective contracts for the construction of such part, for loss or damage to such part occurring from any cause, it will insure and at all times keep such part insured with a responsible insurance company or companies, qualified to assume the risk thereof, against physical loss or damage however caused, with such exemptions as are ordinarily required by insurers of buildings, structures or facilities of similar type and in similar locations, in such amount as it shall determine to be reasonable and in any event at least sufficient to comply with any legal or contractual requirement which, if breached, would result in assumption by the Authority of a portion of any loss or damage as a co-insurer; provided, however, that (i) if at any time the Authority shall be unable to obtain such insurance to the extent above required, either as to the amount of such insurance or as to the risks covered thereby, it will not constitute an event of default under the Agreement if the Authority shall maintain such insurance to the extent reasonably obtainable; (ii) such insurance may be provided by a policy or policies covering all insurable portions of such Project as a whole together with other insurable property of the Authority; and (iii) the requirements set forth in clause (b) above of this paragraph shall not apply to any Project owned by the Commonwealth (but the Authority may from time to time provide such insurance of the kind described in such clause (b) for any Project owned by the Commonwealth as the Authority may determine in its discretion).

All such policies shall be for the benefit of the Trustee and the Authority as their interests shall appear, shall be made payable to the Trustee (by means of the standard mortgagee clause without contribution, if obtainable) and shall be deposited with the Trustee. The proceeds of any and all such insurance shall be deposited with the Trustee, and the Trustee shall have the sole right to receive the proceeds of such insurance and to collect claims thereunder and receipt therefor. The proceeds of any and all such insurance shall be deposited to the credit of the Insurance Proceeds Account in the Property Fund.

The Authority covenants that, immediately after any damage to or destruction of any part of any Project the estimated cost to repair, restore or reconstruct which exceeds One Hundred Thousand Dollars (\$100,000), it will, if necessary, prepare or cause the Architect or Engineer, as the case may be, for the Project to prepare plans and specifications for repairing, restoring or reconstructing the damaged or destroyed property, and in any event it will proceed with all reasonable promptness as may be required to accomplish such repair, restoration or reconstruction in accordance with the original design or to do such other work as may be advised in writing by the University Trustees.

The proceeds of all insurance referred to in this subsection shall be available for, and shall to the extent necessary be applied to, the repair, restoration or reconstruction of the damaged or destroyed property, or the doing of other work with respect thereto as the Authority may determine by resolution adopted upon advice in writing from the University Trustees, and shall be disbursed by the Trustee upon receipt of copies, certified by an Authorized Officer, of the resolution adopted by the Authority authorizing such repair, restoration and reconstruction and of such written advice and otherwise in the manner and upon the showings provided in the Agreement for payments from the Construction Fund. If

such proceeds shall be insufficient for such purpose, the deficiency shall be supplied from any other moneys available for the purpose in the appropriate reserve Account or in the General Account in the Property Fund.

Upon completion of the work authorized by such resolution the Authority shall cause to be filed with the Trustee a notice and a Counsel's Opinion with respect thereto executed, approved and including statements substantially to the same effect as those provided in the Agreement for completion of construction of a Project.

Any balance of such proceeds remaining after such certificate shall have been filed shall be held by the Trustee in the Insurance Proceeds Account in the Property Fund and applied as provided herein or, if the Authority shall so direct by a certificate of an Authorized Officer, shall be transferred to one or more of the Revenue Fund, the Optional Redemption Account in the Debt Service Fund, to any Account within the Construction Fund or to the Multi-Purpose Reserve Account.

Use, Occupancy and Other Insurance

The Authority covenants that it will at all times carry with a responsible insurance company or companies or companies qualified to assume the risk thereof:

(a) use and occupancy insurance covering loss of Revenues from each Project by reason of necessary interruption, total or partial, in the use thereof resulting from damage or destruction of any part thereof however caused, with such exceptions as are ordinarily required by insurers providing similar insurance, in such amount as the Authority shall estimate is sufficient to provide a full equivalent of Revenues for the fiscal year of the Authority respecting which such insurance is carried; provided, that if at any time the Authority shall be unable to obtain such insurance to the extent above required, either as to the amount of such insurance or as to the risks covered thereby, it will not constitute an event of default under the Agreement if the Authority shall carry such insurance to the extent reasonably obtainable; provided, however, that the Authority need not (but may) provide the insurance described in this subparagraph with respect to any Project owned by the Commonwealth; and

(b) such worker's compensation or employers' liability insurance as may be required by law and such public liability and property damage insurance as the Authority shall deem reasonable.

All policies providing use and occupancy insurance shall be made payable to and deposited with the Trustee, and the Trustee shall have the sole right to receive any proceeds of such policies and to collect claims thereunder. Any proceeds of use and occupancy insurance paid to the Trustee shall be deposited by it forthwith to the credit of the Revenue Fund.

Any appraisal or adjustment of any loss or damage under any policy payable to the Trustee and any settlement or payment of indemnity under any such policy shall be agreed upon between the Authority and any insurer and shall be evidenced to the Trustee by a certificate, signed by an Authorized Officer of the Authority, which certificate may be relied upon by the Trustee as conclusive. The Trustee shall in no way be liable or responsible for the collection of insurance moneys in case of any loss or damage.

No Inconsistent Action by Authority

The Authority covenants and agrees that none of the Revenues of any Project will be used for any purpose other than as provided in the Agreement and no contract or contracts will be entered into or any action taken which shall be inconsistent with the provisions of the Agreement.

Further Instruments and Actions

The Authority covenants that it will, from time to time, execute and deliver such further instruments and take such further action as may be required to carry out the purposes of the Agreement.

Records, Reports and Audits

The Authority covenants that it will keep an accurate record of the total cost of each Project, of the Revenues collected or derived from such Project, and of the application of such Revenues collected or derived from such Project. Such records shall be open at all reasonable times to the inspection of the Trustee. The Authority covenants that it will cause any reports or audits relating to each Project to be made as required by law and that it will furnish to the Trustee a copy of each such report and audit forthwith upon receipt thereof by the Authority.

Release of Land; Sale of Equipment

The Authority may from time to time (a) release to the University Trustees any land leased by the University Trustees to the Authority if permitted by a lease entered into between the University Trustees and the Authority and if such release will not adversely affect Revenues, (b) sell or otherwise dispose of any machinery, fixtures, apparatus, tools, instruments or other movable property acquired by it from the proceeds of Bonds or from the Revenues of a Project, if the Authority shall reasonably determine that such articles are no longer useful or appropriate in connection with the construction or operation and maintenance of such Project, and that such sale or disposition, taking account of the application of any proceeds received from such sale or disposition and any replacement to be made of or any substitution to be made for any of the properties so sold or disposed of, shall not adversely affect the Revenues from such Project.

Covenant as to Exclusion of Interest from Gross Income

The Authority covenants that it will not take any action or fail to take any action that would adversely affect the exclusion of interest on the Bonds from gross income for federal income tax purposes.

Notice of Default; Financial Statements

The Authority covenants that (a) forthwith upon any officer of the Authority's obtaining knowledge of any condition or event which constitutes or, after notice or lapse of time or both, would constitute an "event of default" as defined in the Agreement, it will file with the Trustee a certificate signed by an Authorized Officer specifying the nature and period of existence thereof, and what action the Authority has taken, is taking or proposes to take with respect thereto; (b) on or before the 15th day of each July it will file with the Trustee a certificate signed by an Authorized Officer stating that, so far as is known to the signer of the certificate, the Authority is not in default under any covenant, agreement or condition contained in the Agreement and that no event has occurred which constitutes or, after notice or lapse of time or both, would constitute such an event of default or, if the Authority shall be in default, or any such event has occurred, specifying each such default and event and the nature and period of existence thereof of which the signer may have knowledge and what action, if any, the Authority has taken, is taking or proposes to take with respect thereto; and (c) it will cause an examination of its financial statements as of the end of and for each fiscal year during which Bonds shall be Outstanding under the Agreement to be made by independent certified public accountants and within one hundred eighty (180) days after the end of each fiscal year will file with the Trustee a copy of such financial

statements together with the signed opinion of such independent certified public accountants with respect thereto.

DEFAULTS; REMEDIES

Extended Interest

In case the time for the payment of the interest on any Bond shall be extended, whether or not such extension be by or with the consent of the Authority, such interest so extended shall not be entitled in case of default under the Agreement to the benefit or security of the Agreement except subject to the prior payment in full of the principal of all Bonds then Outstanding and of all interest the time for the payment of which shall not have been extended.

Events of Default

Each of the following events is an “event of default” under the Agreement:

(a) payment of the principal and premium, if any, of any of the Bonds shall not be made when the same shall become due and payable, either at maturity or by required proceedings for redemption or otherwise, or payment of the purchase price of any Bond tendered as provided in the applicable Series Resolution shall not be made when such purchase price shall become due and payable; or

(b) payment of any installment of interest on the Bonds shall not be made when due and payable; or

(c) the Authority shall for any reason be rendered incapable of fulfilling its obligations under the Agreement; or

(d) an order or decree shall be entered, with the consent or acquiescence of the Authority, appointing a receiver or receivers of any Project or any part thereof or of the Revenues thereof, or if such order or decree, having been entered without the consent or acquiescence of the Authority, shall not be vacated or discharged or stayed on appeal within one hundred and twenty (120) days after the entry thereof; or

(e) any proceeding shall be instituted, with the consent or acquiescence of the Authority, for the purpose of effecting a composition between the Authority and its creditors or for the purpose of adjusting the claims of such creditors, pursuant to any federal or state statute now or hereafter enacted, if the claims of such creditors are under any circumstances payable from the Revenues of any Project; or

(f) the Authority shall default in the due and punctual performance of any of the covenants, conditions, agreements and provisions contained in the Bonds or in the Agreement on the part of the Authority to be performed in connection with the Bonds or any Project financed or refinanced by the Bonds, and such default shall continue for thirty (30) days after written notice specifying such default and requiring same to be remedied shall have been given to the Authority by the Trustee, which may give such notice in its discretion and shall give such notice at the written request of the Registered Owners of not less than twenty per centum (20%) in principal amount of the Bonds then Outstanding.

For all purposes of the Agreement, any event of default specified in subparagraph (a) or subparagraph (b) of the preceding paragraph with respect to any one or more Bonds shall be deemed to be such an event of default on all other Outstanding Bonds of the same level or levels as the Bond or Bonds

with respect to which such event of default occurred, i.e. any such event of default with respect to one or more Senior Bonds shall be deemed to be such an event of default on all other Outstanding Senior Bonds, any such event of default with respect to one or more Bonds of any Subordinate Series, Level 2 shall be deemed to be such an event of default on all Outstanding Bonds of all Subordinate Series, Level 2, and so on.

No Acceleration

Notwithstanding any other provision of the Agreement to the contrary, the Bonds shall not be subject to acceleration, and all provisions with respect to events of default under the Agreement and with respect to remedies available under the Agreement shall be subject to such prohibition.

Remedies

Upon the happening and continuance of any event of default under the Agreement, then and in every such case the Trustee may proceed, and upon the written request of the Registered Owners of not less than twenty per centum (20%) in principal amount of the Bonds then Outstanding (or, in the case of an event of default under clause (a) or clause (b) above in "Events of Default," not less than twenty per cent (20%) in principal amount of the Bonds Outstanding as to which such event of default has occurred) shall proceed, subject to being indemnified as provided in the Agreement, to protect and enforce its rights and the rights of the Registered Owners of the Bonds under the laws of the Commonwealth or under the Agreement by such suits, actions or proceedings in equity or at law, or by proceedings in the office of any board or officer having jurisdiction, either for the specific performance of any covenant or agreement contained in the Agreement or in aid or execution of any power herein granted or for the enforcement of any proper legal or equitable remedy, as the Trustee, being advised by counsel, shall deem most effectual to protect and enforce such rights.

