CASTLETON UNIVERSITY
COMMUNITY COLLEGE OF VERMONT
JOHNSON STATE COLLEGE
LYNDON STATE COLLEGE
VERMONT TECHNICAL COLLEGE

VERMONT
STATE COLLEGES SYSTEM

OFFICE OF THE CHANCELLOR
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MEMORANDUM

TO: VSC Finance & Facilities Committee
M. Jerome Diamond
J. Churchill Hindes, Chair
Tim Jerman
Bill Lippert
Christopher Macfarlane, Vice Chair
Linda Milne
Martha O'Connor
Aly Richards

FROM: Steve Wisloski, Chief Financial Officer

DATE: January 4, 2017

SUBJ: Finance & Facilities Committee Meeting on January 9, 2017

The Finance and Facilities Committee of the Board of Trustees is scheduled to meet from 1:00 p.m. to 3:00 p.m. in Room 101 of the Chancellor's Office.

As shown in the attached agenda and materials, this meeting contemplates a review and discussion of four topics. The consent calendar is the only anticipated approval item.

The first and lengthiest topic will be a review and discussion of preliminary debt restructuring scenarios, created with the help of PFM, the financial advisory firm selected from a request for proposals process in December. PFM has constructed six scenarios, each of which achieves the objectives of refinancing the System's balloon payment due in 2028, and of removing the debt service coverage and other covenants associated with the TD Bank loans. The scenarios are organized along two dimensions: first, whether the System issues bonds (1) by itself, (2) through the Vermont Municipal Bond Bank, or (3) by itself but using its statutory $34 million of State "moral obligation" for a portion of the financing; and second, whether to extend the financing over 20 years, or over 30. Thus, there is a 20-year and a 30-year scenario for each of the three potential bond issuance alternatives, or six in total.

These six scenarios focus on trade-offs between (1) achieving maximum debt service relief over the next five years, (2) avoiding abrupt year-over-year increases in year six or later, and (3)

minimizing total overall additional debt service. The goal of this discussion will be to familiarize the Committee with these trade-offs, in order to prepare for a vote at the February meeting.

Also included for information and discussion are materials related to two topics – strategic capital planning and performance metrics – proposed to be discussed in more detail at future Committee meetings. The first item, a presentation from Sightlines (a leading facilities management consulting firm) to the University of Maine, provides a reasonable look at the "state of the art" in facilities management and benchmarking used by large universities and many of VSC's peers, including UVM. This item is related to the System's strategic capital planning report due to the Legislature on January 15, which will be discussed as well. The second item, an article from Trusteeship Magazine (published by AGB), discusses the development of financial metrics including the "Composite Financial Index," or CFI, which is also broadly used by higher education institutions nationally.

Finally, the agenda includes a brief review of the scheduled Committee meetings for the remainder of FY2017, including the proposed FY2018 budget development and FY2019 tuition approval processes, as well as a suggestion to move the February meeting from the 6th to the 22nd, and to cancel the March 13th meeting.

Should you have any questions regarding the upcoming meeting or any other matter, or any requested additions to the agenda, please contact me at stephen.wisloski@vsc.edu or (802) 224-3022. Thank you.

Attachments:

1. Agenda
2. Meeting Materials

cc: VSC Board of Trustees, Council of Presidents and Business Affairs Council
David Beatty, Vermont Department of Finance & Management
The Honorable Douglas Hoffer, Vermont State Auditor

Vermont State Colleges Board of Trustees
Finance and Facilities Committee Meeting
January 9, 2017

AGENDA

1. Call to Order
2. Consent agenda
    a. Approve minutes of November 30, 2016 meeting
    b. Grants and Endowments
3. Discussion of debt restructuring alternatives
4. Discussion of strategic capital and facilities planning
5. Discussion of financial metrics
6. Review of schedule for the remainder of FY2017
7. Other business
8. Public comment
9. Adjourn

MEETING MATERIALS

Item 1:
Consent Agenda Items

Back to Agenda

UNAPPROVED Minutes of the VSC Board of Trustees Finance and Facilities Committee held Wednesday, November 30, 2016 at Community College of Vermont, Montpelier Academic Center

Note: These are unapproved minutes, subject to amendment and/or approval at the subsequent meeting.

The Vermont State Colleges Board of Trustees Finance and Facilities Committee met on Wednesday, November 30, 2016 at Community College of Vermont Montpelier Academic Center.

Committee members present: Church Hindes (Chair), Bill Lippert, Chris Macfarlane (Vice Chair), Linda Milne, Martha O'Connor, Aly Richards

Absent: Lynn Dickinson, Karen Luneau

Presidents: Nolan Atkins, Elaine Collins, Joyce Judy, Pat Moulton, Dave Wolk

Chancellor's Office Staff: Tricia Coates, Director of Governmental & External Affairs
Kevin Conroy, Chief Information Officer
Bill Reedy, General Counsel
Dave Rubin, Grants Coordinator
Elaine Sopchak, Administrative Director, Office of the Chancellor
Jeb Spaulding, Chancellor
Steve Wisloski, Chief Financial Officer
Yasmine Ziesler, Chief Academic Officer

From the Colleges: Scott Dikeman, Dean of Administration, Castleton University
Barb Flathers, Assistant to the Dean of Students, Johnson State College
Loren Loomis Hubbell, Dean of Administration, Lyndon State College
Barbara Martin, Dean of Administration, Community College of Vermont
Sharron Scott, Dean of Administration, Johnson State College
Aimee Stephenson, Director of Development, Community College of Vermont
Lit Tyler, Dean of Administration, Vermont Technical College

1. Chair Hindes called the meeting to order at 9:00 a.m.

2. Consent agenda
   a. Approve minutes of October 16, 2016 meeting
   b. Grants and Endowments
   c. Uniform Guidance Policies

No items were requested to be removed from the consent agenda. Trustee Macfarlane moved and Trustee Jerman seconded the approval of the consent agenda.

Trustee Diamond requested that the minutes be corrected to show that he was in attendance at the October 16th meeting. Chair Hindes acknowledged the Dr. Bruce Berryman Award Endowment and thanked the donor for the generosity of the endowment. Trustee Milne inquired about how cash management is addressed in the new uniform guidance policies. Dave Rubin, VSC Grants Coordinator, explained to the Committee that the VSC is in the process of creating standards and practices to implement the uniform guidance policies. In addition to a cash management policy there is a cash handling policy to assure that language around internal controls is established in policy. Trustee Milne requested a copy of the new standards and practices when they are completed.

The consent agenda was approved unanimously with the amended minutes.

3. Review of FY2017 first quarter results

Chair Hindes introduced the first quarter results and CFO Wisloski shared the projected operating deficit of just over $3M, which is approximately $1M better than was projected at the May 19 Committee meeting. In summary none of the colleges are presenting concerning new financial developments.

4. Initial discussion of System-level FY2018 budget framework

Mr. Wisloski reviewed initial assumptions for the FY2018 budget. Trustee Diamond inquired and the Committee discussed whether separating out CCV's budget from those of the residential colleges would give a more accurate budget picture. The Committee also discussed the way the state appropriation is shared among the colleges, and Chair Hindes requested that this topic be put on a Committee agenda in the near future. Trustee Diamond emphasized that the Chancellor's Office's highest priority is to create an FY2018 budget that is balanced and not in deficit. Mr. Wisloski noted that this is still the highest priority but that the costs of unification will affect the process significantly. Trustee Macfarlane asked that increases to the Chancellor's Office budget be explained, particularly as they relate to the business operations consolidation process. Chancellor Spaulding assured the Committee that his staff and the colleges are working very hard to achieve the goal.

5. Quarterly cash and investments performance and review of Policy 430

Mr. Wisloski reviewed the cash and investment report, and the weekly concentration account balance report. The return on the endowment funds invested with Morgan Stanley have exceeded benchmarks for the first nine months of this calendar year.

Mr. Wisloski stated that he, Chair Hindes, and Chancellor Spaulding will review Policy 430 in December and will bring any proposed changes to the Committee. Committee members were encouraged to participate in the review.

6. Debt management policy proposal and potential bond sale update

Mr. Wisloski informed the Committee that he and Chancellor Spaulding would meet with Standard & Poor's on December 2nd. The change in the VSC rating in 2014 from A+ to A was primarily due to low state support and S&P's perception of unlikely state intervention. The 2015 rate change from A to A- was due to the same reason plus declining enrollment. A draft debt management policy, based on samples from NACUBO and other similar colleges, is under development.

An RFP for a bond issue firm has been posted, and Mr. Wisloski expects to engage a firm by the end of December. The purpose of the bond is to eliminate a balloon payment scheduled for 2028, to refinance two covenanted loans, and to refinance to achieve savings.

7. AGB Report initiatives update

Mr. Wisloski briefly reviewed system progress in achieving the recommendations made by AGB in its February 2015 report. He identified in the progress update ten major initiatives with corresponding quantitative goals. Towards the goal of identifying $3M in savings, to date the system estimates it will reach this objective due to the introduction of a high deductible health plan, reductions in the employer contribution to the defined contribution plan, and consolidation of accounts payable across the system. Programming goals primarily around online academic programs and cross-college initiatives are being addressed through the 2016 CampusWorks report recommendations. Individual colleges have made some progress toward enrollment increases. The Board's work toward the goals included moderate tuition increases and timing tuition setting to facilitate early adoption of prior-prior FAFSA procedures.

8. Other business

Trustee Diamond asked if the next Long Range Planning Committee meeting could be held on the same day as a Finance and Facilities Committee meeting. He expects both committees would

be interested in hearing Vermont Tech Interim President Moulton's presentation on her strategic analysis of the Williston campus and its future needs.

9. Public comment

There was no public comment.

Chair Hindes adjourned the meeting at 10:22 a.m.

12/7/16

Vermont State Colleges
Grant Proposal Budget Analysis

Form A & B

College: Vermont Technical College

Grant Title: SBDC Cooperative Agreement

Grant Agency: U.S. Small Business Administration (SBA)

Project Director: Linda J. Rossi, VtSBDC State Director

Purpose of Grant: Provide assistance to the small business community through one-on-one business advising and training.

Grant Period: 10/1/2016 to 9/30/2017

Review Period: _____ Multi-Yr** / Cumulative Grant Amt: _____
**(please enter number of years covered)

Proposed Funding	1st Yr Grant	Cash Match	In-kind	In-direct	Grant	College
Direct Costs						
Salaries & Wages	$ 359,409.29	$ 170,599.14				
Employee Benefits	$ 223,644.36	$ 99,197.30				
Operations						
Travel	$ 5,279.79	$ 5,060.81				
Equipment						
Library Acquisitions						
Other	$ 555.56	$ 114,000.00	$ 32,780.00			
Total Direct	$ 588,889.00	$ 388,857.25	$ 32,780.00	$ -	$ -	$ -
Indirect Costs*	$ 50,000.00			$ 260,584.94		
Total Budget	$ 638,889.00	$ 388,857.25	$ 32,780.00	$ 260,584.94	$ -	$ 1,321,111.19

*(In-Kind & Other costs for space, utilities, maintenance, administrative support, etc.)

What is(are) the sources of College Funding? N/A

What continuing cost obligations does Granting Agency require/expect? N/A

What Continuing cost obligations does the College intend/see likely? N/A

Business Officer Review by: _____ Date: 12/07

Programmatic Review by: Linda J. Rossi Date: 11/22/16

Presidential Review by: _____ Date: 12/07/16

Full required documentation is being submitted, including all appropriate assurances regarding Civil Rights, People with Disabilities, Sex Discrimination, Human Subjects, Laboratory Animals, etc.

Version 4/17/2008

FORM C

- NEW FUNDING SOURCE DOCUMENT - GRANTS ONLY

Vermont Technical College
(College Name)

Submit to Chancellor's Office for all activities based upon a new funding source.
Place copy in front of any applicable master file.

1) Name of grant: (type in all CAP'S)

SMALL BUSINESS ADMINISTRATION (SBA) OSBDC PROGRAM

2) Granting agency/donor/other funding source: (attach support info)

2a) CFDA # 59.037 2b) State Revenue Code
2c) Award # SBAHQ-17-B-0019

3) Purpose of activity:

Conduct Small Business Development Center Programs

4a) Proper accounting fund:		4b) Funding Source	
Entity Gasb Code	92	Federal	XX
Activity Code	90108	State	
		Other: (Name)	

5) Related Grants and their funding sources:

6a) Beginning date:	6b) Ending date:	6c) Duration:
10/1/2016	9/30/2017	12-months

7) Reporting requirements (format/to whom/frequency/other)

Semi-annual narrative and financials. Quarterly drawdowns

8a) Funding amount:	8b)	
	One-time Y or N	
$ 638,889.00	Ongoing funding (indicate timeframe:)	yearly
Board Approval Required Y or N		
11) President:	12) Date to Ch's Ofc:	13) Date Board Approved:
Patricia M.	12/7/16	n

VERMONT STATE COLLEGES

BOARD OF TRUSTEES

RESOLUTION

VSC Finance and Facilities Committee Business: Consent Agenda

WHEREAS, At its January 9, 2017 meeting the VSC Finance and Facilities Committee discussed the business items outlined below; therefore, be it

RESOLVED, The Committee has voted to approve the items outlined below and recommends them to the full Board:

- Approval of the minutes of the November 30, 2016 meeting
- Approval of the U.S. Small Business Development Center grant in the amount of $1,321,111.19.

January 9, 2017

Item 2:
Preliminary Debt Restructuring Scenarios

Back to Agenda

Financing Scenarios

20-year Final Maturity

	Option 1a **Issue Under 1988 Resolution**	*Option 2a* **Issue Through the VMBB**	*Option 3a* **Issue with State Moral Obligation**	*Option 1a plus 100 bps* **Issue Under 1988 Resolution**
Financing Structure:				
Credit Rating	A-	Aa2/AA+ (est.)	Aa2/AA+ (est.)	A-
Spread to AAA MMD	48-102 bps	25-45 bps	25-45 bps	148-202 bps
Rates as of	1/3/2017	1/3/2017	1/3/2017	1/3/2017
Security	General obligation	General obligation	General obligation	General obligation
	No DSRF	DSRF	DSRF	No DSRF
Financial Covenants	None	None	None	None
Amortization	5 years interest only	5 years interest only	5 years interest only	5 years interest only
	Level Debt Service	Level Principal	Level Debt Service	Level Debt Service
Final Maturity	7/1/2037	7/1/2037	7/1/2037	7/1/2037
Sources & Uses of Funds:				
Par Amount	$70,540,000	$73,585,000	$71,720,000	$70,415,000
Premium / (Discount)	7,943,091	12,298,274	9,873,007	2,245,136
Swap Termination Payout (2009)	-	-	-	31,493
Total Sources	**$78,483,091**	**$85,883,274**	**$81,593,007**	**$72,691,629**
Escrow Deposit	$66,623,306	$66,623,306	$66,623,306	$66,623,306
Swap Termination *	10,797,577	10,797,577	10,797,577	5,011,494
Debt Service Reserve Fund	-	7,358,500	3,089,375	-
Cost of Issuance (1.5% est.)	1,062,207	1,103,890	1,082,748	1,056,828
Total Uses	**$78,483,091**	**$85,883,274**	**$81,593,007**	**$72,691,629**
Financing Statistics:				
True Interest Cost	3.98%	3.40%	3.75%	4.75%
Average Maturity (yrs)	13.8	12.7	13.7	13.7
Total Debt Service	$119,048,786	$120,173,738	$120,898,706	$118,704,512
PV of Gross Debt Service @ 4.5%	$74,043,173	$77,013,109	$75,274,134	$73,904,792
Total Net Debt Service *	$119,048,786	$111,153,427	$117,111,640	$118,704,512
PV of Net Debt Service @ 4.5%*	$74,043,173	$72,928,393	$73,559,216	$73,904,792

** Assumes swaps are integrated and termination payment can be funded with tax-exempt bond proceeds (requires review by Bond Counsel). Swap termination values as of 1/3/2017*

** Assumes DSRF earnings of 1.12% (10-yr avg. of 2yr UST).*

Aggregate Debt Service Requirements

	Status Quo	**Option 1a: 20-year Maturity**		**Option 2a: 20-year Maturity**		**Option 3a: 20-year Maturity**		**Option 1a: 20-year Maturity (plus 100 bps)**	
Fiscal Year Ending 6/30	**Existing Net Debt Service***	**Net Debt Service***	**vs. Existing**	**Net Debt Service****	**vs. Existing**	**Net Debt Service****	**vs. Existing**	**Net Debt Service****	**vs. Existing**
2017	$642	$0	($642)	$0	($642)	$0	($642)	$0	($642)
2018	10,678	7,748	(2,930)	7,795	(2,883)	7,765	(2,913)	7,744	(2,934)
2019	10,500	8,757	(1,743)	8,827	(1,673)	8,781	(1,719)	8,750	(1,749)
2020	9,017	7,267	(1,750)	7,337	(1,680)	7,291	(1,725)	7,261	(1,756)
2021	9,008	7,267	(1,741)	7,337	(1,671)	7,292	(1,717)	7,261	(1,747)
2022	8,995	7,255	(1,740)	7,325	(1,670)	7,279	(1,715)	7,249	(1,746)
2023	8,995	10,108	1,113	11,811	2,816	10,210	1,216	10,121	1,127
2024	9,007	10,115	1,108	11,588	2,581	10,213	1,207	10,127	1,120
2025	8,949	10,067	1,118	11,308	2,359	10,162	1,213	10,078	1,129
2026	8,461	9,789	1,328	10,801	2,340	9,889	1,428	9,804	1,343
2027	8,252	9,786	1,534	10,567	2,315	9,882	1,630	9,800	1,548
2028	44,683	9,805	(34,877)	10,360	(34,323)	9,901	(34,781)	9,818	(34,865)
2029	3,299	9,551	6,253	9,873	6,574	9,647	6,349	9,562	6,264
2030	3,161	9,543	6,382	9,633	6,472	9,639	6,478	9,553	6,393
2031	3,161	9,540	6,379	9,403	6,242	9,636	6,475	9,554	6,393
2032	3,157	9,537	6,381	9,168	6,012	9,632	6,476	9,549	6,393
2033	3,151	9,531	6,380	8,933	5,782	9,626	6,474	9,542	6,391
2034	1,849	8,334	6,485	7,400	5,552	8,324	6,476	8,240	6,392
2035	1,849	8,334	6,484	7,171	5,322	8,324	6,474	8,244	6,395
2036	1,847	8,332	6,485	6,934	5,087	8,326	6,479	8,242	6,395
2037	1,847	8,328	6,482	6,704	4,857	8,321	6,474	8,242	6,395
2038	1,848	8,331	6,483	(842)	(2,690)	5,250	3,402	8,239	6,391
2039	1,845	1,845	0	1,845	0	1,845	0	1,845	0
2040	1,839	1,839	0	1,839	0	1,839	0	1,839	0
2041	1,839	1,839	0	1,839	0	1,839	0	1,839	0
2042			0		0	0	0	0	0
2043			0		0	0	0	0	0
2044			0		0	0	0	0	0
2045			0		0	0	0	0	0
2046			0		0	0	0	0	0
2047			0		0	0	0	0	0
2048			0		0	0	0	0	0
Total	**$167,876**	**$192,850**	**$24,974**	**$184,954**	**$17,078**	**$190,913**	**$23,036**	**$192,506**	**$24,629**

** Net of estimated 32.59% subsidy on 2010B BABs.*
*** i) Net of Series 2017 DSRF and estimated 1.12% earnings, and ii) Net of estimated 32.59% subsidy on 2010B BABs.*

Financing Scenarios

30-year Final Maturity

	Option 1b **Issue Under 1988 Resolution**	*Option 2b* **Issue Through the VMBB**	*Option 3b* **Issue with State Moral Obligation**
Financing Structure:			
Credit Rating	A-	Aa2/AA+ (est.)	Aa2/AA+ (est.)
Spread to AAA MMD	48-102 bps	25-45 bps	25-45 bps
Rates as of	1/3/2017	1/3/2017	1/3/2017
Security	General obligation	General obligation	General obligation
	No DSRF	DSRF	DSRF
Financial Covenants	None	None	None
Amortization	5 years interest only	5 years interest only	5 years interest only
	Level Debt Service	Level Principal	Level Debt Service
Final Maturity	7/1/2047	7/1/2047	7/1/2047
Sources & Uses of Funds:			
Par Amount	$71,705,000	$73,040,000	$72,250,000
Premium / (Discount)	6,796,106	11,178,735	8,598,188
Total Sources	**$78,501,106**	**$84,218,735**	**$80,848,188**
Escrow Deposit	$66,623,306	$66,623,306	$66,623,306
Swap Termination *	10,797,577	10,797,577	10,797,577
Debt Service Reserve Fund	-	5,699,593	2,336,500
Cost of Issuance (1.5% est.)	1,080,223	1,098,258	1,090,804
Total Uses	**$78,501,106**	**$84,218,735**	**$80,848,188**
Financing Statistics:			
True Interest Cost	4.33%	3.81%	4.15%
Average Maturity (yrs)	20.4	17.7	20.4
Total Debt Service	$144,848,833	$137,537,522	$145,939,049
PV of Gross Debt Service @ 4.5%	$76,286,948	$77,252,402	$76,866,311
Total Net Debt Service *	$144,848,833	$129,912,404	$142,813,196
PV of Net Debt Service @ 4.5%*	$76,286,948	$74,715,399	$75,826,288

** Assumes swaps are integrated and termination payment can be funded with tax-exempt bond proceeds (requires review by Bond Counsel). Swap termination values as of 1/3/2017*

** Assumes DSRF earnings of 1.12% (10-yr avg. of 2yr UST).*

Aggregate Debt Service Requirements

	Status Quo	**Option 1b: 30-year Maturity**		**Option 2b: 30-year Maturity**		**Option 3b: 30-year Maturity**	
Fiscal Year Ending 6/30	**Existing Net Debt Service***	**Net Debt Service***	**vs. Existing**	**Net Debt Service****	**vs. Existing**	**Net Debt Service****	**vs. Existing**
2017	$642	$0	($642)	$0	($642)	$0	($642)
2018	10,678	7,787	(2,891)	7,789	(2,889)	7,788	(2,890)
2019	10,500	8,815	(1,685)	8,818	(1,682)	8,816	(1,684)
2020	9,017	7,325	(1,692)	7,328	(1,689)	7,326	(1,691)
2021	9,008	7,325	(1,683)	7,328	(1,680)	7,326	(1,682)
2022	8,995	7,313	(1,682)	7,316	(1,679)	7,314	(1,680)
2023	8,995	8,655	(340)	10,057	1,062	8,666	(329)
2024	9,007	8,666	(340)	9,924	917	8,677	(330)
2025	8,949	8,612	(337)	9,733	784	8,627	(322)
2026	8,461	8,337	(124)	9,315	854	8,351	(110)
2027	8,252	8,331	80	9,171	920	8,344	93
2028	44,683	8,358	(36,325)	9,053	(35,629)	8,370	(36,313)
2029	3,299	8,100	4,802	8,656	5,357	8,112	4,813
2030	3,161	8,090	4,929	8,505	5,344	8,100	4,940
2031	3,161	8,089	4,928	8,365	5,204	8,100	4,939
2032	3,157	8,085	4,928	8,220	5,063	8,099	4,942
2033	3,151	8,079	4,927	8,074	4,923	8,087	4,936
2034	1,849	6,774	4,926	6,631	4,782	6,787	4,938
2035	1,849	6,778	4,929	6,491	4,642	6,790	4,940
2036	1,847	6,777	4,930	6,349	4,501	6,788	4,940
2037	1,847	6,776	4,929	6,208	4,361	6,786	4,939
2038	1,848	6,775	4,927	6,068	4,220	6,783	4,936
2039	1,845	6,773	4,928	5,925	4,080	6,780	4,935
2040	1,839	6,764	4,926	5,778	3,939	6,776	4,937
2041	1,839	6,764	4,925	5,638	3,799	6,779	4,940
2042		4,927	4,927	3,658	3,658	4,935	4,935
2043		4,929	4,929	3,518	3,518	4,941	4,941
2044		4,927	4,927	3,377	3,377	4,938	4,938
2045		4,930	4,930	3,232	3,232	4,940	4,940
2046		4,928	4,928	3,092	3,092	4,941	4,941
2047		4,930	4,930	2,952	2,952	4,936	4,936
2048		4,930	4,930	(2,856)	(2,856)	2,611	2,611
Total	**$167,876**	**$218,650**	**$50,774**	**$203,713**	**$35,837**	**$216,614**	**$48,738**

** Net of estimated 32.59% subsidy on 2010B BABs.*
*** i) Net of Series 2017 DSRF and estimated 1.12% earnings, and ii) Net of estimated 32.59% subsidy on 2010B BABs.*

Vermont State Colleges
Outstanding Debt Service Requirements

Issue	2005			2008			2009			2010A			2010B					2013			Aggregate		
FY	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Principal	Interest	Debt Service	2010B BAB Subsidy	Net Debt Service	Principal	Interest	Debt Service	Total Principal	Total Interest*	Total Debt Service*
2017	45	24	69	289	246	536	20	17	38												354	288	642
2018	276	137	413	1,783	2,851	4,634	125	99	224	1,865	97	1,962		2,006	2,006	(654)	1,353	1,460	632	2,092	5,509	5,169	10,678
2019	290	123	413	1,868	2,766	4,633	131	92	224	1,190	30	1,220	1,485	1,971	3,456	(642)	2,814	605	591	1,196	5,569	4,931	10,500
2020	305	109	414	1,956	2,683	4,640	138	86	224				1,135	1,908	3,043	(622)	2,421	755	564	1,319	4,289	4,728	9,017
2021	321	92	413	2,049	2,583	4,631	145	78	223				1,180	1,850	3,030	(603)	2,427	780	533	1,313	4,475	4,533	9,008
2022	337	76	413	2,146	2,484	4,631	153	70	223				1,215	1,782	2,997	(581)	2,417	810	501	1,311	4,661	4,333	8,995
2023	355	59	413	2,248	2,382	4,629	161	62	223				1,265	1,707	2,972	(556)	2,416	845	468	1,313	4,874	4,121	8,995
2024	373	40	414	2,354	2,280	4,635	170	53	222				1,320	1,628	2,948	(530)	2,417	885	434	1,319	5,102	3,905	9,007
2025	393	21	414	2,466	2,161	4,627	179	44	222				1,340	1,547	2,887	(504)	2,383	910	393	1,303	5,287	3,662	8,949
2026	201	3	204	2,583	2,043	4,626	188	34	222				1,115	1,472	2,587	(480)	2,107	955	347	1,302	5,042	3,419	8,461
2027				2,705	1,920	4,625	198	24	221				1,160	1,398	2,558	(456)	2,102	1,005	298	1,303	5,068	3,183	8,252
2028				39,319	1,714	41,034	208	13	221				1,220	1,316	2,536	(429)	2,107	1,065	255	1,320	41,813	2,870	44,683
2029							125	2	127				1,020	1,240	2,260	(404)	1,856	1,095	220	1,315	2,240	1,058	3,299
2030													1,065	1,168	2,233	(381)	1,852	1,125	183	1,308	2,190	971	3,161
2031													1,115	1,093	2,208	(356)	1,852	1,165	144	1,309	2,280	881	3,161
2032													1,170	1,013	2,183	(330)	1,853	1,210	94	1,304	2,380	777	3,157
2033													1,225	926	2,151	(302)	1,850	1,270	32	1,302	2,495	656	3,151
2034													1,285	836	2,121	(272)	1,849				1,285	564	1,849
2035													1,350	741	2,091	(241)	1,849				1,350	499	1,849
2036													1,415	641	2,056	(209)	1,847				1,415	432	1,847
2037													1,485	537	2,022	(175)	1,847				1,485	362	1,847
2038													1,560	427	1,987	(139)	1,848				1,560	288	1,848
2039													1,635	312	1,947	(102)	1,845				1,635	210	1,845
2040													1,710	191	1,901	(62)	1,839				1,710	129	1,839
2041													1,795	65	1,860	(21)	1,839				1,795	44	1,839
Total	**$2,896**	**$685**	**$3,581**	**$61,766**	**$26,114**	**$87,881**	**$1,941**	**$672**	**$2,613**	**$3,055**	**$127**	**$3,182**	**$30,265**	**$27,774**	**$58,039**	**($9,050)**	**$48,989**	**$15,940**	**$5,691**	**$21,631**	**$115,864**	**$52,013**	**$167,876**

*Net of BAB subsidy of 32.59%

Item 3:
Sightlines Presentation to University of Maine

Back to Agenda

Maine's Public Universities
UNIVERSITY OF MAINE SYSTEM

ITEM SUMMARY

1. NAME OF ITEM: Sightlines Annual Facilities Report

2. INITIATED BY: James H. Page, Chancellor

3. BOARD INFORMATION: X **BOARD ACTION:**

4. BACKGROUND:

10

Attached is the annual Return on Physical Asset (ROPA+) presentation from Sightlines regarding the University of Maine System's facilities and facility management operations.

