

**RB31**  
**University of Maryland Baltimore County**  
 University System of Maryland

***Capital Budget Summary***

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**State-owned Capital Improvement Program**  
 (\$ in Millions)

<i>Projects</i>	<i>Prior Auth.</i>	<i>2016 Request</i>	<i>2017 Est.</i>	<i>2018 Est.</i>	<i>2019 Est.</i>	<i>2020 Est.</i>	<i>Beyond CIP</i>
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Interdisciplinary Life Sciences Building	\$4.100	\$6.000	\$8.300	\$30.000	\$77.300	\$0.000	\$0.000
<b>Total</b>	<b>\$4.100</b>	<b>\$6.000</b>	<b>\$8.300</b>	<b>\$30.000</b>	<b>\$77.300</b>	<b>\$0.000</b>	<b>\$0.000</b>

<i>Fund Source</i>	<i>Prior Auth.</i>	<i>2016 Request</i>	<i>2017 Est.</i>	<i>2018 Est.</i>	<i>2019 Est.</i>	<i>2020 Est.</i>	<i>Beyond CIP</i>
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GO Bonds	\$4.100	\$6.000	\$8.300	\$30.000	\$77.300	\$0.000	\$0.000
<b>Total</b>	<b>\$4.100</b>	<b>\$6.000</b>	<b>\$8.300</b>	<b>\$30.000</b>	<b>\$77.300</b>	<b>\$0.000</b>	<b>\$0.000</b>

CIP: Capital Improvement Program  
 GO: general obligation

***Summary of Recommended Bond Actions***

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1. Interdisciplinary Life Sciences Building

Approve funding to continue to design of the Interdisciplinary Life Sciences Building.

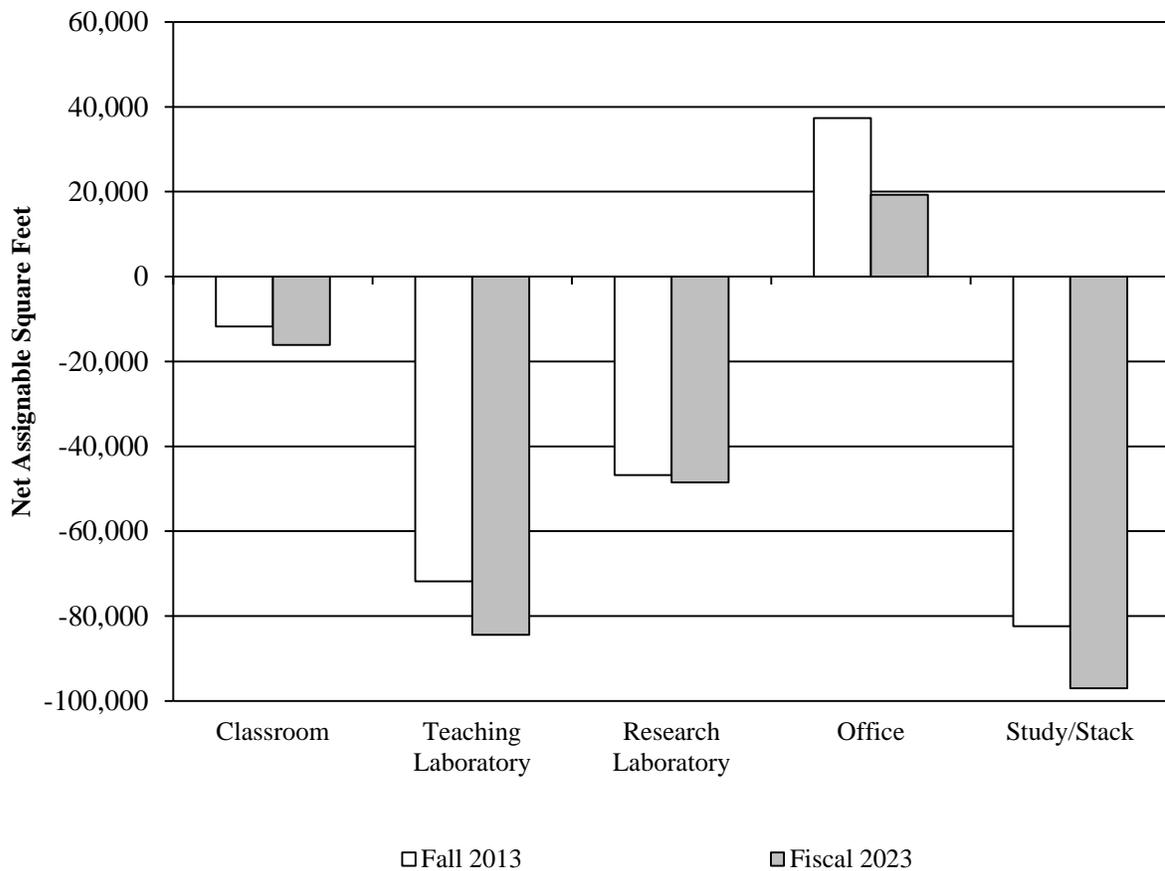
2. Section 2 – University of Maryland Baltimore County – New Performing Arts and Humanities Facility

Approve the de-authorization of \$0.7 million for the New Performing Arts and Humanities Facility.

## ***Performance Measures and Outputs***

According to the fall 2013 facilities inventory, the University of Maryland Baltimore County (UMBC) academic space totals 251,005 net assignable square feet (NASF), which includes 111,415 NASF of classroom space and 139,590 NASF of teaching laboratory space. The Maryland Higher Education Commission (MHEC) estimates UMBC’s fall 2013 academic space deficit to be 83,583 NASF, of which 11,766 and 71,817 NASF are classroom and teaching laboratory space, respectively, as shown in **Exhibit 1**. The deficit in academic space is projected to increase to 100,530 NASF by fiscal 2023, based on MHEC’s projected enrollment growth of 16% in full-time day equivalent students. In addition, it is estimated UMBC’s research space deficit will slightly worsen to 48,525 NASF by fiscal 2023.