In the enforcement of any remedy under the Agreement the Trustee shall be entitled to sue for, enforce payment of and receive any and all amounts then or during any default becoming, and at any time remaining, due from the Authority for principal, interest or otherwise under any of the provisions of the Agreement or of the Bonds, with interest on overdue payments at the rate or rates of interest borne by the applicable Bonds, together with any and all costs and expenses of collection and of all proceedings under the Agreement and under the Bonds, without prejudice to any other right or remedy of the Trustee or of the Registered Owners, and to recover and enforce any judgment or decree against the Authority, but solely as provided in the Agreement and in the Bonds, for any portion of such amounts remaining unpaid, with interest, costs and expenses, and to collect (but solely from moneys in the Debt Service Fund, the Section 10 Reserve Fund, any other reserve fund securing any Bond, the Rate Stabilization Fund and the Property Fund and any other moneys available for such purpose) in any manner provided by law, the moneys adjudged or decreed to be payable.

Application of Funds

(a) Anything in the Agreement to the contrary notwithstanding, if at any time the moneys in the Debt Service Fund, in the Section 10 Reserve Fund, in any other reserve fund securing any Bond, in the Rate Stabilization Fund and in the Property Fund, and any other moneys available for the purpose shall not be sufficient to pay the principal and Redemption Price of or the interest on the Bonds as the same shall become due and payable or the purchase price of any Bond tendered as provided in the applicable Series Resolution, such moneys, together with any moneys then available or thereafter becoming available for such purpose, whether through the exercise of the remedies described in this section of this Summary or otherwise, shall be applied as provided in paragraph (b) below, any such application to be made, first to all Outstanding Senior Bonds, until all principal, Redemption Price and interest then due on

such Senior Bonds have been paid, and second, to all Outstanding Level 2 Bonds, until all principal, Redemption Price and interest then due on such Level 2 Bonds have been paid, and third, to all Outstanding Level 3 Bonds, until all principal, Redemption Price and interest then due on such Level 3 Bonds have been paid, and so on in descending order of subordination. Any such application shall also be subject to the following:

- (i) moneys received under the Commonwealth Guaranty shall be applied only to the Guaranteed Bonds on account of which such moneys are received and shall not be applied to the payment of the fees and expenses of the Trustee;
- (ii) moneys in the Section 10 Reserve Fund shall be applied only to Guaranteed Bonds and shall not be applied to fees and expenses of the Trustee;
- (iii) moneys received under any Credit Facility or Derivative shall be applied only to the payment of amounts which are due on the Bonds secured by such Credit Facility or to which such Derivative applies and to which moneys received under such Credit Facility or such Derivative are permitted to be applied and shall be applied to the fees and expenses of the Trustee only if such application is explicitly permitted under the applicable Credit Facility or the applicable Derivative and only in amounts not in excess of the amounts permitted by such Credit Facility or such Derivative to be so applied;
- (iv) moneys in any reserve fund other than the Section 10 Reserve Fund shall be applied only as provided in the one or more applicable Series Resolutions and shall be applied to fees and expenses of the Trustee only if such application is explicitly permitted by the applicable Series Resolution;
- (v) amounts due to the issuer of a Credit Facility for reimbursement of any amount paid under such Credit Facility for payment of principal or Redemption Price of or interest on any Bond or the purchase price of any Bond tendered as provided in the applicable Series Resolution (but not including interest on any such amount) shall, to the extent and under the conditions set forth in the applicable Series Resolution or reimbursement agreement with the issuer of such Credit Facility, be deemed for purposes of paragraph (b) below to be payments of principal or Redemption Price of or interest on such Bond and shall be paid to such issuer in connection with the application of moneys under such paragraph, and
- (vi) amounts due from or on account of the Authority under a Derivative for amounts paid under such Derivative for payment of principal or Redemption Price of or interest on any Bond (but not including interest on any such amount) shall, to the extent and under the conditions set forth in the applicable Series Resolution or in such Derivative, be deemed for purposes of paragraph (b) below to be payments of principal or Redemption Price of or interest on such Bond and shall be paid as provided in such Derivative in connection with the application of moneys under such paragraph.

(b) All such moneys shall be applied (subject to paragraph (a) above):

first: to the payment to the Trustee of its unpaid fees and expenses, to the extent of moneys available therefor as provided in paragraph (a) above;

second: to the payment to the persons entitled thereto of all installments of interest on Bonds then due, in the order of the maturity of the installments of such interest, and, if the amounts available shall not be sufficient to pay in full any particular installment, then to the

payment ratably, according to the amounts due on such installment, to the persons entitled thereto, without any discrimination or preference except as to any difference in the respective rates of interest specified in the Bonds and except as provided in paragraph (a) above;

third: to the payment to the persons entitled thereto of the unpaid principal and Redemption Price of any of the Bonds which shall have become due (other than Bonds called for redemption for the payment of which moneys are held pursuant to the provisions of the Agreement), in the order of their due dates, with interest upon such Bonds from the respective dates upon which they became due, and the unpaid purchase price of any Bond tendered in accordance with the applicable Series Resolution, and, if the amount available shall not be sufficient to pay in full the principal and Redemption Price of Bonds due on any particular date, together with such interest, and such purchase price, then to the payment first of such interest, ratably according to the amount of such interest due on such date, and then to the payment of such principal, Redemption Price and purchase price, ratably according to the amount of such principal and purchase price due on such date, to the persons entitled thereto, and in either case without any discrimination or preference, except as provided in paragraph (a) above; and

fourth: to the payment of the interest on and the principal and Redemption Price of the Bonds, to the purchase and retirement of Bonds and to the redemption of Bonds, all in accordance with the provisions described above under "Establishment and Application of Funds and Accounts" (and as provided in paragraph (a) above).

(c) Whenever moneys are to be applied by the Trustee pursuant to the above provisions, such moneys shall be applied by the Trustee at such times, and from time to time, as the Trustee in its sole discretion shall determine, having due regard to the amount of such moneys available for application and the likelihood of additional moneys becoming available for such application in the future; and the Trustee shall incur no liability whatsoever to the Authority, to any Registered Owner or to any other person for any delay in applying any such moneys, so long as the Trustee acts with reasonable diligence, having due regard to the circumstances, and ultimately applies the same in accordance with such provisions of the Agreement as may be applicable at the time of application by the Trustee. Whenever the Trustee shall exercise such discretion in applying such moneys, it shall fix the date (which shall be an Interest Payment Date unless the Trustee shall deem another date more suitable) upon which such application is to be made and upon such date interest on the amounts of principal to be paid on such date shall cease to accrue.

The Trustee shall give such notice as it may deem appropriate of the fixing of any such date, and shall not be required to make payment to the Registered Owner of any Bond until such Bond shall be surrendered to the Trustee for appropriate endorsement, or for cancellation if fully paid.

Discontinuance of Proceedings

In the event that any proceeding taken by the Trustee on account of any default under the Agreement shall have been discontinued or abandoned for any reason, then and in every such case the Authority, the Trustee and the Registered Owners shall be restored to their former positions and rights under the Agreement, respectively, and all rights, remedies, powers and duties of the Trustee shall continue as though no such proceeding had been taken.

Control of Proceedings

Anything in the Agreement to the contrary notwithstanding, the registered Owners of a majority in principal amount of the Bonds then Outstanding (or, with respect to an event of default described in clause (a) or clause (b) above in "Events of Default," the Registered Owners of a majority in principal

amount of the Bonds Outstanding as to which such event of default has occurred) shall have the right, subject to the Trustee's being indemnified as provided in the Agreement, by an instrument or concurrent instruments in writing executed and delivered to the Trustee, to direct the method of conducting all remedial proceedings to be taken by the Trustee under the Agreement in connection with the Bonds, provided that such direction shall not be otherwise than in accordance with law or the provisions of the Agreement.

Restrictions upon Actions by a Registered Owner

No Registered Owner shall have any right to institute any suit, action or proceeding in equity or at law for the execution of any trust under the Agreement or for any other remedy under the Agreement unless such Registered Owner previously shall have given to the Trustee written notice of the event of default on account of which such suit, action or proceeding is to be instituted, and unless also the Registered Owners of not less than twenty per cent (20%) in principal amount of the Bonds then Outstanding (or, with respect to an event of default described in clause (a) or clause (b) above in "Events of Default," the Registered Owners of not less than twenty per cent (20%) principal amount of the Bonds Outstanding as to which such event of default has occurred) shall have made written request of the Trustee after the right to exercise such powers of right of action, as the case may be, shall have accrued, and shall have afforded the Trustee a reasonable opportunity either to proceed to exercise the powers granted by the Agreement or to institute such action, suit or proceeding in its or their name, and unless, also, there shall have been offered to the Trustee reasonable security and indemnity against the costs, expenses and liabilities to be incurred therein or thereby, and the Trustee shall have refused or neglected to comply with such request within a reasonable time; and such notification, request and offer of indemnity are hereby declared in such every case, at the option of the Trustee, to be conditions precedent to the execution of the powers and trusts of the Agreement or for any other remedy under the Agreement. No one or more Registered Owners of the Bonds shall have any right in any manner whatever by action of such Registered Owner or Owners to affect, disturb or prejudice the security of the Agreement, or to enforce any right under the Agreement except in the manner provided in the Agreement, that all proceedings at law or in equity shall be instituted, had and maintained in the manner provided in the Agreement and for the benefit of all Registered Owners of the Outstanding Bonds, and that any individual rights of action or other right given to one or more of such Registered Owners by law are restricted by the Agreement to the rights and remedies provided in the Agreement.

Nothing in the Agreement or in the Bonds shall, however, affect or impair the absolute, unconditional and unalterable obligation of the Authority to pay when due (whether due on account of stated maturities, scheduled payments, call for redemption or otherwise) the principal and Redemption Price of and interest on the Bonds and the purchase price of any Bond tendered as provided in the applicable Series Resolution, or affect the right of any Registered Owner of a Bond to institute or require the institution of any action or proceeding against the Authority for the enforcement of such payment, or against the Commonwealth for the enforcement of its guaranty of Guaranteed Bonds.

Actions by Trustee

All rights of action under the Agreement or under any of the Bonds, enforceable by the Trustee, may be enforced by it without the possession of any of the Bonds or the production thereof on the trial or other proceeding relative thereto, and any such suit, action or proceeding instituted by the Trustee shall be brought in its name for the benefit of all of the Registered Owners, subject to the provisions of the Agreement.

No Remedy Exclusive

No remedy conferred by the Agreement upon or reserved to the Trustee or to the Registered Owners is intended to be exclusive of any other remedy or remedies provided by the Agreement, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given under the Agreement.

No Delay or Omission Construed as Waiver

No delay or omission of the Trustee or of any Registered Owner to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver of any such default or an acquiescence therein; and every power and remedy given by the Agreement to the Trustee and the Registered Owners of the Bonds, respectively, with respect to events of default, may be exercised from time to time as often as may be deemed expedient.

The Trustee may, and upon written request of the Registered Owners of not less than a majority in principal amount of the Bonds then Outstanding shall, waive any default which in its opinion shall have been remedied before the entry of final judgment or decree in any suit, action or proceeding instituted by it under the provisions of the Agreement or before the completion of the enforcement of any other remedy under the Agreement, but no such waiver shall extend to or affect any other existing or any subsequent default of defaults or impair any rights or remedies consequent thereon.