While the entire report is attached for Trustee's information, in the interest of time only those slides with a star in the lower left corner will be reviewed at the March 14-15 Board meeting.

Overall, the Sightlines data continues to reflect a challenging situation in which the University's renovation age, density and other metrics generally have worsened year over year.

Slides of potential particular interest may include:

a. Slide 5 provides a very broad overview of Sightlines annual findings.

b. Slides 9, 17 and 27 contain updated data for the familiar density, net asset value and 50+ year renovation age metrics.

c. Slides 50-57 provide a "Roadmap for the Future" which is a newly available analysis that uses data to help answer questions about what kind of investment or other changes will be needed to arrest and improve the worsening Key Performance Indicators which Trustees have adopted.

Sightlines will be available to present and discuss the annual report.

03/03/2016

10.1

Vanderbilt University
Virginia Commonwealth University
Virginia Department of General Services
Wagner College
Wake Forest University
Washburn University
Washington University in St. Louis
Wellesley College
Wesleyan University
West Chester University
West Liberty University
West Virginia Health Science Center
West Virginia Institute of Technology
West Virginia School of Osteopathic Medicine
West Virginia State University
West Virginia University
Western Connecticut State University
Western Oregon University
Westfield State University
Wheaton College
Widener University

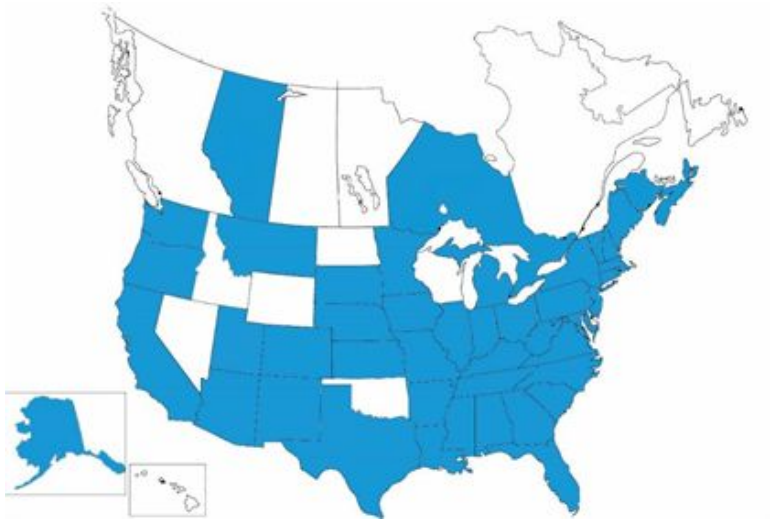
sightlines | ROPA+

The University of Maine System

Presenters: Emily Morris, Jon King, and Dan Scott
March 2016

Who Partners with Sightlines?

Robust membership includes colleges, universities, consortiums and state systems



Serving the Nation's Leading Institutions:

- **70% of the Top 20 Colleges***
- **75% of the Top 20 Universities***
- **34 Flagship State Universities**
- **13 of the 14 Big 10 Institutions**
- **9 of the 12 Ivy Plus Institutions**
- **8 of 13 Selective Liberal Arts Colleges**

* U.S. News Rankings

Sightlines is proud to announce that:

- 450 colleges and universities are Sightlines clients including over 325 ROPA members.
- 93% of ROPA members renewed in 2014
- We have clients in 42 states, the District of Columbia and four Canadian provinces
- More than 100 new institutions became Sightlines members since 2013

Sightlines advises state systems in:

- Alaska
- California
- Connecticut
- Hawaii
- Maine
- Massachusetts
- Minnesota
- Mississippi
- Missouri
- Nebraska
- New Hampshire
- New Jersey
- Pennsylvania
- Texas
- West Virginia

2

10.1

A Vocabulary for Measurement

The Return on Physical Assets – ROPA℠

Annual Stewardship	Asset Reinvestment	Operational Effectiveness	Service
The annual investment needed to ensure buildings will properly perform and reach their useful life ***"Keep-Up Costs"***	The accumulation of repair and modernization needs and the definition of resource capacity to correct them ***"Catch-Up Costs"***	The effectiveness of the facilities operating budget, staffing, supervision, and energy management	The measure of service process, the maintenance quality of space and systems, and the customers opinion of service delivery

Asset Value Change ***Operations Success***

10.1

A Vocabulary for Measurement

The Return on Physical Assets – ROPA℠

Annual Stewardship	Asset Reinvestment	Operational Effectiveness	Service
Operating Budget Planned Maintenance Funded Depreciation ***"Keep-Up Costs"***	State Funding University Revenue Campus Capital Accounts Bonds, Grants, Gifts ***"Catch-Up Costs"***	Facilities Operating Budget Staffing and Supervision Energy Cost and Consumption	Work Order Process Analysis Campus Inspection Customer Satisfaction Survey

Asset Value Change ***Operations Success***

10.1

Core Challenges Within UMS

- The density of the UMaine System is decreasing. In FY2015, density reached 301 users/100K GSF and is below the Sightlines public average of 466 users/100K GSF.

- Campus space is aging over time with 40% of space over 50 years old. This trend is expected to continue in the next 5 years.

- Minimal capital investment has decreased the Net Asset Value of UMS buildings. The current Net Asset Value of the UMaine System is 57%

The Sightlines Paradigm

A framework for integrated planning

Peer System Comparisons

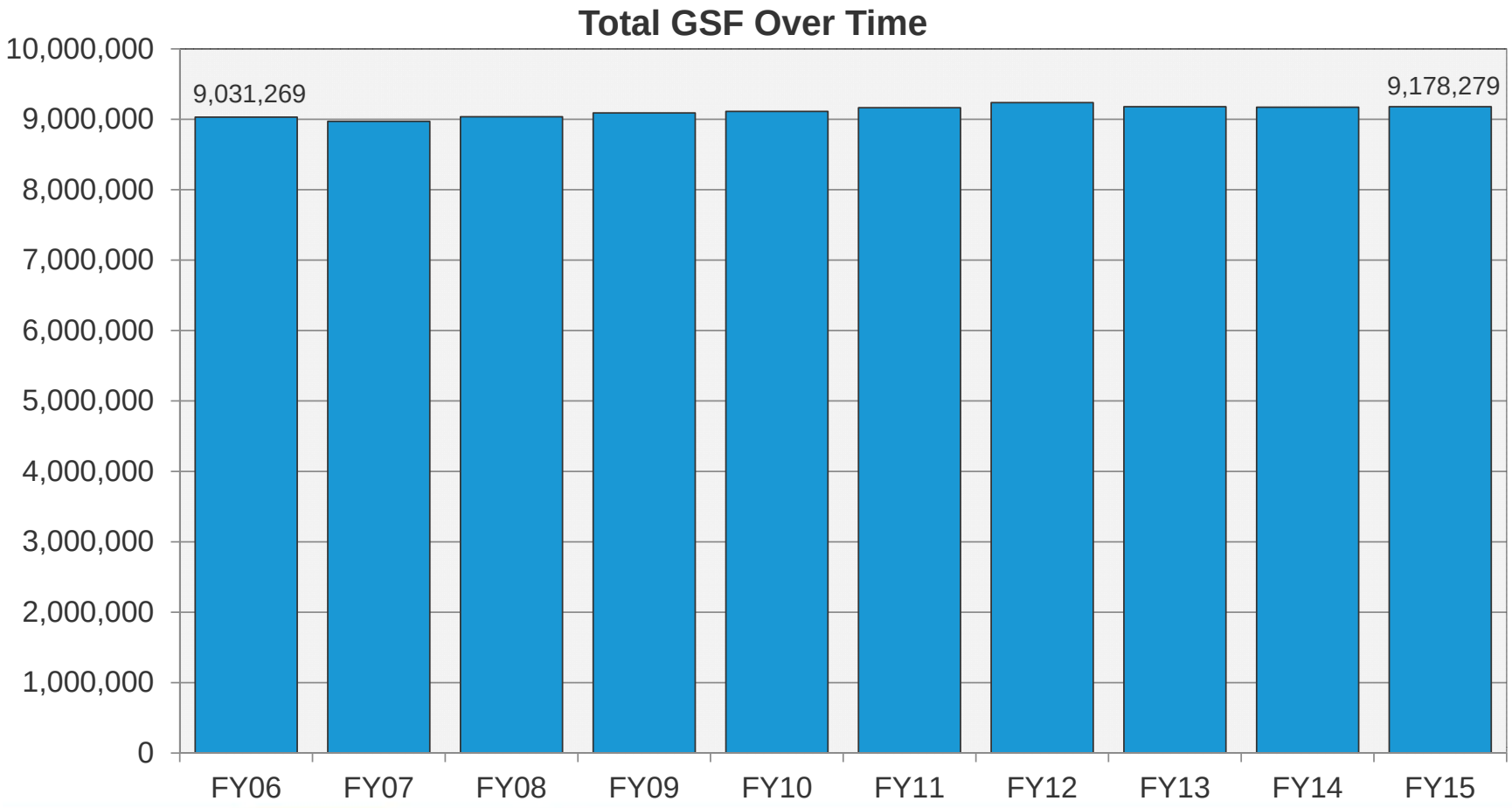
State System Comparisons
Connecticut State University System
Massachusetts State Universities
Mississippi Institutions of Higher Learning
Oregon University System
Pennsylvania State System of Higher Education
University of Alaska System
University of Missouri System

Comparative Considerations

Size, technical complexity, region, geographic location, and setting are all factors included in the selection of peer institutions

Total GSF Over Time

Campus GSF has increased minimally from the beginning of the analysis



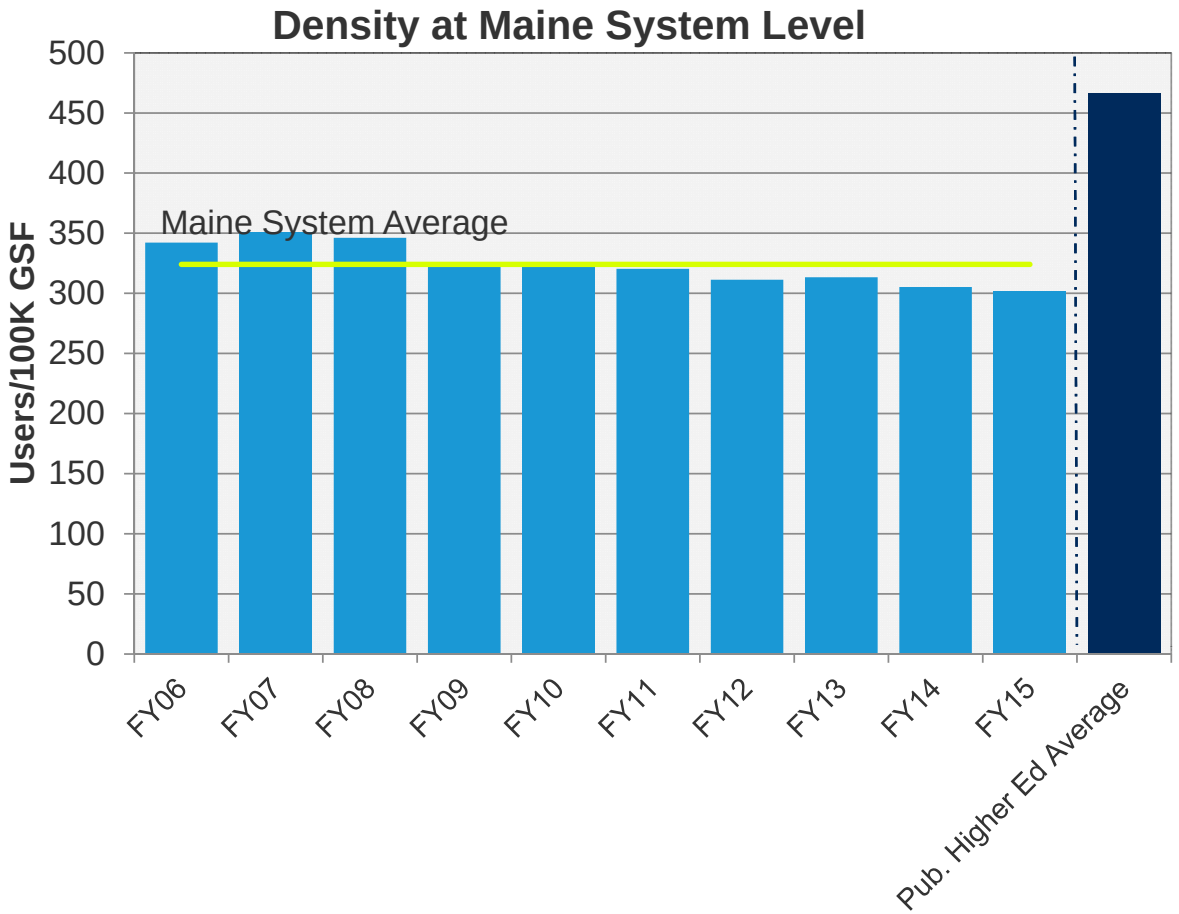
*GSF captured in the analysis is all space that Facilities is responsible for from a maintenance, capital, and energy standpoint

8

10.1

Maine System Density Continues to Decline

System over 100 users per 100k GSF less than public Higher Ed. average in FY15



Density: Measures number of users per 100,00 GSF

Users include all student, faculty, and staff FTEs

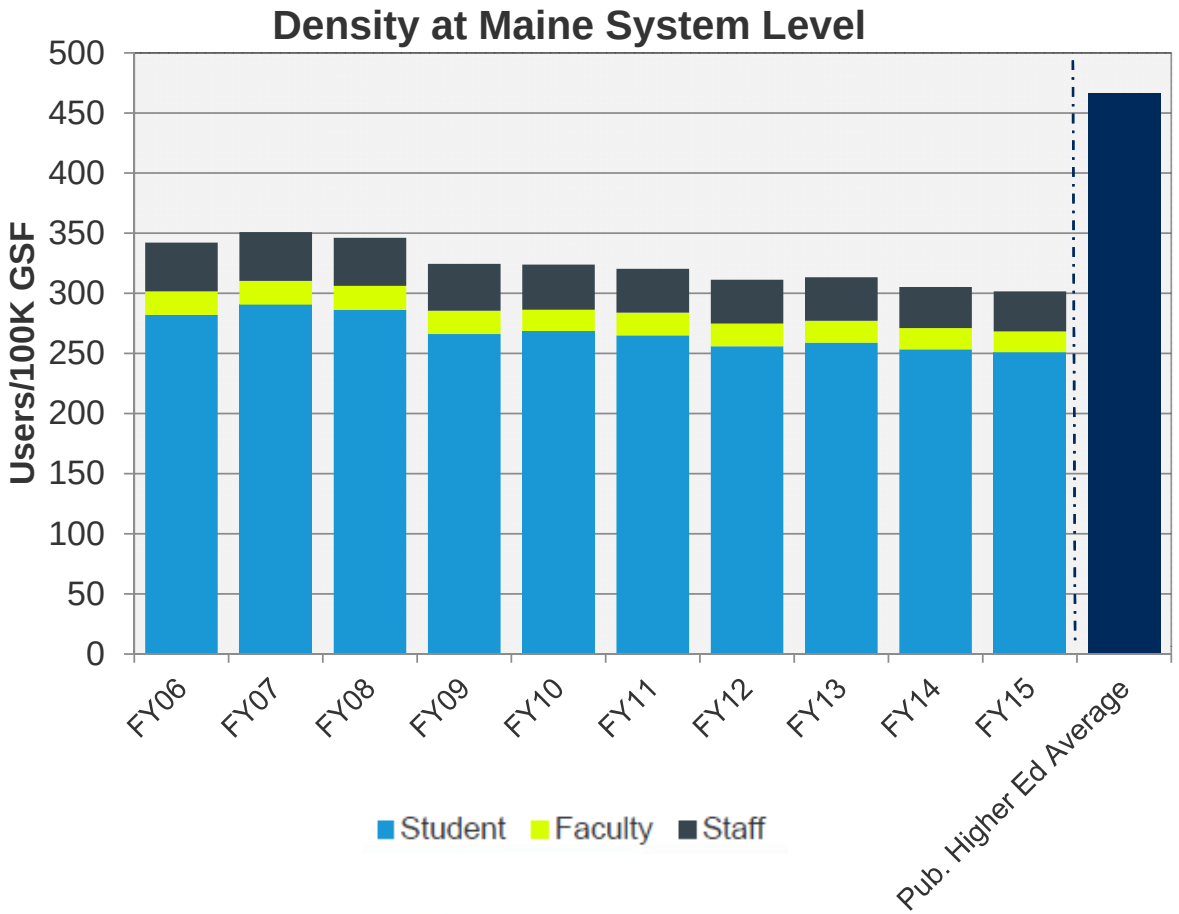
Measures campus building usage on a daily basis

10.1

9

**UMS Key Performance Indictor*

Decreasing Primarily from Student & Staff FTEs



Density: Measures number of users per 100,00 GSF

Users include all student, faculty, and staff FTEs

Measures campus building usage on a daily basis

*Campus footprint has increased by less than 150k GSF during the scope of the analysis

10

10.1

Post-War Buildings are on Average 52 Years Old

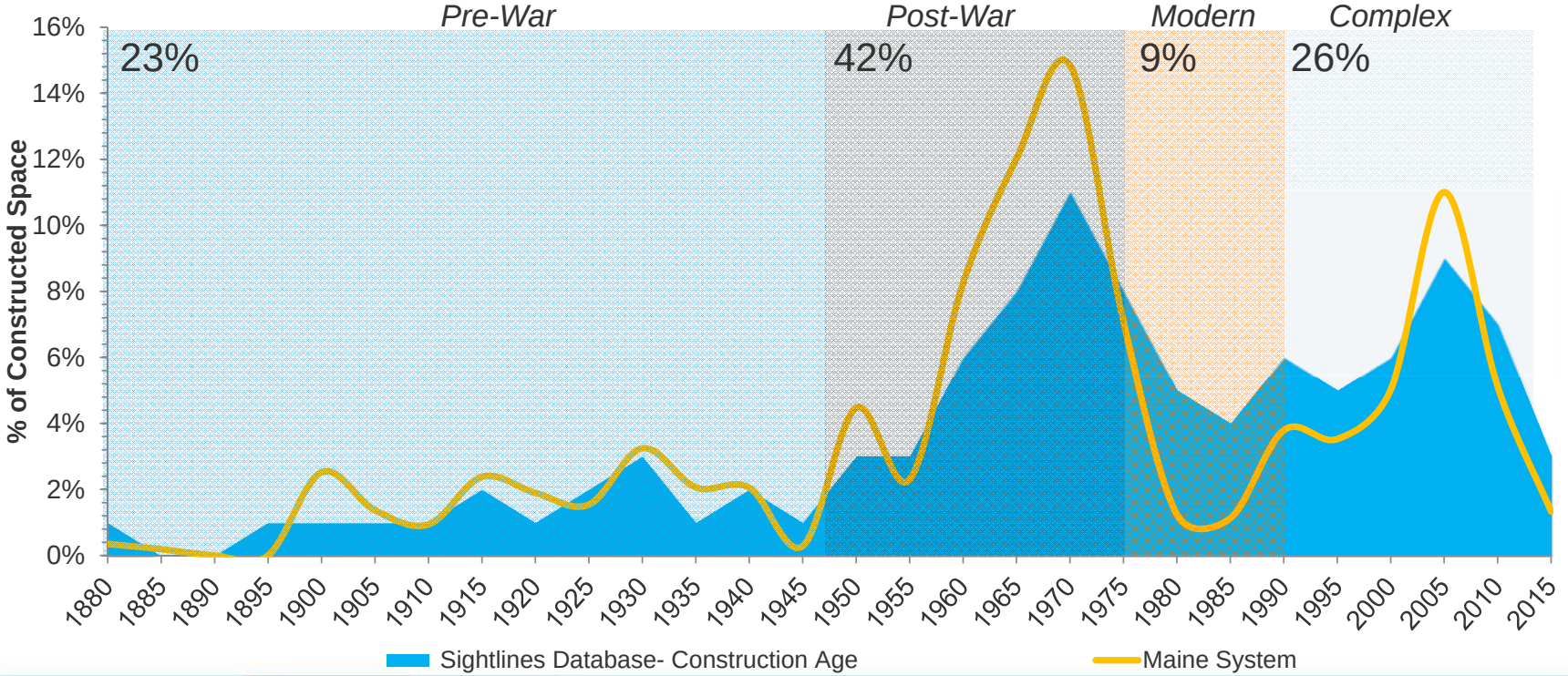
Funding sources should be allocated based on age of the buildings

Pre-War
- Built before 1951
- Durable construction
- Older but typically lasts longer

Post-War
- Built from 1951 to 1975
- Lower-quality construction
- Already needing more repairs and renovations

Modern
- Built from 1976 to 1990
- Quick-flash construction
- Low-quality building components

Complex
- Built in 1991 and newer
- Technically complex spaces
- Higher-quality, more expensive to maintain & repair



