RB00
University System of Maryland – Capital

Capital Budget Summary

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

Projects	2020 Request	2021 Est.	2022 Est.	2023 Est.	2024 Est.	Total
University of Maryland, Baltimore Campus	$13.159	$12.139	$11.100	$12.700	$7.368	$56.466
University of Maryland, College Park Campus	17.163	12.800	39.396	70.790	25.050	165.199
Bowie State University	5.100	6.100	0.000	42.651	77.984	131.835
Towson University	73.491	6.437	50.339	77.523	36.339	244.129
University of Maryland Eastern Shore	11.023	58.161	24.600	0.000	0.000	93.784
Frostburg State University	6.200	43.733	31.443	0.000	0.000	81.376
Coppin State University	0.000	20.986	20.052	0.000	0.000	41.038
Salisbury University	0.000	0.000	0.000	3.000	13.348	16.348
University of Maryland Baltimore County	4.022	6.440	5.452	0.000	0.000	15.914
University of Maryland Center for Environmental Science	0.000	1.170	7.609	7.842	0.000	16.621
University System of Maryland Office	40.599	84.776	36.829	32.000	35.000	229.204
Total	**$170.757**	**$252.742**	**$226.820**	**$246.506**	**$195.089**	**$1,091.914**

Fund Source	2020 Request	2021 Est.	2022 Est.	2023 Est.	2024 Est.	Total
GO Bonds	$136.757	$220.742	$196.820	$216.506	$165.089	$935.914
Revenue Bonds	34.000	32.000	30.000	30.000	30.000	156.000
Total	**$170.757**	**$252.742**	**$226.820**	**$246.506**	**$195.089**	**$1,091.914**

GO: general obligation

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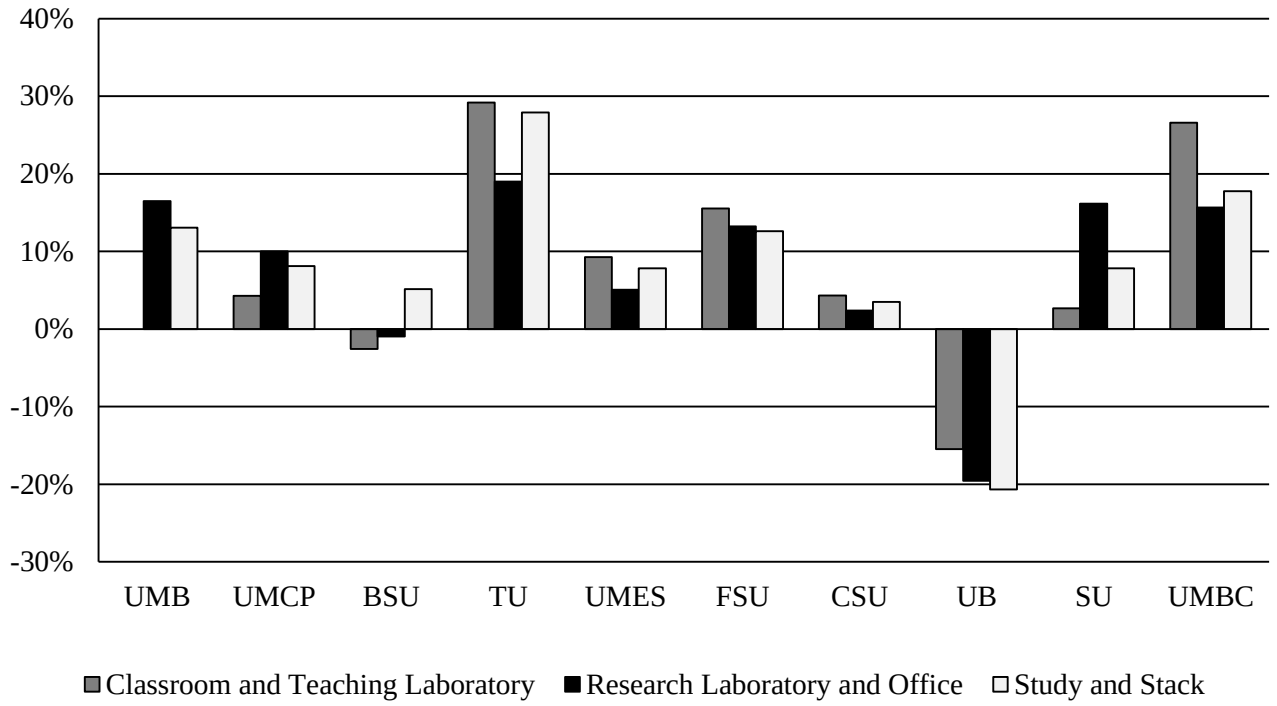
Performance Measures and Outputs

Institutions annually submit the Space Inventory and Guidelines Application (SGAP) report to the Maryland Higher Education Commission (MHEC) that includes data on an institution's current academic space inventory and the 10-year projected inventory. Projected inventory reflects anticipated changes in space due to construction of new facilities, renovations, demolitions, and changes in leased space. **Exhibit 1** shows the 10-year (fall 2017 and fiscal 2027) percentage change in academic space inventory by institution. Overall, most institutions project an increase in its inventory.

Exhibit 1
10-year Percentage Change in Academic Space
Fall 2017and Projected 2027



BSU: Bowie State University
CSU: Coppin State University
FSU: Frostburg State University
SU: Salisbury University
TU: Towson University
UB: University of Baltimore
UMB: University of Maryland, Baltimore Campus
UMBC: University of Maryland Baltimore County
UMCP: University of Maryland, College Park Campus
UMES: University of Maryland Eastern Shore

Source: Maryland Higher Education Commission

The University of Baltimore anticipates an overall decline in the inventory primarily related to not renewing lease space. Classroom and teaching laboratory space increase 29.2% and 26.6% at Towson University (TU) and the University of Maryland Baltimore County (UMBC), respectively, reflecting planned renovations and new facilities between fall 2017 and fiscal 2027. The increase in academic space on campus will help alleviate or even eliminate the academic space deficiency at some institutions that is calculated based on projected enrollment and type of research conducted at the institution. More detail on an institution's academic space surpluses or deficiencies is provided in the institution's capital analysis.

Budget Overview

The fiscal 2020 capital budget provides $136.757 million of general obligation (GO) bond funds for 12 projects at 8 University System of Maryland (USM) institutions, including University of Maryland System Office (USMO). This is supplemented with $34 million in Academic Revenue Bonds (ARB) authorized under separate legislation, which includes USM's annual request to fund various facilities renewal projects at all the institutions that totals $18.6 million in fiscal 2020. In addition, the University of Maryland, College Park Campus (UMCP) leverages $15 million in institutional funds and a $10 million private donation to fund the construction of the New School for Public Policy (SPP).

Issues

1. Facilities Renewal Backlog

Prior to fiscal 2019, USM used a ratio of renovation to replacement value to assess the relative size of its deferred maintenance backlog. However, under this method, some institutions combined renovation and deferred maintenance and others did not, resulting in some institutions overstating their estimated backlog. In order to get a more accurate estimate of systemwide deferred maintenance, USM now surveys institutions annually, requesting each institution to categorize deferred maintenance costs into three categories:

- building-related structural and envelop repairs that are deferred or reaching the end of its useful life (*e.g.*, windows, doors, roofs, masonry, and curtain wall systems);

- building-related mechanical and electrical system upgrades and/or replacements that are currently deferred or needed in the short term (within the next 5 to 10 years); and

- needed building-related life safety and regulatory improvements (*e.g.,* American Disabilities Act (ADA)) that can be separated from other categories.

As shown in **Exhibit 2**, the backlog of deferred maintenance totals $2.0 billion. The University of Maryland, Baltimore Campus (UMB) and UMCP account for 57.2% of the total inventory of space systemwide.

Exhibit 2
Estimated Deferred Maintenance Backlog for State-supported Facilities
Fiscal 2018
($ in Thousands)

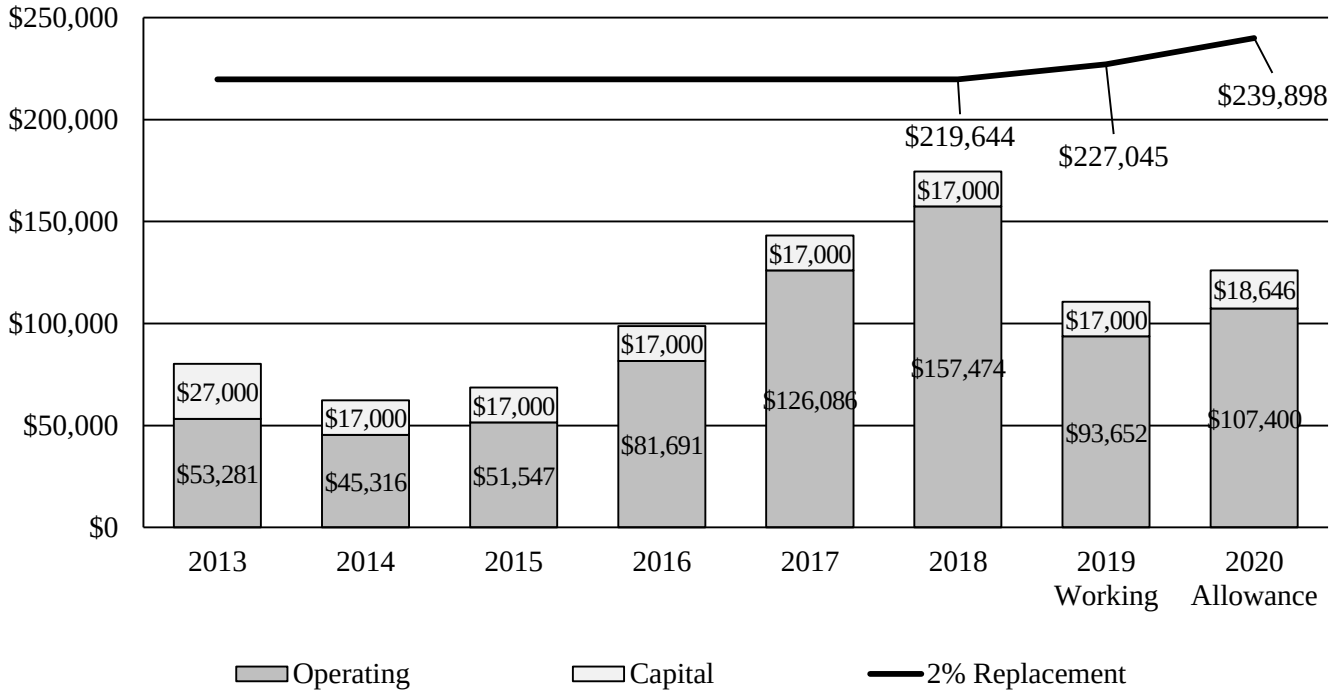
Institution	Total Backlog	% of Total
University of Maryland, Baltimore Campus	$431,726	21.8%
University of Maryland, College Park Campus	702,480	35.4%
Bowie State University	75,940	3.8%
Towson University	185,351	9.3%
University of Maryland Eastern Shore	81,324	4.1%
Frostburg State University	24,975	1.3%
Coppin State University	63,274	3.2%
University of Baltimore	99,719	5.0%
Salisbury University	80,161	4.0%
University of Maryland Baltimore County	206,574	10.4%
University of Maryland Center for Environmental Science	23,375	1.2%
University System of Maryland Regional Centers	8,603	0.4%
Total	**$1,983,499**	

Source: University System of Maryland

Spending on Facilities Renewal

As shown in **Exhibit 3**, from fiscal 2014 and 2018, total spending on facilities renewal grew 180.0%, or $112.2 million, reflecting a steady increase in operating expenditures. However, while spending reached its highest level of $174.5 million in fiscal 2018, this was $45.2 million below the 2% target. The upward trend reflects the priority that the Board of Regents (BOR) and the Chancellor place on renewal. Presidents are held accountable for meeting the BOR target of annually increasing operating expenditures until the 2% target (operating expenditures equal 2% of the replacement value of State facilities) is reached. BOR adopted a strategy for institutions to meet the target by increasing operating expenditures on renewal by 0.2%. Spending in the fiscal 2019 working budget decreases 36.6%, or $63.8 million, to $110.7 million. Overall, since fiscal 2012, $17 million in ARBs have been provided for facilities renewal projects, which increases to $18.6 million in fiscal 2020. This will be further discussed in the USMO section of this analysis.