Notice of Default

The Trustee shall mail to all Registered Owners of Bonds then Outstanding at their addresses as they appear on the registration books written notice of the occurrence of any event of default described in clause (a) or clause (b) above in "Events of Default" promptly upon the occurrence thereof and of any other event of default described under "Events of Default" within thirty (30) days after the Trustee shall have received written notice that any such event of default has occurred and any applicable grace period shall have expired. The Trustee shall not, however, be subject to any liability to any Registered Owner by reason of its failure to mail any such notice.

CONCERNING THE TRUSTEE

Indemnity

The Trustee shall be under no obligation to institute any suit, or to take any remedial proceeding under the Agreement, or to enter any appearance or in any way defend in any suit in which it may be made defendant, or to take any steps in the execution of the trusts created by the Agreement or in the enforcement of any rights and powers under the Agreement, until it shall be indemnified to its satisfaction against any and all costs and expenses, outlays and counsel fees and disbursements and other reasonable disbursements, and against all liability; the Trustee may, nevertheless, begin suit, or appear in and defend suit, or do anything else in its judgment proper to be done by it as such Trustee, without indemnity, and in such case the Authority shall reimburse the Trustee from the Revenues of any Project for all costs and expenses, outlays and counsel fees and disbursements and other reasonable disbursements properly incurred in connection therewith. If the Authority shall fail to make such reimbursement, the Trustee may reimburse itself from any moneys in its possession under the provisions of the Agreement from which the payment of fees and expenses of the Trustee is not prohibited by the Agreement and shall have a first and prior lien on such moneys for that purpose over any of the Bonds Outstanding under the Agreement.

Limitation on Obligations

The Trustee shall be under no obligation to effect or maintain insurance or to renew any policies of insurance or to inquire as to the sufficiency of any policies of insurance carried by the Authority, or to report, or make or file claims or proof of loss for, any loss or damage insured against or which may occur, or to keep itself informed or advised as to the payment of any taxes or assessments, or to require any such payment to be made. The Trustee shall have no responsibility in respect of the construction or operation of any Project, the validity or sufficiency of the Agreement or the due execution or acknowledgment thereof, or in respect of the validity of the Bonds or the due execution or issuance thereof except as represented by its own authentication, or in respect of the validity or enforceability of the guaranty by the Commonwealth executed on any Guaranteed Bond. The Trustee shall be under no obligation, except as otherwise expressly required in the Agreement, to see that any duties herein imposed upon the Authority, the Architect, the Engineer, any investment adviser appointed by the Authority, or any party other than itself, or any covenants in the Agreement on the part of any party other than itself to be performed, shall be done or performed, and the Trustee shall be under no obligation for failure to see that any such duties or covenants are so done or performed.

Notice of Default

In addition to any other notices required to be given by the Trustee under the Agreement, if on the fifteenth day of the month (or, if such fifteenth day is not a business day, on the next succeeding business day) before the date which shall be one or more of a due date for a payment of interest on Guaranteed Bonds or of a Sinking Fund Installment respecting Guaranteed Bonds or a maturity date for Guaranteed Bonds then Outstanding, the moneys held by the Trustee for or to be deposited prior to such due date to the credit of any subaccount of the Interest Account, any subaccount of the Sinking Fund Account or any subaccount of the Principal Account shall be less than the amount required on such date respectively to pay in full such interest then due, to pay such Sinking Fund Installment then due or to pay the principal of all such Guaranteed Bonds then maturing, all as the case may be, the Trustee shall on such fifteenth day (or next succeeding business day) deliver or cause to be delivered to the offices of the Secretary of Administration and Finance and of the Treasurer and Receiver-General of the Commonwealth a notice addressed to said officials and shall give copies thereof to the Authority and to the purchasers in the manner provided in the Agreement. Such notice shall state (a) the amount or amounts to become due, the nature thereof and the due date, (b) the amount or amounts of moneys held by the Trustee on such business day for the credit of the pertinent Account or Accounts and subaccount or subaccounts, (c) the amount or amounts of moneys held by the Trustee on such business day for the credit of the Section 10 Reserve Fund, each Debt Service Reserve Fund or Multi-Series Debt Service Reserve Fund, the Optional Redemption Account, the Rate Stabilization Fund, and any Account in the Property Fund which are available for the payment of such interest, such Sinking Fund Installment or such maturing principal amount, all as the case may be.

If the University Trustees shall be obligated to pay any such amount from Pledged Funds, the Trustee shall include in its notice a request that the University Trustees transfer or cause to be transferred applicable Pledged Funds forthwith, unless such request is otherwise required to be made by any applicable Series Resolution. If (a) the University Trustees shall be obliged by the Contract respecting Outstanding Guaranteed Bonds to give a notice respecting the availability of moneys for said purposes by said dates and (b) such notice has been given and (c) such notice states that moneys are not expected to be available by said dates in amounts sufficient to meet such purposes in full and (d) the moneys held by the Trustee as stated in the last sentence of the first paragraph above in "Notice of Default" are not sufficient, when added to whatever available amount is stated in such notice from the University Trustees, to meet such purposes in full, then the Trustee shall include in the notice to be given by it a request that the Commonwealth make funds available to honor the Commonwealth Guaranty under all such Contracts.

Except as provided above, the Trustee shall not be obliged to take notice or be deemed to have notice of any prospective event of default under the Agreement. The Trustee shall not be obliged to take notice or be deemed to have knowledge of any event of default under the Agreement, except for events of default described in clause (a) or clause (b) above in “Defaults; Remedies - Events of Default,” unless an officer in the corporate trust department of the Trustee has received written notice of such event of default by the Authority or the Registered Owners of not less than twenty per cent (20%) in principal amount of the Bonds Outstanding.

Resignation

The Trustee may resign at any time and thereby become discharged from the trusts created by the Agreement by notice in writing to be given to the Authority and the Registered Owners at least thirty (30) days before such resignation is to take effect, but such resignation shall take effect immediately upon the appointment of a new Trustee under the Agreement, if such new Trustee shall be appointed before the time limited by such notice and shall then accept the trusts of the Agreement.

Removal

The Trustee may be removed at any time by an instrument or concurrent instruments in writing, signed by the Registered Owners of not less than a majority in principal amount of the Bonds then Outstanding and filed with the Authority (and the Authority shall promptly deliver to the Trustee a reproduction copy of each such instrument) or by resolution of the Authority.

The Trustee may also be removed at any time for any breach of trust or violation of the Agreement by any court of competent jurisdiction upon application by the Registered Owners of not less than five per cent (5%) in principal amount of the Bonds then Outstanding.

Appointment of Successor Trustee

If at any time the Trustee shall resign, be removed, be dissolved or otherwise become incapable of acting, or the bank or trust company acting as Trustee shall be taken over by any governmental official, agency, department or board, the position of Trustee shall thereupon become vacant. If at any time moneys on deposit with the Trustee shall not be secured as required by the Agreement, a vacancy in the position of Trustee may be declared by a resolution duly passed by the Authority. If the position of Trustee shall become vacant for any of the foregoing reasons or for any other reason, the Authority shall appoint a Trustee to fill such vacancy. The Authority shall send written notice of any such appointment to the Registered Owners, and the Trustee whose position is being filled shall make available to the Authority at all times during normal business hours its registration books and permit the Authority to copy such registration books.

At any time within one year after any such vacancy shall have occurred, the Registered Owners of a majority in principal amount of the Bonds then Outstanding, by an instrument or concurrent instruments in writing, signed by such Registered Owners or their attorneys in fact or legal representatives and filed with the Authority, may appoint a successor Trustee which shall supersede any Trustee theretofore appointed by the Authority. Copies of such instrument shall be delivered promptly by the Authority to the predecessor Trustee and to the Trustee so appointed by the Registered Owners.

If no appointment of a successor Trustee shall be made pursuant to the foregoing provisions, the Registered Owner of any Outstanding Bond or any retiring Trustee may apply to any court of competent

jurisdiction to appoint a successor Trustee. Such court may thereupon, after such notice, if any, as such court may deem proper and prescribe, appoint a successor Trustee.

Any Trustee hereafter appointed shall be a bank or trust company within the Commonwealth (as the words “within the Commonwealth” are used in the Enabling Act) duly authorized to exercise corporate trust powers and subject to examination by federal or state authority, of good standing, having a combined capital and surplus aggregating not less than One Hundred Million Dollars (\$100,000,000).

The Trustee shall not be required to be “within the Commonwealth” if the Enabling Act no longer contains such requirement.

SUPPLEMENTAL AGREEMENTS

Supplemental Agreements without Consent of Registered Owners

The Authority and the Trustee may, from time to time and at any time, without the consent of the Registered Owners, enter into agreements supplemental to the Agreement as shall not be inconsistent with the terms and provisions of the Agreement (which supplemental agreements shall thereafter form a part of the Agreement)

(a) to cure any ambiguity or formal defect or omission in the Agreement or in any supplemental agreement, or

(b) to grant to or confer upon the Trustee for the benefit of the Registered Owners any additional rights, remedies, powers, authority or security that may lawfully be granted to or conferred upon the Registered Owners or the Trustee, or

(c) to add to the covenants and agreements of the Authority other covenants and agreements thereafter to be observed by the Authority which shall not be inconsistent with the terms and provisions of the Agreement or to surrender any right or power reserved to or conferred upon the Authority in the Agreement, or

(d) any amendment described in “Establishment and Application of Funds and Accounts — Rebate Fund,” or

(e) for any other purpose, provided that (i) such supplemental agreement (A) does not adversely affect the interest of any Registered Owner and (B) does not make any change in the Agreement prohibited by clauses (a) through (e) below in “Modification of Agreement” and (ii) the Authority and the Trustee receive an opinion of bond counsel to the Authority to the effect that such supplemental agreement complies with subclauses (A) and (B) of this clause.

If the interest on obligations issued in bearer form should at any time qualify for exclusion from gross income for federal income tax purposes, or if the Authority desires to issue obligations the interest on which is not excludable from gross income for federal income tax purposes, and if in either case applicable law permits the issuance by the Authority of obligations in bearer form, the Agreement may be amended without the consent of the registered Owners to permit the issuance under the Agreement of obligations in such form, provided that the Authority and the Trustee receive an opinion of bond counsel to the Authority to the effect that applicable law permits the issuance by the Authority of obligations in bearer form and that such amendment will not affect the exclusion from gross income for federal income tax purposes of the interest on any Bond previously issued under the Agreement.

Any provision of the Agreement with respect to any Series of Bonds secured by a Credit Facility may be amended by the Series Resolution authorizing such Series to take into account the requirements or reasonable requests of the issuer of such Credit Facility. Such amendments may include, but not be limited to, amendments with respect to the exercise of rights of the Registered Owner of the Bonds of such Series by the issuer of such Credit Facility and subrogation of the issuer of such Credit Facility to the rights of such Registered Owners.

Modification of Agreement

The Registered Owners of not less than fifty-one percent (51%) in aggregate principal amount of the Bonds then Outstanding shall have the right, from time to time, to consent to and approve the execution by the Authority and the Trustee of such agreement or agreements supplemental to the Agreement as shall be deemed necessary or desirable by the Authority for the purpose of modifying, altering, amending, adding to or rescinding, in any particular, any of the terms or provisions contained in the Agreement or in any supplemental agreement; provided, however, that nothing contained in the Agreement shall permit, or be construed as permitting (a) an extension of the maturity of the principal of, the due date of any Sinking Fund Installment or respecting the due date of any interest payment due on any Bond, or (b) a reduction in the principal amount of any Bond or the Redemption Price thereof or the rate of interest thereon, or (c) the creation of a lien or pledge of Revenues ranking prior to or on a parity with the lien or pledge created by the Agreement, or (d) a preference or priority of any Bond or Bonds over any other Bond or Bonds other than as provided in the Agreement or (e) a reduction in the aggregate principal amount of the Bonds required for consent to such supplemental agreement. Nothing contained in the Agreement, however, shall be construed as making necessary the approval by Registered Owners of the execution of any supplemental agreement or agreements described above in "Supplemental Agreements without Consent of Registered Owners."