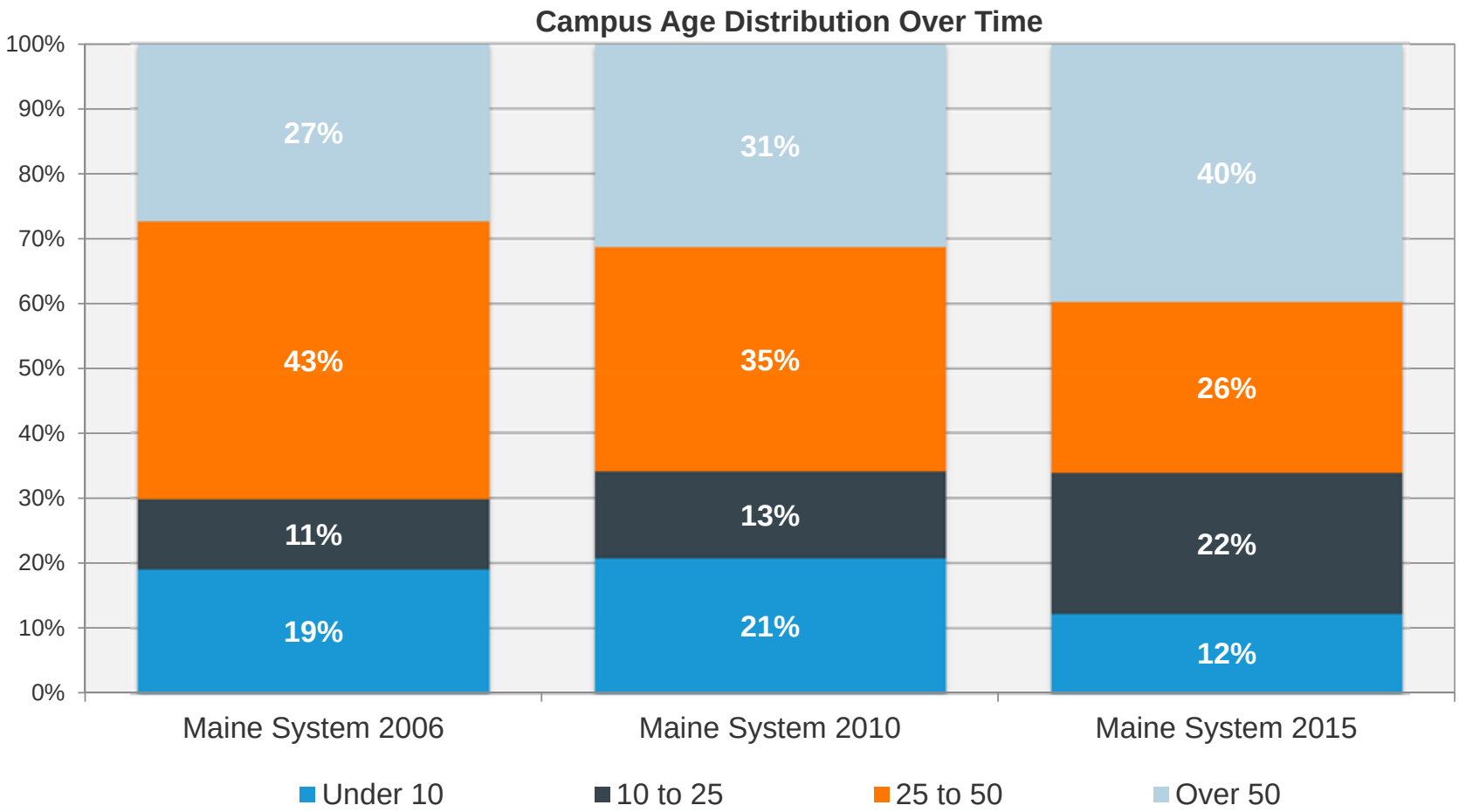
11

sightlines

10.1

Space Over 50 is Growing

Consistent distribution of high risk space over the years



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Space Over 50 is Growing

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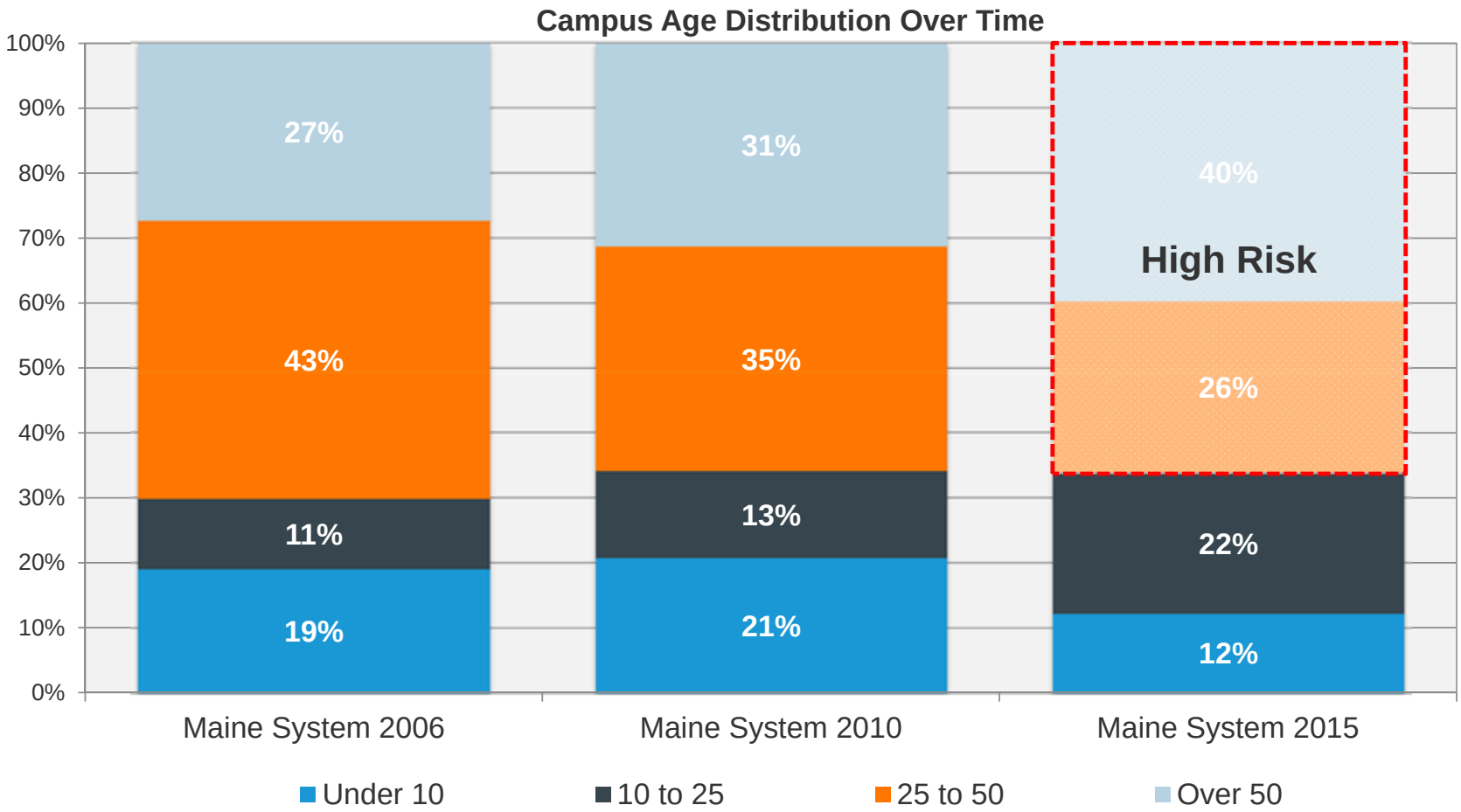
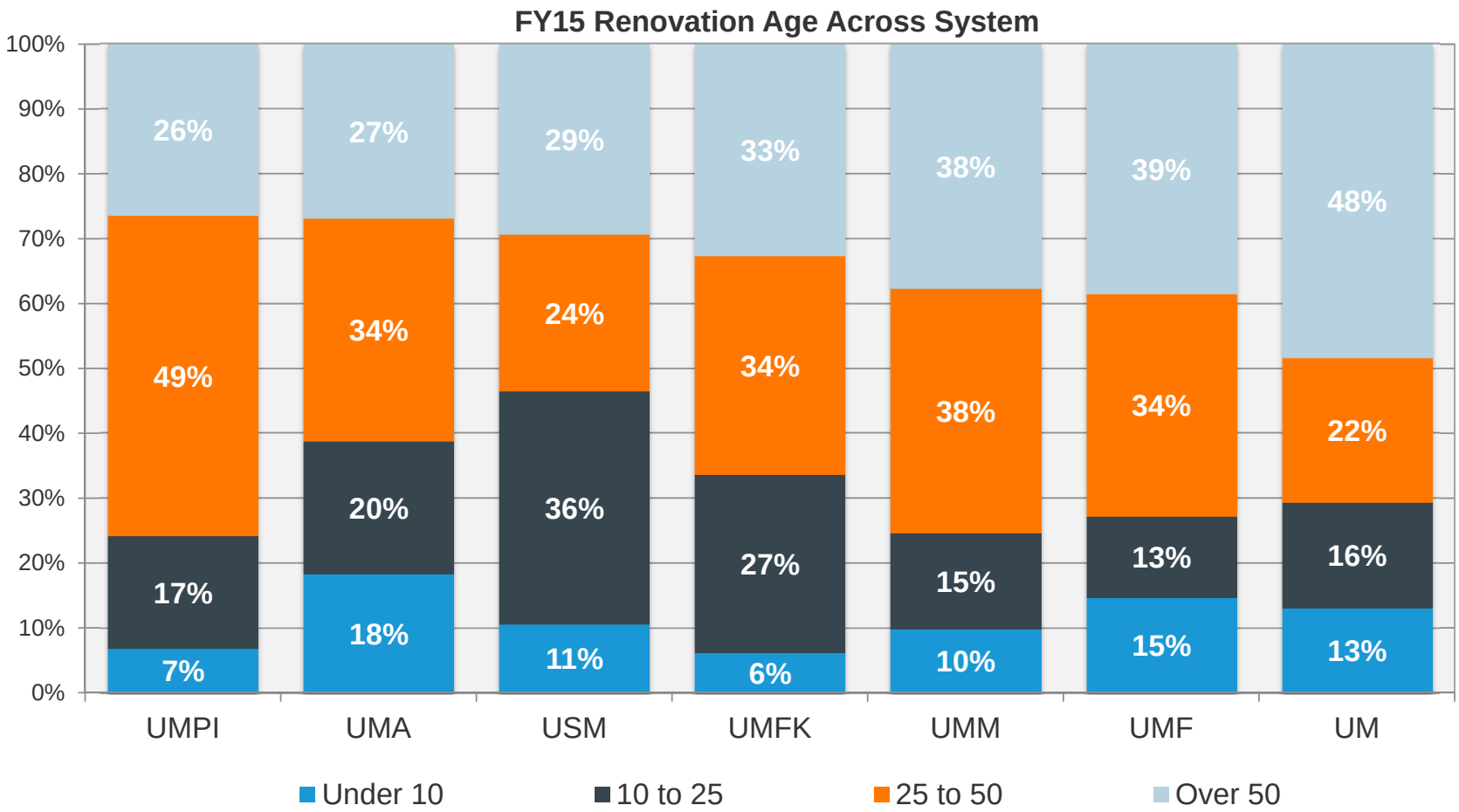


10.1

All Campuses Facing High Risk Profile

UMaine has the largest majority of space over 50 in the system



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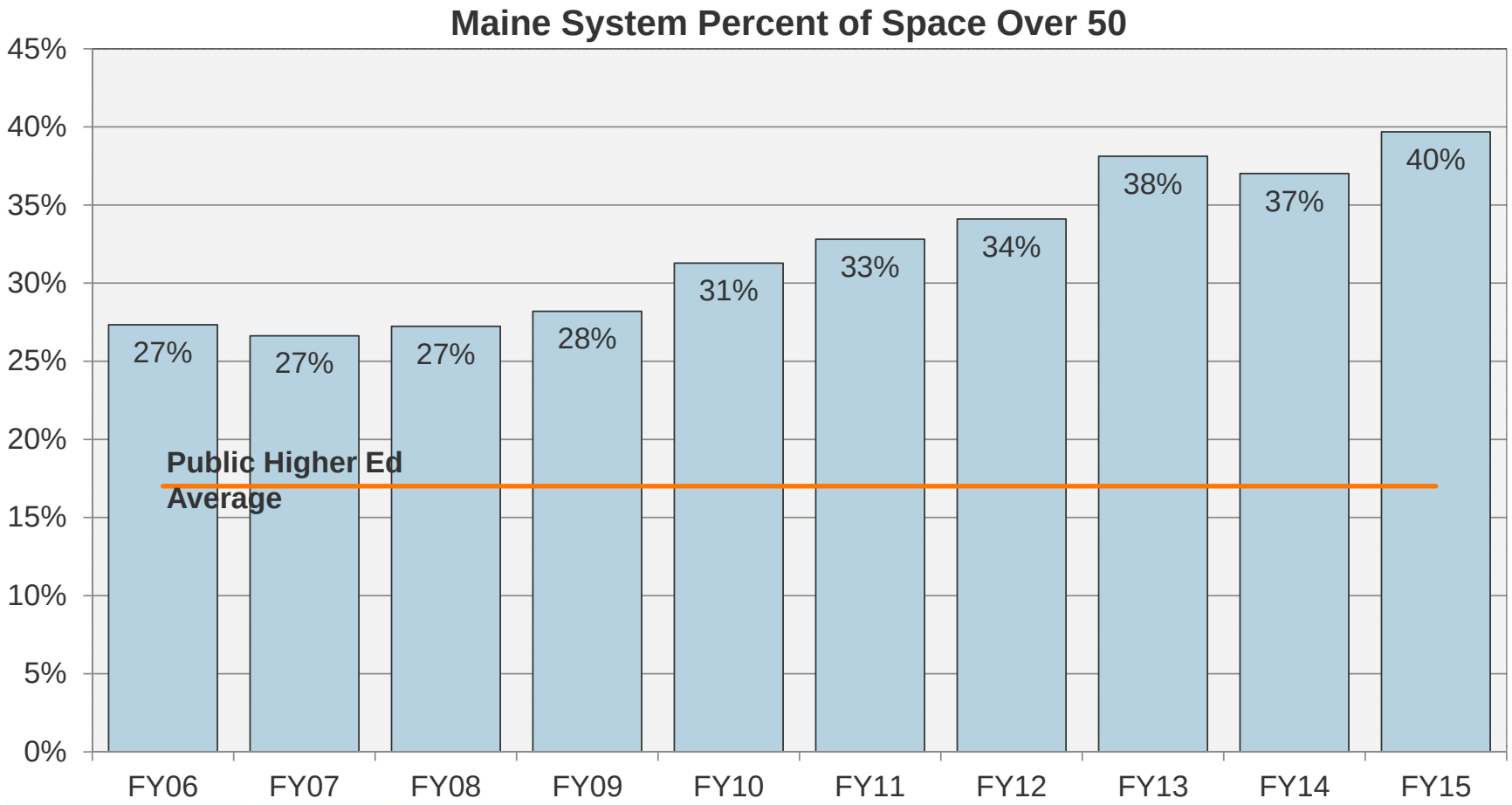
sightlines

10.1

Space Over 50 Growing in the UMS

UM and USM are Main Drivers of Increase



15

sightlines

10.1

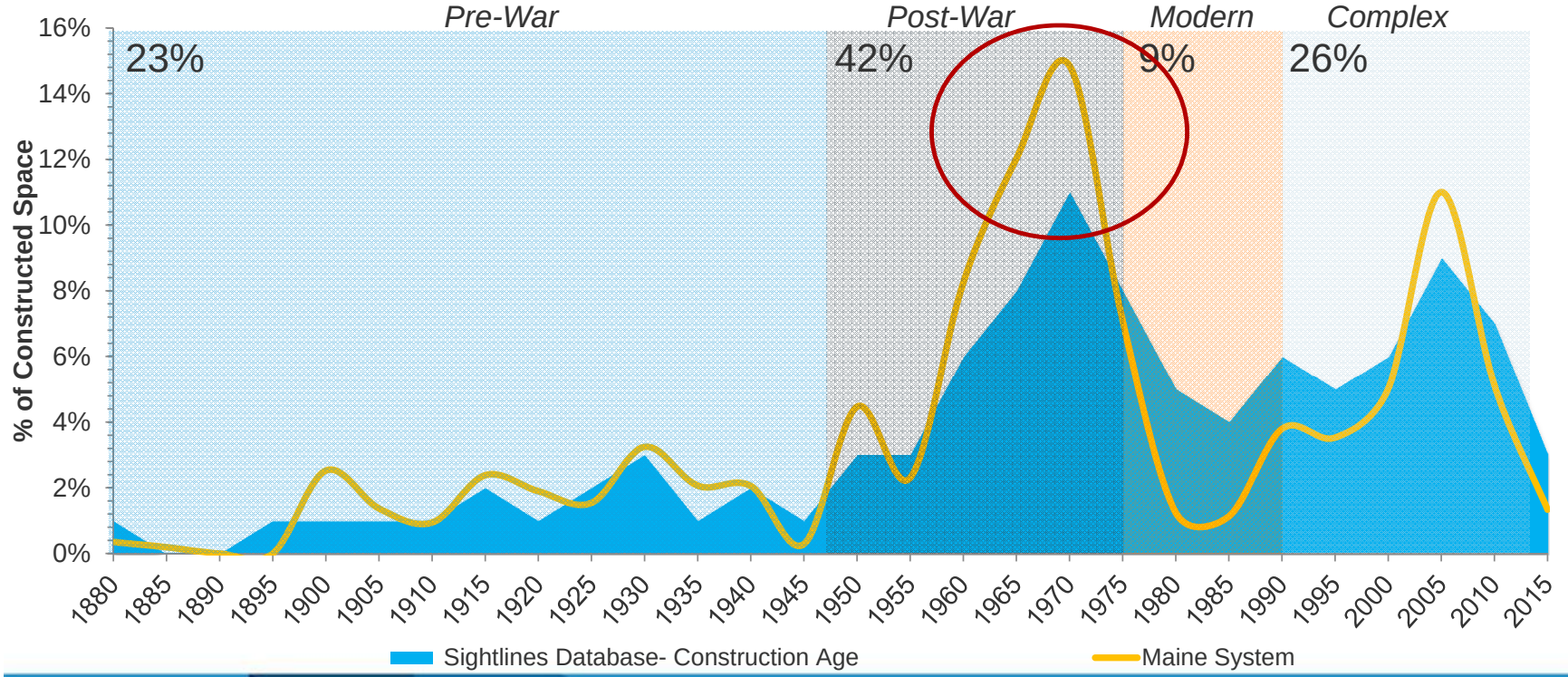
UMS Peak Construction is Turning 50

Pre-War
Built before 1951
Durable construction
Older but typically lasts longer

Post-War
Built from 1951 to 1975
Lower-quality construction
Already needing more repairs and renovations

Modern
Built from 1976 to 1990
Quick-flash construction
Low-quality building components

Complex
Built in 1991 and newer
Technically complex spaces
Higher-quality, more expensive to maintain & repair



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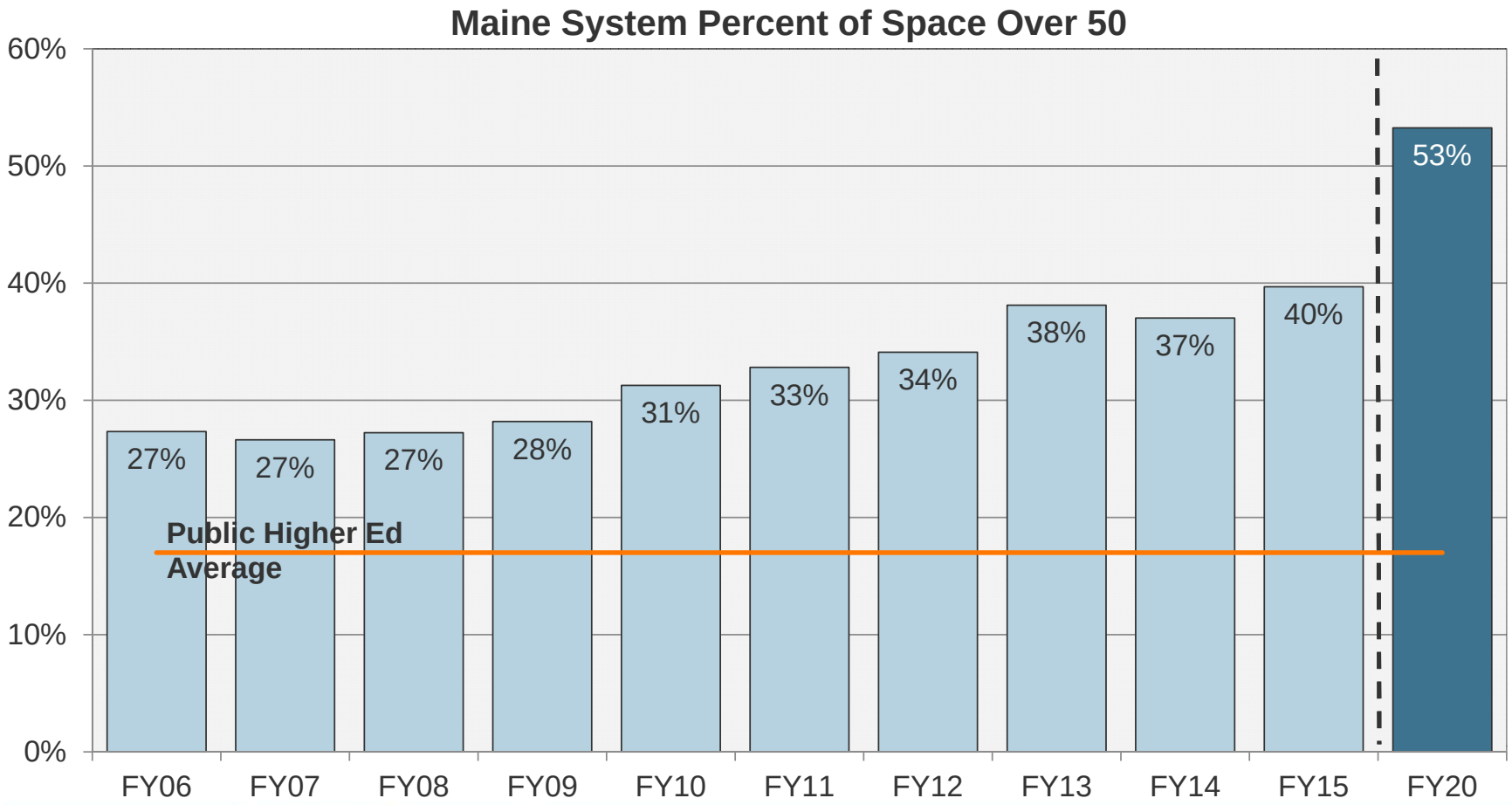
sightlines

10.1

By 2020 53% of Space Will Be Over 50 Years Old

Plan now for major life cycle replacements in these buildings



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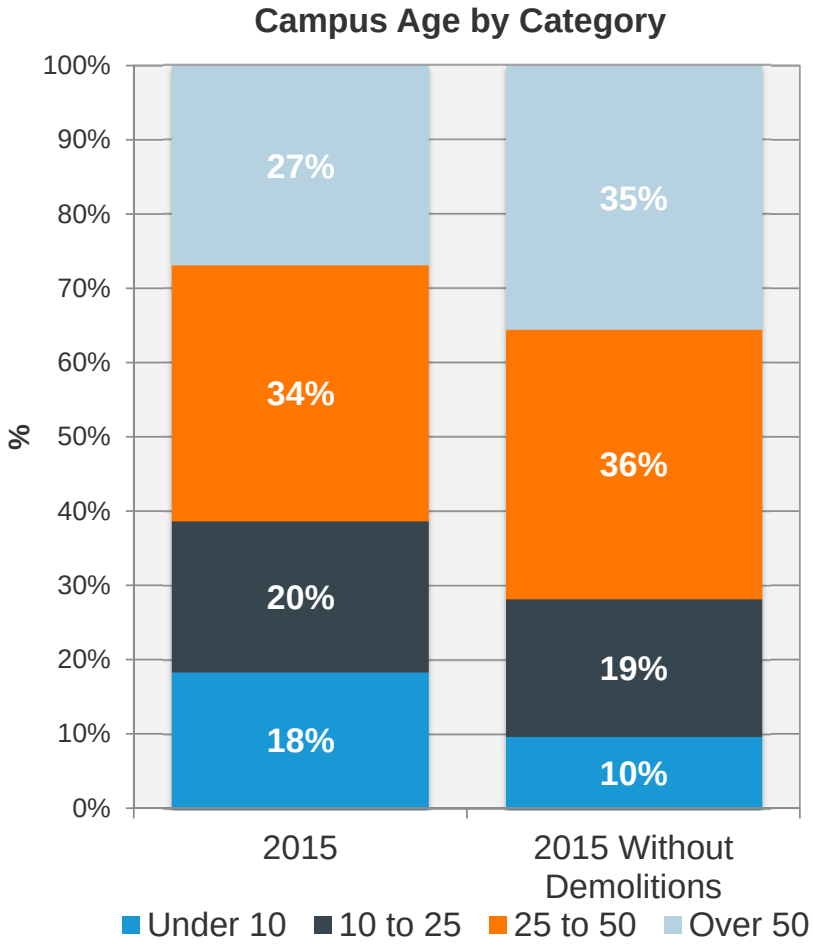
sightlines

10.1

UMA: Demolition Case Study

The effect demolitions and removals from inventory has effected age



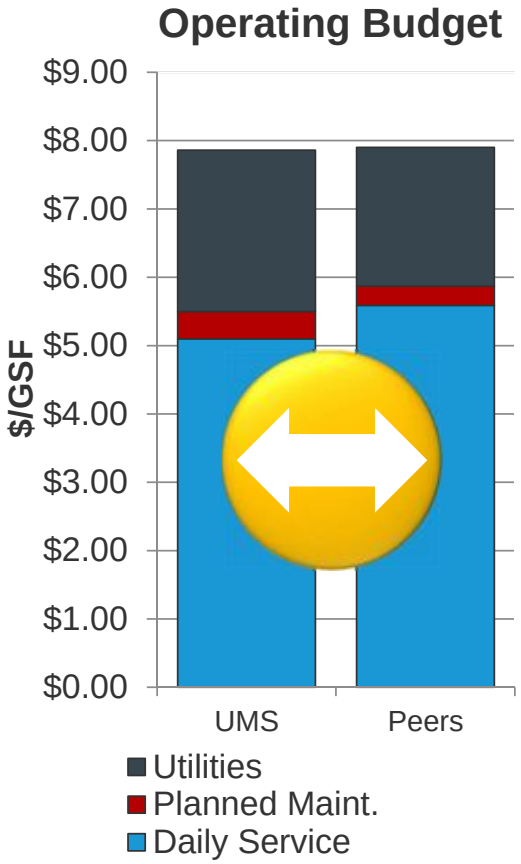
Building	Year Removed
Augusta Hall	2010
Campus Center East/West	2011
Caribou Hall	2011
Mailroom	2012
Katahdin Hall	2013
Maintenance Shop	2013
Schoodic Hall	2013

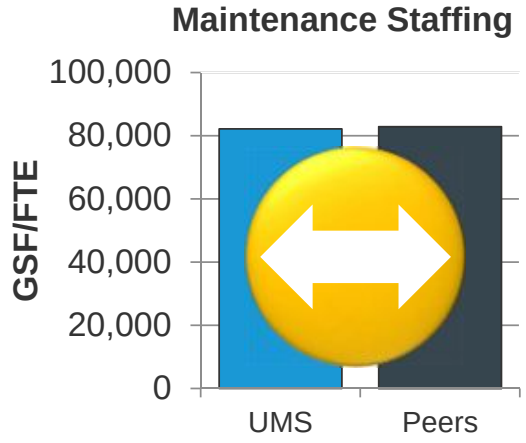
Through demolitions or removals from inventory, UMA has been able to reduce it's "high risk" space by 10% and it's space over 50 by 8%