Exhibit 3
Operating and Capital Spending on Facility Renewal
Fiscal 2013-2020
($ in Thousands)

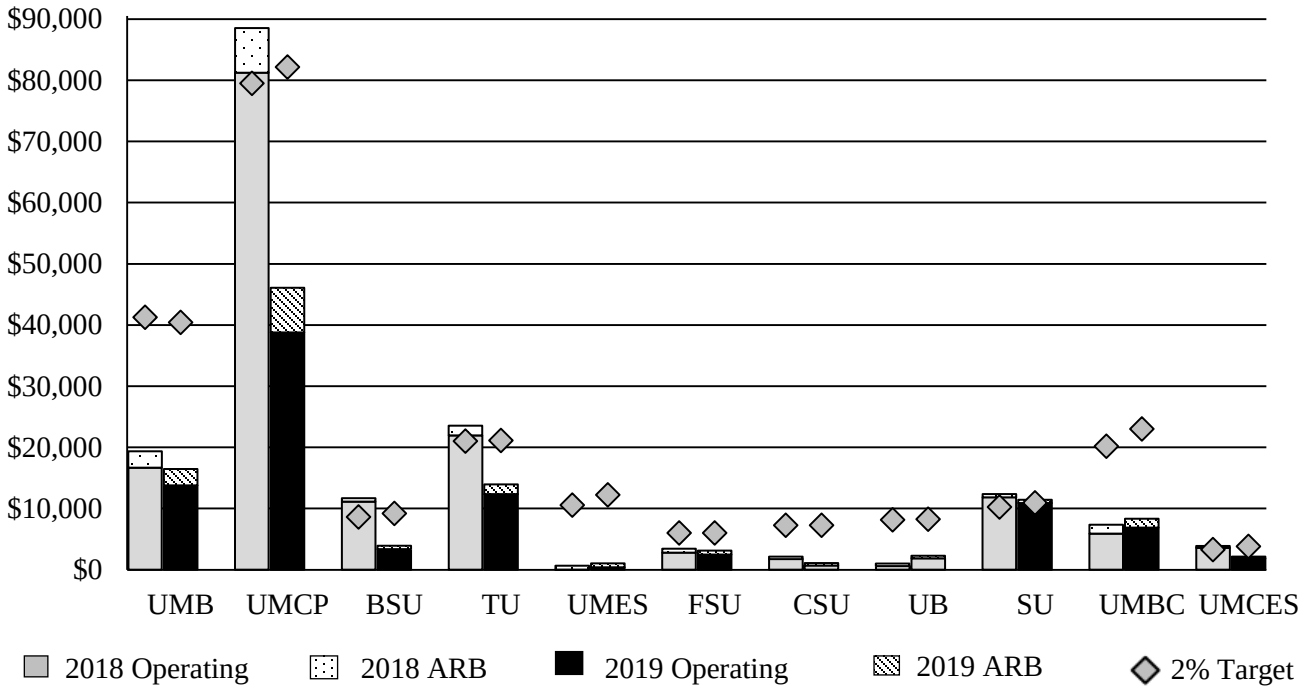


Note: Fiscal 2013 includes a one-time $10 million in general obligation bond funding to fund renewal projects at institutions.

Source: University System of Maryland

Exhibit 4 shows the allocation of the fiscal 2018 and 2019 operating expenditures and ARBs for facilities renewal and the 2% target. In order for USM to meet the 2% target, institutions would need to have spent a total of $219.6 million in fiscal 2018 and $227.0 million in fiscal 2019 (the 2% target is based on the most recently available replacement value numbers from the SGAP report). In fiscal 2018, five institutions exceeded the 2% target, and to date in fiscal 2019, only one institution – Salisbury University (SU) – is expected to exceed the target. It should be noted that in fiscal 2020, all institutions have budgeted increases in spending on facilities renewal with only SU maintaining spending over the 2% target. **The Chancellor should comment on if institutions are budgeting increased spending on facilities renewal in order to reach the 2% target and, if not, how are institutions held accountable and what measures are taken to ensure that institutions do not reduce spending on facilities renewal during periods of financial challenges.**

Exhibit 4
Operating and Capital Facility Renewal Expenditures
Fiscal 2018-2019
($ in Thousands)



ARB: Academic Revenue Bond
BSU: Bowie State University
CSU: Coppin State University
FSU: Frostburg State University
SU: Salisbury University
TU: Towson University
UB: University of Baltimore
UMB: University of Maryland, Baltimore Campus
UMBC: University of Maryland Baltimore County
UMCES: University of Maryland Center for Environmental Science
UMCP: University of Maryland, College Park Campus
UMES: University of Maryland Eastern Shore

Note: The University of Maryland University College does not have a spending target due to the unique nature of its facilities profile, which includes leased buildings and buildings that are off campus or outside of the State.

Source: University System of Maryland

2. Plant Funds

Institutions can transfer operating funds to the plant fund, which are a group of accounts similar to a savings account in which institutions can set aside funds for anticipated capital expenditures. Funds are used to finance the acquisition, construction, renovation, and maintenance of facilities. Plant funds

may only be used for facilities and capital activities and may not be easily transferred to other accounts for noncapital purposes. For State-supported facilities, the use of plant funds is governed by the capital budget process in accordance with State law and BOR policies. BOR oversees the use of self-supported plant funds.

Specifically, funds are set aside for:

- facilities renewal and deferred maintenance needs of State-support facilities;
- debt service payments and retirement of debt;
- periodic or major facilities renewal of self-supported or auxiliary facilities;
- nonbudgeted fund requirements in the *Capital Improvement Program* (CIP); and
- facilities or land acquisitions.

Through its efforts to protect its credit rating, USM has been fiscally conservative in building up its available funds, which include plant funds and fund balance. The growth in these funds has allowed USM to fund capital projects that otherwise may not have had the funding to proceed, such as the Cole Field House or the Iribe Computing Center. In addition, if an institution receives donor funding to support the construction of a facility, it may have to temporarily borrow funds, also known as a bridge loan, from its account until it receives the donor funds. As shown in **Exhibit 5**, from fiscal 2012 to 2018, plant funds grew 47.3%, or $346.5 million, of which $324.5 million was related to State-supported funds. In fiscal 2018, plant funds totaled $1.1 billion of which $691.1 million was State supported.

Exhibit 5
Ending Plant Fund Balances
Fiscal 2012-2018
($ in Thousands)

	State Supported	Non-State Supported	Total	Annual Change	
2012	$366,566	$365,530	$732,096	$110,065	17.7%
2013	473,398	300,290	773,688	41,592	5.7%
2014	454,801	312,753	767,554	-6,134	-0.8%
2015	456,894	346,686	803,580	36,026	4.7%
2016	534,805	380,863	915,668	112,088	13.9%
2017	574,955	390,788	965,743	50,075	5.5%
2018	691,065	387,557	1,078,621	112,878	11.7%

Source: University System of Maryland

Exhibit 6 shows changes in transfers to and expenditures from the plant fund for fiscal 2018. A total of $680 million was transferred into plant funds of which $547.2 million were State-supported funds. Over half of these funds, $280.4 million, are designated for future renewal, replacement, and deferred maintenance projects. Institutions spent $567.1 million of plants funds of which $253.4 million were State-supported funds used for renewal, replacement, and deferred maintenance projects.

Exhibit 6
Changes in Plant Fund
Fiscal 2018
($ in Thousands)

	State-supported	Non-State Supported	Total
Beginning Balance	**$574,955**	**$390,788**	**$965,743**
Transfers In			
Plant Fund[1]	$4,435	$12,649	
Current Projects	25,327	42,267	
Land Acquisition	0	263	
CIP Nonbudgeted Funds	10,445	0	
Renewal and Replacement	255,407	43,181	
Deferred Maintenance	24,969	13,587	
Future Projects	40,661	8,372	
Future Debt Service	179,288	469	
Internal Loans	6,633	12,027	
Total – Transfers In	***$547,164***	***$132,814***	***$679,978***
Expenditures			
Plant Fund	-$4,555[2]	$1,732	
Various Projects	12,949	53,762	
Land Acquisition	186	0	
CIP Nonbudgeted Funds	10,440	0	
Renewal and Replacement	234,187	24,983	
Deferred Maintenance	19,196	12,333	
Future Projects	14,444	11,326	
Future Debt Service	139,530	1,941	
Internal Loans[3]	4,595	29,969	
Balance Service Center	81	0	
Total – Expenditures	***$431,053***	***$136,046***	***$567,099***
Ending Balance	**$691,065**	**$387,557**	**$1,078,621**

CIP: *Capital Improvement Program*

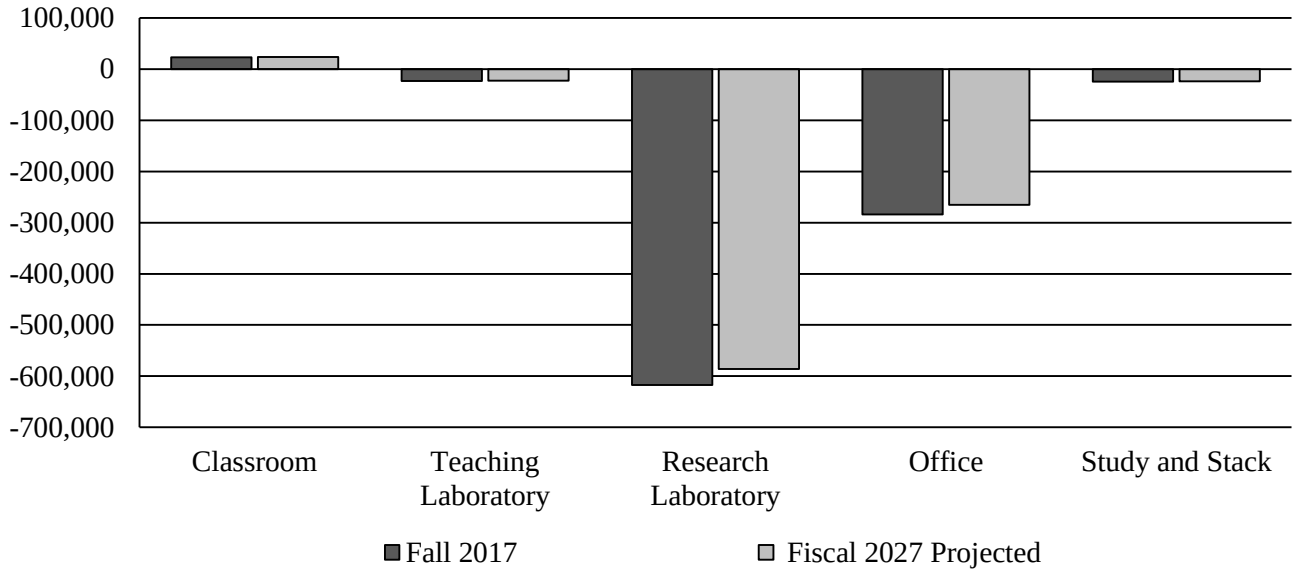
[1]Funds not designated for a specific purpose.
[2]Some institutions classified a transfer of funds into plant funds as expenditures.
[3]Includes University System of Maryland Office revolving equipment loan.

Source: University System of Maryland

University of Maryland, Baltimore Campus

As of fall 2017, the research laboratory and office space deficit at UMB totals 901,324 net assignable square feet (NASF), as shown in **Exhibit 7**. According to MHEC, it is projected that this deficit will be slightly eased by 49,757 NASF by fiscal 2027. UMB will continue to maintain a small surplus in classroom space, while the deficit in teaching laboratory space eases by 898 NASF by fiscal 2027.

Exhibit 7
Current and Project Academic Space Deficit
Fall 2017 and Projected Fiscal 2027
Net Assignable Square Feet



Source: Maryland Higher Education Commission

Central Electric Substation and Electrical Infrastructure Upgrades

This multi-year project will construct new electric substations at the north and south end of campus, replacing the existing Greene Street substation, and upgrade the existing electrical infrastructure servicing campus. The two new substations will be fed from two different Baltimore Gas and Electric sources thereby providing redundancy for the campus. The project will also provide new duct banks and cable throughout the campus. The northern substation will also include space for the UMB recycling center. The project will be phased in over several years.

Authorization Uses
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
Planning	$5.890	$0.000	$0.000	$0.000	$0.000	$0.000
Construction	12.564	13.059	12.139	11.100	12.700	7.368
Equipment	0.000	0.100	0.000	0.000	0.000	0.000
Total	**$18.454**	**$13.159**	**$12.139**	**$11.100**	**$12.700**	**$7.368**

Authorization Sources
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
GO Bond	$15.454	$13.159	$12.139	$11.100	$12.700	$7.368
Nonbudgeted	3.000	0.000	0.000	0.000	0.000	0.000
Total	**$18.454**	**$13.159**	**$12.139**	**$11.100**	**$12.700**	**$7.368**

This project will be completed in five phases. The fiscal 2020 budget provides $13.2 million to complete Phase I construction of the north substation and recycling center. It should be noted that $7.2 million of fiscal 2019 funding is carried over to fiscal 2020 as the fiscal 2019 appropriation was not sufficient to cover construction costs. Bids came in higher than expected, leading to a reevaluation on how they are going to proceed. **The President should comment on the options being considered and the impact of unexpected higher costs will have on the project**.