If the Registered Owners of not less than fifty-one per cent (51%) in aggregate principal amount of the Bonds Outstanding at the time of the execution of such supplemental agreement shall have consented to and approved the execution thereof as provided in the Agreement, no Registered Owner shall have any right to object to the execution of such supplemental agreement, or to object to any of the terms and provisions contained therein or the operation thereof, or in any manner to question the propriety of the execution thereof, or to enjoin or restrain the Trustee or the Authority from executing the same or from taking any action pursuant to the provisions thereof.

Responsibilities of Trustee

In each and every case provided for in this section "Supplemental Agreements", the Trustee shall be entitled to exercise its discretion in determining whether or not any proposed supplemental agreement, or any term or provision therein contained, is proper or desirable, having in view the purposes of such instrument, the needs of the Authority, the rights and interests of the Registered Owners, and the rights, obligations and interests of the Trustee, and the Trustee shall not be under any responsibility or liability to the Authority or to any Registered Owner or to anyone whomsoever for its refusal in good faith to enter into any such supplemental agreement if such agreement is deemed by it to be contrary to the provisions of this section. The Trustee shall be entitled to receive, and shall be fully protected in relying upon, the opinion of any counsel approved by it, who may be counsel for the Authority, as conclusive evidence that any such proposed supplemental agreement does or does not comply with the provisions of the Agreement, and that it is or is not proper for it under the applicable provisions of the Agreement, to join in the execution of such supplemental agreement.

DEFEASANCE

Release of Agreement

If the Authority shall pay or cause to be paid, or there shall otherwise be paid, to the Registered Owners of all Bonds the principal or Redemption Price, if applicable, and interest due or to become due thereon, at the times and in the manner stipulated therein and in the Agreement, or if all Outstanding Bonds shall be deemed to be paid as provided in the following paragraph, and if all other sums, if any, then payable to the Trustee under the shall be paid, or the payment of such sums shall be provided for to the reasonable satisfaction of the Trustee, then the pledge of any Revenues and other moneys and securities pledged under the Agreement and all covenants, agreements and other obligations of the Authority to the Registered Owners, shall thereupon cease, terminate and become void and be discharged and satisfied. In such event, the Trustee shall cause an accounting for such period or period as shall be requested by the Authority to be prepared and filed with the Authority and, upon the request of the Authority, shall execute and deliver to the Authority all such instruments as may be desirable to evidence such discharge and satisfaction, and the Trustee shall pay over or deliver to the Authority all moneys or securities held by it pursuant to the Agreement which are not required for the payment of principal or Redemption Price, if applicable, of or interest on Bonds not theretofore surrendered for such payment or redemption, and for the payment of such other amounts. If the Authority shall pay or cause to be paid, or there shall otherwise be paid, to the Registered Owners of any Outstanding Bonds the principal or Redemption Price, if applicable, and interest due or to become due thereon, at the times and in the manner stipulated therein and in the Agreement, or if any Outstanding Bonds shall be deemed to be paid as provided in the following paragraph, such Bonds shall cease to be entitled to any lien, benefit or security under the Agreement, and all covenants, agreements and obligations of the Authority to the Registered Owners of such Bonds shall thereupon cease, terminate and become void and be discharged and satisfied.

Any Outstanding Bonds shall prior to the maturity or redemption date thereof be deemed to have been paid within the meaning and with the effect expressed in the previous paragraph if (a) in case any of said Bonds are to be redeemed on any date prior to their maturity, the Authority shall have given to the trustee in form satisfactory to it irrevocable instructions to give notice of redemption of such Bonds on said date, (b) there shall have been deposited with the Trustee either moneys in an amount which shall be sufficient, or Investment Obligations (including any Investment Obligations issued or held in book-entry form on the books of the Department of the Treasury of the United States, which are irrevocably payable to the Trustee and in form satisfactory to the Trustee) the principal of and the interest on which when due will provide the Trustee with moneys which, together with the moneys, if any, deposited with the Trustee at the same time, shall be sufficient, to pay when due the principal or Redemption Price, if applicable, and interest due and to become due on said Bonds on and prior to the redemption date or maturity date thereof, as the case may be, and (c) in the event said Bonds will not be redeemed within the next succeeding sixty (60) days, the Authority shall have given the Trustee in form satisfactory to it irrevocable instructions to give notice, in the manner and at the time specified in the Agreement, that the deposit required by (b) above has been made with the Trustee and that said Bonds are deemed to have been paid in accordance with this paragraph and stating such maturity or redemption date or dates upon which moneys are to be available for the payment of the principal or Redemption Price, if applicable, on said Bonds. None of Investment Obligations, moneys deposited with the Trustee pursuant to this paragraph or principal or interest payments on any such Investment Obligations shall be withdrawn or used for any purpose other than, and shall be held in trust for, the payment of the principal or Redemption Price, if applicable, and interest on said Bonds; provided that any cash received from such principal or interest payments on such Investment Obligation deposited with the Trustee, if not needed for such purpose, shall, to the extent practicable, be reinvested in Investment Obligation maturing at times and in amounts sufficient to pay when due the principal or Redemption Price, if applicable, and interest to become due on said Bonds on and prior to such redemption date or maturity date, as the case may be, and

interest earned from such reinvestment shall be paid over to the Authority, as received by the Trustee, free and clear of any trust, lien or pledge. For the purposes of this paragraph, Investment Obligations shall mean and include only such securities as are described in clause (a) of the definition of "Investment Obligations" in "Definitions" which shall not be subject to redemption prior to their maturity.

Anything in the Agreement to the contrary notwithstanding, the Trustee shall notify the Authority in writing of any moneys held by the Trustee in trust for the payment and discharge of any of the Bonds which remain unclaimed six months prior to the date when such moneys would escheat under applicable law and shall, at the written request of the Authority, pay such moneys to the Authority as its absolute property and free from trust, or, if the Authority does not so request in writing, or if such payment is not permitted under applicable escheat law, shall apply such moneys as provided by such applicable law, and the Trustee shall upon such payment or application be released and discharged with respect thereto and the Registered Owners shall look only to the Authority or as such applicable law may provide for the payment of such Bonds, the Authority or any other entity being liable only to the extent of funds received from the Trustee (without regard to any interest thereon received from the Trustee) and having no liability for interest on any such funds.

MISCELLANEOUS PROVISIONS

Rights under Agreement

Except as otherwise expressly provided in the Agreement, nothing in the Agreement expressed or implied is intended or shall be construed to confer upon any person, firm or corporation other than the parties hereto and the Registered Owners any right, remedy or claim, legal or equitable, under or by reason of the Agreement or any provisions hereof, the Agreement and all its provisions being intended to be and being for the sole and exclusive benefit of the parties hereto and the Registered Owners.

Effect of Partial Invalidity

In case any one or more of the provisions of the Agreement or of the Bonds shall for any reason be held to be illegal or invalid, such illegality or invalidity shall not affect any other provision of the Agreement or of the Bonds, but the Agreement and the Bonds shall be construed and enforced as if such illegal or invalid provision has not been contained therein. In case any covenant, stipulation, obligation or agreement contained in the Bonds or in the Agreement shall for any reason be held to be in violation of law, then such covenant, stipulation, obligation or agreement shall be deemed to be the covenant, stipulation, obligation or agreement of the Authority to the full extent permitted by law.

Effect of Covenants, etc.

All covenants, stipulations, obligations and agreements of the Authority contained in the Agreement shall be deemed to be covenants, stipulations, obligations and agreements of the Authority to the full extent permitted by law. No covenant, stipulation, obligation or agreement contained in the Agreement shall be deemed to be a covenant, stipulation, obligation or agreement of any present or future member, officer, agent or employee of the Authority in his individual capacity, and neither any member of the Authority nor any officer thereof executing the Bonds shall be liable personally on the Bonds or be subject to any personal liability by reason of the issuance thereof. No member, officer, agent or employee of the Authority shall incur any liability in acting or proceeding or in not acting or not proceeding, in good faith, reasonably and in accordance with the terms of the Agreement and the Enabling Act.

The Agreement is executed with the intent that the laws of the Commonwealth shall govern its construction.

Reference to Interest as Excludable from Gross Income

All references in the Agreement with respect to the exclusion, excludability, inclusion or includability or the like of interest from gross income for federal income tax purposes shall apply only to Bonds and the interest thereon as to which an opinion of counsel has been rendered to the effect that interest on such Bonds is excludable from gross income for federal income tax purposes.

[Intentionally Left Blank]

SUMMARY OF CERTAIN PROVISIONS OF THE CONTRACT

Except as otherwise expressly provided herein, capitalized terms shall be used as defined in the Trust Agreement dated as of November 1, 2000 by and between the Authority and the trustee named therein or its successor (the "Project Trust Agreement") or the Trust Agreement dated as of December 1, 2000 by and between the Authority and the trustee named therein or its successor (the "Facilities Trust Agreement" and together with the Project Trust Agreement, the "Trust Agreements"). Bonds issued pursuant to the Project Trust Agreement are referred to herein as "Project Revenue Bonds," and bonds issued pursuant to the Facilities Trust Agreement are referred to herein as "Facilities Revenue Bonds." The trustees named in each Trust Agreement are referred to herein as the "Bond Trustee."

PROJECTS

General

From time to time, upon the request of the University, the Authority undertakes Projects on behalf of the Commonwealth and the University. The Prior Projects are listed in the Contract. Additional Projects will become subject of the terms of the Contract upon designation thereof by the Authority and the University, as evidenced by the listing of such Projects on a Certificate delivered by the Authority and the University. Delivery of the Certificate makes the Projects listed thereon, in addition to the Prior Projects, subject to the terms of the Contract, so long as any bonds or notes of the Authority remain outstanding.

Undertaking and Completion of Projects by the Authority and the University.

The Authority shall proceed with all reasonable speed to acquire, undertake, plan, construct, and complete the Projects in accordance with the written requests authorized by the University of Massachusetts Board of Trustees (the "University Trustees"), subject to such further approvals by the University Trustees and other officials as may be required by the Act or the Contract. The Authority may use any mode of procurement of acquisition, design and construction with regard to each Project that is from time to time permitted by the Act or other applicable law.

The Authority may engage such consulting architects, engineers, and other experts as it deems advisable in connection with the Projects. The plans and specifications for each of the Projects shall comply, or provide for compliance, with all applicable building codes, laws relating to health, safety and access and other applicable laws, and with all applicable rules and regulations promulgated thereunder by any governmental authority including without limitation executive orders issued by the Governor of the Commonwealth. Upon award of a contract or contracts for the doing of any work included in, or in connection with any acquisitions of, the Projects, as applicable, the Authority shall provide and maintain competent and adequate architectural and engineering observation of the Projects as the Authority deems appropriate until acceptance thereof by the University Trustees for occupancy. The Authority and the University Trustees shall permit each other free access to the Projects at all times. The Authority shall permit the University Trustees to examine such records of the Authority pertaining to the Projects as the University Trustees may desire, and the University Trustees shall permit the Authority to examine such records of the University and the Commonwealth pertaining to the Projects as the Authority may desire.