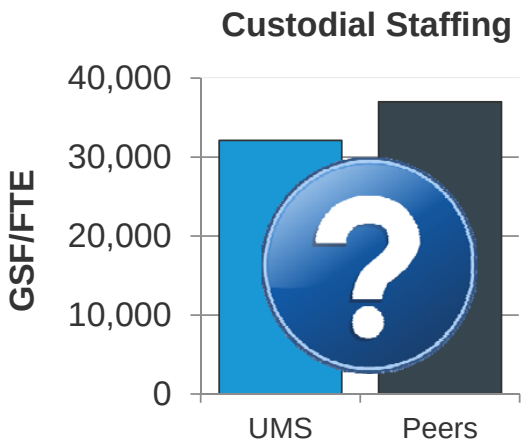
10.1

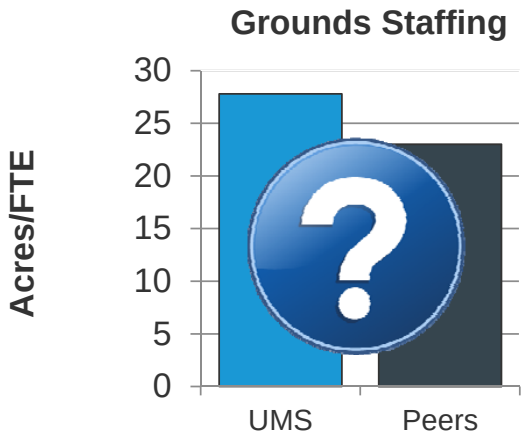
Operations Dashboard

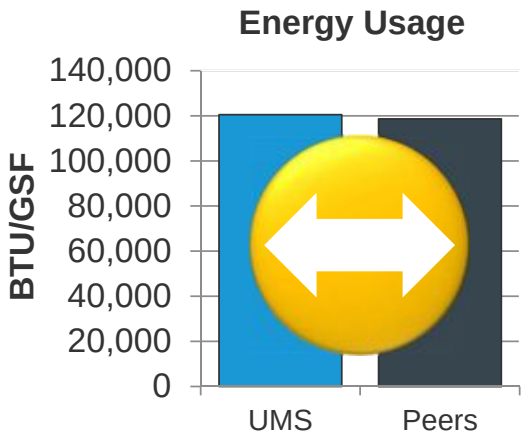
Metrics used to assess operations success







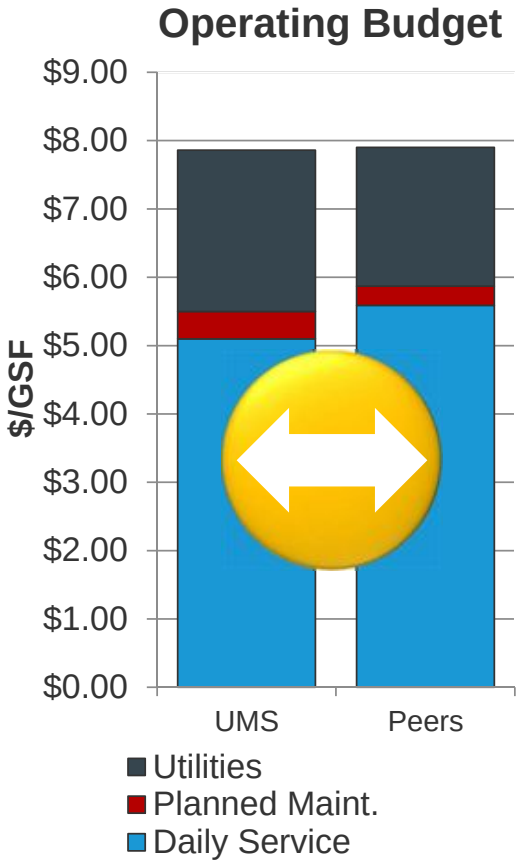


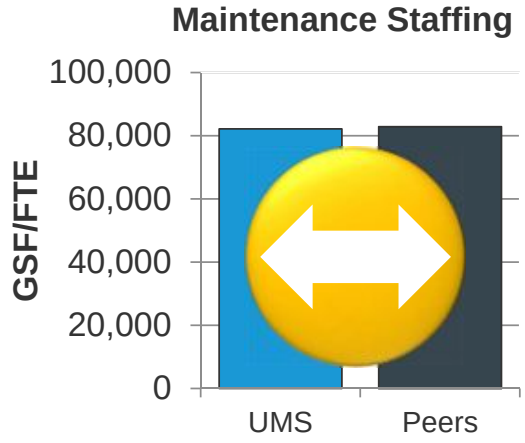


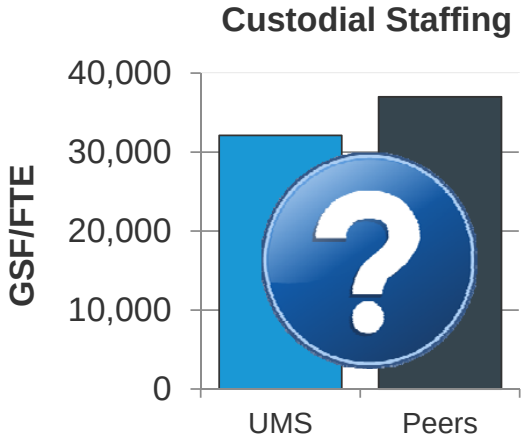
10.1

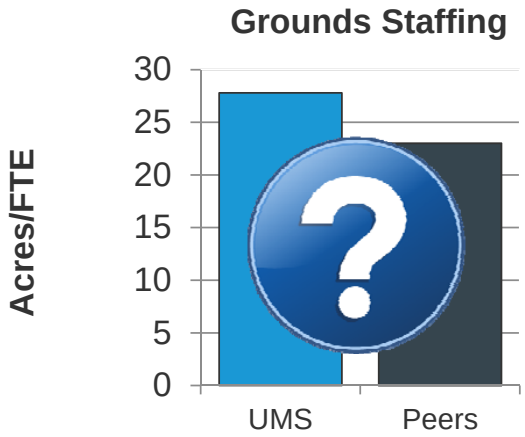
Operations Dashboard

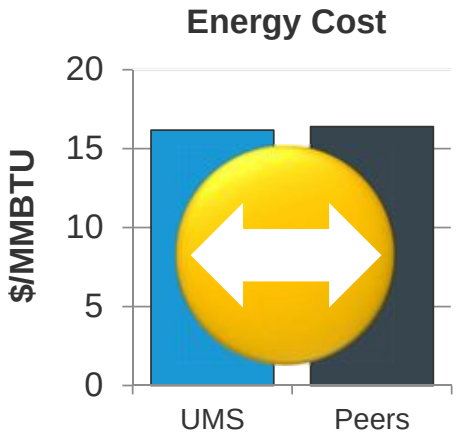
Metrics used to assess operations success







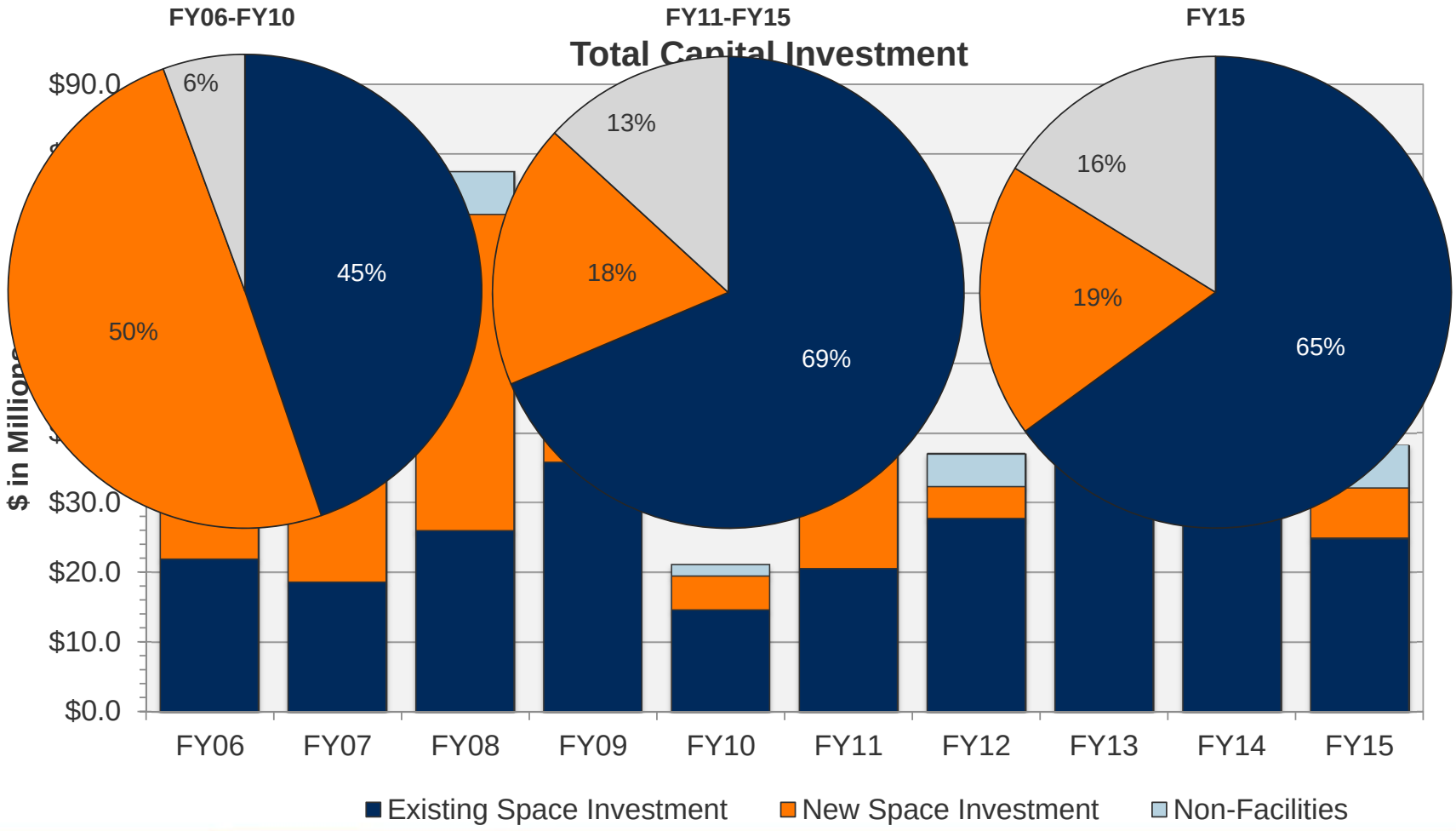




10.1

Maine System Has Seen Waves of Investment

Smaller focus in new space in the recent years



Examples of Non-Facilities work include: Study/Design fees, IT work, and demolition costs. These are necessary capital costs for Facilities Operations but do not add value/enhance existing buildings.

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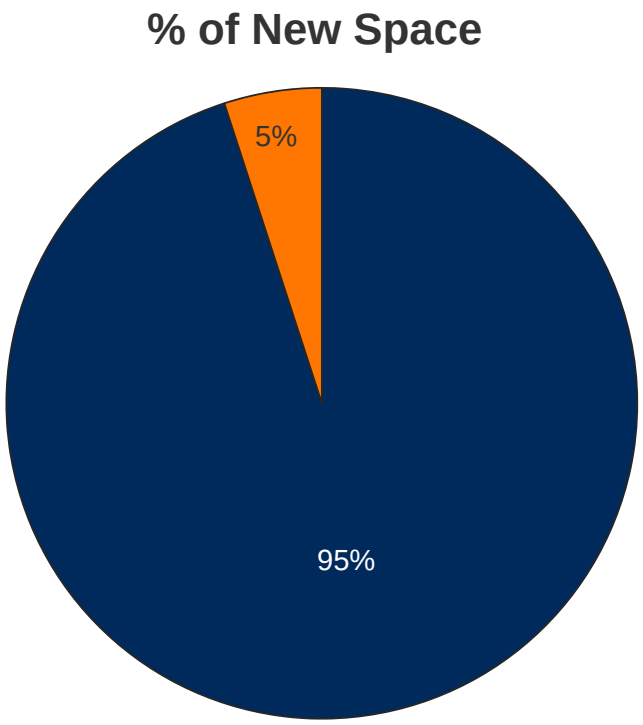
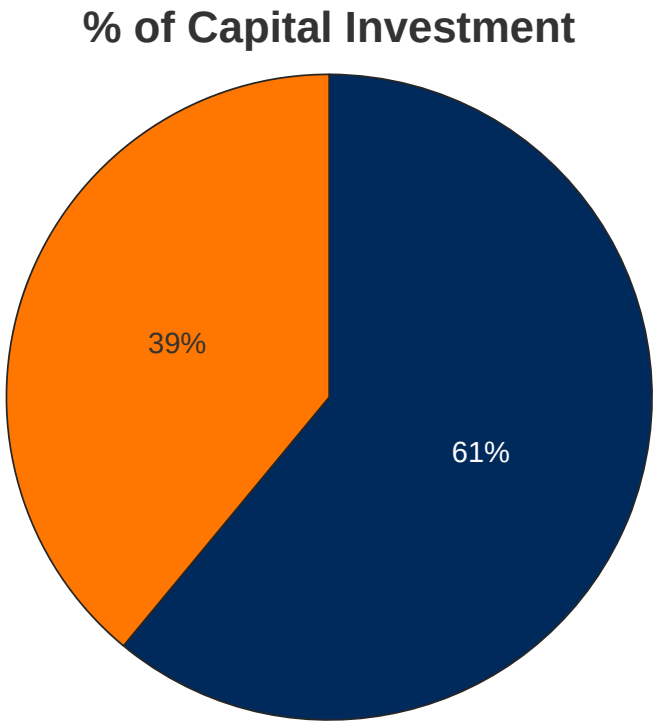
10.1

New Space Funding Impacts Limited % of GSF





Existing Space New Space

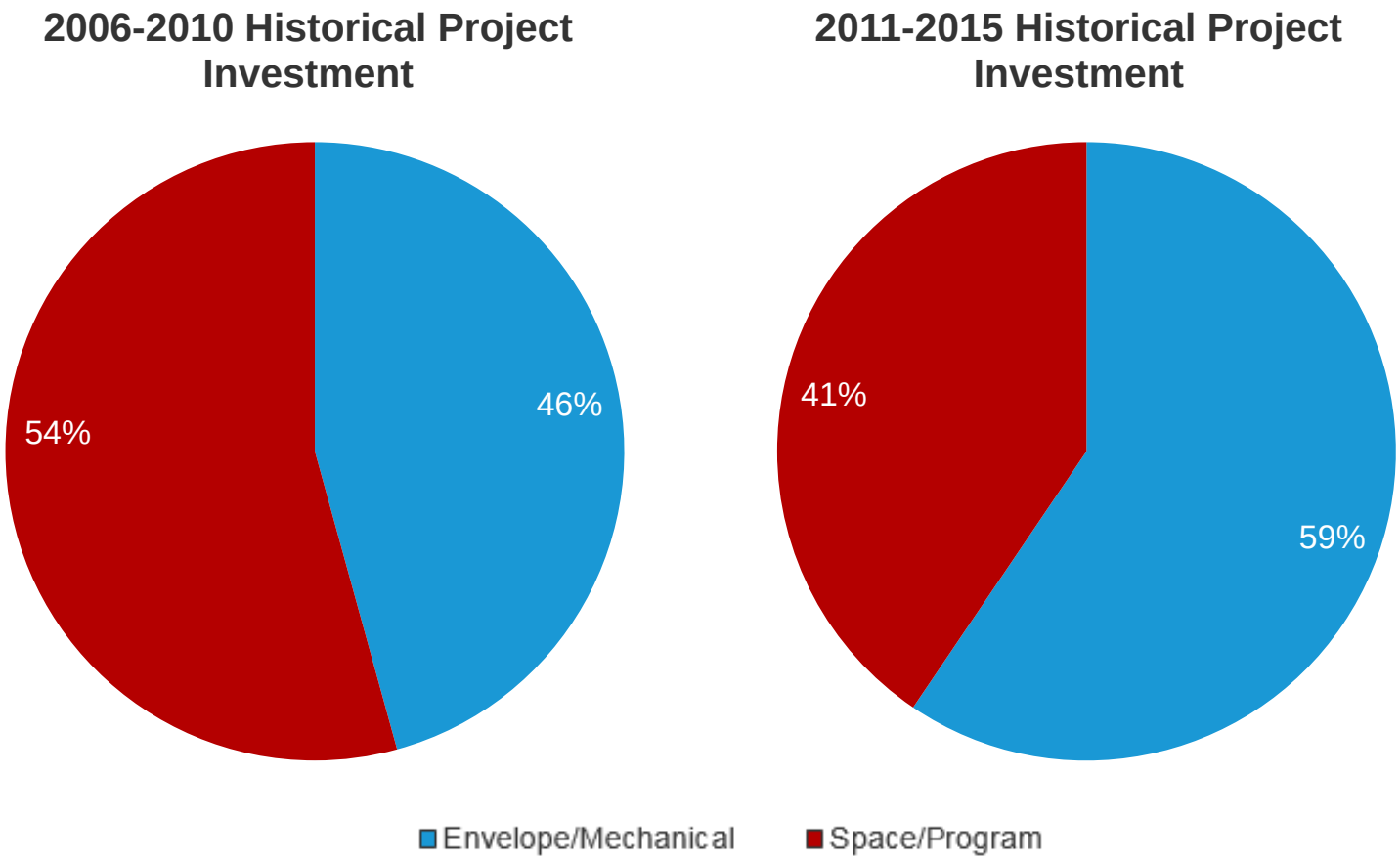
22

sightlines

10.1

Shift in Investment in Recent Years

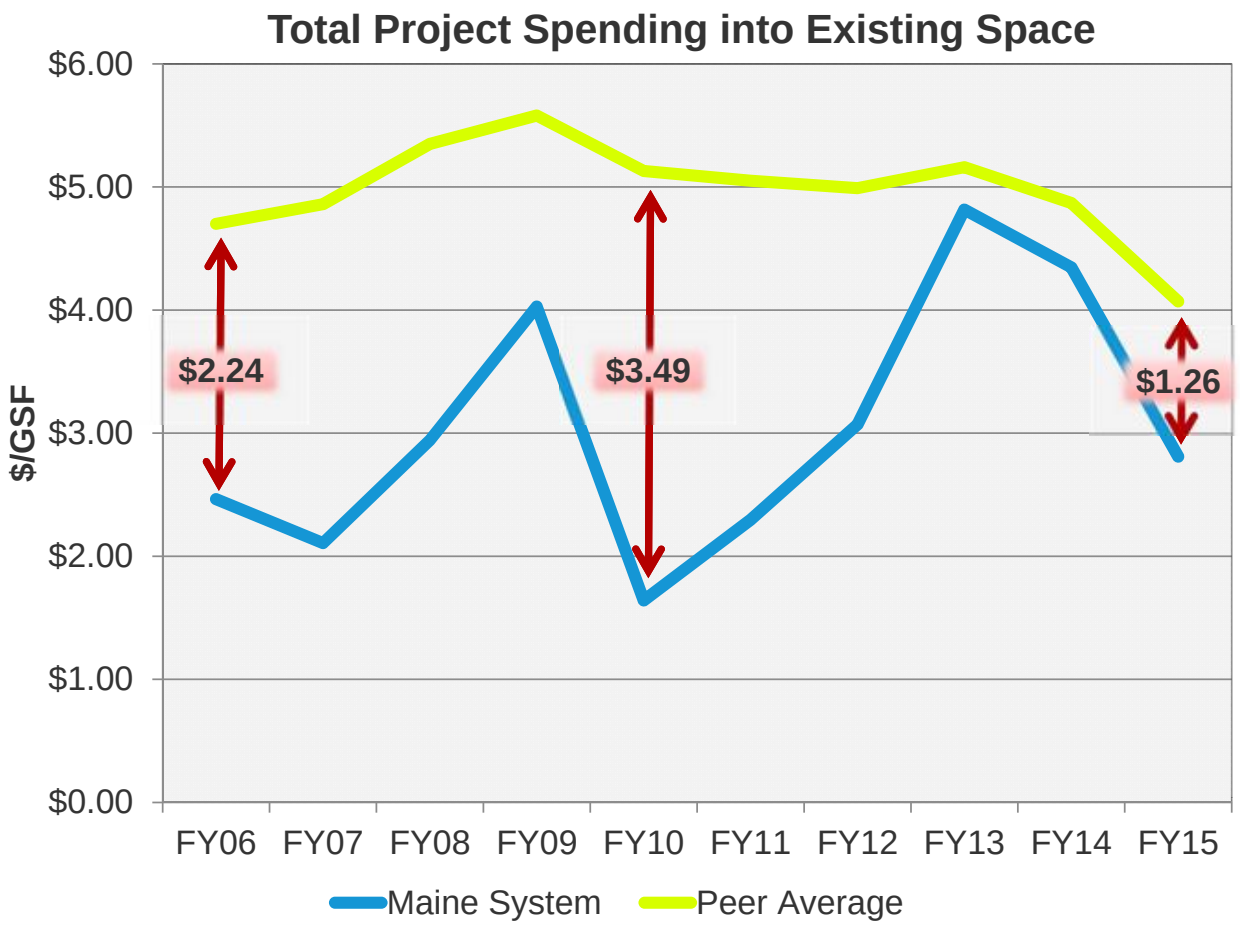
Envelope and mechanical investments offer a greater ROI

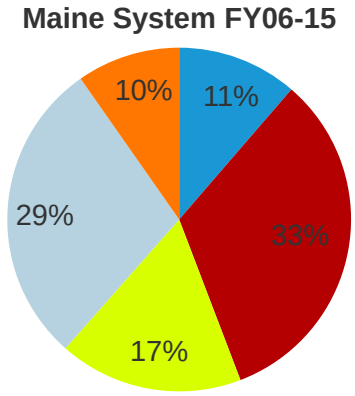


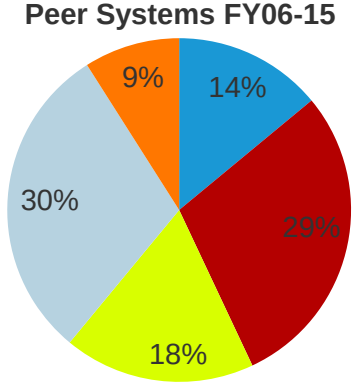
10.1

Maine System Unable to Achieve Peer Levels

Project selection is comparable to peer breakout







Building Envelope
Building Systems
Infrastructure
Space Renewal
Safety/Code

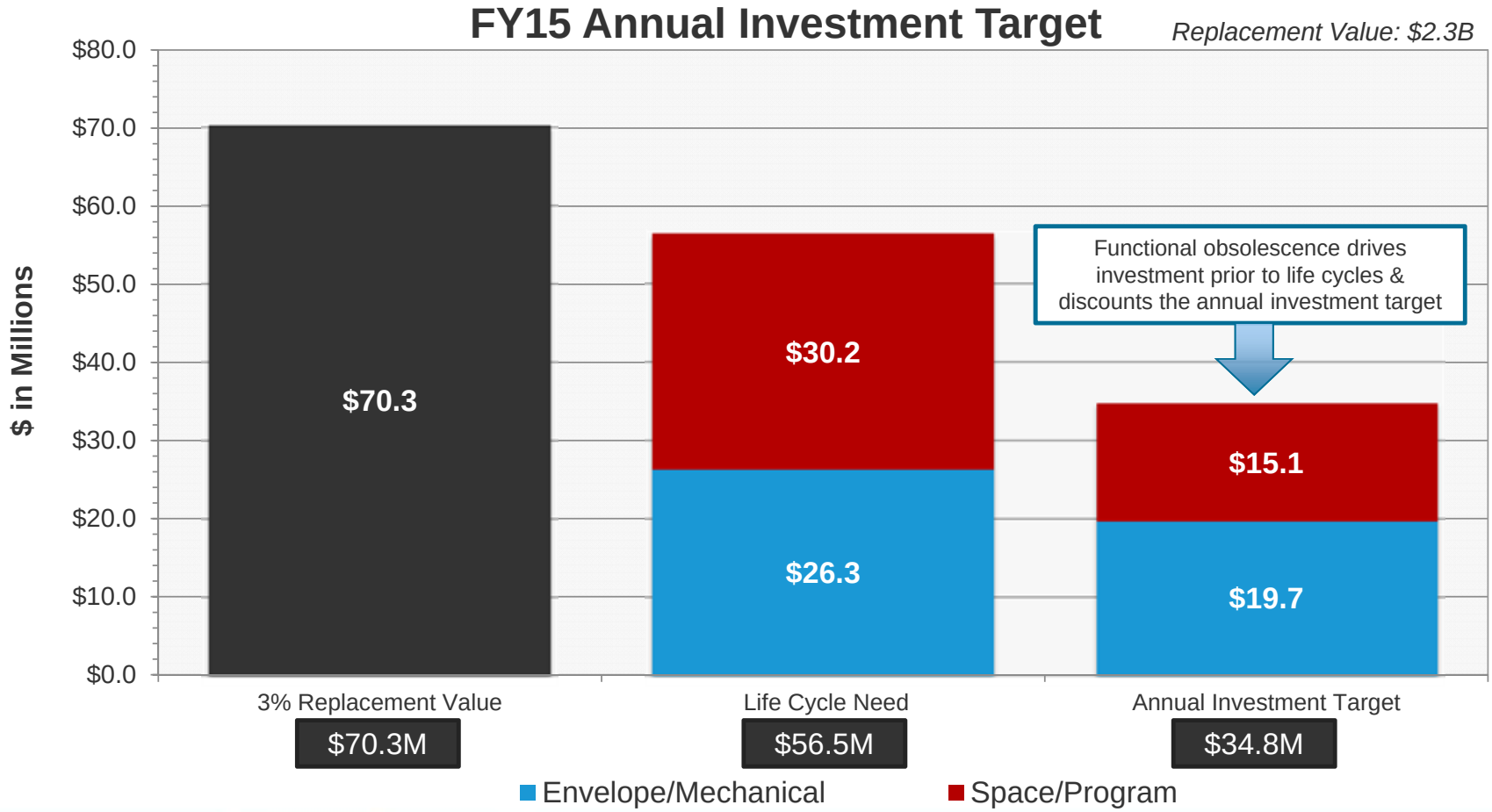
10.1

24

**UMS Key Performance Indictor*

Defining an Annual Investment Target

Annual Funding Target: $34.8M



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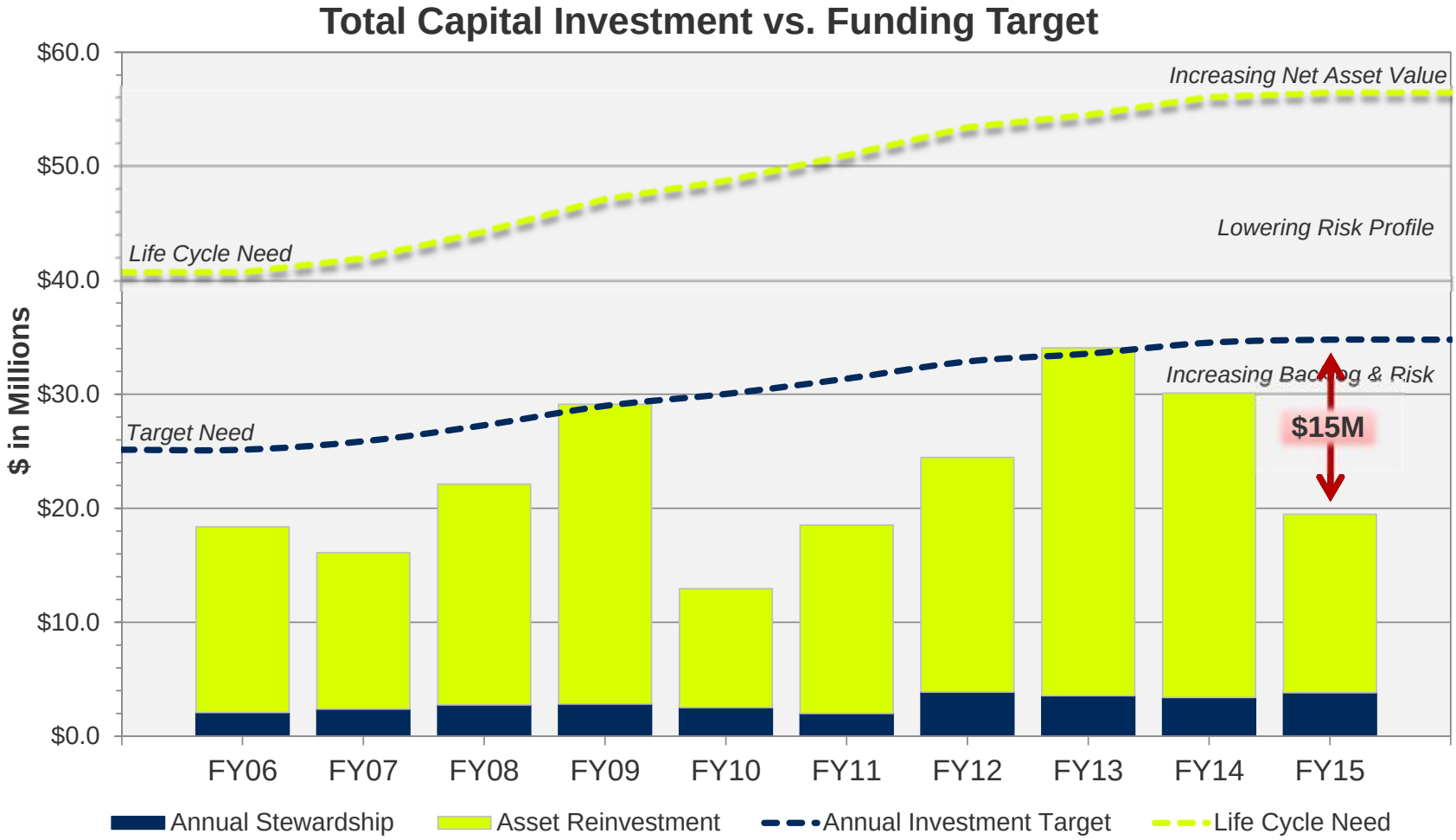
10.1