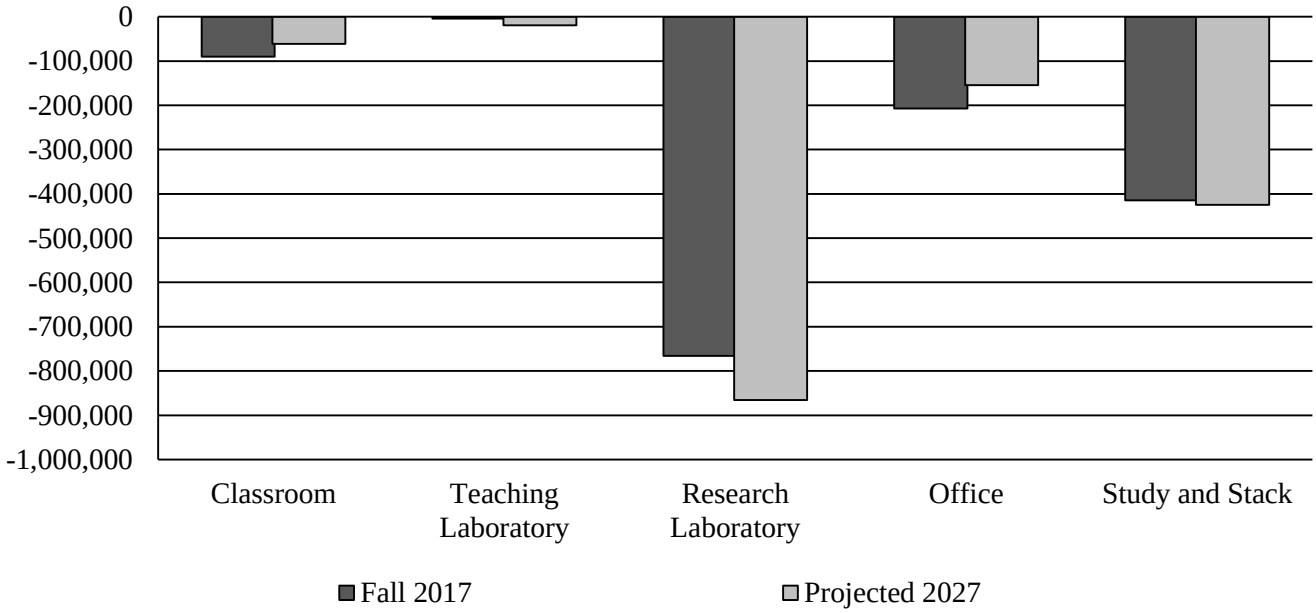
The $3.0 million of institutional nonbudgeted funds reflected as prior authorized funds in the project fund summary were originally programmed in the 2018 CIP for fiscal 2022. However, these funds were advanced by UMB and used to widen and extend a duct bank to link the Health Sciences Research Facility III to an emergency generator. The next phase of the project, construction of new duct banks and installation of new cables and electrical feeders, begins in fiscal 2021 and is scheduled to be completed in fiscal 2023. Construction of the new south campus switching station that will replace the existing Greene Street station is scheduled for fiscal 2024 and 2025.

Recommendation: Approve $13.2 million in GO bond funding to continue construction and equip the electrical substation, recycling center, and electrical infrastructure upgrades.

University of Maryland, College Park Campus

As shown in **Exhibit 8,** UMCP's classroom space deficit will lessen by 28,575 NASF by fiscal 2027. According to MHEC, the teaching laboratory deficit will increase to 19,013 NASF by fiscal 2027. While the office space deficit decreases by 52,260 NASF by fiscal 2027, the research laboratory space deficit grows by 99,309 NASF to 857,334 NASF.

Exhibit 8
Current and Project Academic Space Deficit
Fall 2017 and Projected Fiscal 2027
Net Assignable Square Feet



Source: Maryland Higher Education Commission

CIP

The 2019 CIP includes four projects at UMCP including $12.5 million for construction of the School of Public Policy building and $4.7 million to continue design of the Chemistry Building Wing 1 Replacement in the fiscal 2020. The new engineering building is added to the CIP with $10 million in nonbudgeted funds programmed for design in fiscal 2023. The 2019 CIP programs a return to funding for the Campus Building System and Infrastructure Improvements project in fiscal 2021 with $5 million equally in GO bonds and ARBs.

($ in Millions)

Projects	Prior Auth.	2020 Est.	2021 Est.	2022 Est.	2023 Est.	2024 Est.	Beyond CIP
School of Public Policy Building	$5.000	$18.194	$20.126	$1.680	$0.000	$0.000	$0.000
Chemistry Building Wing 1 Replacement	17.400	4.663	0.300	29.396	60.790	5.050	0.000
Campuswide Building System and Infrastructure Improvements	45.000	0.000	10.000	10.000	10.000	10.000	0.000
New Engineering Building	0	0	0	0	10.000	45.000	145.000
Total	**$67.400**	**$22.857**	**$30.426**	**$41.076**	**$80.790**	**$60.050**	**$145.000**

Fund Source	Prior Auth.	2020 Est.	2021 Est.	2022 Est.	2023 Est.	2024 Est.	Beyond CIP
GO Bonds	$32.700	$17.163	$7.800	$34.396	$65.790	$20.050	$135.000
Revenue Bonds	20.000	0	5.000	5.000	5.000	5.000	0.000
Nonbudgeted	14.700	5.694	17.626	1.680	10.000	35.000	10.000
Total	**$67.400**	**$22.857**	**$30.426**	**$41.076**	**$80.790**	**$60.050**	**$145.000**

School of Public Policy Building

This project proposes to construct a new facility for SPP to consolidate operations into a single location. When completed, space occupied by SPP in the Van Munching Hall will be vacated, allowing the School of Business to expand. The facility enables SPP to meet its Strategic Plan goals for growth, including expanding program offerings and the Do Good Institute and becoming a nationwide top-10 public policy program.

Authorization Uses
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
Planning	$3.400	$0.762	$0.000	$0.000	$0.000	$0.000
Construction	1.600	17.432	19.206	0	0.000	0.000
Equipment	0.000	0.000	0.920	1.680	0.000	0.000
Total	**$5.000**	**$18.194**	**$20.126**	**$1.680**	**$0.000**	**$0.000**

Authorization Sources
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
GO Bond	$5.000	$12.500	$2.500	$0.000	$0.000	$0.000
Nonbudgeted	0.000	5.694	17.626	1.680	0.000	0.000
Total	**$5.000**	**$18.194**	**$20.126**	**$1.680**	**$0.000**	**$0.000**

The estimated total cost for project is $45.0 million, which remains unchanged from the anticipated cost in the 2018 CIP. The project leverages $15 million in institutional funds and a $10 million private donation. The fiscal 2020 budget provides $12.5 million GO bond funding, which is consistent with the amount programmed in the 2018 CIP. A fiscal 2021 preauthorization of $2.5 million to complete construction is included in Section 12 of the Maryland Consolidated Capital Bond Loan (MCCBL) of 2019. Nonbudgeted funds were reduced from $16.7 million to $5.7 million in fiscal 2020 to reflect the cash flow needs of the project with the majority of funds ($17.6 million) programmed in fiscal 2021.

The anticipated start date for construction was delayed from January 2019 to June 2019 due to the schematic design taking more time than anticipated in order to consider multiple building footprints, traffic circulation, and parking options. UMCP states that this will not result in an increase in the cost of the project. The project will address the following issues.

- ***Lack of Space to Expand and Grow:*** SPP plans to increase undergraduate and graduate course offerings. In fall 2015, there were 232 full-time and 68 part-time graduate majors, which is expected to increase to 317 full-time and 115 part-time graduate students by 2025. However, full-time graduate enrollment declined 19.4% between fall 2015 and 2018 to 187 students and part-time graduate enrollment decreased 4.4% to 65 students. Conversely, enrollment in the new undergraduate program that was launched in fall 2017 has more than doubled in fall 2018, increasing from 78 students to 162 students. SPP expects to increase enrollment to 540 full-time and 54 part-time undergraduate students by 2025.

In terms of personnel, a new SPP will facilitate an increase in the number of full-time faculty from 61 in 2015 to 109 by 2025. Part-time faculty and staff is projected to grow from 20 to 30, and graduate assistants will increase from 57 to 65 between 2015 and 2025.

- ***Located in Several Buildings:*** SPP occupies 16,639 NASF in Van Munching Hall, 5,564 NASF in Preinkert Hall, and 2,378 NASF in Taliaferro Hall. Being housed in separate buildings impedes opportunities for collaboration and interaction among faculty, staff, and students.

- ***Campuswide Space Shortages:*** SPP shares space with the Robert H. Smith School of Business in Van Munching Hall, which was originally constructed in 1992 for both schools. Additions were constructed in 2002, 2008, and 2011 to accommodate growth in the School of Business. From fall 2011 to 2018, enrollment in the School of Business has grown 14.1%. Due to limited resources, including space, and in order to maintain quality, the business program is a limited enrollment program in which undergraduate enrollment is capped at 2,000 to 2,200. Once the space occupied by SPP is vacated, it will allow the School of Business to expand and increase enrollment above the current cap.

The new facility will increase the space assigned to SPP by 29% from 24,581 NASF to 31,690 NASF, allowing consolidation of its operations in a single location and providing space to grow its programs. As shown in **Exhibit 9**, 61.9% of the NASF will be office space, while classroom space comprises 16.5% of the total space that includes five classrooms ranging in size from 25 to 150 seats. While classroom space is below the State guidelines of 16,822 NASF, SPP will use classrooms in other buildings and, when possible, the conference rooms in the new facility will be used for seminar classes.

Exhibit 9
Space by Classification Provided in the School of Public Policy Building

Space	Net Assignable Square Feet
Office	23,740
Classroom	6,310
Lounge	2,000
Conference	1,850
Open Laboratory	1,800
Open Stack Study	1,200
Other	1,455
Total	**38,355**

Source: Department of Budget and Management

Recommendation: Approve $12.5 million in GO bond funding to complete design and continue construction of the SPP Building and approve a fiscal 2021 preauthorization of $2.5 million to complete construction of the building.

Chemistry Building Wing 1 Replacement

This project proposes to construct a replacement for Wing 1 of the Chemistry Building.

Authorization Uses
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
Planning	$3.770	$4.663	$0	$1.800	$0.000	$0.000
Construction	13.630	0.000	0.300	27.596	55.190	3.450
Equipment	0.000	0.000	0.000	0.000	5.600	1.600
Total	**$17.400**	**$4.663**	**$0.300**	**$29.396**	**$60.790**	**$5.050**

Authorization Sources
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
GO Bond	$2.700	$4.663	$0.300	$29.396	$60.790	$5.050
Nonbudgeted	14.700	0.000	0.000	0.000	0.000	0.000
Total	**$17.400**	**$4.663**	**$0.300**	**$29.396**	**$60.790**	**$5.050**

The General Assembly accelerated the project by adding $2.7 million in fiscal 2019 to design the facility and expressed the intent for construction funding to be provided in fiscal 2021 and 2022. The fiscal 2020 budget provides $4.7 million to continue design of the project. This is $2.0 million more than programmed in the 2018 CIP, reflecting two years for design rather than three years. The 2019 CIP programs $0.3 million for abatement in fiscal 2021, deferring construction to fiscal 2022 and 2023 programming $27.6 million and $55.2 million, respectively, in GO bond funding.

The project includes $14.7 million of institutional funds used to renovate 14,308 NASF/27,000 gross square feet (GSF) of the Chemistry Building, including performing minor upgrades to selected spaces and upgrading the heating, ventilation, and air conditioning (HVAC) in the second and third floors of Wing 2 of the building. Occupants currently housed in Wing 1 will be relocated to the renovated portion of the facility. In addition to using $14.7 million of institutional funds, UMCP further decreased the cost of the project by reducing the scope by relocating the nuclear magnetic resonance to renovated space in Wing 2 rather than building a new facility and eliminating

space to be renovated to accommodate the relocation of occupants and instead moving them to underutilized space in the Chemistry Building. Overall, this resulted in the estimated total cost of the project decreasing from $138.4 million to $102.9 million.

Wing 1 was constructed in 1968 and has not had significant renovations since the original construction and, as such, has numerous deficiencies, including:

- the lack of central air conditioning and a poorly functioning heating system, resulting in extreme temperature conditions that are not conducive to teaching and research;
- outmoded laboratory configurations;
- antiquated casework;
- inadequate fume hood exhaust systems;
- obsolete and deficient electrical systems; and
- insufficient environmental controls.

Recommendation: Approve $4.7 million in GO bond funding to complete design of the Chemistry Building Wing 1 Replacement.

Summary of Other Projects in the CIP

Campuswide Building System and Infrastructure Improvements

Between fiscal 2013 and 2016, $10 million in funding was provided annually, equally from GO bonds and ARBs, to fund campuswide building system and infrastructure improvements to address the backlog of deferred maintenance. This stand-alone facility renewal initiative is intended to address critical deferred maintenance projects that if left unaddressed pose serious health, life, and safety issues, and could lead to a shutdown of entire buildings. The multi-year project was first initiated in fiscal 2013 and was anticipated to be an annually funded initiative. To date, the State has provided $25 million of GO bonds with another $20 million coming from USM ARB debt. The project was put on hold so that other UMCP projects could be moved up. The 2019 CIP as well as the 2017 and 2018 CIPs programmed a return to funding the initiative in fiscal 2021 with $5 million equally in GO bonds and ARBs. Future funding of the project will be contingent on the need for additional project components and the availability of State funds.

New Engineering Building

In October 2017, UMCP announced its largest donation of $219.5 million from the A. James & Alice B. Clark Foundation. The gift included provisions to provide 30%, or $55 million (the lesser of the two), to support the construction of a new building for the A. James Clark School of Engineering, which is to be leveraged with State and institutional funds. Ballinger and Associates completed an Academic Facilities Report in December that outlined a 20-year academic and architectural strategic vision for the School of Engineering and provided an analysis of the school's existing facilities and academic metrics, comparing them to peer institutions.