The Authority and the University Trustees shall use their best efforts to cause the Projects to be completed or acquired, as applicable, so as to be ready for use (and, where applicable, occupancy) as promptly as reasonably possible and, upon completion of all work in connection with any of the Projects, the Authority shall furnish or cause to be furnished to the University Trustees a certificate or certificates to the effect that such work has been completed free from defects and inadequacies and otherwise in

conformity with the working drawings and detail specifications as amended or modified by any change order or additional work authorizations, that no mechanics', laborers', materialmen's or other liens exist or can be created on the Projects on account of such work, and that the Authority has made payment or cause such payment to be made in full for the doing of the work or acquisition in question, or has made other proper arrangements so that it is no longer liable for any claims for payment for such work or materials or supplies furnished to such portion of the Projects; or that the Authority is disputing any such claims.

During the period the Projects are being undertaken and completed the University Trustees shall also furnish to the site thereof (a) steam or other sources for temporary heating purposes, (b) electricity for temporary light and power and (c) water for construction purposes, such utilities to be furnished at such points and in such manner as is set forth in the working drawings and detail specifications approved by the University Trustees for the doing of work upon the Projects.

Operation, Maintenance and Repair of Projects

The Authority and the University, as applicable, shall administer and operate each of the Projects in accordance with the Act, the Contract and the applicable Trust Agreement.

The University acknowledges that use of the Projects or portions thereof by any individual or entity that is not a state, a political subdivision thereof or an integral part of a state or political subdivision thereof may jeopardize the tax-exempt status of interest on the tax-exempt bonds or notes issued by the Authority. The University will avoid such private use of the Projects, which would jeopardize the tax-exempt status of the tax-exempt bonds or notes. During the time that any tax-exempt bond or note is outstanding, the University will consult with the Authority and with bond counsel to the Authority regarding the impact of any private use of the Projects on the tax-exempt status of such bonds or notes and will not enter into any transaction which might result in a private use without notifying the Authority.

Fees, Rents, Rates and Other Charges for Projects

The Authority or the University, as applicable, shall establish and revise rules and regulations to ensure the use (and, where applicable, occupancy) of, and fix and revise fees, rents, rates and other charges allocable to the Projects as set forth in the Contract.

Such rules and regulations and such fees, rents, rates and other charges shall be so fixed and adjusted in respect of the aggregate of all revenues from or allocable to the Projects (collectively, the "Revenues") (x) so as to maintain, so far as consistent with the requirements of the Contract, a reasonable uniformity in charges for like rooms and other accommodations at the University whether or not contained in a project of the Authority and (y) so as to provide Revenues sufficient to:

- (a) pay the cost of maintaining, repairing and operating the Projects,
- (b) pay the fees and expenses of the Bond Trustee, fees and expenses of any paying or fiscal agent appointed by the Authority in connection with the issuance of notes or bonds secured or provided for under the Trust Agreements or other instruments, premiums of insurance maintained by the Authority with respect to the Projects and such other projects and property and rentals payable by the Authority under any lease or leases of land on which the Projects or any other such project or property may be located,
- (c) pay the principal of (including Sinking Fund Installments) and the interest on notes and bonds issued to finance or refinance the Projects, as such principal and interest shall become due and payable,

(d) pay such portions of the operating and administrative expenses of the Authority (which shall include any amount (the "Rebate Amount") required by the Internal Revenue Code of 1986, as amended or other applicable law to be rebated by the Authority with respect to tax exempt bonds or notes to the United States of America and not provided from other funds of the Authority) as the Authority shall deem properly allocable to the Projects,

(e) pay amounts payable by the Authority under the Series Resolutions, any Derivatives, any Liquidity Facility, any Credit Facility or any other contract or other arrangement with respect to bonds or notes,

(f) create or maintain reserves, if any, for such of the foregoing purposes as may be provided for in any resolution of the Authority as required or permitted by either Trust Agreement or the Contract, and

(g) pay the amount, if any, required by Section 19C of the Enabling Act to be paid to the Treasurer and Receiver-General of the Commonwealth out of such revenues.

Other Obligations of the University for Projects

The University Trustees shall make available to the Authority the services of officers and employees of and facilities in the University for the performance of any and all activities with respect to the Projects as necessary to operate them in furtherance of the purposes of the University and to maintain the Projects in good order and repair, as determined by the University.

In performing the foregoing services the University Trustees may act in the name of the Commonwealth or in their name, as may be consistent with law, and in their discretion as to the manner, method and time of performance.

The obligation of the University Trustees under the Contract to operate the Projects, keep them in good order and repair and maintain them shall include, but not be limited to, the furnishing of all supplies and materials needed or desirable for such operation, keeping in good order and repair, and maintenance, the making of all interior and exterior repairs to the buildings and structures included in the Projects and all repairs to other improvements and to equipment and furnishings included in the Projects, the maintenance of the Projects and the replacement, restoration and reconstruction of any structure, improvement or item of equipment or furnishings or portion thereof worn out, damaged or destroyed by whatever cause.

Other Obligations of the Authority for Projects

The Authority shall at all times conduct its business and affairs in such manner that:

(1) each of the Projects will be separately and distinctly accounted for relative to any other project or enterprise developed, administered or engaged in by the Authority; and

(2) such portion of the office and general administrative expenses of the Authority as is charged to each of the Projects and the basis upon which the same is apportioned can be readily determined.

The Authority shall account separately for all revenues, income, reserves and funds, from whatever source, received or held by the Authority for

(1) the undertaking, acquisition, completion, operation or maintenance of the Projects;

(2) for any of the purposes set forth in any resolution authorizing the issue of bonds or notes or in the Trust Agreements or other instruments;

(3) received by or for the account of the Authority as proceeds of insurance upon or as damages award for the taking or condemnation of any of the Projects or any portion thereof;

(4) for Projects and property of the Authority for which the Authority has issued notes or bonds;

(5) for bonds and notes to be refunded by bonds issued under either Trust Agreement; provided that the Authority may, except as otherwise provided in the Trust Agreements or other instrument or any Authority resolution relating to bonds or notes to be refunded by bonds to be issued under the Trust Agreements, mingle all revenues, income, reserves and funds, from whatever source, received or held by the Authority for the purposes of or in connection with the undertaking, completion, operation or maintenance of any Project financed or to be financed or refinanced by bonds or notes secured by the Trust Agreements or for like purposes of or in connection with any other Project or property of the Authority the revenues from which are pledged or assigned by the Trust Agreements.

Pursuant to the Contract, the Authority authorizes and directs the University Trustees to make and revise rules and regulations concerning the conduct of persons while on or in the Projects and the bringing into or onto, keeping in or on and removal from the Projects of property of others than the Authority, to enforce such rules and regulations and to establish and impose penalties for violation of the same. All such rules, regulations and penalties shall be subject to the approval of the Authority, which shall not be reasonably withheld, shall comply with the Act, the Contract, any other contract or agreement between the Authority and the University Trustees relating to the Projects and the Trust Agreements, and, shall be made and revised so as to be nearly identical as possible with rules, regulations and penalties from time to time promulgated by the University Trustees respecting other like facilities under their control.

Insurance

The Authority shall purchase and maintain in effect with respect to each of its Projects policies of insurance and fidelity bonds against such risks and losses and in such amounts as it shall deem to be reasonable.

ISSUANCE OF BONDS OR NOTES

General

From time to time, the Authority shall issue bond or notes to achieve its corporate purposes in undertaking Projects on behalf of the Commonwealth and the University and paying related expenses or to refund prior indebtedness of the Authority or other indebtedness with respect to the University, all as set forth in the Act. The bonds or notes shall be issued pursuant to the Trust Agreements or other instruments permitted by the Act. Prior Bonds subject to the terms of the Contract are listed in the Contract. Additional bonds or notes will become subject to the terms of the Contract upon designation thereof by the Authority and the University, as set forth in the Certificate related to such bonds or notes. The Certificate shall set forth (i) whether the bonds or notes constitute Facility Revenue Bonds, Project Revenue Bonds or other bonds or notes issued under the Trust Agreements or other instrument, and (ii) the aggregate principal amount of such indebtedness. The Authority shall apply the proceeds of the bonds or notes as set forth in the Act, the applicable Trust Agreement, the applicable Series Resolution and the Certificate with respect to such bonds or notes.

Commonwealth Guaranty for Certain Bonds and Notes

In accordance with the Act, certain bonds and notes of the Authority will be guaranteed by the Commonwealth with the approval of the University Trustees, acting on behalf of the Commonwealth. Prior Bonds of the Authority guaranteed by the Commonwealth are listed in the Contract (the “Prior Guaranteed Bonds”). From time to time, the Authority may issue additional bonds or notes guaranteed by the Commonwealth, as determined by the Authority and the University Trustees, on behalf of the Commonwealth, as set forth in the Certificate with respect to such bonds or notes.

With respect to the Prior Guaranteed Bonds and other guaranteed bond or notes so designated in a Certificate, the Commonwealth agrees to guarantee to the Owners thereof and to the Bond Trustee, as trustee for such Owners, the payment of the principal of and interest on all of the guaranteed bonds or notes as the same become due and payable, and in case the Authority shall default in making any such payment as and when the same shall be due and payable, the Commonwealth agrees to make such payment as the same becomes due and payable and pledges its full faith and credit for the performance of this guaranty, provided that the total outstanding amount of bonds and notes issued by the Authority and guaranteed by the Commonwealth under the Act shall not exceed the amount from time to time authorized by the Act to be so guaranteed.

Such guaranteed bonds or notes shall include a guaranty in the form of Exhibit B to the Contract executed by the University Trustees, on behalf of the Commonwealth.

No provision of the Contract shall create or be deemed to create any obligation by the Commonwealth to appropriate funds for any purposes under the Contract other than performance of the Commonwealth Guaranty on the guaranteed indebtedness.

In accordance with the Act, the Section 10 Reserve Account shall be funded in connection the issuance of guaranteed bonds or notes in an amount determined in accordance with the Act and the Trust Agreements. Moneys in the Section 10 Reserve Fund may be applied as set forth in the Trust Agreements and Series Resolutions.

Special Provisions for Facilities Revenue Bonds

A Capital Improvements Reserve Account shall be funded in connection the issuance of Facilities Revenue Bonds in an amount determined by the Authority, in consultation with the University. Moneys in the Capital Improvements Reserve Account may be applied to any lawful purpose of the Authority, all as set forth in the Trust Agreements and Series Resolutions.

Special Provisions for Derivatives

In connection with any Derivatives related to bonds or notes issued by the Authority, the Authority shall establish a General Reserve Fund. The Authority shall deposit into the General Reserve Fund from time to time, amounts received by the Authority on account of the Derivatives related to the bonds or notes, initially based on an amount equal to 0.19875% per annum of the notional amounts thereof or such other amount as determined by the Authority and set forth in a Series Resolution with respect the bonds or notes related to the Derivative. Amounts on deposit in the General Reserve Fund may be invested in any investment by which the Authority is from time to time permitted by law to invest its moneys. Moneys and investments in the General Reserve Fund shall be held separately from all other moneys and investments of the Authority. Moneys in the General Reserve Fund may be applied to any lawful purpose of the Authority. Moneys may be withdrawn from the General Reserve Fund by any authorized officer of the Authority.