Maine System Has Been Unable to Achieve Target

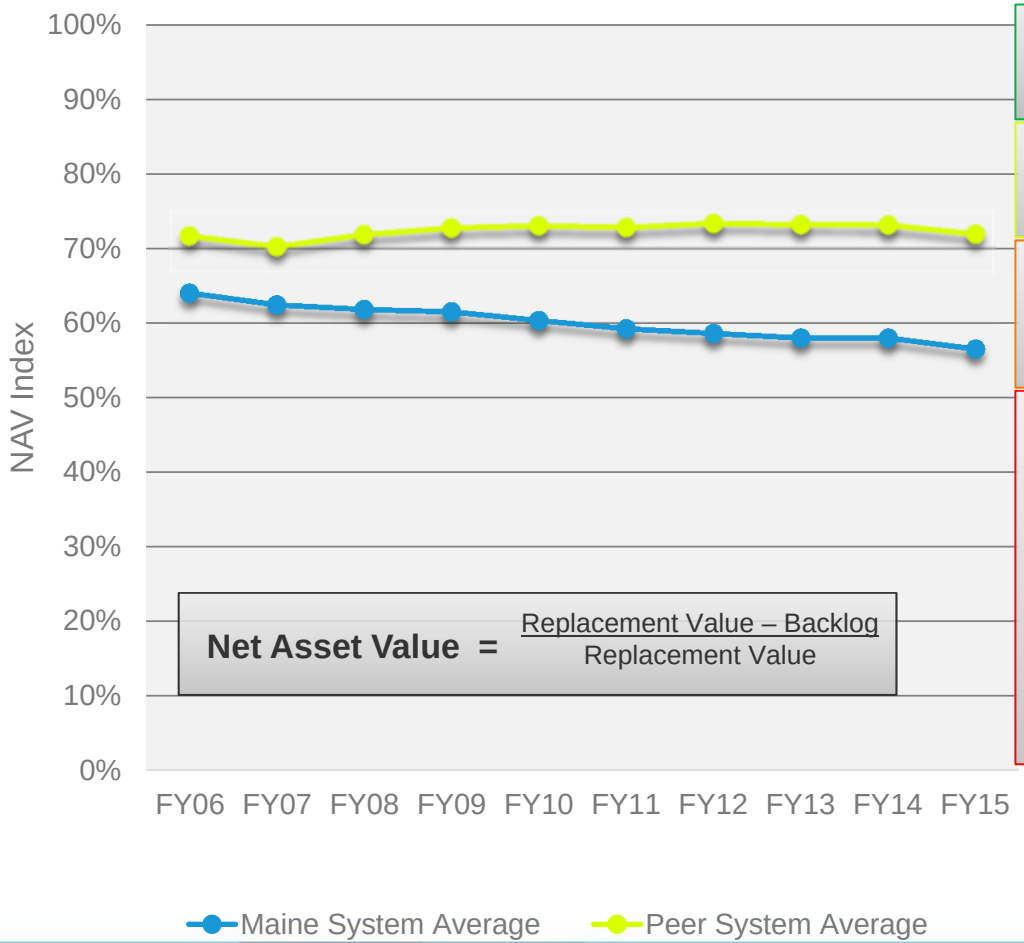
An increase in backlog is a direct result of not reaching target



10.1

Maine System's NAV Decreasing in FY15

Peers have remained stable since the beginning of the analysis



Investment Strategy

"Keep Up" Stage: Primarily new or recently renovated buildings with sporadic building repair & life cycle needs

Balanced Profile Stage: Buildings are beginning to show their age and may require more significant investment and renovation on a case-by-case basis

"Catch Up" Stage: Buildings require more significant repairs; major building components are in jeopardy of complete failure; large-scale capital infusions or renovations are inevitable

Transitional/Gut Renovation/Demo Stage: Major buildings components are in jeopardy of failure. Reliability issues are widespread throughout the building.

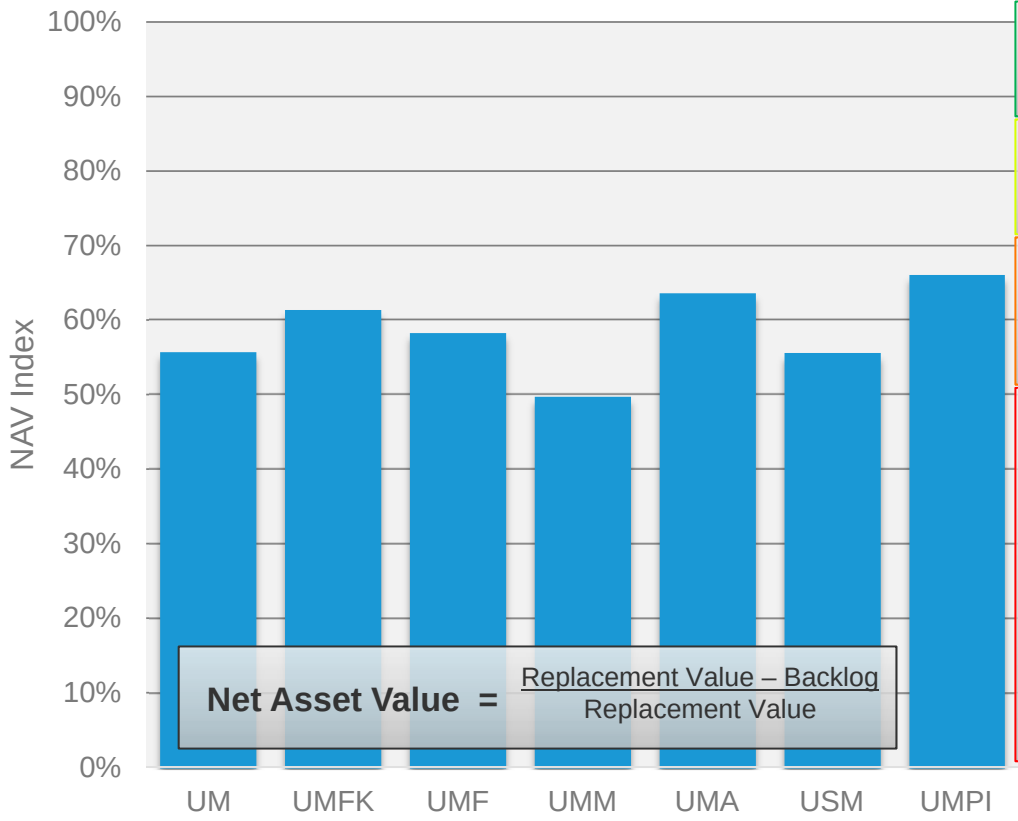
10.1

27

**UMS Key Performance Indictor*

Machias Lowest of the Maine System

Most of the Maine System falls in the "Catch-Up" stage



Investment Strategy

"Keep Up" Stage: Primarily new or recently renovated buildings with sporadic building repair & life cycle needs

Balanced Profile Stage: Buildings are beginning to show their age and may require more significant investment and renovation on a case-by-case basis

"Catch Up" Stage: Buildings require more significant repairs; major building components are in jeopardy of complete failure; large-scale capital infusions or renovations are inevitable

Transitional/Gut Renovation/Demo Stage: Major buildings components are in jeopardy of failure. Reliability issues are widespread throughout the building.

10.1

28

10.1

Planning for the Future

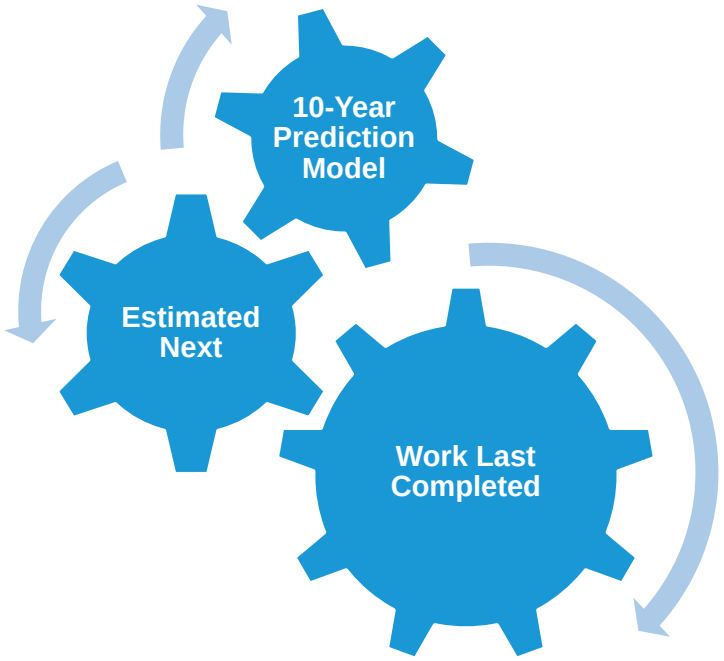
ROPA+ Prediction Overview

Regionalized costs based on comprehensive database of building systems

6 Subsystems

Roof
Envelope
HVAC Systems
Electrical
Plumbing
Interiors

96% of Building Costs

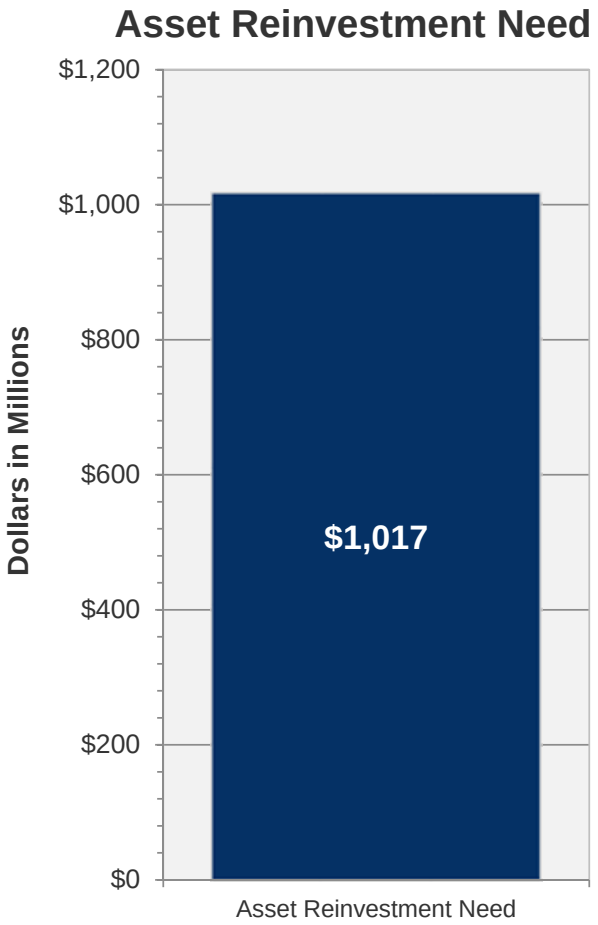


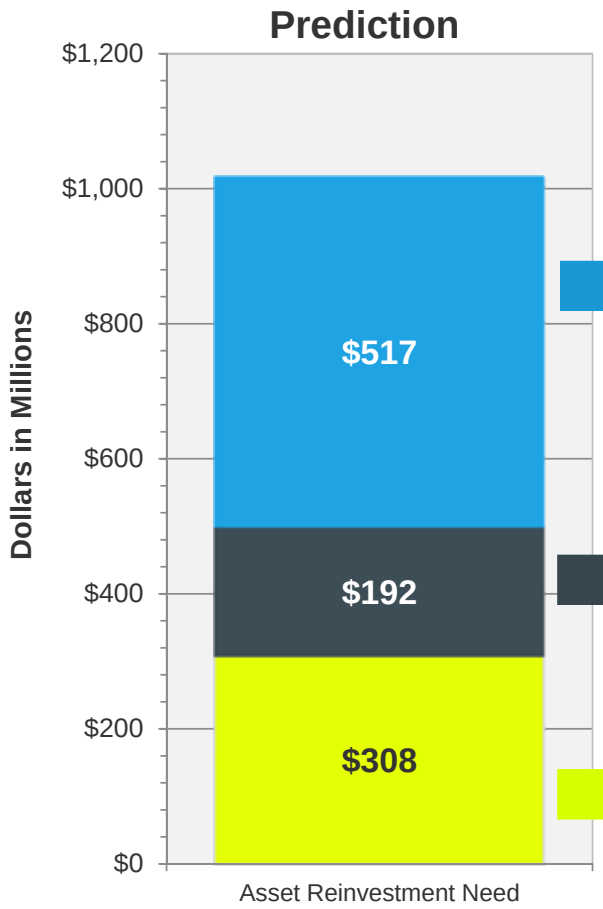
10.1

30

sightlines

UMS Total 10 Year Need is $1B ($114/GSF)





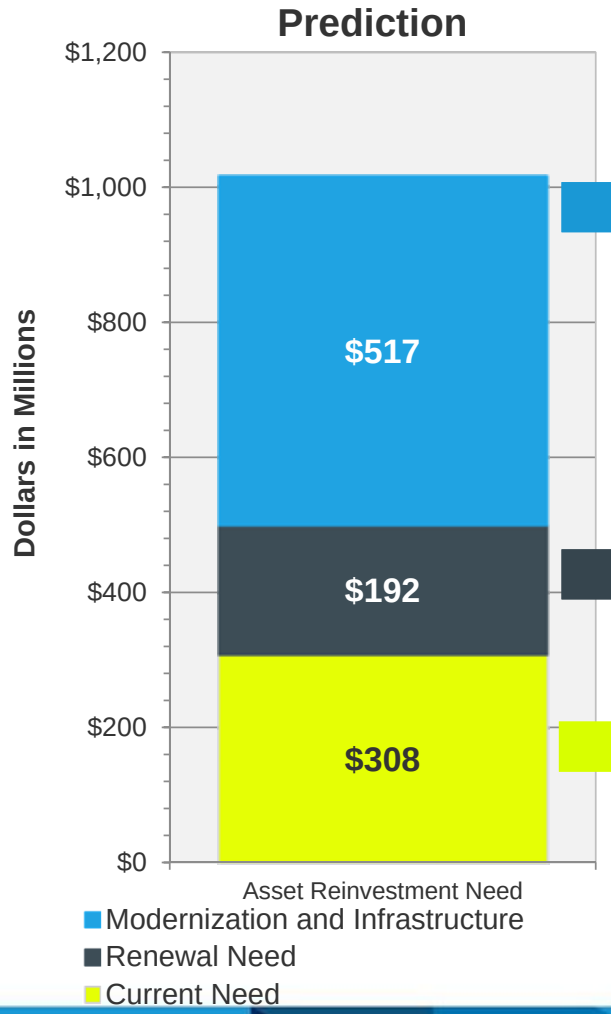
- ✓ Modernization and Infrastructure need is $517M
- ✓ Sightlines recommends a 10 year capital strategy to address the total need.

- ✓ Total 10 year renewal need is $192M.
- ✓ This represents the life cycle needs coming due between 2016-2025.

- ✓ Current Need Today *(Highest Risk)*

10.1

Aligning Capital Funding Sources With Need



- ✓ Modernization and Infrastructure Needs
- ✓ Estimated using a combination of the Sightlines' database and BPS analyses.

✓ Combination of Funds

- ✓ Life Cycle Needs coming due between 2016-2025

✓ "Keep-Up" Funds

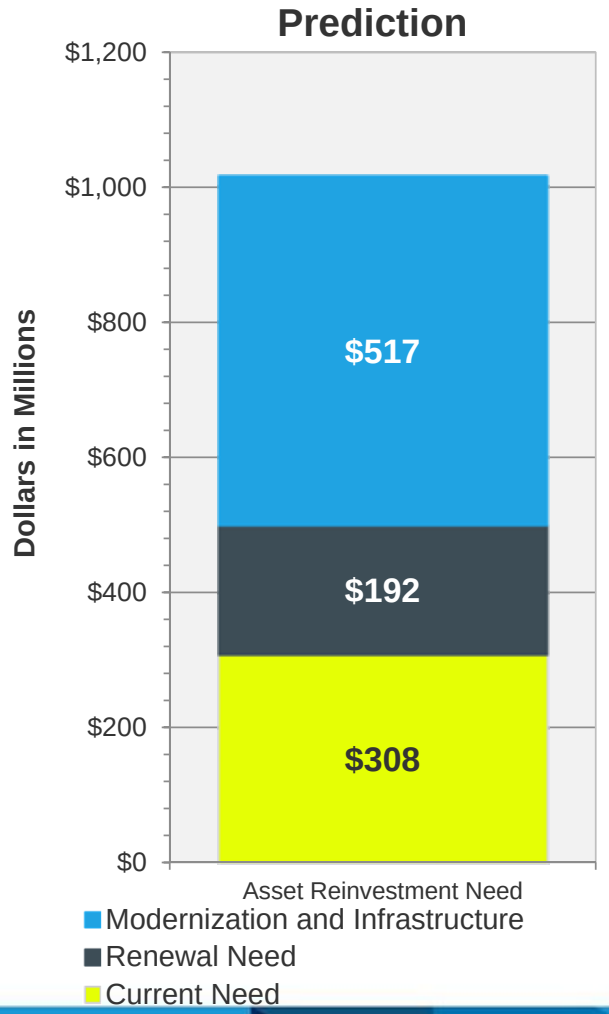
- ✓ Deferred Maintenance
- ✓ The subsystem has already failed
- ✓ The subsystem is functioning with substantial degradation of efficiency or performing at increased cost

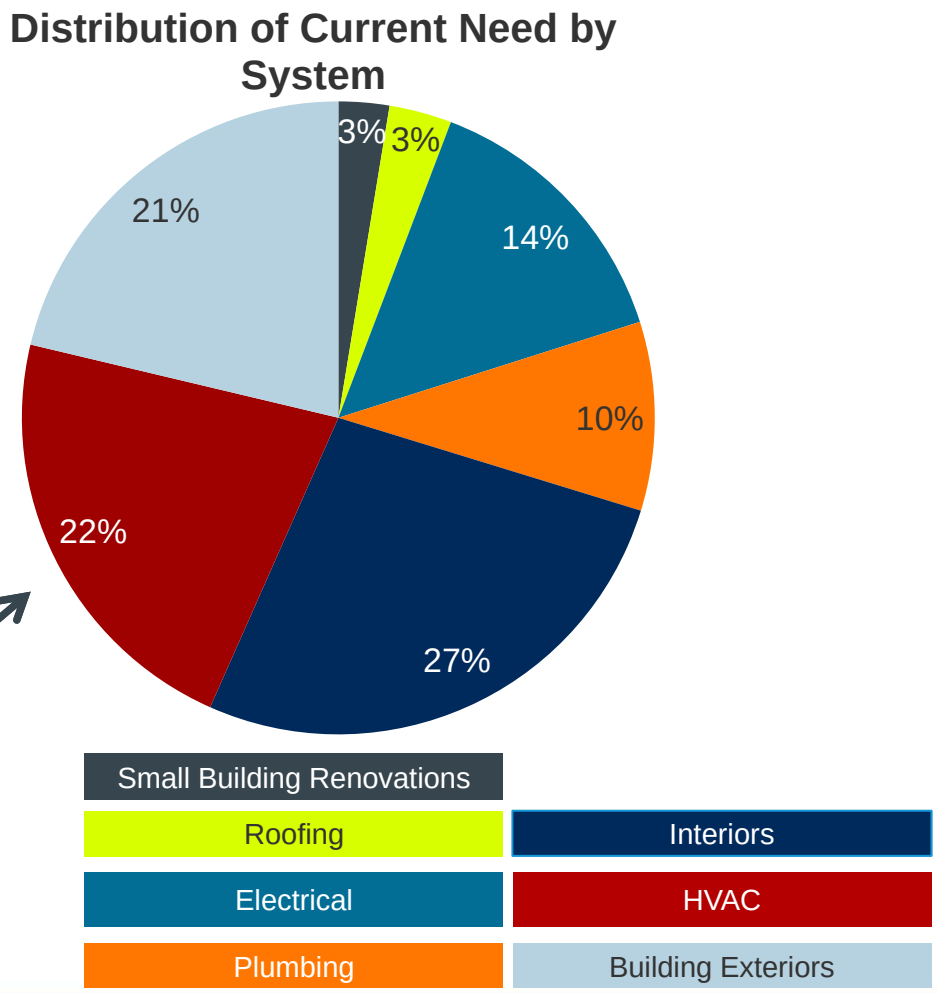
✓ "Catch-Up" Funds

32

10.1

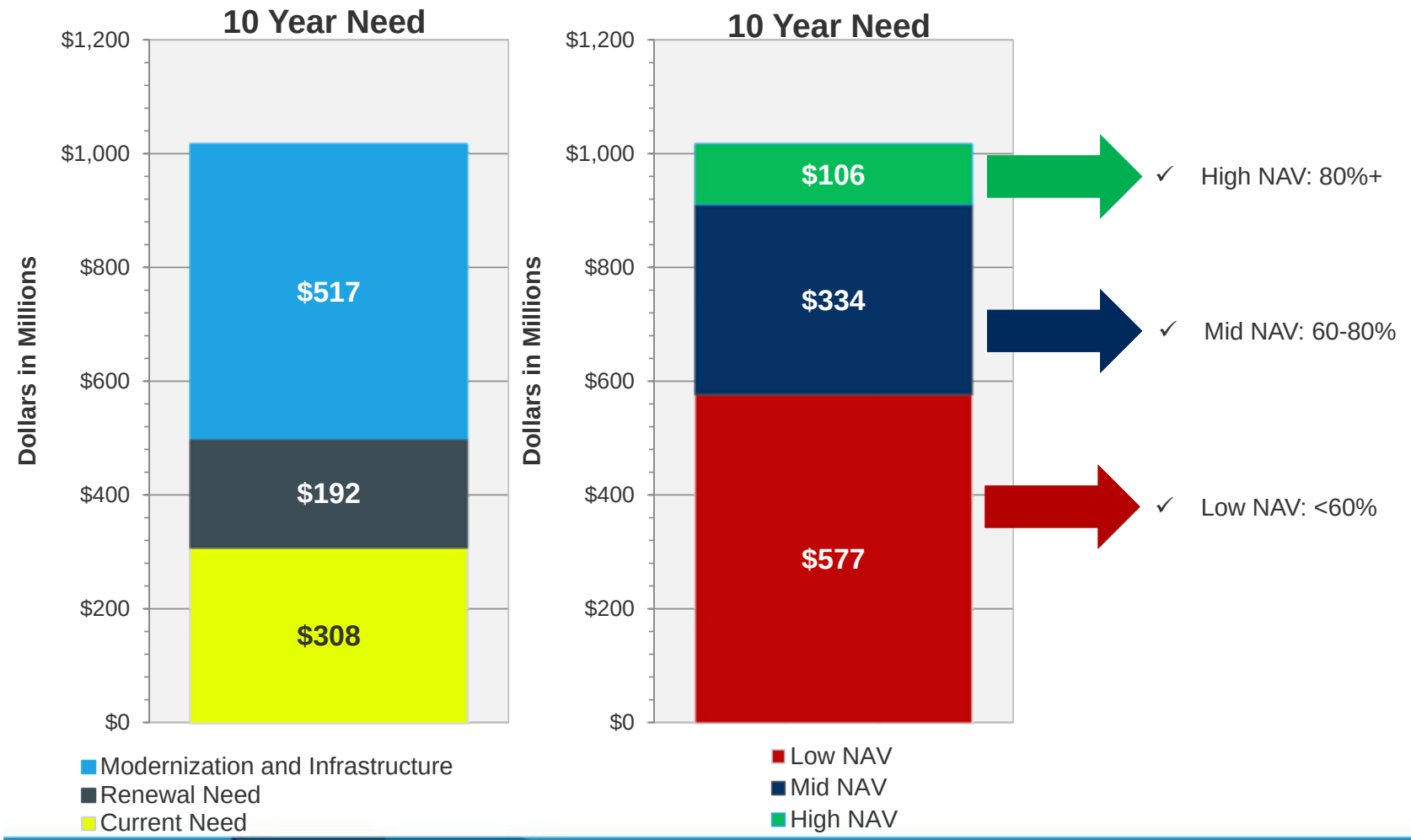
HVAC and Exteriors Make Up Majority of Current Need