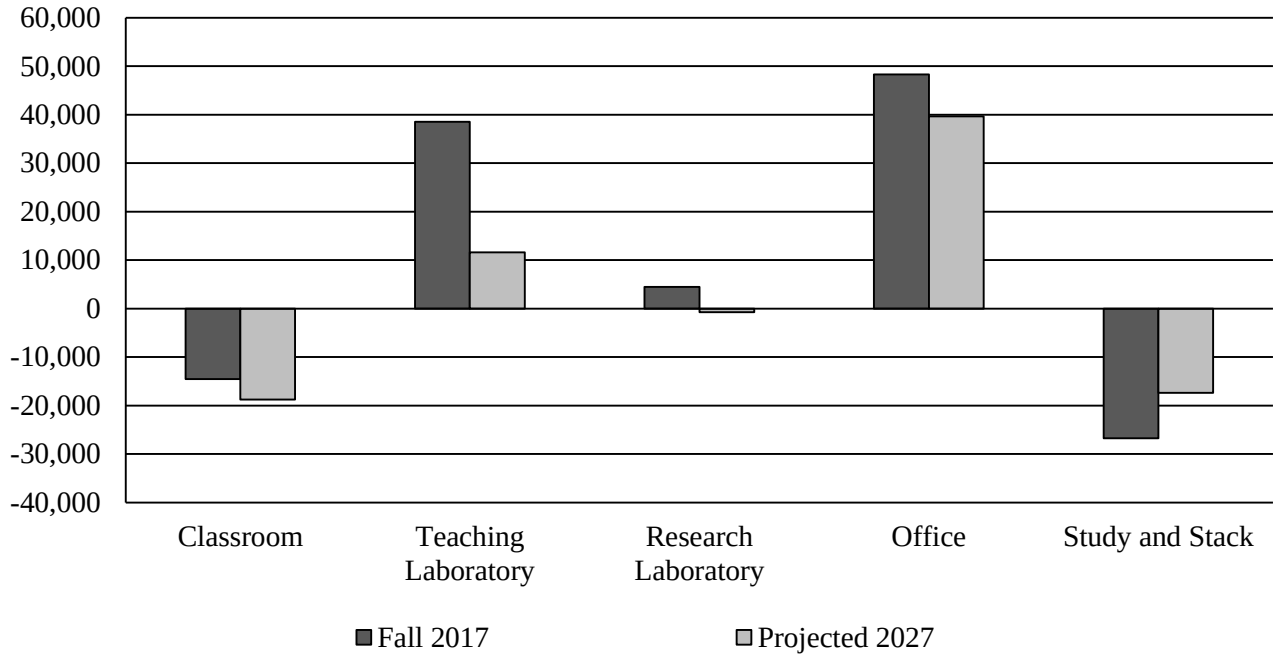
The report projected that undergraduate and graduate enrollment will increase by 16% and 26%, respectively, in the next 20 years, and faculty and staff will grow 13% and 20%, respectively. To be competitive with peer engineering programs, the study recommended that the departments of chemical and biomolecular engineering, civil and environmental engineering, electrical and computer engineering, materials science engineering, and mechanical engineering need to increase their research NASF per principle investigator and graduate students by, on average, 550 NASF and 85 NASF, respectively. Currently, the School of Engineering occupies 616,000 NASF. In order to accommodate the projected growth, the school will need an additional 223,000 NASF over the next 20 years.

UMCP would leverage up to the $55 million gift to construct a new 130,000+ NASF/200,000+ GSF Interdisciplinary Engineering Building. The new facility would house the departments of chemical and biomolecular engineering, civil and environmental engineering, materials science engineering, and mechanical engineering. The Clark School is scheduled to begin the Part 1 and 2 programming phase for this project in April 2019.

Bowie State University

By fiscal 2027, it is projected that the surplus in teaching laboratory, office, and research laboratory space will decrease by 26,958 NASF, 8,633 NASF, and 5,165 NASF, respectively, as shown in **Exhibit 10** with research laboratory space going from a surplus in 2017 to a deficit in 2027. The deficit in classroom space will also increase, further decreasing by 4,208 NASF. The study/stack space is the only category that will improve by 2027 with an estimated increase of 9,365 NASF.

Exhibit 10
Current and Project Academic Space Deficit
Fall 2017 and Projected Fiscal 2027
Net Assignable Square Feet



Source: Maryland Higher Education Commission

CIP

Bowie State University receives funding to begin planning of the new Communication Arts and Humanities Building. Completion of this project will involve the demolition of the current Martin Luther King, Jr. Building and the construction of the new Communication Arts and Humanities Building in its location. Funding for this construction is expected to run through fiscal 2025.

($ in Millions)

Projects	Prior Auth.	2020 Est.	2021 Est.	2022 Est.	2023 Est.	2024 Est.	Beyond CIP
Communication Arts and Humanities Building	$0.000	$5.100	$6.100	$0.000	$42.651	$77.984	$8.165
Total	**$0.000**	**$5.100**	**$6.100**	**$0.000**	**$42.651**	**$77.984**	**$8.165**

Fund Source	Prior Auth.	2020 Est.	2021 Est.	2022 Est.	2023 Est.	2024 Est.	Beyond CIP
GO Bonds	$0.000	$5.100	$6.100	$0.000	$42.651	$77.984	$8.165
Total	**$0.000**	**$5.100**	**$6.100**	**$0.000**	**$42.651**	**$77.984**	**$8.165**

Communication Arts and Humanities Building

This project proposes to construct a new 102,840 NASF Communication Arts and Humanities Building to accommodate the departments of communications, English, and modern languages, history and government, and the Reserve Officer Training Corps (ROTC). The project includes the demolition of the Martin Luther King, Jr. Building. The new facility will replace functionally inadequate and poorly configured space in the existing Martin Luther King, Jr. Building. The new building will include multimedia classrooms, specialized laboratories, and media production facilities. The fiscal 2020 budget includes funds to begin design of the building. The estimated cost of this project totals $140,000,000.

Authorization Uses
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
Acquisition	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Planning	0.000	5.100	6.100	0.000	0.000	0.000
Construction	0.000	0.000	0.000	0.000	42.651	77.984
Equipment	0.000	0.000	0.000	0.000	0.000	0.000
Total	**$0.000**	**$5.100**	**$6.100**	**$0.000**	**$42.651**	**$77.984**

Authorization Sources
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
GO Bond	$0.000	$5.100	$6.100	$0.000	$42.651	$77.984
Total	**$0.000**	**$5.100**	**$6.100**	**$0.000**	**$42.651**	**$77.984**

The fiscal 2020 budget provides $5.1 million in GO bond funding for building planning. Design funding for this project has been accelerated by a year to address an 18% increase in the number of full-time equivalent students at the university between fiscal 2014 and 2019. Although the design phase has been moved up one year as requested by the General Assembly through a preauthorization included in the MCCBL of 2018, the construction phase is still programmed to commence in fiscal 2023 as was programmed in the 2018 CIP.

The existing Martin Luther King, Jr. Building is 46 years old, and its mechanical and electrical systems have exceeded their useful lives and are failing. The recommended service life for mechanical systems is 20 years. Due to the inadequate mechanical system, building users frequently complain of lack of cooling in the summer and heating in the winter.

Several instructional spaces are not ADA accessible. This is because several classrooms and class laboratories have recessed entrances. In addition, the existing elevator and electrical and fire protection systems do not meet current codes. Faculty offices are too small and not ADA accessible. Offices on the second and third floors are undersized with an average size of 98 NASF, and many of them are not ADA compliant. The State's standard for office space is 166 NASF per person.

The Martin Luther King, Jr. Building has two existing lecture halls and 22 general purpose classrooms. The average station size for the two lecture halls is 12.6 NASF per student, while that for the classrooms is 13.6 NASF per student. Based on current space standards, the station size in lecture halls should be 22 NASF per student, while general learning classrooms should be 25 NASF per student. Additionally, the proposed building incorporates informal learning environments to provide space for small group interaction before and after classes. Such space is increasingly needed, especially for collaborative team-based projects.

The project scope has been modified to include a total of 4,485 NASF for the university's ROTC program in the project scope.

Exhibit 11 provides the net square footage of the new Communication Arts and Humanities Building by room.

Exhibit 11
Space by Classification Provided in the Communication Arts and Humanities Building

Area	Net Square Footage
Classroom	20,200
Class Laboratory/Storage	11,190
Open Laboratory	1,320
Office	23,080
Workroom/Storage	2,610
Conference Room	5,540
Study	5,020
Copy/Print Station	120
Media Production	2,550
Media Resource	5,670
Media Archives	1,000
Assembly	17,500
Assembly Support	1,700
Exhibition	160
Lounge	900
Lockers/Vending	680
Meeting Room	400
Computer	250
Physical Plant Workroom	300
Storage	1,500
Holding/Receiving	250
Storage	900
Total	**102,840**

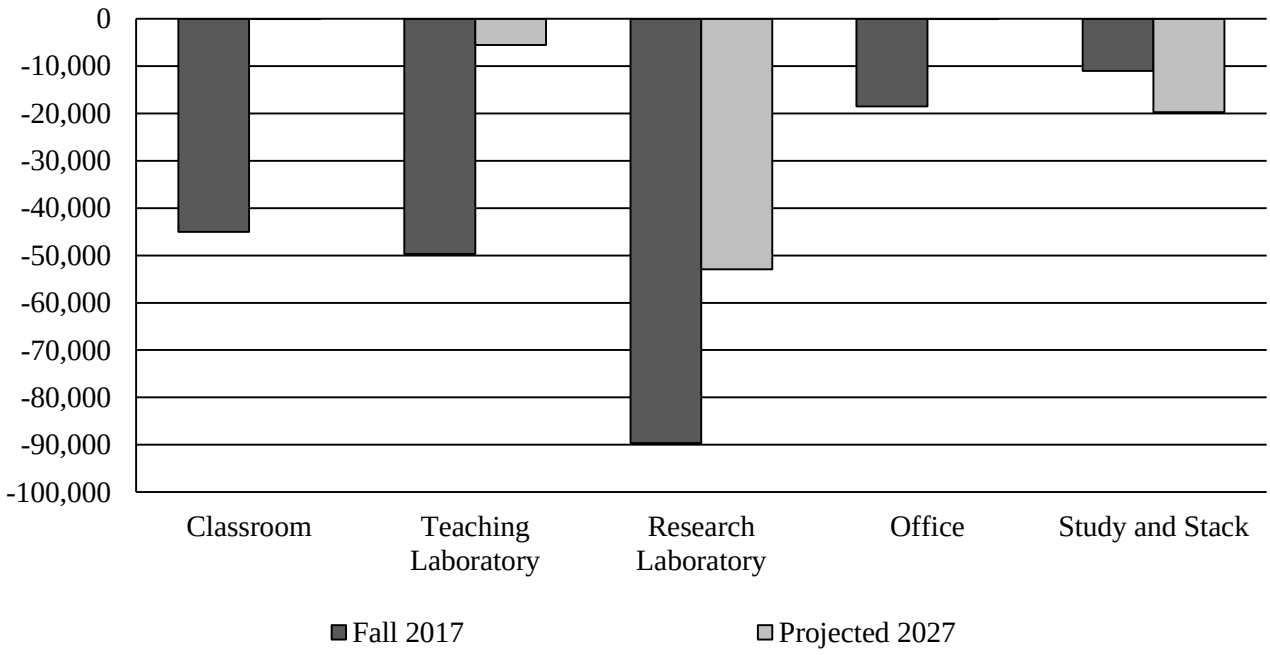
Source: Department of Budget and Management, 2019 *Capital Improvement Program*

Recommendation: Approve $5.1 million in GO bond funding to begin planning for the new Communication Arts and Humanities Building.

Towson University

Overall, the space deficits at TU are project to ease by fiscal 2027, particularly teaching-related spaces. In fall 2017, the classroom and teaching laboratory space deficit was 45,045 NASF and 49,668 NASF, respectively, as shown in **Exhibit 12**. According to MHEC, the classroom deficit will basically be eliminated by fiscal 2027, decreasing to 20 NASF, and the teaching laboratory deficit will significantly decrease to 5,508 NASF. NASF. The office space deficit is projected to also be basically eliminated, and the research space deficit will improve to 52,949 NASF.

Exhibit 12
Current and Project Academic Space Deficit
Fall 2017 and Projected 2027
Net Assignable Square Feet



Source: Maryland Higher Education Commission

CIP

The New Science Facility receives the last funding for construction, and funding is provided to begin design of the New College of Health Professions Building. The renovation of Smith Hall is added with design funding programmed in fiscal 2023.

($ in Millions)

Projects	Prior Auth.	2020 Est.	2021 Est.	2022 Est.	2023 Est.	2024 Est.	Beyond CIP
New Science Facility	$108.594	$75.225	$0.000	$0.000	$0.000	$0.000	$0.000
New College of Health Professions Building	0.000	5.266	6.437	50.339	72.523	31.388	0.000
Smith Hall Renovation	0.000	0.000	0.000	0.000	5.000	4.951	107.819
Total	**$108.594**	**$80.491**	**$6.437**	**$50.339**	**$77.523**	**$36.339**	**$107.819**

Fund Source	Prior Auth.	2020 Est.	2021 Est.	2022 Est.	2023 Est.	2024 Est.	Beyond CIP
GO Bonds	$96.594	$71.491	$6.437	$50.339	$77.523	$36.339	$107.819
Revenue Bonds	2.000	2.000	0.000	0.000	0.000	0.000	0.000
Nonbudgeted Funds	10.000	7.000	0.000	0.000	0.000	0.000	0.000
Total	**$108.594**	**$80.491**	**$6.437**	**$50.339**	**$77.523**	**$36.339**	**$107.819**

New Science Facility

This project proposes to construct a new 182,242 NASF/316,000 GSF science facility integrating instructional and research space that will accommodate current and projected enrollment growth in the College of Science and Mathematics. The project also includes 9,000 NASF/16,000 GSF that will be constructed as shell space to be completed at a later date with non-State funds.