SECURITY FOR PAYMENT OF BONDS AND NOTES

General Obligation of the University

Pursuant to the Contract, the University Trustees pledge all funds of the University permitted by law to be applied thereto, to the making of all payments required under the Contract, including without limitation all payments of debt service on bonds or notes issued by the Authority under the Act and the Trust Agreements or other instruments and payments with respect to any Liquidity Facility, Credit Facility or Derivatives. *Notwithstanding the foregoing, this pledge does not apply to payments with respect to bonds or notes issued for Specific Revenue Projects under the Facilities Trust Agreement.*

Without limiting the generality of the foregoing, the University Trustees, in the name and on behalf of the Commonwealth, pledge to the making of payments required by the Contract Spendable Cash and Investments, Authority Eligible Gifts, University Eligible Gifts and Trust Funds, each as defined in Exhibit C to the Contract.

Pledge of the University for Bonds and Notes Related to Specific Revenue Projects

Pursuant to the Contract, the University Trustees pledge to the making of all payments required under the Contract with respect to bonds or notes issued for Specific Revenue Projects under the Facilities Trust Agreement, revenues generated from the rates and charges established by the University for such Specific Revenue Project, including amounts which constitute Authority Eligible Gifts, University Eligible Gifts and Trust Funds. Amounts payable under the Contract with respect to Specific Revenue Projects are not secured by the general obligation of the University, including without limitation Spendable Cash and Investments.

General Provisions Related to Pledged Funds

All Revenues collected or received by the Commonwealth or the University, from whatever source, as payment of fees, rents, rates or other charges for the use and occupancy of a Project, including without limitation Revenues from Specific Revenue Projects and from Spendable Cash and Investments, and needed to pay the Certified Amount shall be held in trust by the University for the Authority and paid to the Authority, as applicable, separate from all other moneys, held by the University or the Commonwealth. Such amounts ("Pledged Funds") shall be applied solely as provided in the Act, the Contract, the Series Resolutions or the Trust Agreements and shall be remitted by the University Trustees to the Bond Trustee under the Trust Agreements or the Authority, as applicable, at such times and in such amounts as may be directed in writing by the Authority in accordance with the Authority's annual certification process described below.

Pledged Funds are and will be free and clear of any pledge, lien, charge or encumbrance thereon or with respect thereto prior to the pledge created by the Contract and the University Trustees shall take all actions necessary to protect and effectuate such pledge provided, however, that nothing in this paragraph shall be deemed to limit the right of the University Trustees, to the extent permitted by law, to create a pledge, lien or other charge on any or all such Pledge Funds to other Projects and bonds and notes issued for such Projects in accordance with the Contract or on a basis junior and subordinate to the pledge created by the Contract.

The University shall cause to be available in Spendable Cash and Investments at all times amounts sufficient to pay such portion of the Certified Amount (hereinafter defined) required to be paid therefrom and to provide for any other payments required under the HEFA Financing Agreements.

Authority Certification of Amounts Due under the Contract

On or before March 1 of each year for the twelve month period commencing the next succeeding November 1, the Authority shall certify in writing to the University Trustees (and provide a copy to the Bond Trustee) the amount estimated for each component of the Projects, detailing (i) the Authority's projected debt service costs and fees and expenses related to the bonds or notes, including without limitation any payments with respect to any Liquidity Facility, Credit Facility or Derivatives, (ii) the Authority's projected operating and administrative costs, (iii) any projected required deposits to reserves, including without limitation the Section 10 Reserve Fund, Capital Improvements Reserve Fund and the General Reserve Fund, (iv) any projected payments to the Commonwealth pursuant to Section 19C of the Act, (v) any additional reserves it may propose to create or augment consistent with the Trust Agreements and (vi) the amount, if any, payable to the University Trustees to reimburse Specific Revenue Project expenses incurred by the University Trustees (collectively, the "Certified Amount"). Such certificate, which may be revised from time to time as necessary, shall state the dates within such period when any portion of the Certified Amount shall be due, the portion of the Certified Amount due on such dates, the payee of such amount and payment instructions, the source of such payments and the amount payable from each source. The Certified Amount shall also detail the fees, rents, rates and other charges proposed for the use of the Projects, which shall be fixed so as to be sufficient, in the aggregate, together with other available moneys, to cover all of the costs and transfers to reserves as aforesaid allocable to the Projects.

University Certification of Spendable Cash and Investments

On or before April 1 of each year, the University shall certify in writing to the Authority whether or not there are sufficient funds in Spendable Cash and Investments to pay the Certified Amounts and, if so, that such funds will be held in trust in Spendable Cash and Investments for the equal and ratable benefit of the Authority and each other person or entity for whose benefit amounts will be applied to the payment of amounts required to be paid therefrom and will not be expended for any other purpose. Such funds will be so held and not expended for any other purpose; provided, however, that if any portion of the Certified Amount is paid from University Eligible Gifts, Authority Eligible Gifts; other Authority revenues or Revenues from Specific Revenue Projects, then after any such payment an amount equal to such portion so paid need no longer be held in Spendable Cash and Investments.

The University Trustees authorize and, pursuant to Chapter 3A of Chapter 75 of the Massachusetts General Laws and other applicable law or resolution delegate power to the President of the University, the Senior Vice President for Administration and Finance & Treasurer of the University and any such other officer to deliver the certificate described in the preceding paragraph and to do all other acts and things necessary or desirable to cause the University to comply with its obligations under the Contract.

If such certification states that sufficient funds are not available in Spendable Cash and Investments to pay such amounts, such certification shall state the amount of funds in Spendable Cash and Investments that are available to pay a portion of such amounts and a ratable portion of such funds in Spendable Cash and Investments shall be held in trust for the benefit of the Authority to be applied to the payment pro rata of all amounts payable to or for the account of the Authority from Spendable Cash and Investments. The University will continue to be obligated to pay any portion (or, if applicable, all) of the Certified Amount payable from all funds of the University permitted by law to be applied thereto notwithstanding any shortfall in amounts available in Spendable Cash and Investments.

If such certification states that sufficient funds are not available in Spendable Cash and Investments to pay such amounts, or if the Authority has not received such certificate required by the Contract, the Authority will promptly adopt or revise mandatory fees, rates, rents and other charges for the use of the Projects and any portion thereof to be charged and billed to and collected from students in the University

and provide for the billing, collection and remittance of such fees rates, rents and other charges by the University Trustees at such times and in such manner as in the judgment of the Authority will produce moneys sufficient and available to meet the requirements of the Contract. The Authority shall promptly notify the University Trustees in writing of the matters set forth in the foregoing sentence. Pursuant to the Contract, the University Trustees approve, and agree to confirm such approval from time to time, all fees, rents, rates and other charges adopted or revised by the Authority pursuant to this paragraph and agree to cause the same to be billed to and collected from students in the University as the Authority may provide and remitted as the Authority may provide.

Payments from Pledged Funds

The University Trustees on behalf of the University will transfer to the Authority or the Bond Trustees, as applicable, amounts required to pay the Certified Amount (defined in *Authority Certification of Amounts Due under the Contract* above), including but not limited to the amounts necessary to pay principal of, premium if any, and interest on the bonds and notes issued by the Authority from all funds of the University legally permitted to be applied thereto, including, but not limited to University Eligible Gifts, Authority Eligible Gifts, other available Revenues of the University, including without limitation, amounts available in the University's Spendable Cash and Investments.

Expenses incurred by the University Trustees in connection with the repair and maintenance of the Projects shall be paid for or reimbursed to the University Trustees from the Pledged Funds. The Authority, in its discretion, may (a) authorize the University Trustees to deduct from the Pledged Funds, prior to remittance thereof to the Bond Trustee, amounts equal to amounts budgeted by the Authority for such expenses, or (b) instruct the University Trustees to certify to the Authority the amount of such expenses, if any, incurred by the University Trustees and not authorized to be deducted, such amounts to be reimbursed to the University Trustees from Pledged Funds transmitted to the Bond Trustee. Any amount deducted by the University Trustees pursuant to (a) and not expended for such expenses during the period for which it was budgeted by the Authority shall be certified to the Authority by the University Trustees within 30 days and shall be retained by the University Trustees and used solely for expenses of repair and maintenance of the Projects. In the event the Authority incurs an expense for repair or maintenance of the Projects, the University Trustees shall remit to the Authority such portion of the Pledged Funds deducted under (a) as is necessary to reimburse the Authority.

Defaults And Rights

Upon the failure of the Authority to pay debt service on any bond or note issued by the Authority (other than as a result of the failure of the University Trustees under the Contract) or to observe or perform any other agreement or condition under the Contract (or failure to cure the same), after 15 days notice thereof to the Authority by the University Trustees, the Authority shall be deemed to be in default under the Contract. Thereupon, the Commonwealth may, acting by and through the University Trustees, assume the rights and obligations of the Authority under the Contract until such time as the University Trustees may declare the default to be cured.

Upon the failure of the Authority or the University Trustees to make any payment required under the provisions of the Contract, or to observe any other covenant or requirement imposed by the Contract, the Authority or the University Trustees, as the case may be, shall be deemed in default under the Contract. Thereupon, the Authority or the Trustee may institute legal proceedings to enforce such covenant or requirement or to enforce the pledge and lien granted under the provisions of the Contract and may take such other actions or exercise such other remedies as may be available at law or in equity to enforce the provisions of the Contract, including without limitation and upon agreement of the parties, mediation or arbitration. Without limiting the generality of the foregoing, in the case of an Authority default, the Commonwealth may,

acting by and through the University Trustees, assume the rights and obligations of the Authority under the Contract until such time as the University Trustees may declare the default to be cured, and, in the case of the University Trustees default, the Authority may itself undertake to perform such obligations, and may employ such persons or entities and make such expenditures as are reasonably necessary for the performance thereof, until such time as the Authority may declare the default to be cured.

No action by the Authority to enforce the Contract, or any other action of the Authority under the Contract, and no default or breach by the University Trustees, shall in any way affect the obligations of the University Trustees under the Contract. No action by the University Trustees under the Contract, and no default or breach by the Authority, shall in any way affect the obligations of the Commonwealth under the Contract. Whenever a breach of the Contract, whether substantial or otherwise, and whether before or after notice of the breach has been given to the Authority or the University Trustees, has been corrected, the obligations and rights under the Contract shall be reinstated and performance of the Contract shall continue as if such breach had never occurred.

The University Trustees, the University or the Authority may, to the extent authorized by law, act under the Contract or authorize an officer or officers to act in their name thereunder, and the action of any duly authorized officer or committee of the University Trustees, the University or the Authority shall be deemed to be the action of the Commonwealth, acting by and through the University Trustees, the University or the Authority, as the case may be.

No member, officer or employee of the University Trustees or the University shall be individually liable on any obligation assumed by the Commonwealth or the University Trustees under the Contract. No member, officer or employee of the Authority shall be individually liable on any obligation assumed by the Authority under the Contract, and neither the carrying out of a Project nor the ownership of a Project by the Authority shall impose any liability on any such member, officer or employee.

NOTICES AND DEMANDS

Any notice or demand permitted or required under the Contract to be given or served by any of the parties to the Contract to or upon another party to the Contract shall be in writing and shall be signed in the name of the party giving or serving the same. Such notice or demand shall be mailed by registered mail (postage and registry charges prepaid) or served on the President of the University, if such notice is to the Commonwealth or the University Trustees, or otherwise on the Executive Director of the Authority. Notice shall be deemed to have been received at the time of actual service or three days after the date of the mailing by registered mail properly addressed.

NON-ASSIGNABILITY

The Contract is not assignable except that if by act of the General Court the powers, functions, duties and property of the University or the Authority are transferred to another political subdivision, agency, board, commission, department, authority or institution of the Commonwealth, the rights and obligations of the Contract shall be deemed to have been assigned thereby to such transferee, and provided further that the Authority's rights to receive moneys under the Contract and to enforce the provisions of the Contract may be assigned to the Bond Trustee.