10.1

Over 50% of Total Need Falls in Low NAV Buildings



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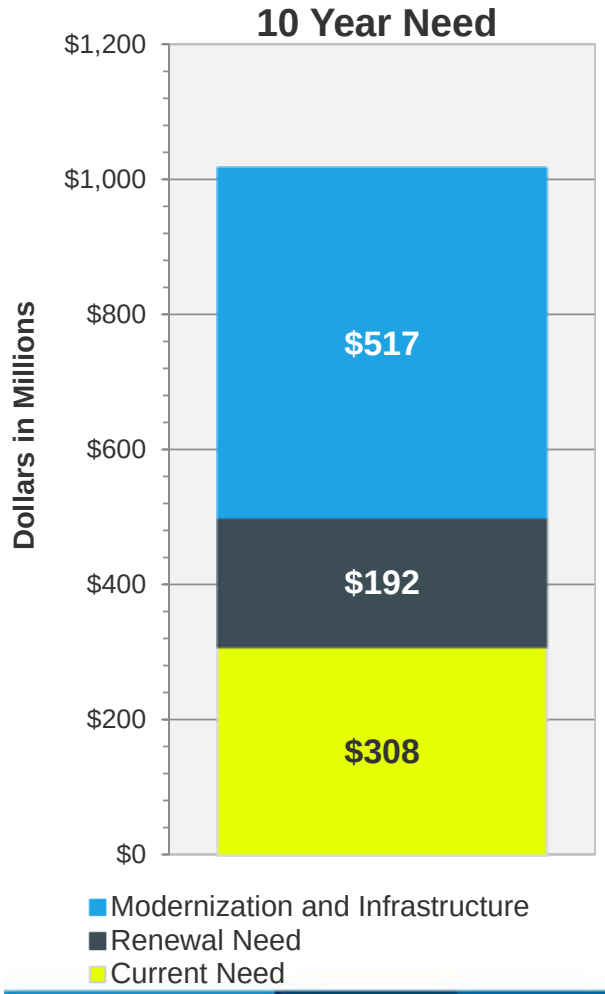
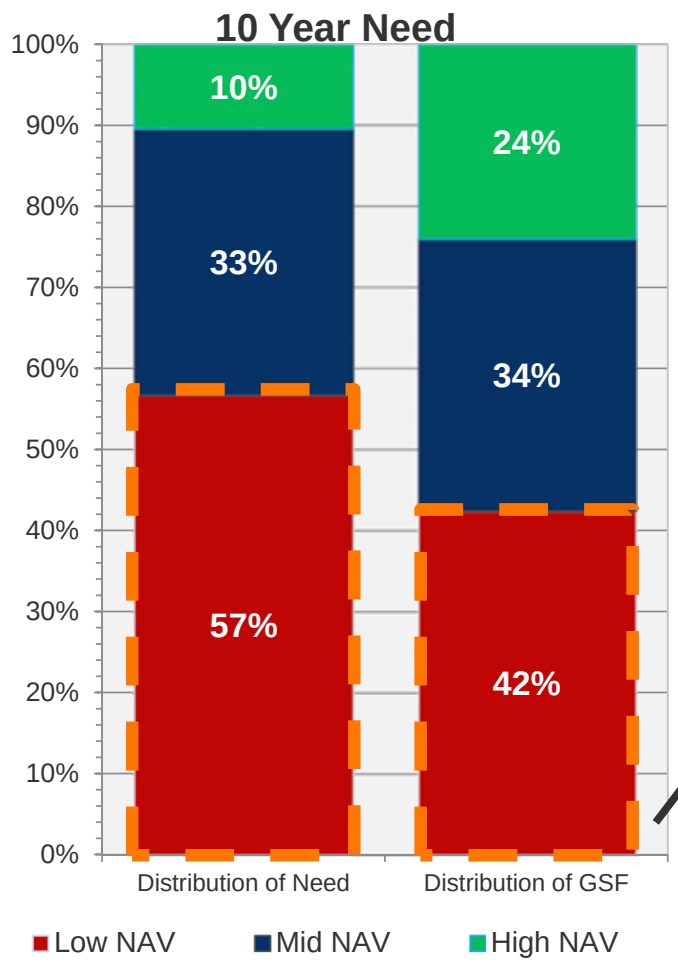
sightlines

10.1

Distribution of Need Greater Than GSF Percentage





Low NAV Statistics:

- 179 Buildings Total
- 66 Buildings built during the Post-War Phase

Utilization and Low NAV:

- 37 Buildings have low utilization and low NAV
- $20M in Need through Prediction

"Hot Topic Buildings":

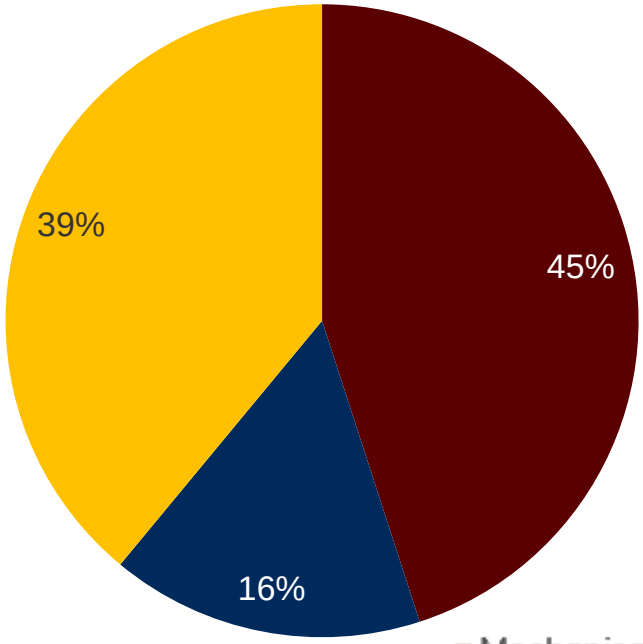
- Stone House – USM
- Dow Hall – UMA
- Alumni Theater – UMF
- Acadia House - UMFK

10.1

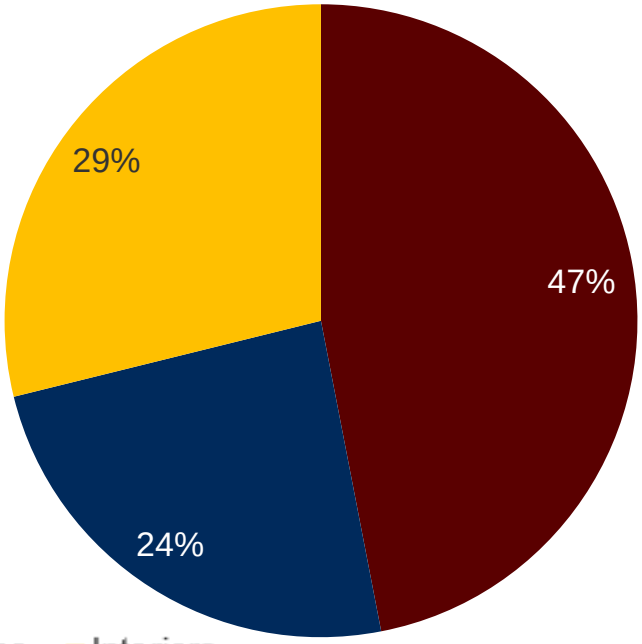
Over 50% of Historical Investment in Durable Projects

Stronger investment in envelope work needed in future years

2006-2015 Historical Project Investment



Distribution of Maine System Need by System



Mechanical Envelope Interiors

$199M Invested	$500M of Need

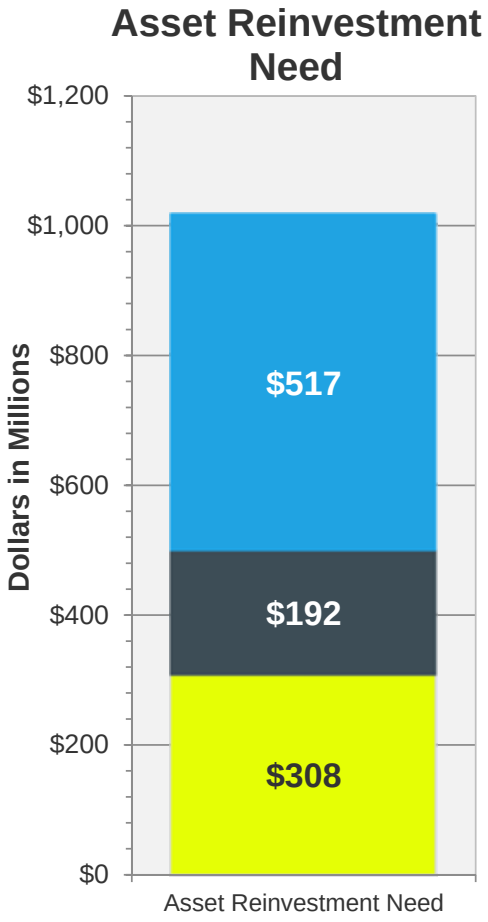
Does not include modernization and infrastructure investments or costs.

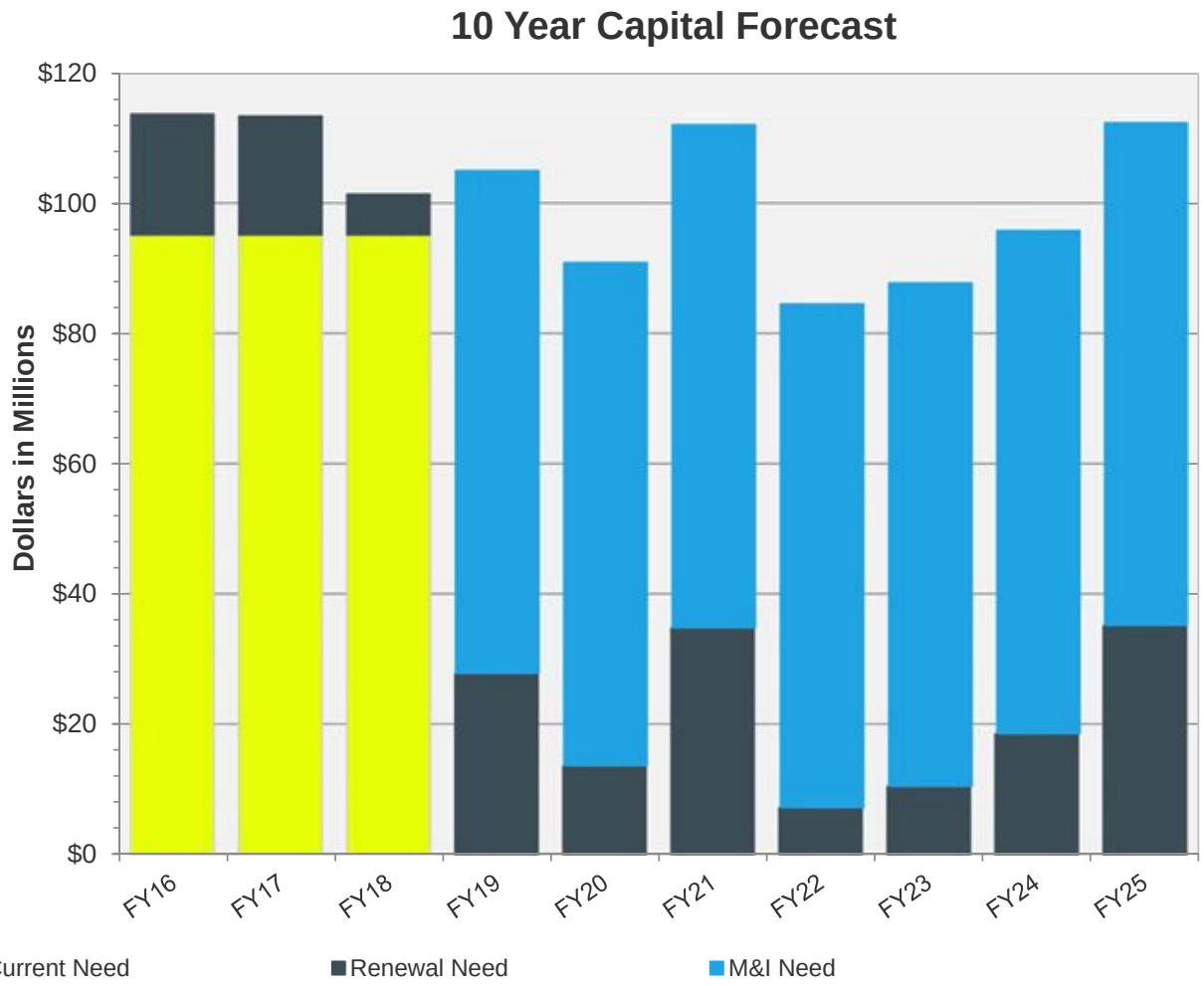
36

sightlines

10.1

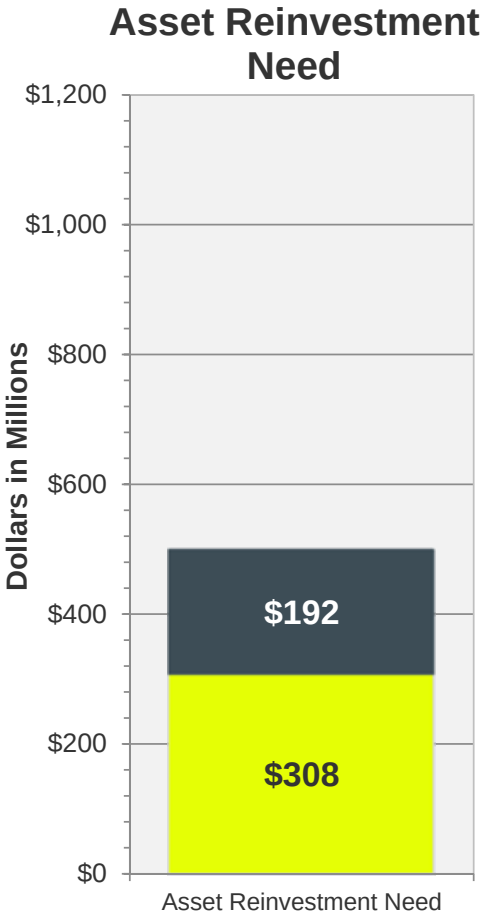
Predictive Investment Model: $1,017 M in Need

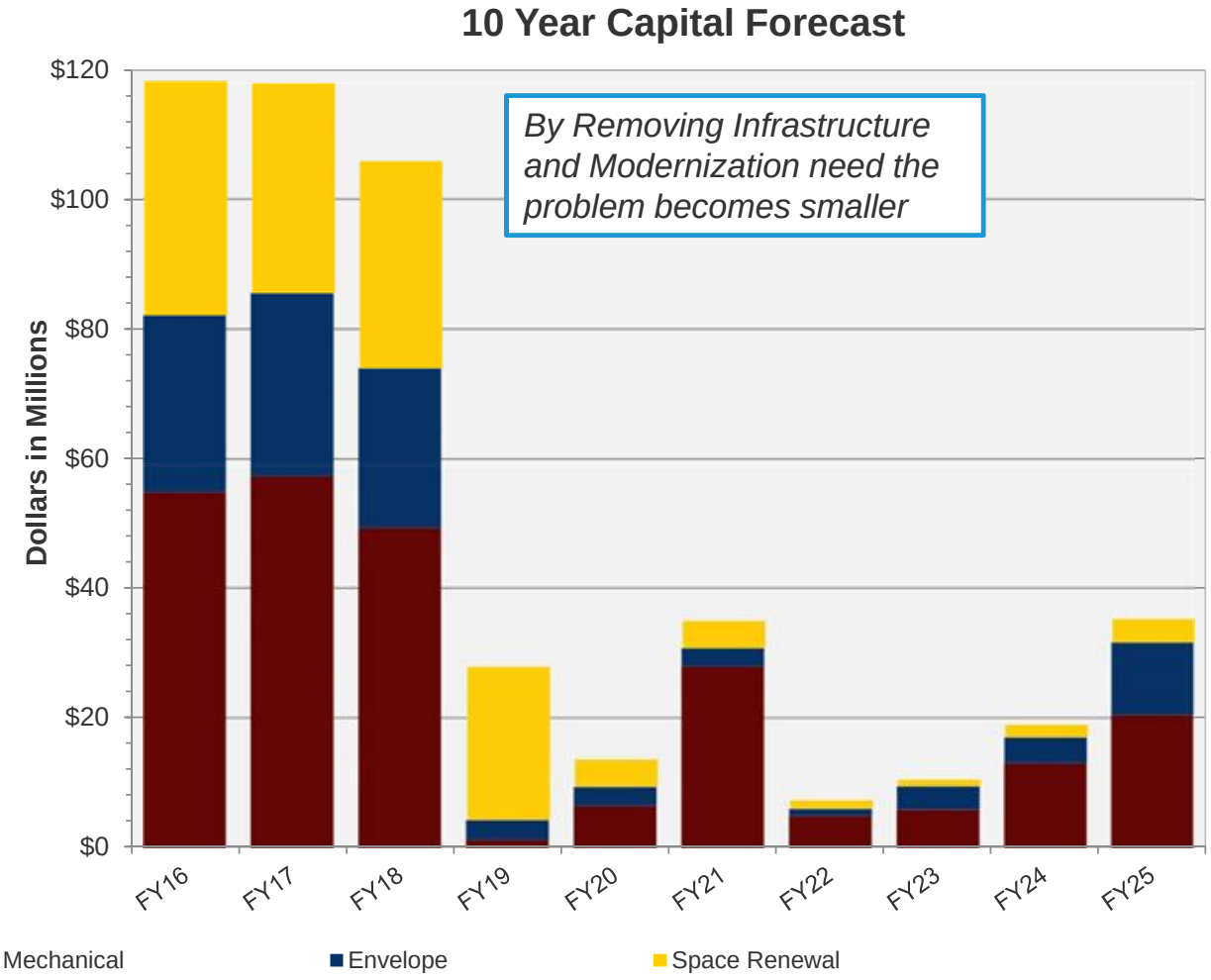




10.1

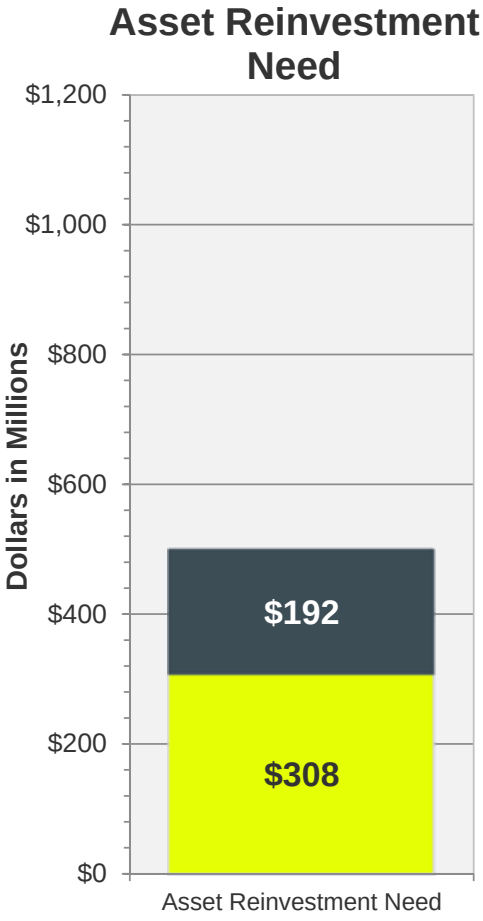
Predictive Investment Model: $500M in Need

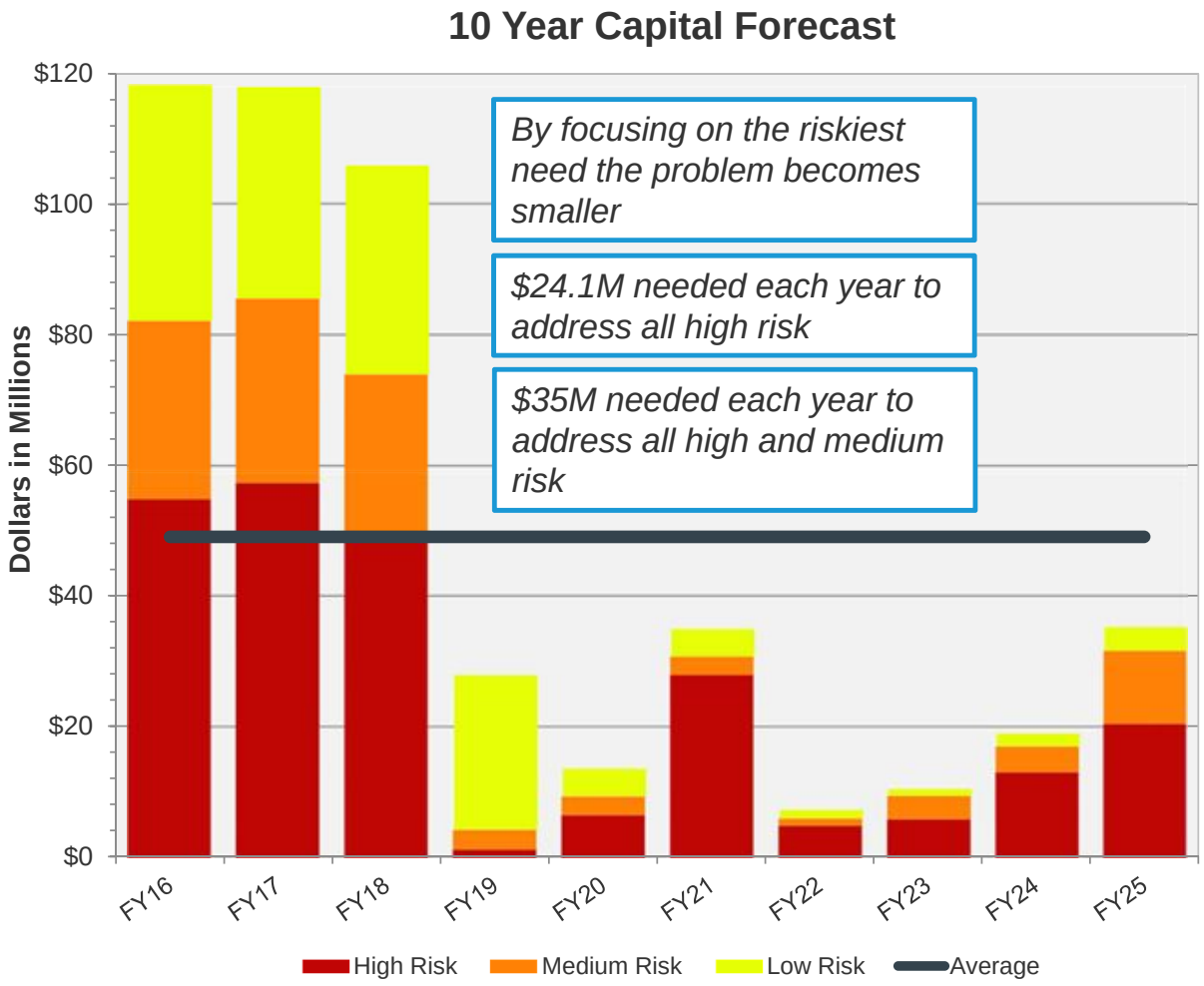




10.1

Predictive Investment Model: $241M High Risk Need





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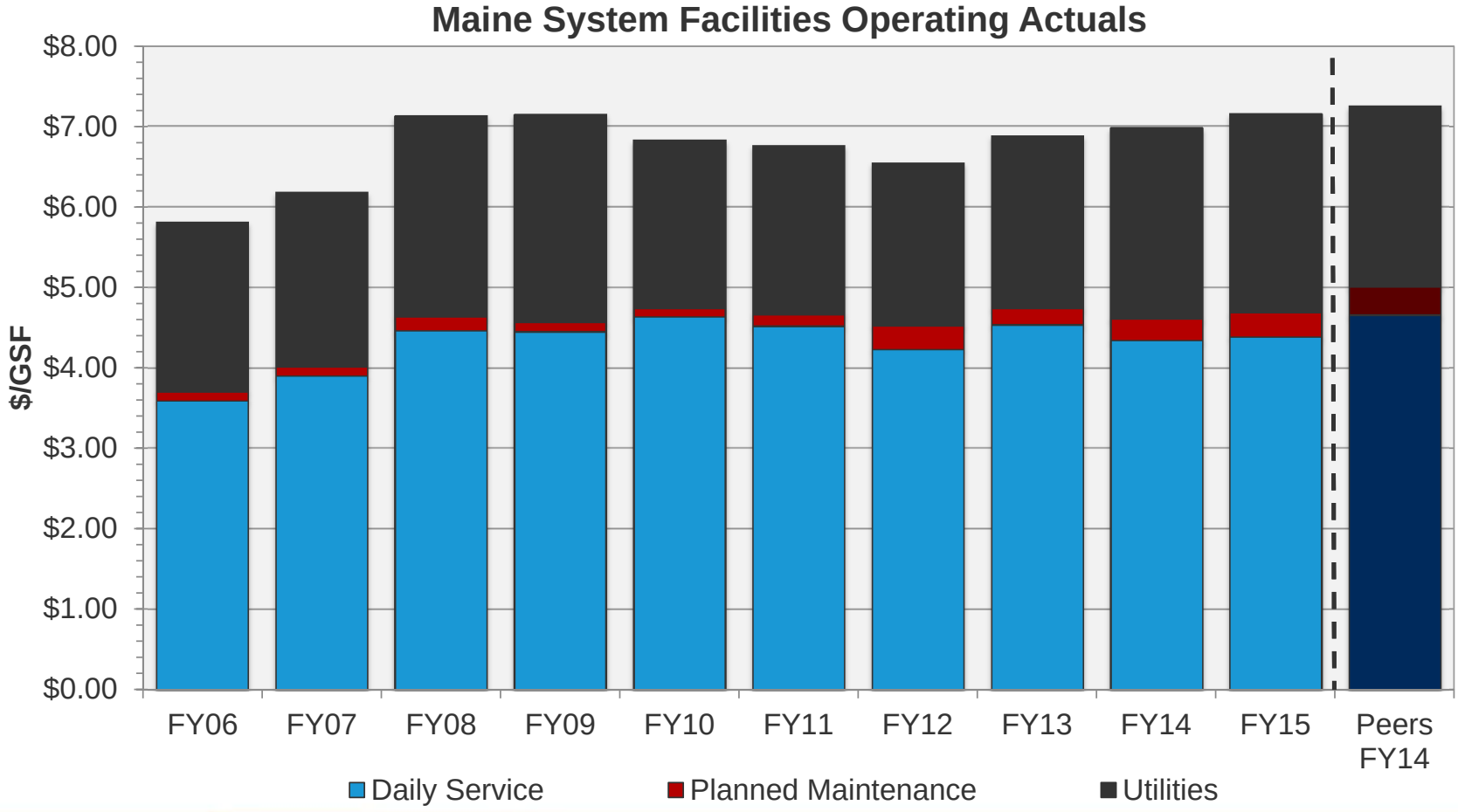
10.1