Authorization Uses
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
Planning	$14.519	$0.000	$0.000	$0.000	$0.000	$0.000
Construction	94.075	66.725	0.000	0.000	0.000	0.000
Equipment	0.000	8.500	0.000	0.000	0.000	0.000
Total	**$108.594**	**$75.225**	**$0.000**	**$0.000**	**$0.000**	**$0.000**

Authorization Sources
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
GO Bond	$96.594	$66.225	$0.000	$0.000	$0.000	$0.000
Nonbudgeted	10.000	7.000	0.000	0.000	0.000	0.000
Revenue Bonds	2.000	2.000	0.000	0.000	0.000	0.000
Total	**$108.594**	**$75.225**	**$0.000**	**$0.000**	**$0.000**	**$0.000**

The estimated total cost for project is $183.8 million, which remains unchanged from the anticipated cost in the 2018 CIP. The fiscal 2020 budget provides $66.2 million in GO bond funding, which is consistent with the amount programmed in the 2018 CIP. In addition, $2.0 million in ARB funding and $7.0 million in nonbudgeted funds, which is an equipment load from USMO, are included, resulting in funding for fiscal 2020 totaling $75.2 million.

The project is funded with $10.0 million from TU of which $5.0 million will be from private donations and $5.0 million from institutional funds. To date, TU has secured gifts and commitments totaling $1.6 million, and there are $0.6 million in outstanding solicitations. TU is continuing to identify potential donors who could make gifts from $25,000 to $0.1 million. If TU is unable to raise the $5 million, it will need to use other institutional funds to cover the shortfall. In addition, $4.0 million in ARBs was used in lieu of GO bonds to fund the project.

The total cost of the project does not include 9,000 NASF/16,000 GSF that will be constructed as shell space. Fitting out of the space is estimated to cost $4.0 million, bringing the total cost of the project to $187.8 million.

The project is scheduled to be completed in July 2020 and be occupied for the fall 2020 semester. The project was originally planned as an expansion and renovation of Smith Hall. However, a detailed engineering review and assessment of Smith Hall revealed significant deficiencies in the building envelope. The review also determined that the existing structural system could not accommodate the additional weight of the rooftop mechanical equipment needed for a modern science facility. As shown in the **Exhibit 13**, classroom and class laboratory space comprise 52.1% of the NASF, and research laboratory comprises 21.0% of the total space.

Exhibit 13
Space by Classification Provided in the New Science Facility

Space	Net Assignable Square Feet
Class Laboratory	72,635
Classroom	22,175
Research Laboratory	38,321
Office	26,440
Study	9,558
Greenhouse	3,796
Food Facilities and Lounge	3,200
Animal Quarters	2,921
Other	3,196
Total	**182,242**

Source: Department of Budget and Management

Recommendation: Approve $66.2 million in GO bond funding to complete construction and equip the new science facility.

New College of Health Professions Building

This project proposes to construct a new 131,661 NASF/228,993 GSF facility to accommodate the departments of health science, nursing, occupational therapy, communication sciences and disorders, collaborative programs, and support space for the kinesiology.

Authorization Uses
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
Planning	$0.000	$5.266	$6.437	$3.606	$0.000	$0.000
Construction	0.000	0.000	0.000	46.733	72.523	23.388
Equipment	0.000	0.000	0.000	0.000	0.000	8.000
Total	**$0.000**	**$5.266**	**$6.437**	**$50.339**	**$72.523**	**$31.388**

Authorization Sources
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
GO Bond	$0.000	$5.266	$6.437	$50.339	$72.523	$31.388
Total	**$0.000**	**$5.266**	**$6.437**	**$50.339**	**$72.523**	**$31.388**

The fiscal 2020 budget provides $5.3 million in GO bond funding to begin design, which is consistent with the amount programmed in the 2018 CIP. In fiscal 2022, $50.3 million is programmed for design and construction, which is $20.0 million more than programmed in the 2018 CIP. This is due to an acceleration in the construction schedule with the anticipated start date moving from December 2021 to July 2021. Overall, the total estimated cost for the facility increases $5.3 million in the 2019 CIP to $165.9 million, compared to the 2018 CIP estimate, but at this early stage, the estimates are still very preliminary and have not been informed by any design efforts.

The Department of Health Professions, which is comprised of five departments – nursing, speech-language pathology and audiology, health sciences, occupational therapy, and occupational science – and part of the Kinesiology Department are geographically dispersed throughout five buildings on campus and one off-campus leased facility. This limits shared resources for student learning, academic and outreach planning, and interdisciplinary collaboration. This project will address the following issues.

- ***Lack of Space to Expand and Grow:*** Existing classrooms are utilized to capacity and cannot accommodate an increase in enrollment. The quality of existing classroom laboratories and simulation laboratories cannot support current teaching pedagogies. The lack of simulation laboratory space poses challenges given the shortage of clinical student training facilities at hospitals and changes in the curriculum requiring additional hands-on, skill-focused, team-oriented training experiences. Due to these space constraints, programs such as nursing, occupational therapy, and speech-language pathology and audiology have limited enrollment through enrollment caps or by limiting the number of course offerings.

- ***Quality of Space:*** A large portion of the college is located in Linthicum Hall that was built in 1968 and due to its block wall construction, classrooms and offices cannot be easily reconfigured. Other inadequacies of space currently occupied by the college include:

    - inappropriately sized and configured classrooms and laboratories that lack adequate technology;

    - lack of research space to support faculty and student learning;

    - lack of and undersized office and support space;

- lack of appropriate space for simulation laboratories to accommodate state-of-the-art equipment and control rooms; and

- lack of student study space for independent and group work.

- ***Located in Several Buildings:*** The College of Health Professions is currently housed in five buildings throughout campus and in one leased off-campus space. Being housed in separate buildings impedes opportunities for collaboration and interaction among faculty, staff, and students.

As shown in **Exhibit 14**, classroom and class laboratory space will comprise 45.8% of the total NASF, and office space accounts for 27.7% of the total space.

Exhibit14
Space by Classification Provided in the New College of Health Professions

Space	Net Assignable Square Feet
Classroom	38,750
Office	36,517
Class Laboratories	21,550
Demonstration	10,960
Research Laboratories	5,970
Assembly	4,600
Study and Stack	4,130
Open Laboratory	3,300
Lounge, Food, and Vending	1,340
Other	4,544
Total	**131,661**

Source: Department of Budget and Management

Recommendation: Approve $5.3 million in GO bond funding to begin design of the New College of Health Professions Building.

Summary of Other Projects in the CIP

Smith Hall Renovation

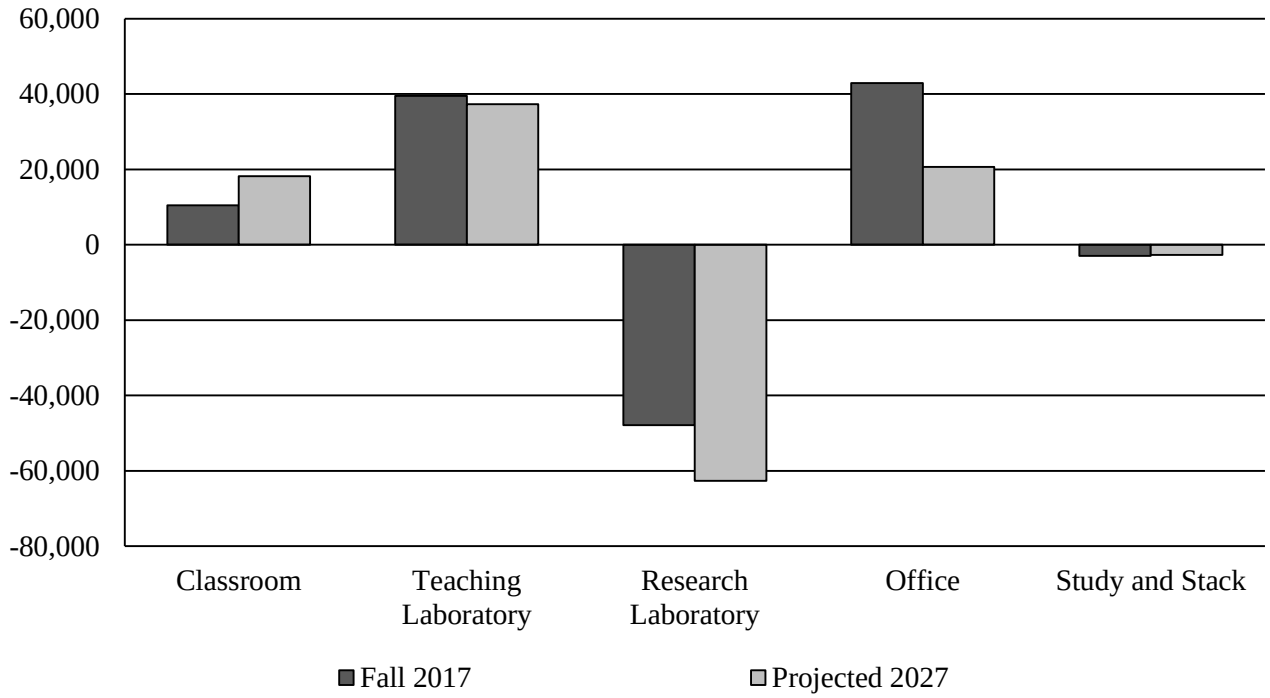
The Smith Hall Renovation project is added in the 2019 CIP with $5.0 million programmed in fiscal 2023 to begin design. Once the current occupants of Smith Hall relocate to the New Science

Facility, the space will be renovated for the College of Fine Arts, the departments of mass communications and communication studies and electronic media and film, and general purpose classroom space. The renovation will adaptively reuse an existing building located in the middle of campus and would be largely unusable without the renovation due to much of the space being science laboratories that are not usable for other purposes. Once the current science occupants of Smith Hall move to the New Science Facility, 60% of the building will be unusable. The renovation will replace inadequate building systems such as HVAC, electrical, plumbing, and fire suppression, and provide modern classrooms, study, media production, and other needed space. The estimated cost of the renovation is $117.8 million for Phase I of the project. **The President should comment on factors contributing to the high cost of the renovation and if an analysis was conducted to determine if renovation was more cost effective than constructing a new facility.**

University of Maryland Eastern Shore

By fiscal 2027, it is projected that the surplus in classroom space will increase to 18,209 NASF, as shown in **Exhibit 15**. While teaching laboratory space will slightly decrease by fiscal 2027, the University of Maryland Eastern Shore (UMES) with still have a surplus of 37,318 NASF. The deficit in research laboratory space is projected to worsen by 14,760 NASF, totaling 62,674 NASF by fiscal 2027.

Exhibit 15
Current and Project Academic Space Deficit
Fall 2017 and Projected 2027
Net Assignable Square Feet
(in Thousands)



Source: Maryland Higher Education Commission

CIP

The fiscal 2020 budget provides GO bond and ARB funding to complete design and start construction on the School of Pharmacy and Health Professions building and $1.0 million in ARBs to start design of the Campus Flood Mitigation Project.

($ in Millions)

Projects	Prior Auth.	2020 Est.	2021 Est.	2022 Est.	2023 Est.	2024 Est.	Beyond CIP
School of Pharmacy and Health Professions	$6.548	$10.015	$48.735	$24.600	$0.000	$0.000	$0.000
Campus Flood Mitigation Project	0.000	1.008	9.426	0.000	0.000	0.000	0.000
Total	**$6.548**	**$11.023**	**$58.161**	**$24.600**	**$0.000**	**$0.000**	**$0.000**

Fund Source	Prior Auth.	2020 Est.	2021 Est.	2022 Est.	2023 Est.	2024 Est.	Beyond CIP
GO Bonds	$6.548	$5.015	$48.735	$24.600	$0.000	$0.000	$0.000
Revenue Bonds	0.000	6.008	9.426	0.000	0.000	0.000	0.000
Total	**$6.548**	**$11.023**	**$58.161**	**$24.600**	**$0.000**	**$0.000**	**$0.000**

School of Pharmacy and Health Professions

This project proposes to construct a new 70,956 NASF/120,000 GSF building for the School of Pharmacy and Health Professions to house the School of Pharmacy's Doctor of Pharmacy and Doctor of Pharmaceutical Sciences program, providing modern instructional and research space needs to support current and future growth of the school.

Authorization Uses
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
Planning	$6.548	$2.160	$0.000	$0.000	$0.000	$.0000
Construction	0.000	7.855	45.735	23.600	0.000	0.000
Equipment	0.000	0.000	3.000	1.000	0.000	0.000
Total	**$6.548**	**$10,015**	**$48.735**	**$24.600**	**$0.000**	**$0.000**

Authorization Sources
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
GO Bond	$6.548	$5.015	$48.735	$24.600	$0.000	$0.000
Revenue Bonds	0.000	5.000	0.000	0.000	0.000	0.000
Total	**$6.548**	**$10.015**	**$48.735**	**$24.600**	**$0.000**	**$0.000**

Comments

The total estimated cost for the facility increases $2.0 million in the 2019 CIP from $87.9 million to $89.9 million. At the schematic design phase, the estimated cost of the project was $10.0 million over budget due to a variety of factors including:

- the negotiated design fee was $0.4 million higher than planned;
- the need for a special foundation due to the facility being located in a flood prone area; and
- increases in the construction budget included accounting for built-in equipment, such as audiovisual systems and laboratory casework, and $1.9 million in alternatives. However, the increase in the construction budget is offset by a $2.5 million reduction in the capital equipment budget.

The fiscal 2020 budget provides $5.0 million in GO bonds and $5.0 in ARB funding, which is consistent with the amount programmed in the 2018 CIP. Preauthorizations of $45.7 million and $23.6 million for fiscal 2021 and 2022, respectively, to continue construction are included in Sections 12 and 13 of the MCCBL of 2019.