AMENDMENTS

The Contract may be amended only by the execution of an Amendment in writing by the Authority, the University Trustees and the Commonwealth, acting by and through the University Trustees, or their successors.

[Intentionally Left Blank]

APPENDIX E

PROPOSED FORM OF OPINION OF BOND COUNSEL

[Intentionally Left Blank]



One Financial Center
Boston, MA 02111
617 542 6000
mintz.com

[Closing Date]

University of Massachusetts Building Authority
100 Carlson Avenue
Newton, Massachusetts 02459

Re: University of Massachusetts Building Authority Project Revenue Bonds, Senior Series 2024-1
(the “Bonds”)

We have acted as bond counsel to the Authority in connection with the issuance by the Authority of the Bonds pursuant to (i) Chapter 773 of the Acts of 1960, as amended (the “Act”), (ii) the Trust Agreement dated as of November 1, 2000, as amended (the “Trust Agreement”) between the Authority and U.S. Bank Trust Company, National Association, as successor trustee (the “Trustee”) and (iii) the Series Resolution Authorizing the Issuance of the Bonds adopted by the Authority on December 7, 2023 (the “Series Resolution”). In such capacity, we have examined the law and such certified proceedings and other documents as we have deemed necessary to render this opinion, including without limitation the Second Amended and Restated Master Contract for Financial Assistance, Management and Services dated as of May 1, 2019 (the “Master Contract”), among the Authority, the University of Massachusetts, acting by and through the Board of Trustees (the “University Trustees”), and The Commonwealth of Massachusetts (the “Commonwealth”), acting by and through the University Trustees, and the Certificate Making Bonds Subject to Master Contract dated as of the date hereof (the “Certificate,” and together with the Master Contract, the “Contract”). Capitalized terms used herein shall, unless otherwise specified, have the meanings set forth in the Trust Agreement and the Series Resolution.

Under the Trust Agreement, the Authority has pledged certain revenues (the “Revenues”) for the payment of the principal of and interest on the Bonds when due.

Based upon and subject to the foregoing, we are of the opinion that, under existing law:

1. The Authority is validly existing as a body politic and corporate and public instrumentality of the Commonwealth with the power to enter into the Trust Agreement and the Series Resolution, perform the agreements on its part contained therein and issue the Bonds.
2. The Trust Agreement, the Series Resolution and the Contract have been duly authorized, executed and delivered by the Authority and constitute valid and binding obligations of the Authority enforceable upon the Authority.
3. The Contract has been duly authorized, executed and delivered by the Commonwealth and constitutes a valid and binding obligation of the Commonwealth enforceable upon the Commonwealth.

4. Pursuant to the Act, the Trust Agreement creates a valid lien on the Revenues and other funds pledged by the Trust Agreement for the security of the Bonds issued thereunder on a parity with other bonds issued under the Trust Agreement.

5. The Bonds have been duly authorized, executed and delivered by the Authority and are valid and binding limited obligations of the Authority, payable solely from the Revenues and other funds provided therefor in the Trust Agreement. Neither the Commonwealth nor any political subdivision or instrumentality thereof, including the Authority, is obligated to pay the principal of or redemption premium, if any, or interest on the Bonds except from the Revenues and other funds provided therefor as aforesaid in the Trust Agreement and the Series Resolution, and neither the faith and credit nor the taxing power of the Commonwealth nor of any political subdivision or instrumentality thereof, including the Authority, is pledged to the payment of the principal of or redemption premium, if any, or interest on the Bonds.

6. Interest on the Bonds will not be included in the gross income of the holders of the Bonds for federal income tax purposes. This opinion is expressly conditioned upon the Authority's compliance with certain requirements of the Internal Revenue Code of 1986, as amended, which must be satisfied subsequent to the date of issuance of the Bonds in order that interest thereon is and continues to be excluded from gross income for federal income tax purposes. Failure to comply with certain of such requirements could cause interest on the Bonds to be included in the gross income of holders of the Bonds retroactive to the date of issuance of the Bonds. Interest on the Bonds will not constitute a preference item for purposes of computation of the alternative minimum tax imposed on certain individuals and corporations but will be included in "adjusted current earnings" when calculating corporate alternative minimum taxable income under section 56(g) of the Code in the computation of the alternative minimum tax applicable to certain corporations. We express no opinion as to other federal tax consequences resulting from holding the Bonds.

7. Interest on the Bonds, and any profit made on the sale thereof, are exempt from Massachusetts personal income taxes, and the Bonds are exempt from Massachusetts personal property taxes. We express no opinion as to other Massachusetts tax consequences arising with respect to the Bonds nor as to the taxability of the Bonds or the income therefrom under the laws of any state other than Massachusetts.

It is to be understood that the rights of the holders of the Bonds and the enforceability of the Bonds, the Trust Agreement and the Contract may be limited by bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights generally and by equitable principles, whether considered at law or in equity.

This opinion is given as of the date hereof, and we assume no obligation to revise or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may hereafter occur.

PROPOSED FORM OF CONTINUING DISCLOSURE AGREEMENT

This Authority and University Continuing Disclosure Agreement, dated May __, 2024 (this “Agreement”), is by and between the University of Massachusetts Building Authority (the “Authority”), a body politic and corporate established by Chapter 773 of the Acts of 1960 of The Commonwealth of Massachusetts (as amended, the “Enabling Act”) and the University of Massachusetts (the “University”).

WITNESSETH:

WHEREAS, upon the execution and delivery of this Agreement (and subject to the fulfillment of certain other conditions) the Authority will issue its Project Revenue Bonds, Senior Series 2024-1 (the “Bonds”); and

WHEREAS, the Rule (hereinafter defined) requires a participating underwriter not to purchase or sell municipal securities in connection with an offering unless the participating underwriter has reasonably determined that the issuer and other obligated persons (within the meaning of the Rule) have undertaken certain continuing disclosure obligations;

NOW, THEREFORE, in consideration of the premises, including without limitation the issuance by the Authority of the Bonds, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Authority and the University agree as follows:

1. Purpose; Beneficiaries. This Agreement is entered into solely to assist the Underwriter (hereinafter defined) in complying with subsection (b)(5) of the Rule. This Agreement constitutes a written undertaking for the benefit of the Registered Owners (hereinafter defined) and beneficial owners (within the meaning of the Rule) of the Bonds (such Registered Owners and beneficial owners being sometimes called herein “owners”).

2. Definitions. The following words and terms used in this Agreement shall have the following respective meanings:

(a) “EMMA” means the MSRB’s Electronic Municipal Market Access system, or its successor as designated by the MSRB.

(b) “Financial Obligation” means a (i) debt obligation; (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligations; or (iii) guarantee of (i) or (ii). The term Financial Obligation shall not include municipal securities, as to which a final official statement has been provided to the MSRB consistent with the Rule.

(c) “MSRB” means the Municipal Securities Rulemaking Board.

(d) “Rule” means Rule 15c2-12 promulgated by the SEC under the Securities and Exchange Act of 1934, as amended (17 CFR Part 240, §240.15c2-12), as in effect on the date of this Agreement, including any official interpretation thereof.

(e) “SEC” means the United States Securities and Exchange Commission.

All capitalized words and terms used in this Agreement and not otherwise defined herein shall have the meaning ascribed to such words and terms in the Official Statement, dated May 2, 2024 pertaining to the Bonds (the “Official Statement”).

3. The Undertaking of the University. The University hereby undertakes to provide to the Authority no later than 270 days after the end of each fiscal year of the University, commencing with the fiscal year ending June 30, 2024, the annual financial information described below (the “University’s Annual Report”), together with audited financial statements of the University for such fiscal year if audited financial statements are then available; provided, however, that if audited financial statements of the University are not then available, such audited financial statements shall be delivered to the Authority when they become available (but in no event later than 350 days after the end of such fiscal year (the “prior fiscal year”)). The University’s audited financial statements for each fiscal year will be prepared on an accrual basis in accordance with generally accepted accounting principles as in effect from time to time (or as otherwise may be required or permitted by law) and will consist of a combined balance sheet, a combined statement of changes in net assets and a combined statement of current net assets, revenues, expenses and other changes (or such other items as may be required or permitted by law or by generally accepted accounting principles as in effect from time to time or by other accounting principles as in effect from time to time in accordance with which the financial statements of the University may be prepared). Such financial statements will be audited by a group of certified public accountants appointed by the University. The University’s Annual Report shall include the financial and operating data, in each case updated through the last day of the prior fiscal year unless otherwise noted, and in each case substantially in the same level of detail as is found in Appendix A – “Certain Information Regarding the University” to the Official Statement:

- (a) as set forth in the first sentence under the heading “GOVERNANCE – Faculty and Staff”;
- (b) in the tables under the heading “ENROLLMENT”;
- (c) in the tables and under the subheading “Student Financial Aid” under the heading “TUITION AND FEES”;
- (d) in Table A and Table B under the heading “UNIVERSITY REVENUES AND BUDGETING”;
- (e) in the table under the heading “SUMMARY OF FINANCIAL RESULTS, FISCAL YEARS 2021, 2022 AND 2023 – Endowment and Fundraising”;
- (f) in the table under the heading “CURRENT AND FUTURE CAPITAL PLANS”;
- (g) in the table under the heading “INDEBTEDNESS OF THE UNIVERSITY – Spendable Cash and Investments”; and
- (h) in the first paragraph under the heading “EMPLOYEE RELATIONS”.

In the event the University’s audited financial statements provided pursuant to this Agreement contain any of the information described in paragraphs (a) through (h) above, the requirement of this Section 3 shall be deemed to be satisfied with respect to including such information in the University’s Annual Report.

Any or all of the items listed above may be included by reference to other documents, including official statements pertaining to debt issued by the Authority or others on behalf of the University, which have been submitted to EMMA.

4. Transmission of Financial Statements and Annual Financial Information by the Authority. The Authority will transmit the financial statements of the University and the University’s Annual Report to the MSRB through its EMMA system promptly upon the receipt thereof from the University and will give notice to EMMA of any failure by the University to provide such financial statements or the University’s Annual Report by the dates set forth in this Agreement.

5. The Undertaking of the Authority. The Authority hereby undertakes to provide to EMMA no later than 270 days after the end of each fiscal year of the Authority, commencing with the fiscal year ending June 30, 2024, the annual financial information described below, together with audited financial statements of the Authority for such

fiscal year if audited financial statement are then available; provided, however, that if audited financial statements of the Authority are not then available, such audited financial statements shall be delivered to the MSRB via EMMA when they become available (but in no event later than 350 days after the end of such fiscal year (the “prior fiscal year of the Authority”). The Authority’s annual financial statements for each fiscal year will be prepared using the economic resources measurement focus and the accrual basis of accounting in accordance with generally accepted accounting principles as in effect from time to time (or as otherwise may be required or permitted by law) and will consist of a statement of net assets, a statement of revenues, expenses and changes in net assets and a statement of cash flows (or such other items as may be required or permitted by law or by accounting principles as in effect from time to time in accordance with which the financial statements of the Authority may be prepared). Such financial statements will be audited by a group of certified public accountants appointed by the Authority. The annual financial information to be provided by the Authority shall consist of financial and operating data, updated through the last day of the prior fiscal year of the Authority unless otherwise noted, relating to the following information contained in the Official Statement and substantially in the same level of detail as is found in the section of the Official Statement referenced in parentheses after each item:

- (a) any material change in the provisions of the Contract (“Security and Sources of Payment for the Bonds – Contract” and “– Pledge of Revenues under the Project Trust Agreement”);
- (b) annual debt service requirements on the Bonds (“Security and Sources of Payment for the Bonds – Annual Debt Service Requirements”);
- (c) any amendment to the Project Trust Agreement made with the consent of the registered owners of the Bonds and any other amendment to the Project Trust Agreement which, in the opinion of the firm of attorneys serving as bond counsel to the Authority at the time the Authority submits the information required by the University and Authority Disclosure Agreement, is material to the interests of the registered owners of the Bonds (“Appendix D – Summary of Legal Documents”).