**Exhibit 1**  
**Academic Space Deficiency**  
**Fall 2013 and Projected Fiscal 2016**



Source: Maryland Higher Education Commission, Four-year Public Colleges and Universities Academic Space Surplus/Deficiency, Fall 2013, Projected 2023

## ***Budget Overview***

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The 2014 *Capital Improvement Plan* (CIP) programmed \$4.2 million and \$5.5 million in fiscal 2017 and 2018, respectively, for design of the Interdisciplinary Life Sciences Building (ILSB). Construction and equipment funding of \$56.9 million was programmed in fiscal 2019 and included \$7.9 million of Academic Revenue Bonds. The remaining funding of \$66.6 million was programmed in the out-years. In 2014, the General Assembly accelerated this project by two years by authorizing \$4.1 million to begin design of ILSB and included language expressing the intent that construction funds would be authorized in the Maryland Consolidated Capital Bond Loan of 2016 and 2017. The 2015 CIP programs construction funding of \$4.6 million in fiscal 2017 and \$26.1 million and \$69.4 million in fiscal 2018 and 2019, respectively. It should be noted that the structural cost per gross square foot is \$524 due to the specialized nature of the facility, which includes an animal research facility. The total cost of the project is estimated to be \$125.7 million.

ILSB will address a shortage of teaching space to support science, technology, engineering, and mathematics (STEM) programs and interdisciplinary research space supporting life sciences and graduate education. Additionally, it will address deficiencies in research support facilities including animal research space.

UMBC relies on active learning instructional methods in STEM disciplines in which students work in small groups to solve problems and develop ideas and principles needed for a deeper understanding of the material. These classrooms are configured differently from the traditional instructional spaces and incorporate more technology. There are two active-learning classrooms, which are used all day during the week. Additional active-learning classrooms are needed in order to accommodate the enrollment growth in STEM programs, and multi-disciplinary teaching laboratories are needed to support courses taught in the active-learning classrooms to provide hands-on experiments in a wet laboratory setting. Overall, between fall 2008 and 2012, undergraduate and graduate STEM enrollment grew 21% leading to a shortage of classroom and teaching laboratory space.

There is a shortage of interdisciplinary research space supporting life sciences and graduate education resulting in UMBC being unable to grow research programs and limiting its ability to compete for research grant and contract funding. Currently, life science research laboratory space is located in various buildings throughout campus and is fully occupied. Furthermore, there are no research laboratories designed to support interdisciplinary research.

The animal research facilities are insufficient to perform animal procedures and lack dedicated quarantine rooms. The animal facilities are currently located in two locations: (1) 2,361 NASF in the Biological Sciences building that was designed more than 30 years ago; and (2) a 1,976 NASF in Sondheim Hall, in a general classroom building, not designed for this purpose. The facilities have poor ventilation and inadequate humidity control leading to odor and the presence of allergens. An insufficient number of procedure spaces results in the animals being transported to the principal investigator's laboratory for routine procedures. The lack of quarantine rooms puts all the animals in the facility at risk of being infected. If one animal becomes infected, this results in the need to treat all of the animals to prevent the spread of infections, which is expensive and time-consuming. In addition, animal research protocols involving the use of biological agents that are infectious to humans cannot

be performed. The existing facility in the Biological Sciences building is at full capacity and can only accommodate six researchers. Furthermore, the existing facilities cannot be retrofitted to gain the Association for Assessment and Accreditation of Laboratory Animal Care accreditation, thereby affecting UMBC’s ability to obtain funding for animal based research.

ILSB will address UMBC’s academic and research space deficit. The facility will provide a total of 25,270 NASF, including active learning classrooms (18,240 NASF), teaching laboratories (6,430 NASF), and collaborative project study space (600 NASF). This will eliminate the classroom deficit, which in fall 2013 totaled 11,766 NASF. Additionally, the facility will provide 27,995 NASF of research laboratory space, thereby reducing UMBC’s research space deficit to 18,787 NASF.

## ***Operating Budget Impact Statement***

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### **Executive’s Operating Budget Impact Statement (\$ in Millions)**

	<i>FY 2016</i>	<i>FY 2017</i>	<i>FY 2018</i>	<i>FY 2019</i>	<i>FY 2020</i>
<b>Interdisciplinary Life Sciences Building</b>					
Estimated Operating Cost	\$0.000	\$0.000	\$0.000	\$0.596	\$1.549
Estimated Staffing	0	0	0	1	3
<b>Total Operating Impact</b>					
Estimated Operating Cost	<b>\$0.000</b>	<b>\$0.000</b>	<b>\$0.000</b>	<b>\$0.596</b>	<b>\$1,549</b>
Estimated Staffing	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>

## ***Pre-authorizations and De-authorizations***

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### **Exhibit 2 Pre-authorizations and De-authorizations**

<b>Project</b>	<b>De-authorized Amount</b>	<b>Reason</b>
New Performing Arts and Humanities Facility	\$711,372	Phase I of project completed.

Source: Department of Budget and Management, 2015 *Capital Improvement Program*

## ***GO Bond Recommended Actions***

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1. Approve \$6 million in general obligation bonds to continue design of the Interdisciplinary Life Sciences Building.
2. Approve the de-authorization of \$0.7 million in general obligation bonds for construction and equipping the New Performing Arts and Humanities Facility due to Phase I of the project being completed.