In June 2013, the pharmacy program was fully accredited. However, the Accreditation Council on Pharmacy Education (APCE) noted that the current facilities were not ideal for the program and stated that UMES needed to make progress in addressing the short- and long-term facilities needs of the program. Progress included a decision on where to locate a new pharmacy building and target dates for beginning and completing construction.

In April 2015, APCE conducted a site visit and found the pharmacy facilities unsatisfactory in four categories and needs improvement in one category. APCE noted that the school occupies space in six different buildings and two temporary trailers with the first- and second-year students based in different buildings and faculty and administrative offices in other buildings. While the program continues to be in compliance with accreditation standards, the lack of adequate facilities could put it in jeopardy. The project will address the following issues.

- ***Existing Classrooms Are Too Small:*** Student stations at an existing lecture hall is 12.7 NASF below the State space guidelines of 20.0 NASF per station. Additionally, larger classrooms allow for more flexible seating arrangements that foster better classroom interactions.

- ***Inadequate Breakout Space:*** Health profession pedagogy heavily relies on small breakout sessions during which students engage in problem-solving activities and case studies, which is followed by large group discussions. Existing space was not designed as breakout space and is located in different buildings from the lecture halls. Furthermore, some breakout sessions are held in temporary buildings that lack HVAC.

- ***Lack of Specialized Class Laboratories:*** There are no pharmacy simulation laboratories or clinical examination suites.

- ***Insufficient Research Space:*** There are two research laboratories totaling 2,082 NSAF for 10 faculty members. The smaller laboratory (882 NASF) is shared by 4 faculty members. There is only one chemical fume hood in the laboratory, which is not sufficient for the number of researchers using the laboratory. The larger laboratory (1,200 NASF) has only one biosafety hood, so researchers have to take turns using the laboratory. In addition, in fall 2015, a new research-oriented degree program in pharmaceutical sciences was launched. While space for the program was carved out of existing space, the program needs its own dedicated laboratory. Overall, approximately 8,200 NASF of research space is needed.

- ***Lack of Animal Research Space:*** ACPE's 2013 evaluation noted the need for animal space to house rodents and other laboratory animals. The care of research animals must meet the guidelines established by the Institutional Animal Care and Use Committee and the Association for Assessment and Accreditation of Laboratory Animal Care. In order to qualify for animal-related research grants, an Animal Biosafety Level 2 facility is needed.

Office space comprises 21.0% of the total NASF, as shown in **Exhibit 16**. Classroom and class laboratory space account for 35.8% of the total and 13.5% is related to research.

Exhibit 16

Space by Classification Provided in the School of Pharmacy and Health Professions Building

Space	Net Assignable Square Feet
Office	14,897
Class Laboratories	14,499
Classroom	10,933
Research Laboratories	9,577
Lounge and Meeting	7,198
Animal Facilities	4,383
Library and Library Support	4,296
Demonstration	3,277
Other	1,896
Total	**70,956**

Source: Department of Budget and Management

Recommendation: Approve $5.0 million in GO bond funding to complete design and begin construction of the School of Pharmacy and Health Professions building. Approve preauthorizations of $45.7 million and $23.6 million for fiscal 2021 and 2022, respectively.

Campus Flood Mitigation Project

This project proposes to construct site improvement to mitigate flooding on campus.

Authorization Uses
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
Planning	$0.000	$1.008	$0.000	$0.000	$0.000	$0.000
Construction	0.000	0.000	9.426	0.000	0.000	0.000
Total	**$0.000**	**$1.008**	**$9.426**	**$0.000**	**$0.000**	**$0.000**

Authorization Sources
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
Revenue Bonds	$0.000	$1.008	$9.426	$0.000	$0.000	$0.000
Total	**$0.000**	**$1.008**	**$9.426**	**$0.000**	**$0.000**	**$0.000**

This project was added to the 2019 CIP because it is an emergency project. The project will be funded with ARBs with $1.0 million provided in fiscal 2020, and $9.4 million for construction is programmed in fiscal 2021.

UMES is located within a 100-year flood plan, and over the years, there has been an increase in the frequency of heavy rain events. Between 1994 and 2009, UMES experienced 12 significant flood events. Flooding from Tropical Storm Irene in September 2016 caused the campus to close and resulted in over $1.0 million in damages. Several buildings were flooded, and 3,259 square feet of the basement of Kiah Hall had to be repaired, but some portions are still unusable. In addition, computers and electrical and mechanical equipment were destroyed. The latest flooding incident occurred in May 2018 when heavy rain caused a sewer line to discharge, and a number of buildings were flooded. Work includes:

- updating the electric and sewer systems, including raising transformers and transfer switches above flood elevations, adding emergency generators to buildings with sump pumps, replacing

sections of the existing sewer lines that have deteriorated, and raising the rim elevation of sewer manholes located in flood prone areas;

- constructing a floodwall along the Manokin Branch (a tributary of the Manokin River) and the addition of flood walls around basements and building entrances; and

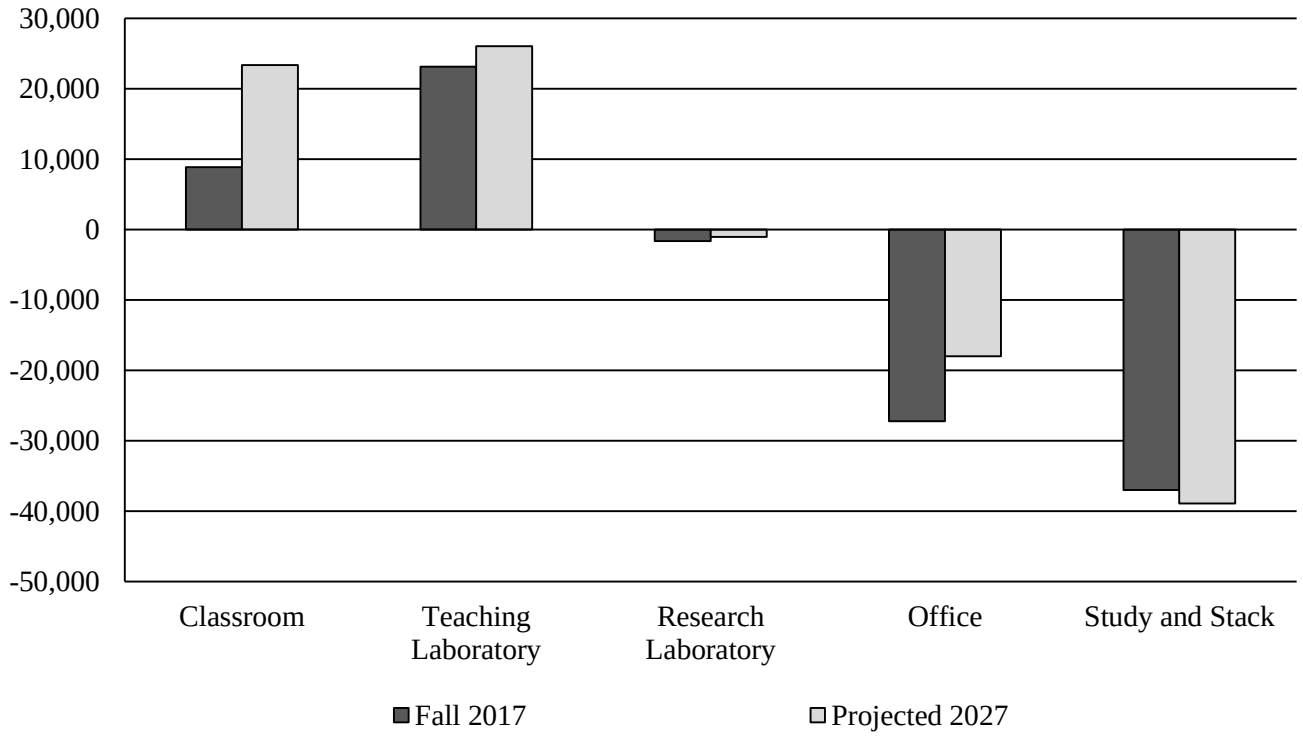
- maintenance of existing stormwater management ponds. Two bioretention facilities are planned adjacent to Kiah Hall and the Central Steam plant, and new stormwater management ponds are planned on East Campus where future development will occur.

Recommendation: Approve $1.0 million in ARB bond funding to design the Campus Flood Mitigation Project.

Frostburg State University

As shown in **Exhibit 17**, by fiscal 2027, it is projected that the deficiency in study and stack space will worsen, further decreasing by 1,902 NASF. Conversely, research laboratory and office space deficits will decrease, while surpluses in classroom and teaching laboratory space will continue to grow.

Exhibit 17
Current and Project Academic Space Deficit
Fall 2017 and Projected 2027
Net Assignable Square Feet



Source: Maryland Higher Education Commission

CIP

The fiscal 2020 budget provides GO bonds to finish planning and begin construction on the Education and Health Sciences Center.

($ in Millions)

Projects	Prior Auth.	2020 Est.	2021 Est.	2022 Est.	2023 Est.	2024 Est.	Beyond CIP
Education and Health Sciences Center	$5.500	$6.200	$43.733	$31.443	$0.000	$0.000	$0.000
Total	**$5.500**	**$6.200**	**$43.733**	**$31.443**	**$0.000**	**$0.000**	**$0.000**

Fund Source	Prior Auth.	2020 Est.	2021 Est.	2022 Est.	2023 Est.	2024 Est.	Beyond CIP
GO Bonds	$5.500	$6.200	$38.733	$31.443	$0.000	$0.000	$0.000
Revenue Bonds	0.000	0.000	5.000	0.000	0.000	0.000	0.000
Total	**$5.500**	**$6.200**	**$43.733**	**$31.443**	**$0.000**	**$0.000**	**$0.000**

Education and Health Sciences Center

This project proposes to construct a new 57,115 NASF/100,009 GSF facility for the College of Education, the Exercise and Sports Science Program, Health Professions, Nursing Program, and campus Health Center. The new building will include modern classrooms, laboratories, offices, and support space. The proposed occupants are currently located in four campus buildings that are too small and do not have adequate academic and support space. The lack of modern instructional space makes it difficult to deliver instruction efficiently and to offer new academic programs, and it limits enrollment growth. The fiscal 2020 budget includes funding to continue design and begin construction of the facility.

Authorization Uses
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
Acquisition	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Planning	5.500	1.200	1.833	0.000	0.000	0.000
Construction	0.000	5.000	38.900	28.443	0.000	0.000
Equipment	0.000	0.000	3.000	3.000	0.000	0.000
Total	**$5.500**	**$6.200**	**$43.733**	**$31.443**	**$0.000**	**$0.000**

Authorization Sources
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
GO Bond	$5.500	$6.200	$38.733	$31.443	$0.000	$0.000
Revenue Bonds	0.000	0.000	5.000	0.000	0.000	0.000
Total	**$5.500**	**$6.200**	**$43.733**	**$31.443**	**$0.000**	**$0.000**

The estimated total cost for the project is $86.9 million. The fiscal 2020 $6.2 GO bond authorization provides funding to complete construction documents and to relocate utility systems at a new site. There is insufficient funding to complete construction documents, and the university has chosen a new site for the project that is closer to the campus core. The fiscal 2020 funding will allow the project to remain on schedule. The project is scheduled to be completed in April 2022. The proposed project will address the following facility problems:

- ***Functionally Inadequate Instructional Space:*** Several existing facilities were not designed for the purposes for which they are now used.

- ***Insufficient Instructional Space:*** Existing facilities are now too small due to the high demand for certain courses.

- ***Lack of Clinical Simulation and Specialized Class Laboratory Space:*** One of the goals of this project is to increase the supply of nursing educators by increasing the proportion of nurses with baccalaureate and master degrees. There are currently no existing clinical training laboratories to support nursing and other health science programs.

- ***Obsolete Distance Education Facilities:*** Courses, such as the Registered Nurse to Bachelor of Nursing Program, are primarily offered online. Existing facilities have obsolete technology. Due to the lack of modern technology, online classes to satellite sites such as USM at Hagerstown cannot be offered.

Exhibit 18 provides the net square footage of the Education and Health Sciences Center by area.