Any or all of the items listed above may be included by reference to other documents, including official statements pertaining to debt issued by the Authority, which have been submitted to EMMA.

6. Notice of Certain Events. Whenever the Authority obtains knowledge of the occurrence of any of the following listed events with respect to the Bonds, the Authority shall submit to the MSRB via EMMA, in a timely manner not in excess of ten business days of the event, notice of any of the following events with respect to the Bonds; provided however, that the submission by a rating agency of a rating change, to the MSRB, will be deemed filed by the Institution for the purposes of this Agreement:

- (a) principal and interest payment delinquencies;
- (b) non-payment related defaults, if material;
- (c) unscheduled draws on debt service reserves reflecting financial difficulties;
- (d) unscheduled draws on credit enhancements, if any, reflecting financial difficulties;
- (e) substitution of credit or liquidity providers, if any, or their failure to perform;
- (f) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax-exempt status of the Bonds;
- (g) modifications to rights of holders of the Bonds, if material;
- (h) bond calls, if material, and tender offers;

- (i) defeasances;
- (j) release, substitution, or sale of property, if any, securing payment of the Bonds, if material;
- (k) rating changes;
- (l) bankruptcy, insolvency, receivership or similar event of the Authority or the University* ;
- (m) the consummation of a merger, consolidation, or acquisition involving the Authority or the University or the sale of all or substantially all of the assets of the Authority or the University, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;
- (n) appointment of a successor or additional trustee or the change of the name of the Trustee, if material;
- (o) incurrence of a Financial Obligation of the Authority or the University, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the Authority or the University, any of which affect the holders of the Bonds, if material; and
- (p) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the Authority or the University, any of which reflect financial difficulties.

Whenever the University obtains knowledge of the occurrence of any of the foregoing listed events with respect to the University, the University shall notify the Authority in a timely manner not in excess of ten business days of the event, in order to permit the Authority to comply with the requirements set forth above.

7. Enforceability of this Agreement: Termination. To the extent permitted by law, the provisions of this Agreement shall be enforceable against the University with respect to the obligations of the University hereunder, and against the Authority with respect to the obligations of the Authority hereunder, in accordance with the terms hereof by any owner of a Bond, including any beneficial owner acting as a third party beneficiary (upon proof of its status as a beneficial owner reasonably satisfactory to the University or the Authority, as the case may be). To the extent permitted by law, any such owner shall have the right, for the equal benefit and protection of all owners of the Bonds, by mandamus or other suit or proceeding at law or in equity, to enforce its rights against the University or the Authority, as applicable, and to compel the University or the Authority as applicable, and any of the officers, agents or employees of, as applicable, the University or the Authority, to perform and carry out their duties under such provisions of this Agreement; provided, however, that the sole remedy for a violation of this Agreement shall be limited to an action to compel specific performance of the obligations of the University or the Authority, as applicable, under this Agreement and shall not include any rights to monetary damages. This Agreement shall terminate if no Bonds remain outstanding (without regard to an economic defeasance) or if the provisions of the Rule concerning continuing disclosure are no longer in effect, whichever occurs first.

8. Amendments. This Agreement may be amended, changed or modified by the parties hereto, without the consent of, or notice to, any owners of the Bonds, (a) to comply with or conform to the provisions of the Rule or any amendments thereto or authoritative interpretations thereof by the SEC or its staff (whether required or optional), (b) to add a dissemination agent for the information required to be provided pursuant to this Agreement by the

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

University or the Authority and to make any necessary or desirable provisions with respect thereto, (c) to add to the covenants of the University or the Authority for the benefit of the owners of the Bonds, (d) to modify the contents, presentation and format of the annual financial information of the University or the Authority from time to time as a result of a change in circumstances that arises from a change in legal requirements, or (e) to otherwise modify the duties of the University or the Authority in this Agreement in a manner consistent to the requirements of the Rule concerning continuing disclosure; provided, however, that in the case of any amendment pursuant to clause (d) or (e), (i) the duties of the University or the Authority, as amended, would have complied with the requirements of the Rule at the time of the offering of the Bonds, after taking into account any amendments or authoritative interpretations of the Rule, as well as any change in circumstances, and (ii) the amendment does not materially impair the interests of the owners of the Bonds, as determined either by a party unaffiliated with the University or the Authority (such as the firm serving at the time as bond counsel to the Authority) or by the vote or consent of the Registered Owners of a majority in outstanding principal amount of the Bonds affected thereby at or prior to the time of such amendment, which consent shall be obtained as provided in the Trust Agreement with respect to consents of Registered Owners. Any amendment, change or modification to this Agreement shall be in writing.

If this Agreement is amended with respect to the annual financial information to be submitted by the Authority or the University hereunder, the annual financial information containing the amended financial information will explain, in narrative form, the reasons for the amendment and the impact of the change in the type of financial information being provided. If this Agreement is amended with respect to the accounting principles to be followed in preparing financial statements of the University or the Authority, the annual financial information of the University or the Authority as applicable, for the year in which the change is made will present a comparison between the financial statements or information prepared on the basis of the new accounting principles and the financial statements or information prepared on the basis of the former accounting principles. Such comparison will include a qualitative discussion of the differences in the accounting principles and the impact of the change in the accounting principles on the presentation of the financial information, in order to provide information to investors to enable them to evaluate the ability of the University or the Authority, as applicable, to meet its obligations with respect to the Bonds. To the extent reasonably feasible, the comparison will also be quantitative. The University will give notice of any change in its accounting principles to the Authority as promptly as practicable after such change has been determined and the Authority will submit such information to EMMA promptly upon the receipt thereof. The Authority will give notice of any change in its accounting principles to the MSRB via EMMA as promptly as practicable after such change has been determined.

9. Counterparts. This Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

10. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth and applicable law of the United States of America.

11. Titles of Sections. The titles of sections in this Agreement shall have no effect in construing this Agreement.

12. Actions to be Performed on Non-Business Days. Any action required by this Agreement to be taken on a Saturday, Sunday or holiday within the Commonwealth may be taken on the next business day with the same force and effect as if taken on the day so required.

[Remainder of this page intentionally left blank.]

IN WITNESS WHEREOF, the UNIVERSITY OF MASSACHUSETTS, acting by duly authorized officer thereof, and UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY, acting by a duly authorized officer thereof, have executed this Agreement, and the seal of the University and the seal of the Authority have been affixed hereto, all as of the day and year first above written.

(seal)

UNIVERSITY OF MASSACHUSETTS BUILDING
AUTHORITY

By: _____
Barbara J. Kroncke
Executive Director

(seal)

UNIVERSITY OF MASSACHUSETTS

By: _____
Lisa A. Calise
Senior Vice President for Administration and Finance
& Treasurer

EXHIBIT A

MSRB

Municipal Securities Rulemaking Board

1300 I Street NW, Suite 1000
Washington, DC 20005
Phone: (202) 838-1500
Fax: (202) 898-1500

EMMA

Electronic Municipal Market Access

<http://emma.msrb.org/>

[Intentionally Left Blank]

APPENDIX G

BOOK-ENTRY ONLY SYSTEM

DTC

The Depository Trust Company (“DTC”), New York, New York, will act as securities depository for the Bonds. The Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully registered Bond certificate will be issued for each stated maturity of the Bonds, in the aggregate principal amount of the applicable stated maturity, and will be deposited with DTC.

DTC, the world’s largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934, as amended. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of the Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Bonds on DTC’s records. The ownership interest of each actual purchaser of each Bond (“Beneficial Owner”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Bonds, except in the event that use of the book-entry system for the Bonds is discontinued.

To facilitate subsequent transfers, all Bonds deposited by Direct Participants with DTC are registered in the name of DTC’s partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of the Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Bonds. DTC’s records reflect only the identity of the Direct Participants to whose accounts such Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Bonds, such as redemptions, defaults, and proposed amendments to the Bond documents. For example, Beneficial Owners of Bonds may wish to ascertain that the nominee holding the Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners.

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

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Authority as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy). The Authority cannot give any assurances that Direct Participants or others will distribute payments of principal of and interest on the Bonds paid to DTC or its nominee, as the registered owner, to the Beneficial Owners, or that they will do so on a timely basis or that DTC will serve and act in a manner described in this document.

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

Principal (including sinking fund installments), redemption premium, if any, and interest payments on the Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Authority or Trustee on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Trustee or the Authority, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

The Authority may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, Bond certificates will be printed and delivered to DTC.

THE INFORMATION IN THIS SECTION CONCERNING DTC AND DTC'S BOOK-ENTRY SYSTEM HAS BEEN OBTAINED FROM SOURCES THAT THE AUTHORITY BELIEVES TO BE RELIABLE, BUT THE AUTHORITY TAKES NO RESPONSIBILITY FOR THE ACCURACY THEREOF.

No Responsibility of the Authority or the Trustee

NEITHER THE AUTHORITY NOR THE TRUSTEE WILL HAVE ANY RESPONSIBILITY OR OBLIGATIONS TO DIRECT PARTICIPANTS OR THE PERSONS FOR WHOM THEY ACT AS NOMINEES WITH RESPECT TO THE PAYMENTS TO OR THE PROVIDING OF NOTICE FOR DIRECT PARTICIPANTS, INDIRECT PARTICIPANTS, OR BENEFICIAL OWNERS.

SO LONG AS CEDE & CO. IS THE REGISTERED OWNER OF THE BONDS, AS NOMINEE OF DTC, REFERENCES HEREIN TO THE HOLDERS OR REGISTERED OWNERS OF THE BONDS SHALL MEAN CEDE & CO. AND SHALL NOT MEAN THE BENEFICIAL OWNERS OF THE BONDS.

Certificated Bonds

DTC may discontinue providing its services as securities depository with respect to the Bonds at any time by giving reasonable notice to the Authority and the Trustee. In addition, the Authority may determine that continuation of the system of book-entry transfers through DTC (or a successor securities depository) is not in the best interests of the Beneficial Owners of the Bonds. If for either reason the Book-Entry Only system is discontinued, Bond certificates will be delivered as described in the Project Trust Agreement and the Beneficial Owner, upon registration of certificates held in the Beneficial Owner's name, will become the holder of such Bond. Thereafter, the Bonds may be exchanged for an equal aggregate principal amount of the Bonds in other authorized denominations and of the same maturity, upon surrender thereof at the principal corporate trust office of the Trustee. The transfer of the Bonds may be registered on the books maintained by the Trustee for such purpose only upon the assignment in the form satisfactory to the Trustee. For every exchange or registration of transfer of the Bonds, the Authority and the Trustee may make a charge sufficient to reimburse them for any tax or other governmental charge required to be paid with respect to such exchange or registration of transfer, but no other charge may be made to the holder of such Bond for any exchange or registration of transfer of the Bonds. The Trustee will not be required to transfer or exchange the Bonds during the notice period preceding any redemption if such Bonds (or any part thereof) are eligible to be selected or have been selected for redemption.

[Intentionally Left Blank]