Operations Success

UMS Spending Less Than Peers in Daily Service

Utilities are main driver of operating actuals increase in FY15



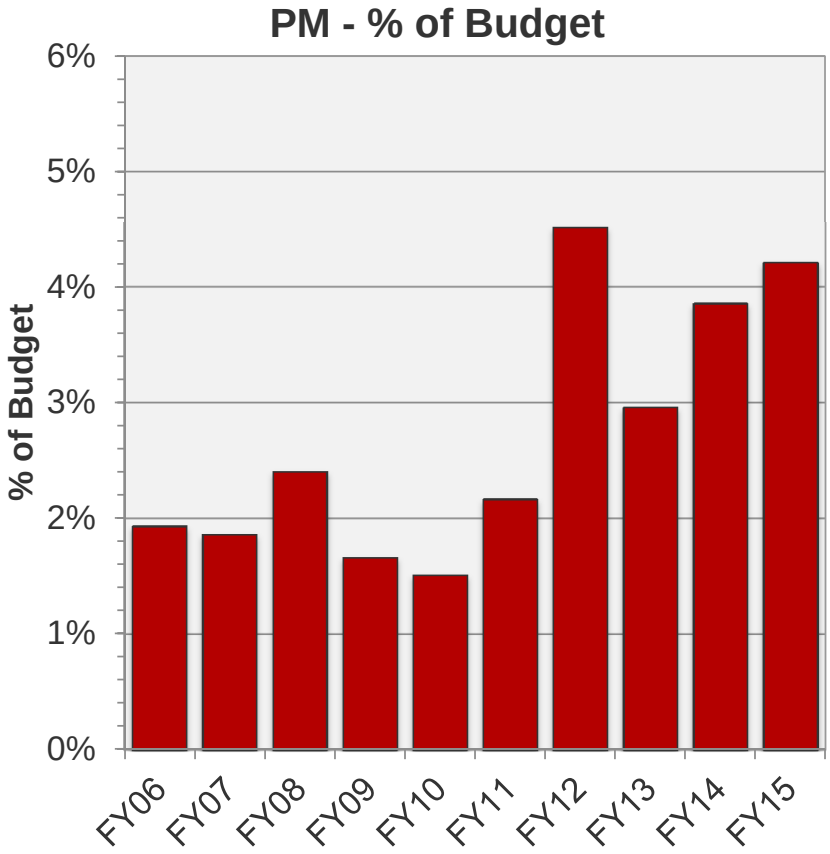
41

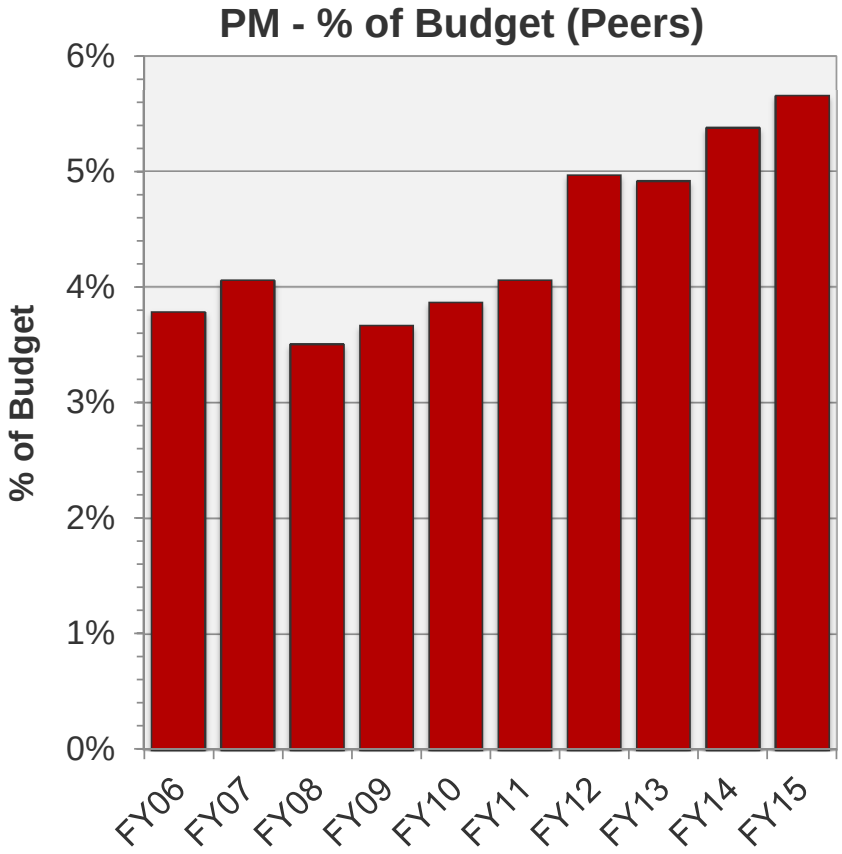
**UMS Key Performance Indictor*

10.1

UMS Invests Less in PM as % of Budget

Best practices for PM is 10-12% of the operating budget





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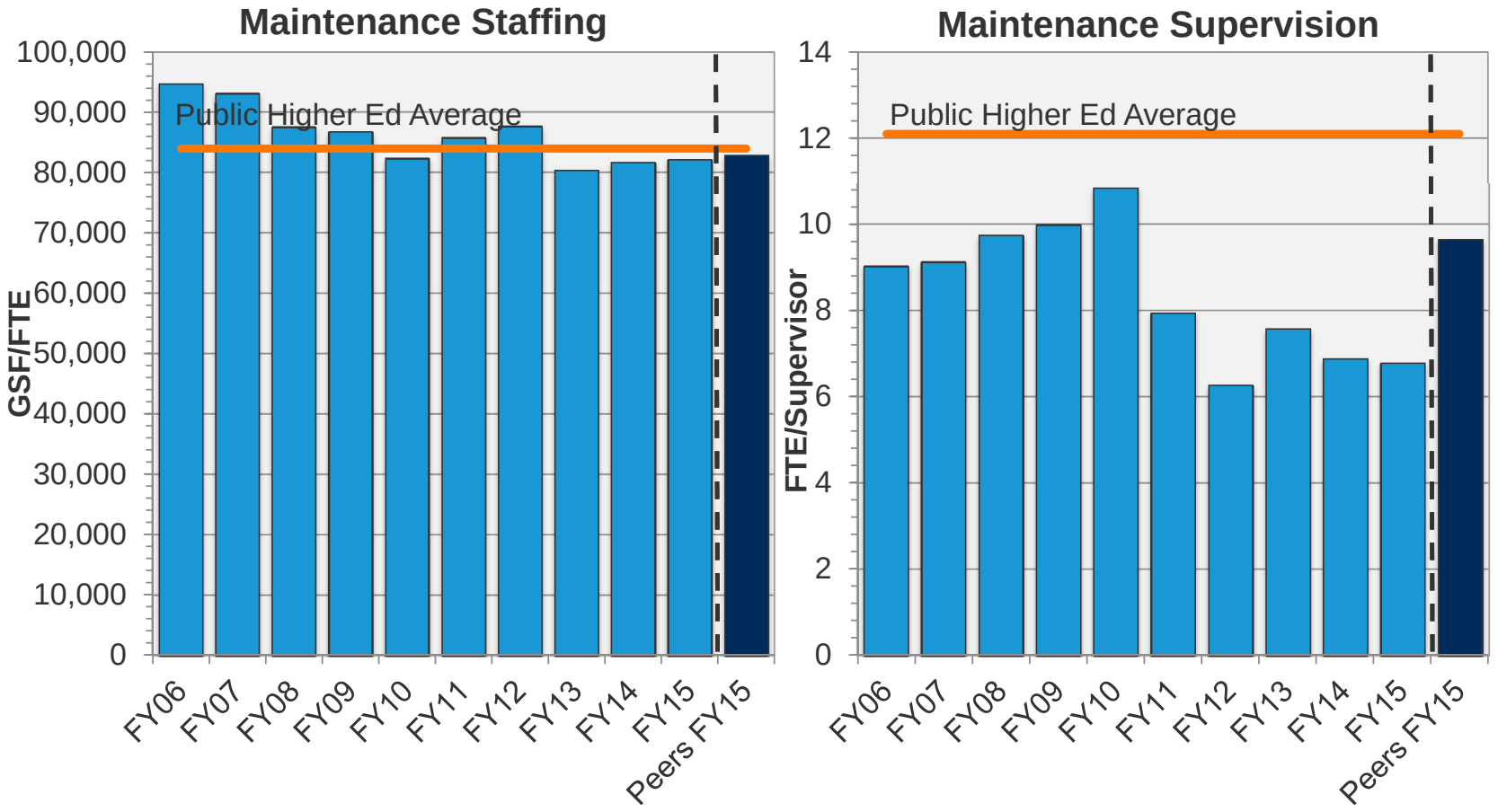
**UMS Key Performance Indictor*

10.1

Maintenance Operations



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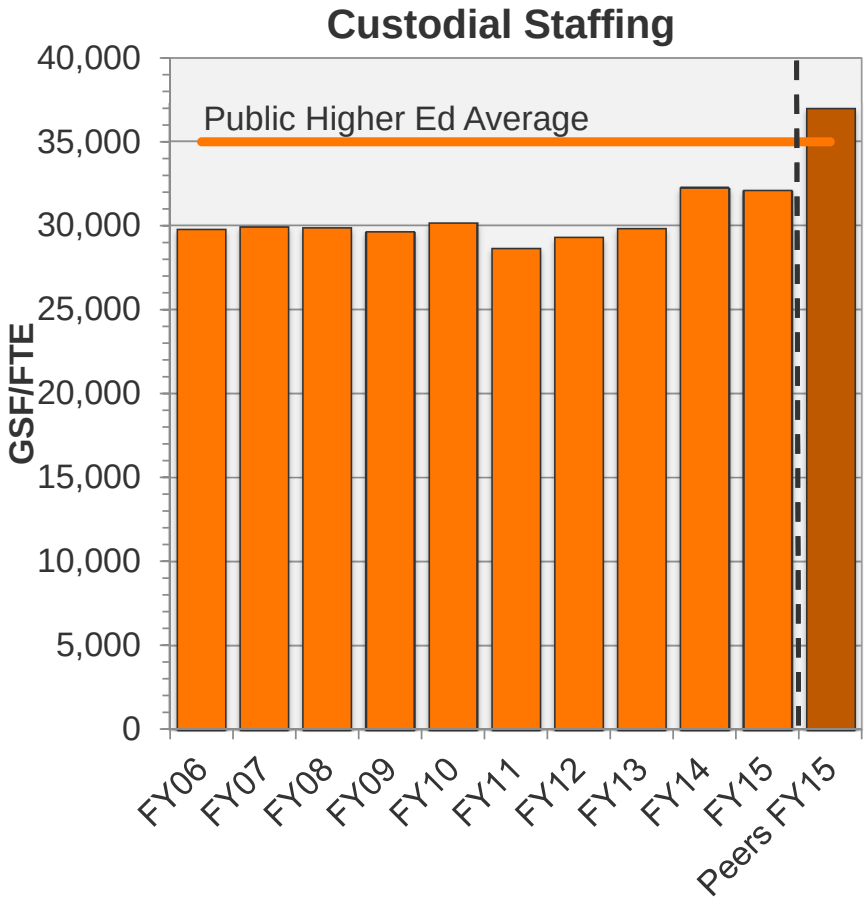
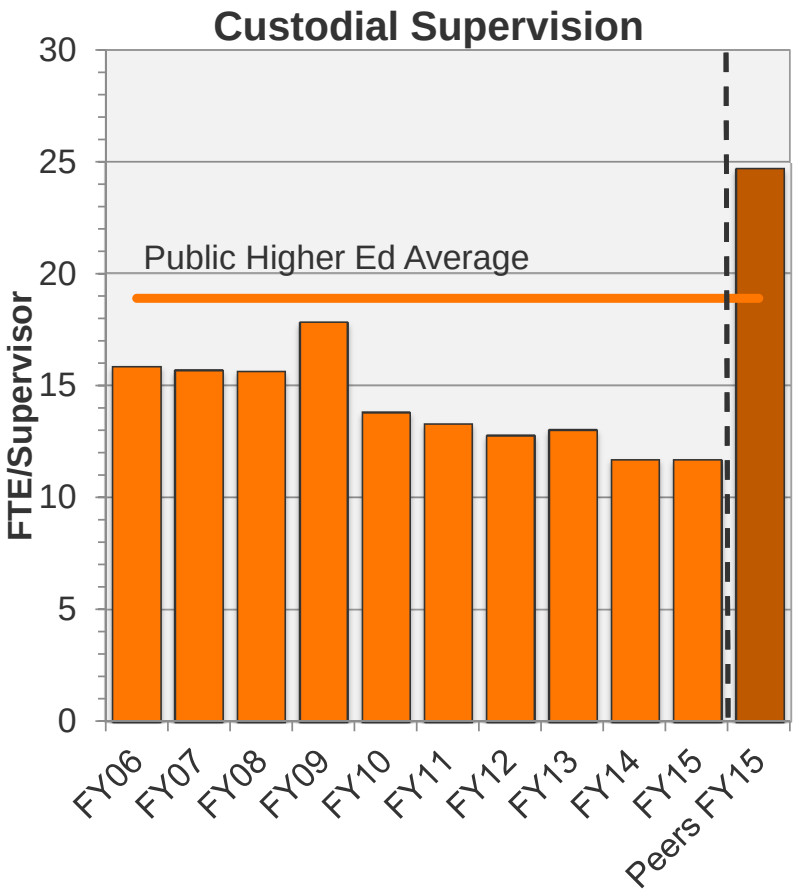
*UMS Key Performance Indictor

10.1

Custodial Operations





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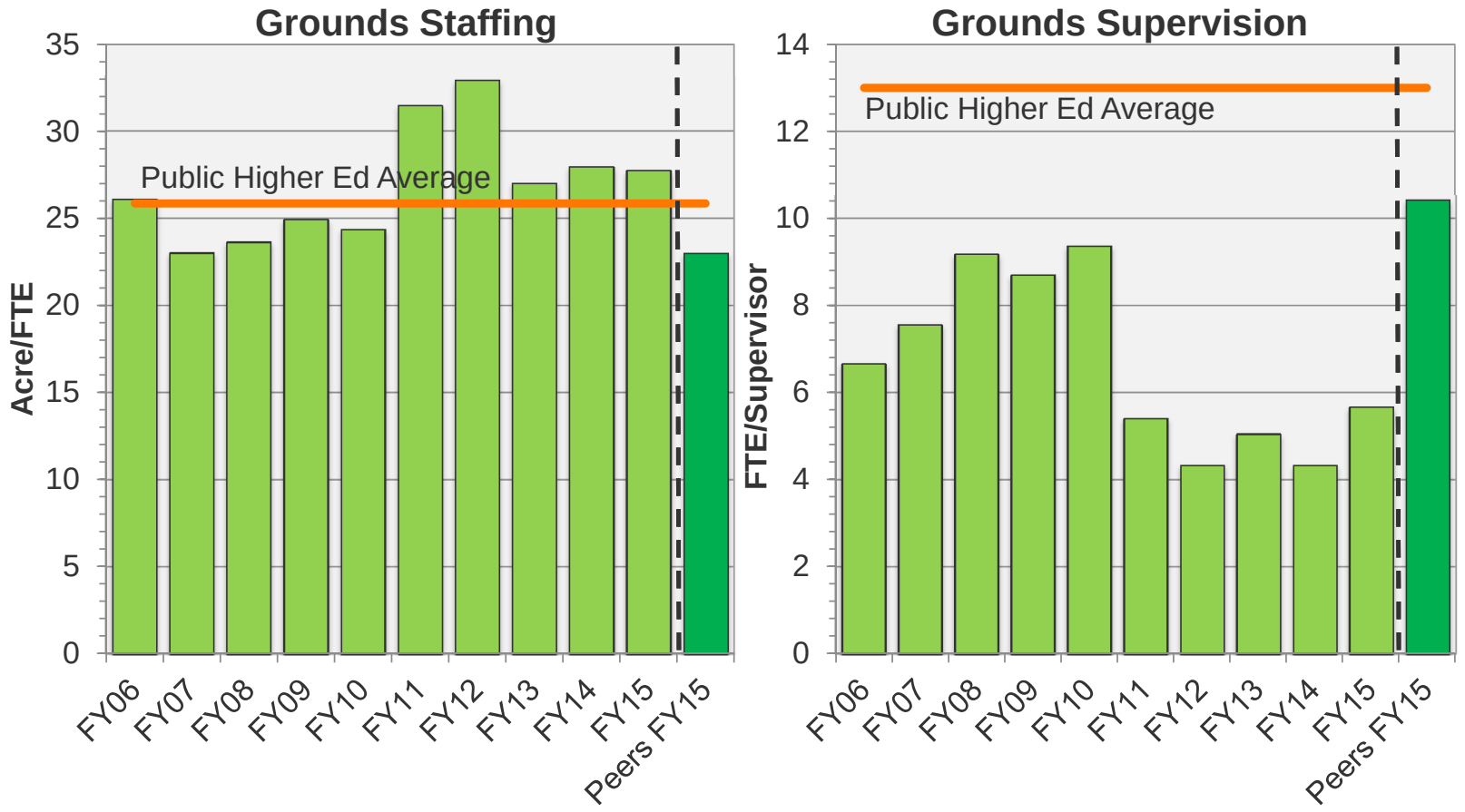
*UMS Key Performance Indictor

Grounds Operations



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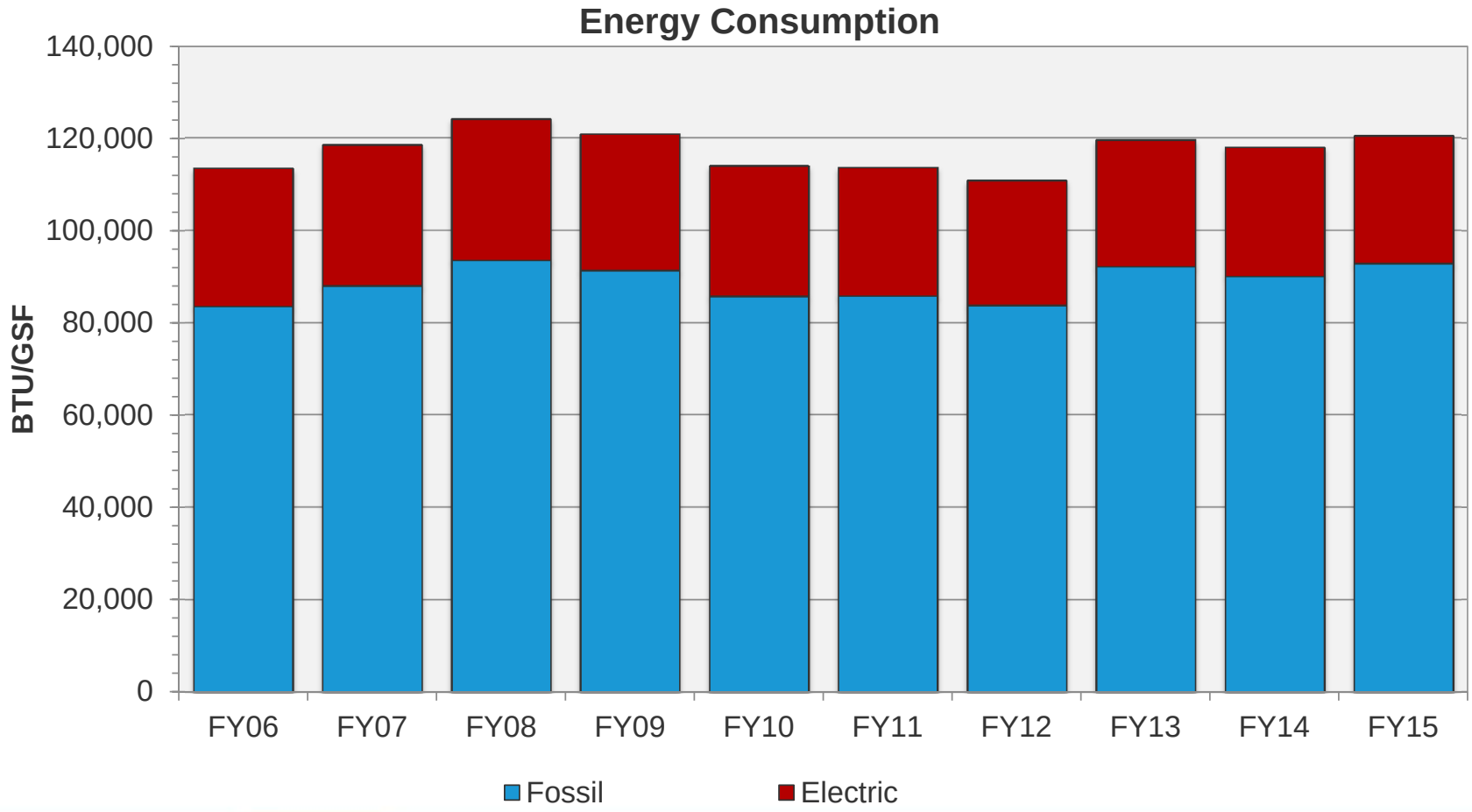
45

*UMS Key Performance Indictor

Energy Consumption

Fossil consumption increases in FY15, electric remains consistent



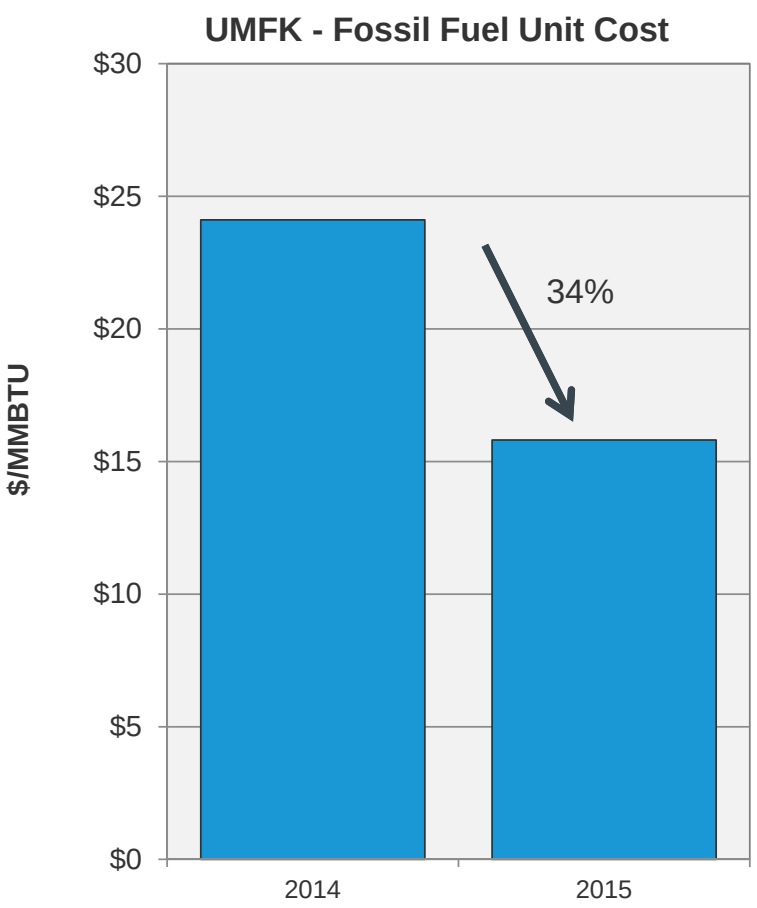
*Fossil Fuels contain all heating fuel sources, including alternative sources (ie biomass, wood chips, etc.)