Exhibit 18
Space by Classification Provided in the Education and Health Sciences Center

Area	Net Square Footage
Classroom	13,500
Class Laboratory	12,210
Class Laboratory Storage	150
Open Laboratory	1,400
Research Space	2,200
Office	12,280
Dean's Suite	3,010
Conference Space	1,700
Study and Stack	1,680
Lounge	1,875
Meeting	2,200
Computer	850
Receiving and Loading Dock	1,200
Health Care	2,860
Total	**57,115**

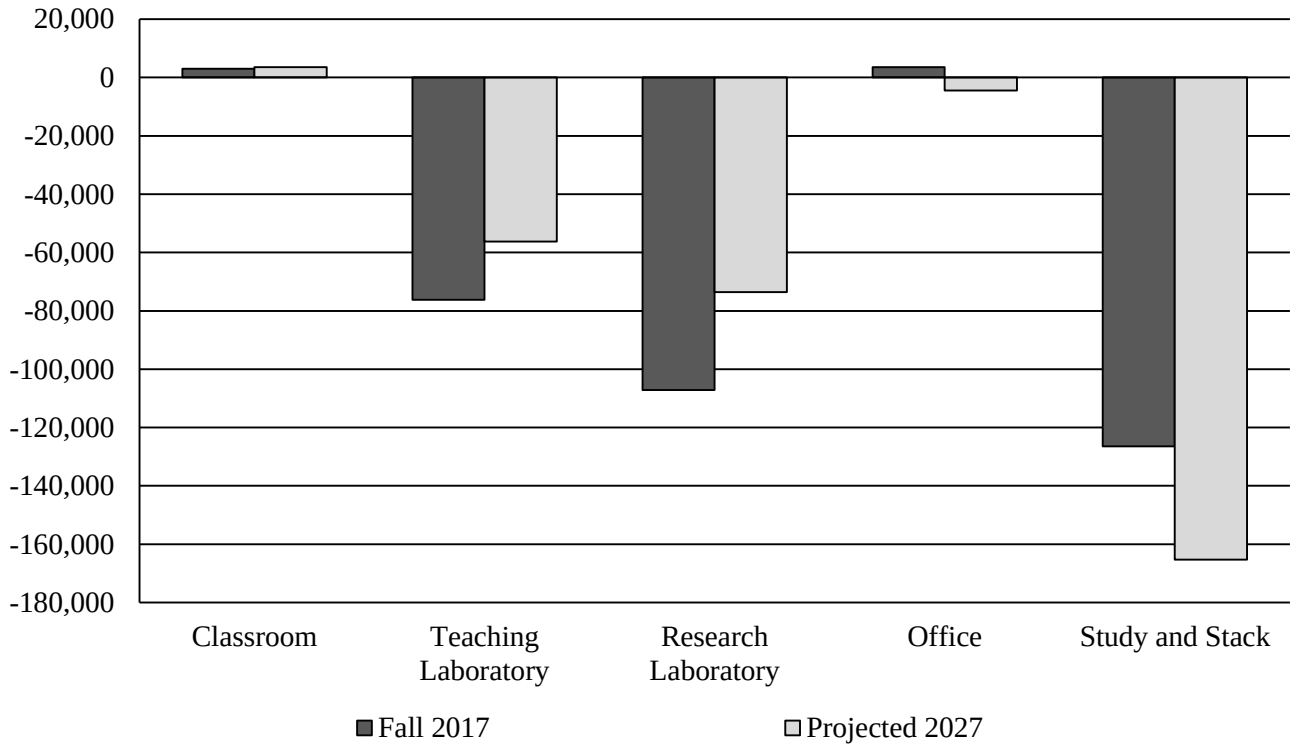
Source: Department of Budget and Management, 2019 *Capital Improvement Program*

Recommendation: Approve $6.2 million in GO bond funding to complete planning and begin construction of the Education and Health Sciences Center.

University of Maryland Baltimore County

UMBC will continue to have a slight surplus in classroom space, which is projected to increase by 500 NASF to 3,527 NASF by fiscal 2027, as shown in **Exhibit 19**. The teaching and research laboratory deficits are projected to lessen by 19,900 NASF and 33,544 NASF, respectively, by fiscal 2027. However, the study and stack space deficit is projected to increase by 38,878 NASF.

Exhibit 19
Current and Project Academic Space Deficit
Fall 2017 and Projected 2027
Net Assignable Square Feet



Source: Maryland Higher Education Commission

Utility Upgrades

This project proposes to replace or renew critically deteriorated utility system components, provide additional utility system capacity to support current and future buildings, and respond to State environmental regulations.

Authorization Uses
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
Planning	$1.360	$0.000	$0.000	$0.027	$0.000	$0.000
Construction	0.000	4.022	6.440	5.425	0.000	0.000
Total	**$1.360**	**$4.022**	**$6.440**	**$5.452**	**$0.000**	**$0.000**

Authorization Sources
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
GO Bond	$1.360	$1.676	$6.440	$5.452	$0.000	$0.000
Revenue Bonds	0.000	2.346	0.000	0.000	0.000	0.000
Total	**$1.360**	**$4.022**	**$6.440**	**$5.452**	**$0.000**	**$0.000**

The fiscal 2020 budget provides a total of $4.0 million to fund the project, which is $2.3 million more than programmed in the 2018 CIP. While the $1.7 million in GO bond funding is consistent with the amount programmed in the 2018 CIP, $2.3 million in ARB funding is added to replace a high-temperature hot water generator that has failed and cannot be economically or reliably repaired to extend its useful life. Overall, this results in the estimated total cost of the project increasing by $0.5 million to $17.3 million.

This project will address chronic infrastructure failures that are a result of an aging infrastructure that is approaching 50 years old and has exceeded its useful life.

- Electrical, mechanical, and other systems either require major repairs or replacement to remain functional and avoid catastrophic failures that would cause property loss and threaten the delivery of core services.

- If another high-temperature hot water generator fails, buildings would not be properly conditioned and could lead to extreme temperatures and humidity resulting in the need to close buildings.

- Three transformers are nearing the end of their useful life and need to be replaced within one or two years to avoid complete failure. The campus has experienced three to five power outages per year with the cost of repair ranging from $250,000 to $1.2 million.

- The campus has experienced 20 water main breaks since 2011, resulting in water being shut off to a portion of campus while repairs were being made with one break leaving resident halls without water for almost 24 hours. The cost to repair each break ranges from $20,000 to $200,000.

- A 2018 utility condition assessment identified structural deterioration of the utility tunnel system that supports distribution of the chilled and hot water and the electrical and telecommunication feeder systems. Moisture infiltration has caused the walls to spall and crack. If repairs are not made and moisture removal measures are not put into place, complete tunnel failure could occur that could severe any of the utility lines.

- Cabling, poles, and heads of much of the exterior lighting network have deteriorated to the point that some light fixtures must be replaced.

- Insurance claims have risen to cover the costs of needed repairs and damages, which resulted in the State's insurance provider increasing UMBC's deductible from $50,000 to $250,000. In addition, since USM is insured as a unit, the rise in UMBC's claims has resulted in premiums increasing for all institutions.

In addition, the campus is not in compliance with the new State environmental regulations. In particular, regulations require treatment of 20% of the previously untreated impervious area by 2025.

The project will be completed in three phases over three years:

- ***Fiscal 2020:*** replacement of the boiler in the Central Plant and replacement transformers and switchgrear;

- ***Fiscal 2021:*** electrical upgrades and utility tunnel refurbishment; and

- ***Fiscal 2022:*** general utility work and lighting upgrades, stormwater system upgrades, and domestic water upgrades.

Recommendation: Approve $1.7 million in GO bond funding to begin construction of Utility Upgrades.

University System of Maryland Office

Southern Maryland Higher Education Center

The project will provide a third academic facility on the Southern Maryland Higher Education Center (SMHEC) to support new education, research, and professional training programs.

Authorization Uses
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
Planning	$7.011	$0.758	$0.000	$0.000	$0.000	$0.000
Construction	0.000	11.195	62.202	3.229	0.000	0.000
Equipment	0.000	0.000	0.000	1.600	0.000	0.000
Total	**$7.011**	**$11.953**	**$62.202**	**$4.829**	**$0.000**	**$0.000**

Authorization Sources
($ in Millions)

Description	Prior Authorization	2020 Request	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
GO Bond	$6.011	$6.953	$62.202	$4.829	$0.000	$0.000
Nonbudgeted	1.000	0.000	0.000	0.000	0.000	0.000
Revenue Bonds	0.000	5.000	0.000	0.000	0.000	0.000
Total	**$7.011**	**$11.953**	**$62.202**	**$4.829**	**$0.000**	**$0.000**

Initially, USM and SMHEC entered into a formal agreement on the design, construction, and management of a third facility in December 2013. Recommendations from the Southern Maryland Higher Education Council that assessed the education needs in the region resulted in the scope of the project more than doubling from 38,121 GSF to 84,388 GSF. The revised project included more engineering teaching laboratories, research space, and an auditorium, resulting in the cost of the project increasing from $13.4 million to $78.3 million as programmed in the 2015 CIP. The cost of the facility has subsequently increased to $86 million in the 2019 CIP.

Reassessment of Project

Due to concerns over a steady decline in enrollment at SMHEC, especially in the engineering programs, language in the 2018 *Joint Chairmen's Report* (JCR) requested USMO to submit a report reevaluating the justification of the project. The report was to include an assessment of the program

mix (current and planned programs), enrollment by program, and how planned programs would meet the workforce needs of the region. It should be noted that enrollment and workforce projections are only to fiscal 2024. The report recommended funding the Building III as requested in fiscal 2020 based on the following findings.

- ***Enrollment Assessment:*** The report notes that SMHEC has experienced a number of enrollment-related challenges over the past six years but the trends are starting to reverse. In regards to high school enrollment, the report notes that in Southern Maryland, it is estimated to grow 11% by 2024. However, according to the Western Interstate Commission for Higher Education, it is estimated that statewide, the number of high school graduates will decline 9.3% by fiscal 2030. In addition, graduates will become increasingly diverse; therefore, in order for higher education institutions to maintain or increase enrollment, they will need to recruit and develop programs to retain and graduate these students who typically do not graduate at the same rate as traditional students. In addition, as pointed out in the report, the region underperforms in the percentage of high school graduates who enroll in college compared to other similarly sized Maryland counties. Consequently, SMHEC may not be able to rely on an increase of high school graduates to grow their enrollment.

  Enrollment in programs offered at SMHEC is projected to increase due to the federal government's expansion of defense spending that will translate into enhanced demand for education and training at federal defense facilities in Southern Maryland. Also, it is projected that more hybrid courses with instruction being offered online and face-to-face will be offered at SMHEC as institutions take advantage of the technology in the new facility.

- ***Assessment of Region's Workforce Needs:*** Between fiscal 2014 and 2024, the region is projected to face an annual need for approximately 930 baccalaureate-level prepared individuals in a wide variety of fields, 85 with a master's degree and 81 with a doctorate or professional degree. The greatest number of openings are expected to be in business administration/management, healthcare, K-12 education, and computer and information sciences. However, according to the JCR, the current programs are small, boutique graduate programs that represent a portfolio of technical, logistic, and engineering programs.

  It should be noted, in fiscal 2017, that St. Mary's County completed its *Strategic Plan to Build an Innovation Driven Economy*, which focused on trade industry clusters, groups of industries based in a specific region that sell their products and services beyond the local trade area. Four priority clusters were identified: unmanned and autonomous systems; repair prototyping and other advanced manufacturing business; agriculture and aquaculture; and tourism and hospitality.

- ***Responding to Region's Need:*** SMHEC will continue to recruit new and expand existing programs. New programs that have been recruited since fiscal 2017 are mainly those offered by the Florida Institute of Technology and had been previously offered on the Naval Air Station Pax River site. USM and SMHEC are working to identify additional programs to address workforce needs in areas such as information technology (IT), cyber security, business administration and management, and health care.

Scope of Third Building

The facility will address the following issues:

- ***Lack of Classroom Space:*** Classrooms in the two buildings at SMHEC are too small with only 3 rooms able to accommodate a maximum of 32 students. Institutions offering programs at SMHEC require larger classrooms that can accommodate 36 students. The new facility will have 16 classrooms, including 5 that can hold 36 students, and allow for the expansion of other academic programs.

- ***Lack of Electrical Engineering Space:*** UMCP launched an undergraduate electrical engineering program in fall 2016, primarily for Navy personnel, limiting enrollment to 10 students. While the current facilities do not have the research or laboratory space needed to support the electrical engineering program, UMCP retrofitted existing classroom space into laboratory space. While not ideal or a permanent solution, the retrofitted laboratory can work for the short term. The new facility would provide engineering classroom and laboratory space and support spaces, such as an electronic shop and storage space for materials for engineering programs.

- ***Lack of Research Space:*** The current facilities do not have research space to test unmanned autonomous systems (UAS) that need specialized space to conduct research, such as having a high bay space with 20-foot ceilings to test unmanned aircraft. Due to its location near the Naval Air Warfare Center Aircraft Division at Patuxent River, it is expected that there will be significant UAS activity in the tri-county region of Calvert, Charles, and St. Mary's counties. Furthermore, UMCP established a test site for UAS at the St. Mary's County Regional Airport as part of the Mid-Atlantic Aviation Partnership with Virginia and New Jersey.

- ***Need for Additional Conference Space:*** The facility will provide additional conference space to accommodate demand for training programs and conferences. Between fiscal 2011 and 2015, SMHEC held 1,262 training programs serving approximately 87,500 people. In fiscal 2015, SMHEC turned away 31 events due to the lack of space. The facility includes a 330-seat auditorium that will be funded by St. Mary's County.

Overall, the facility will provide 13,342 NASF and 5,052 NASF of classroom and instructional laboratory space, respectively; 15,282 NASF of research space; 7,740 NASF of conference space; and 5,137 NASF of office space.

The Department of Legislative Services (DLS) evaluated the scope and size of the project and determined that the facility provides approximately 15% more NASF than is needed. If USM wants to proceed with the project as currently scoped, the State's participation should be benchmarked on the amount of space required to meet the research components of the facility. **Based on the data provided in the cost estimate worksheet, the cost of the surplus space is approximately $10 million. Therefore, DLS recommends to add budget language expressing the intent that total State funding for the project may not exceed $75.995 million.**

Recommendation: Approve $7.0 million in GO bond funding to complete design and begin construction of the third building at SMHEC and add intent language that State funding is not to exceed $76 million. Reduce the fiscal 2021 preauthorization by $10 million. Approve a fiscal 2022 preauthorization of $3.2 million to complete construction of the building.

Capital Facilities Renewal

Authorization Uses
($ in Millions)

Description	2018 Approp.	2019 Approp.	2020 Request	2021 Est	2022 Est	2023 Est	2024 Est
Capital Facilities Renewal	$17.000	$17.000	$28.646	$22.574	$32.000	$32.000	$35.000
Total	**$17.000**	**$17.000**	**$28.646**	**$22.574**	**$32.000**	**$32.000**	**$35.000**

Authorization Sources
($ in Millions)

Description	2018 Approp.	2019 Approp.	2020 Request	2021 Est	2022 Est	2023 Est	2024 Est
GO Bond	$0.000	$0.000	$10.000	$10.000	$7.000	$7.000	$10.000
Revenue Bonds	17.000	17.000	18.646	12.574	25.000	25.000	25.000
Total	**$17.000**	**$17.000**	**$28.646**	**$22.574**	**$32.000**	**$32.000**	**$35.000**

This annual facilities renewal program provides funding for infrastructure improvements at various facilities at USM institutions. Funding for fiscal 2020 totals $28.7 million, which includes $10 million in GO bonds and $18.7 million in ARBs. This is $6.6 million more than programmed in the 2018 CIP, which included $22 million in ARBs and no GO bond funding. The ARBs are $3.3 million less than programmed due to a portion of the funding reserved for emergencies being allocated to UMES for flood mitigation ($1 million) and UMBC to replace a high-temperature, hot water generator ($2.3 million). The remaining funding will enable USM to undertake 44 projects at 11 institutions in fiscal 2019.

The 2019 CIP programs $10 million in GO bond and $12.6 million in ARBs in fiscal 2021. This is $9.4 million less than programmed in the 2018 CIP, which did not include GO bonds. The 2019 CIP

programs $32 million, consisting of $7 million in GO bonds and $25 million in ARBs in fiscal 2022 and 2023. GO funding increases to $10 million in fiscal 2024.

Currently, capital facilities renewal funds are allocated among institutions on a pro rata share of self-reported replacement costs for all State-funded academic facilities. However, this method for allocating the limited funds does not provide incentives for institutions to put more resources toward these projects. The expected increase in funding for renewal projects provides an opportunity for USM to develop a new methodology that provides incentives for institutions that work to put more resources toward facilities renewal. Currently, USM is considering an approach in which funding would be divided in two and allocated by different methods.

- The first component would allocate a portion of the funds based on a formula tied to replacement value, square footage, and/or building age. This would provide a minimal level of funding for all institutions.

- The second component would allocate the remaining funds to projects submitted to USMO that would be evaluated by USMO and BOR based on appropriate criteria that would include if an institution is enhancing efforts to address its deferred maintenance.

In addition, USM could also include a matching component as an incentive for institutions to increase funding for facilities renewal. **DLS recommends that USMO submit a report on a methodology to allocate facilities renewal funding among the institutions that includes incentives for institutions to increase the amount spent on renewal projects.**

Summary of Other Projects in the CIP

Coppin State University

Percy Julian Building Renovation for the College of Business

This project proposes to renovate the 30,410 NASF/52,190 GSF Percy Julian Science and Art Building and construct a 4,690 NASF/12,220 GSF addition for the College of Business and the School of Graduate Studies. The building will include classrooms, class laboratories, and offices. The Julian Science and Arts Building was vacated when the new Science and Technology Center opened in 2015. The project will address needs of the university's graduate education mission and the College of Business by modernizing instructional and support spaces. The project will also make the building compliant with current accessibility and building codes. The design phase is funded and currently underway. The 2019 CIP programs construction funding in fiscal 2021 and 2022, which is consistent with the schedule established for the project in the 2018 CIP. The total project cost is currently estimated at $44.0 million but is not informed by any advanced stages of design.

Salisbury University

Blackwell Hall Renovation

With the completion of the Patricia R. Guerrieri Academic Commons, the former library, Blackwell Hall, will be renovated to become a Student Services Center. This will be a one-stop shot housing the registrar, financial aid, academic advising, career services, the bursar, admissions, counseling center, health center, and welcome center. This will provide better service and efficiencies and open space in other buildings for much needed academic classroom, laboratory, and study space. The project will also include replacement of the outdated mechanical, plumbing, and electrical systems, which are at the end of their useful life and will bring the building up to code. The estimated cost of the project totals $40.1 million with $3.0 million programmed in fiscal 2023 to begin design.

University of Maryland Center for Environmental Science

Chesapeake Analytics Collaborative Building

This project proposes to construct the new Chesapeake Analytics Collaborative Building at the University of Maryland Center for Environmental Science's Chesapeake Biological Laboratory (CBL) in Solomons Island. CBL currently does not have modern research collaboration space. In addition, existing library space is not ADA compliant and is insufficient to house CBL's library collection. The building will provide adequate space for the library collection, including the Chesapeake Archives, and house IT and big data visualization systems needed to support collaborative research and instructional programs. The estimated cost of the project is $16.6 million. The 2019 CIP does not make changes to the funding sequence programming design and construction over fiscal 2021 through 2023.

Projects Removed from the CIP

Exhibit 20 lists the projects removed from the CIP in fiscal 2020.

Exhibit 20
Projects Removed from the *Capital Improvement Program*
Fiscal 2020

Project	Description	Reason for Deferral
UMCP – New Cole Field House	Eliminated State funding.	The State's $25 million commitment was fully funded in fiscal 2019.

UMCP: University of Maryland, College Park Campus

Source: Department of Budget and Management, 2019 *Capital Improvement Program*

Preauthorizations and Deauthorizations

Exhibit 21 provides details on the preauthorizations and deauthorizations for USM.

Exhibit 21
Preauthorizations and Deauthorizations

Preauthorizations

Project	2021	2022	2023
UMCP – School of Public Policy Building	$2.500	$0.000	$0.000
UMES – School of Pharmacy and Health Professions	45.735	23.600	0.000
USMO – Southern Maryland Regional Higher Education Center	62.202	3.229	0.000

Deauthorizations

Project	Deauthorized Amount	Reason
UMCP – Physical Sciences Complex	$525,300	Project complete.
UMBC – New Performing Arts and Humanities Facility	800,000	Project complete.
FSU – New Center for Communications and Information Technology	293,965	Project complete.
CSU – Pedestrian Bridge ADA Improvements	210,696	Project complete.

ADA: American Disabilities Act
CSU: Coppin State University
FSU: Frostburg State University
UMBC: University of Maryland Baltimore County
UMCP: University of Maryland, College Park Campus
UMES: University of Maryland Eastern Shore
USMO: University System of Maryland Office

Source: Department of Budget and Management, 2019 *Capital Improvement Program*

GO Bond Recommended Actions

1. Approve $13.2 million in general obligation bond funds to continue construction and equip the central electric substation and electrical infrastructure upgrades at the University of Maryland, Baltimore Campus.

2. Approve $4.7 million in general obligation bond funds to continue design of the Chemistry Building Wing 1 Replacement at the University of Maryland, College Park Campus.

3. Approve $12.5 million in general obligation bond funds to complete design and continue construction of the School of Public Policy building at the University of Maryland, College Park Campus.

4. Approve $5.1 million in general obligation bond funds to begin planning for the Communication Arts and Humanities Building at Bowie State University.

5. Approve $5.3 million in general obligation bond funds to begin design of the new College of Health Professions building at Towson University.

6. Approve $66.2 million in general obligation bond funds to complete construction and equip the new Science Facility at Towson University.

7. Approve $5.0 million in general obligation bond funds to complete design and begin construction on the School of Pharmacy and Health Professions building at the University of Maryland Eastern Shore.

8. Approve $1.0 million in Academic Revenue Bonds funding to design the campus flood mitigation project at the University of Maryland Eastern Shore.

9. Approve $6.2 million in general obligation bond funds to finish planning and begin construction on the Education and Health Sciences Center at Frostburg State University.

10. Approve $1.7 million in general obligation bond funds to begin construction on the utility upgrades and site improvements at the University of Maryland Baltimore County.

11. Adopt committee narrative.

Adopt the following narrative:

Progress on a Revised Allocation Methodology: The University System of Maryland's (USM) current method of allocating capital facilities renewal funds does not reward or provide incentives to those institutions that have made efforts to increase spending on renewal projects. Beginning in fiscal 2022, funding for facilities renewal is expected to increase from $17 million

in previous years to $32 million, giving USM an opportunity to develop and implement a new method for allocating funds that may more effectively address the backlog of deferred maintenance. Therefore, the budget committees request the University System of Maryland Office (USMO) to submit a report on the progress of developing and implementing a revised method for allocating capital facilities renewal funds among the institutions.

Information Request	**Author**	**Due Date**
Progress on a revised allocation methodology	USMO	November 1, 2019

12. Add intent language to Southern Maryland Higher Education Center appropriation.

RB36B Southern Maryland Regional Higher Education Center .... $ 6,953,000

Add the following language:

Southern Maryland Regional Higher Education Center. Provide funds to complete design and begin construction of a third building on the Southern Maryland Higher Education Center Campus to provide academic and research laboratory space, provided that notwithstanding Section 6 of this Act, work may commence on this project prior to the appropriation of all funds necessary to complete this project, provided that it is the intent of the General Assembly that total State funding for this project may not exceed $75,995,000 (St. Mary's County).....

Explanation: This language expresses the intent of the General Assembly that total State funding for the third building at the Southern Maryland Higher Education Center may not exceed $75 million.

13. Approve amending language to a prior authorization for the Facilities Renewal Program to allow funds to be expended prior to June 1, 2021.

14. Approve the deauthorization of $288,234 in general obligation bonds for the Physical Sciences Complex at the University of Maryland, College Park Campus.

15. Approve the deauthorization of $800,000 in general obligation bonds for the Performing Arts and Humanities Complex at the University of Maryland Baltimore County.

16. Approve the deauthorization of $237,066 in general obligation bonds for the Physical Science Complex at the University of Maryland, College Park Campus.

17. Approve the deauthorization of $293,965 in general obligation bonds appropriated in 2013 for the Center for Communications and Information Technology at Frostburg State University.

18. Approve the deauthorization of $210,696 in general obligation bonds appropriated in 2013 for the pedestrian bridge American Disabilities Act improvements at Coppin State University.

19. Approve the preauthorization of $2.5 million in general obligation bonds for fiscal 2021 to continue construction of the School of Public Policy Building at the University of Maryland, College Park Campus.

20. Approve the preauthorization of $45.7 million in general obligation bonds for fiscal 2021 to continue construction of the School of Pharmacy and Health Professions at the University of Maryland Eastern Shore.

21. Reduce funding for the Southern Maryland Regional Higher Education Center.

ZF4800	SECTION 12 – Southern Maryland Regional Higher Education Center.....	$ 52,202,000

Add the following language:

RB 36 UNIVERSITY SYSTEM OF MARYLAND OFFICE
(St. Mary's County)

(A) Southern Maryland Regional Higher Education Center. Provide funds to continue construction of a third building on the Southern Maryland Higher Education Center Campus to provide academic and research laboratory space, provided that notwithstanding Section 6 of this Act, work may continue on this project prior to the appropriation of all funds necessary to complete this project..... ~~62,202,000~~ 52,202,000

Explanation: Reduce the preauthorization for the third building at the Southern Maryland Higher Education Center.

22. Approve the preauthorization of $23.6 million in general obligation bonds for fiscal 2022 to complete construction of the School of Pharmacy and Health Professions at the University of Maryland Eastern Shore.

23. Approve the preauthorization of $3.3 in general obligation bonds to for fiscal 2022 to complete construction of a third building at the Southern Maryland Regional Higher Education Center.

Total Preauthorization (2019) Reductions/Additions -$10,000,000

Operating Budget Impact Statement

Executive's Operating Budget Impact Statement – State-owned Projects
($ in Millions)

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
UMCP – School of Public Policy Building					
Estimated Operating Cost	$0.000	$0.785	$1.151	$1.169	$0.560
Estimated Staffing	0.00	0.00	2.00	2.00	2.00
UMCP – Chemistry Building Wing 1 Replacement					
Estimated Operating Cost	$0.303	$0.303	$0.303	$0.303	$0.014
Estimated Staffing	0.00	0.00	0.00	0.00	0.00
TU – New College of Health Professions Building					
Estimated Operating Cost	$0.000	$0.000	$0.000	$0.000	$1.486
Estimated Staffing	0.00	0.00	0.00	0.00	3.00
TU – New Science Facility					
Estimated Operating Cost	$0.000	$5.714	$5.944	$6.050	$6.159
Estimated Staffing	0.00	7.00	8.00	8.00	8.00
BSU – Communication Arts and Humanities Building					
Estimated Operating Cost	$0.000	$0.000	$0.000	$0.000	$1.112
Estimated Staffing	0.00	0.00	0.00	0.00	2.00
FSU – Education Professions and Health Sciences Center					
Estimated Operating Cost	$0.000	$0.000	$0.302	$1.061	$1.095
Estimated Staffing	0.00	0.00	1.00	3.00	3.00

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
UMES – School of Pharmacy and Health Professions					
Estimated Operating Cost	$0.000	$0.000	$1.475	$1.461	$1.502
Estimated Staffing	0.00	0.00	3.00	3.00	3.00
USMO – Southern Maryland Regional Higher Education Center					
Estimated Operating Cost	$0.000	$0.000	$1.368	$1.574	$1.602
Estimated Staffing	0.00	0.00	2.00	2.00	2.00
Total Operating Impact					
Estimated Operating Cost	**$0.303**	**$6.802**	**$10.543**	**$11.618**	**$13.530**
Estimated Staffing	**0.00**	**7.00**	**16.00**	**18.00**	**23.00**

BSU: Bowie State University
FSU: Frostburg State University
TU: Towson University
UMCP: University of Maryland, College Park Campus
UMES: University of Maryland Eastern Shore
USMO: University System of Maryland Office