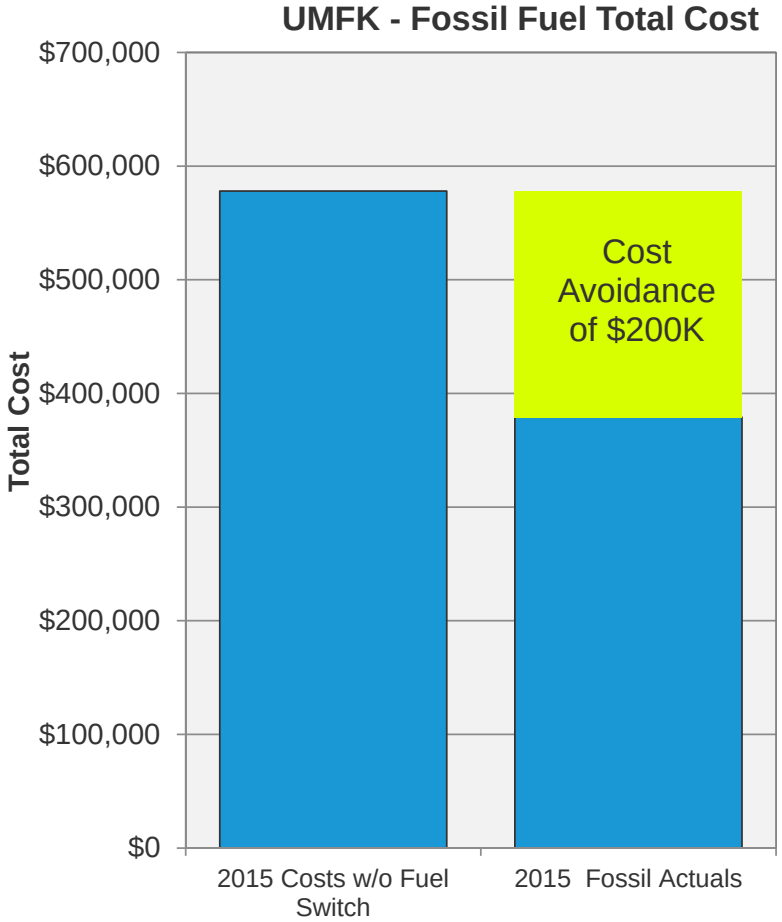
46

10.1

UMFK Case Study: Fossil Fuel Costing

With wood pellet furnace, UMFK avoided $200K of Fossil Fuel expenditures





*All numbers are in FY15 Dollars

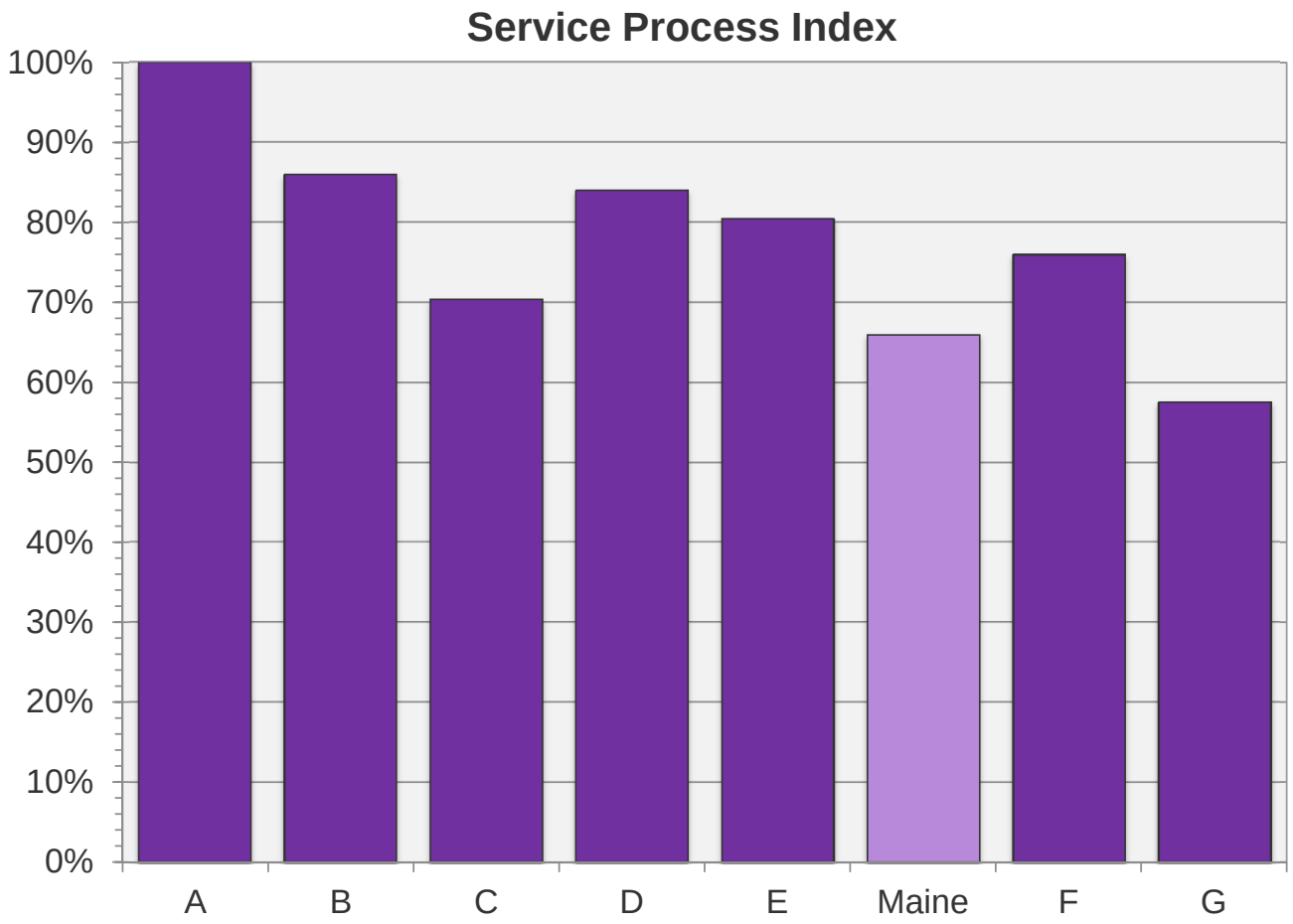
**Fossil Fuels contain all heating fuel sources, including alternative sources (ie biomass, wood chips, etc.)

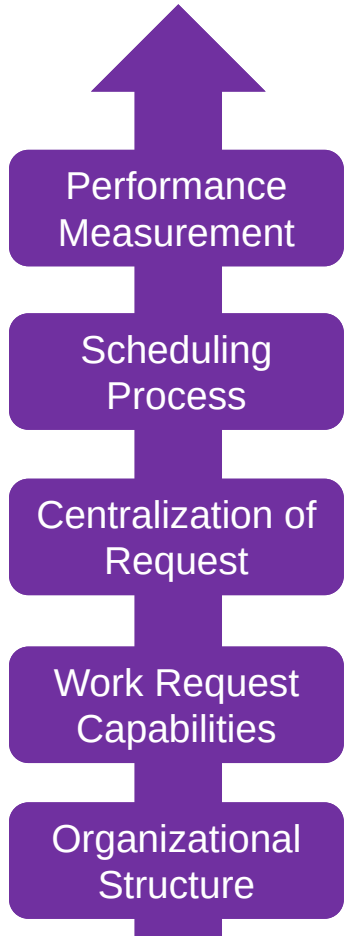
47

10.1

Expectations for the IWMS

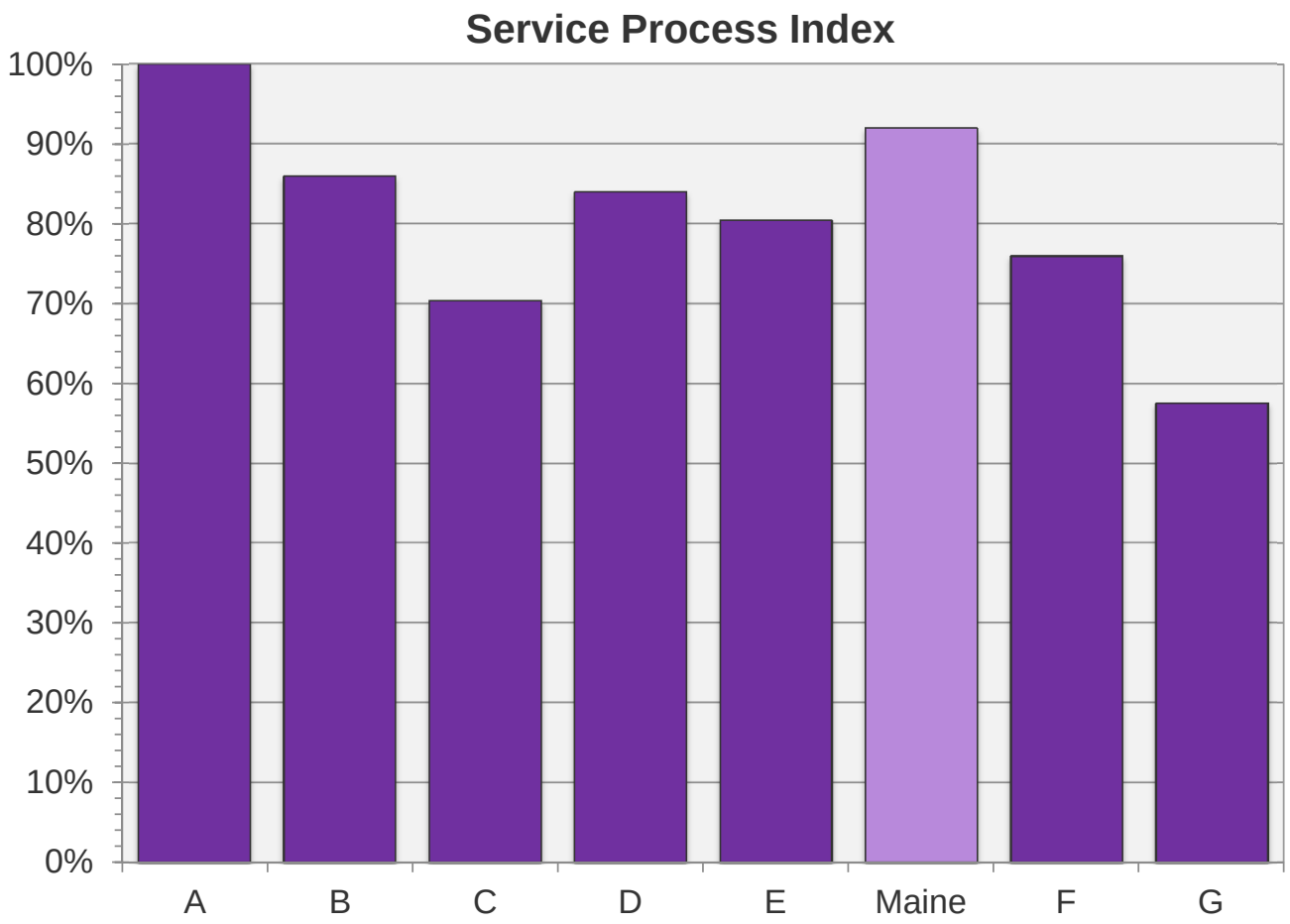
With stronger work order system implementation, scores will increase





10.1

Expectations for the IWMS



- Performance Measurement
- Scheduling Process
- Centralization of Request
- Work Request Capabilities
- Organizational Structure

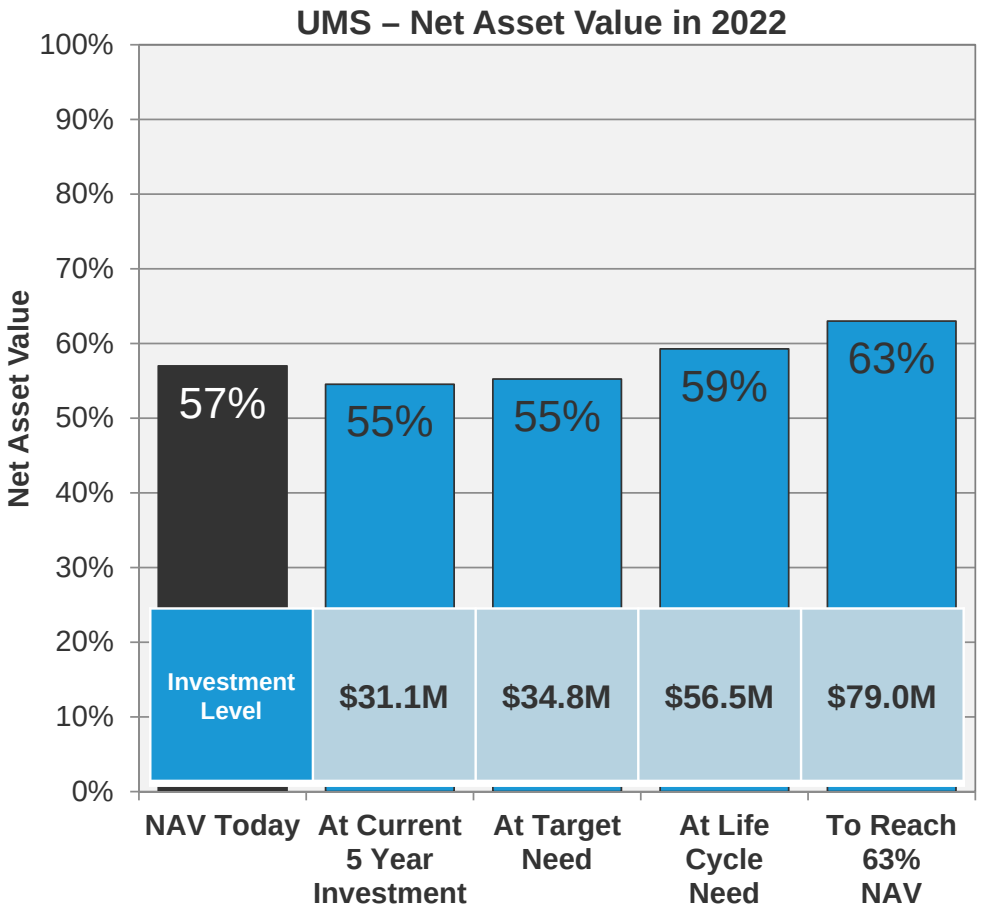
10.1

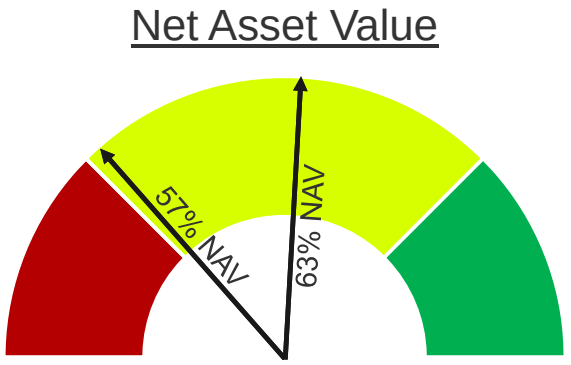
10.1

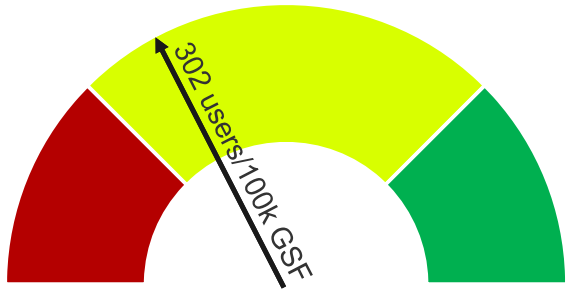
Strategic Roadmap To Achieve UMS Goals

Strategic Roadmap for UMS: Investment

Scenario #1: Increase in investment







10.1

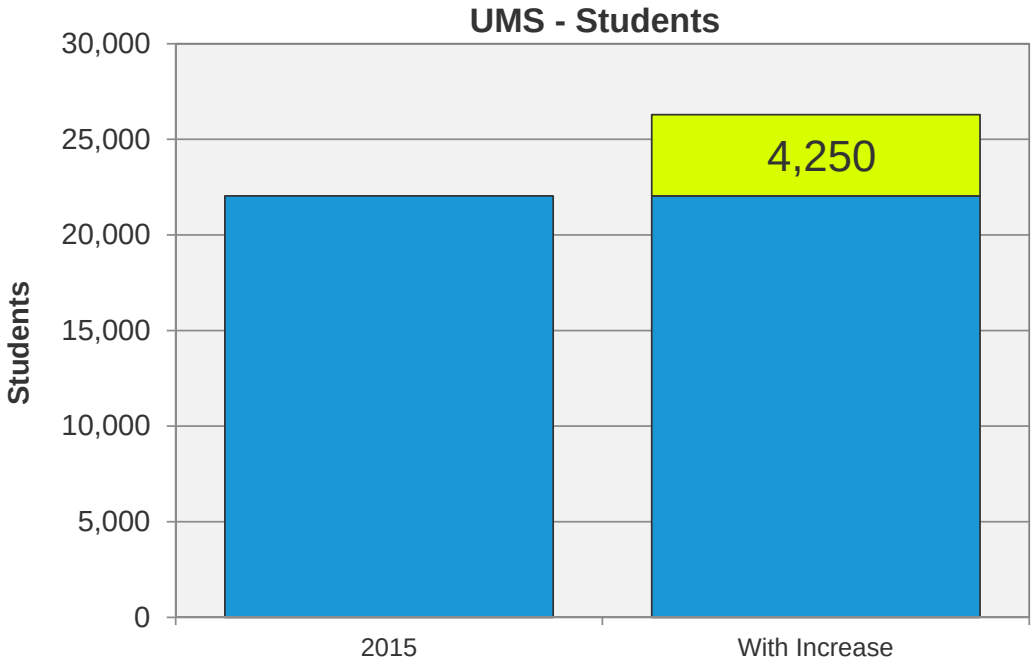
*Model assumes 2.8% inflation year over year and current investment level of $31.1M for FY16 and FY17

**These models assume investments on a yearly basis.

51

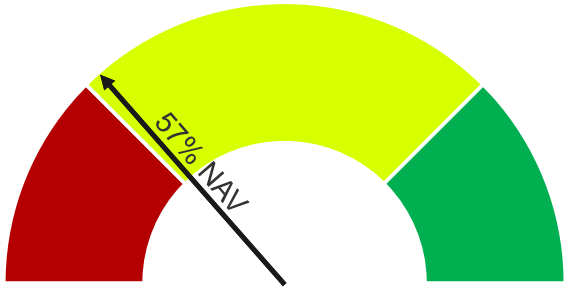
Strategic Roadmap for UMS: Enrollment

Scenario #2: Increase in users

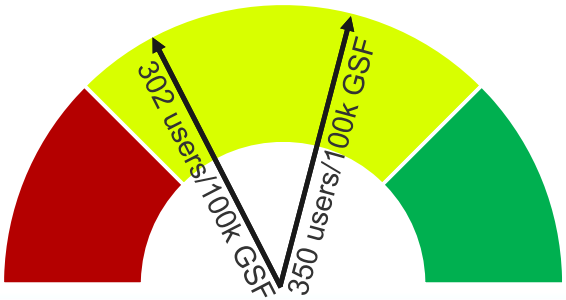


UMS would need to increase students by 4,250 (19%) in order to reach 350 users per 100k GSF

Net Asset Value



Density Factor



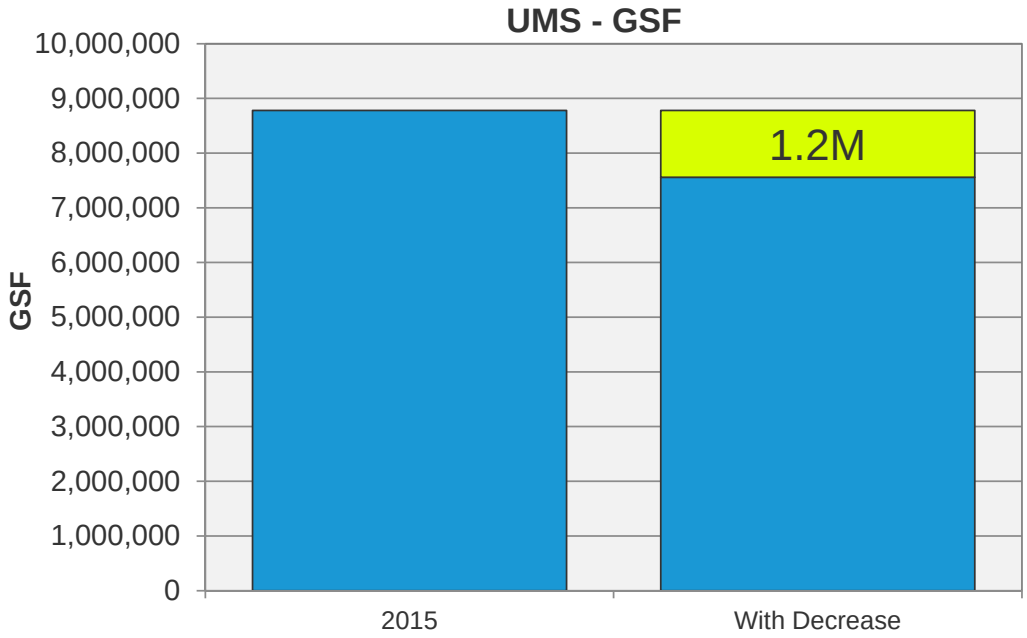
52

sightlines

10.1

Strategic Roadmap for UMS: Space

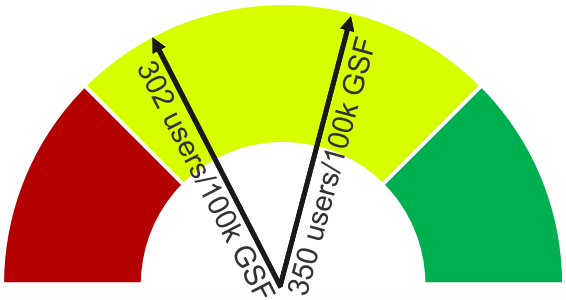
Scenario #3: Decrease in space



UMS would need to decrease GSF by 1.2M (14%) in order to reach 350 users per 100k GSF

Net Asset Value

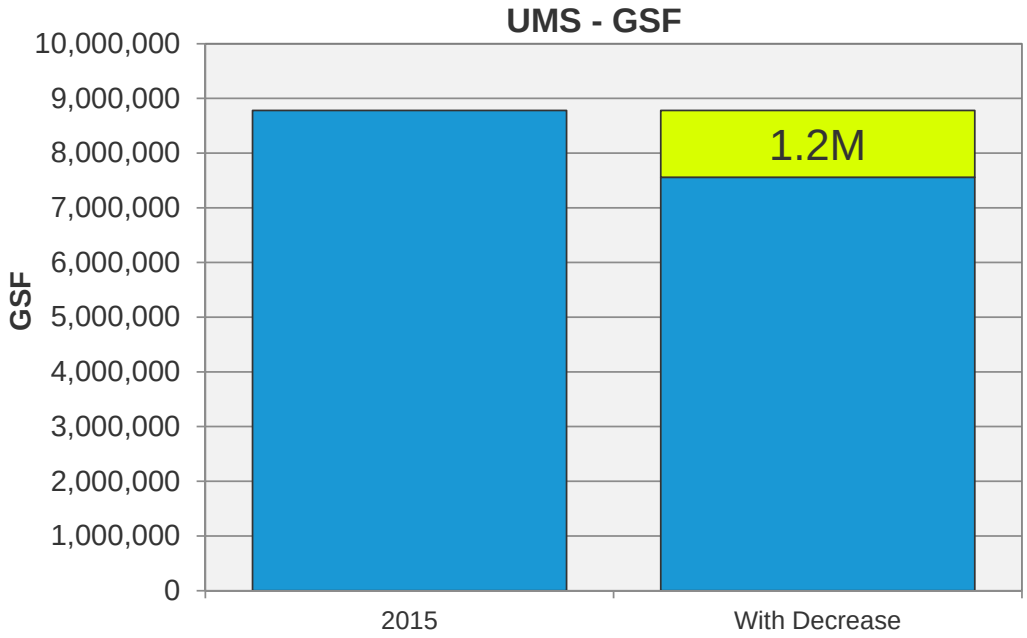
Density Factor

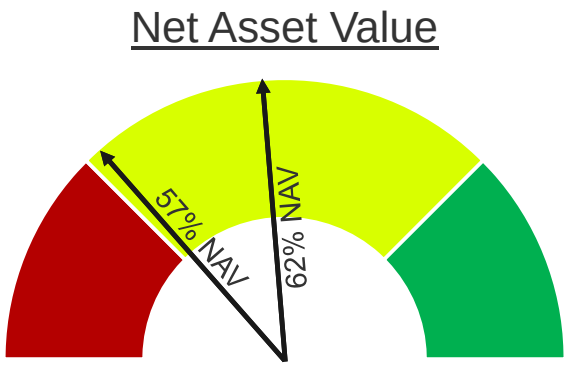


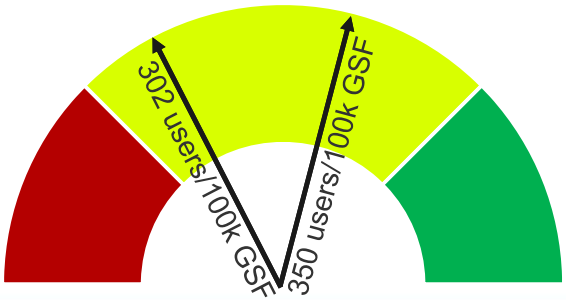
10.1

Strategic Roadmap for UMS: Space

Scenario #3: Decrease in space







If you remove all space with an NAV below 40%, density would increase to 350 users/100k GSF, if students stay constant, and Net Asset Value will increase to 62%, in today's dollars

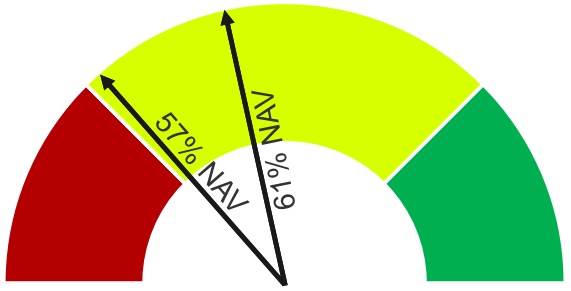
10.1

Strategic Roadmap for UMS: Combination

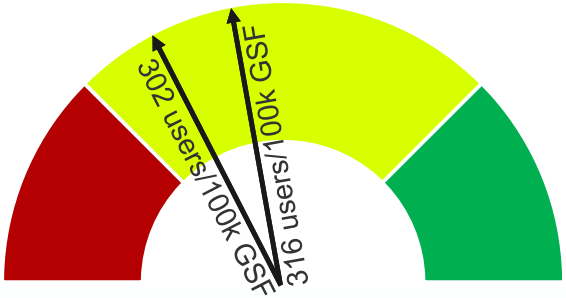
Scenario #4: Combination of the three elements

Investment Level	**$50M for 5 Years**
Enrollment Level	**Stable**
Space Reduction	**400K GSF**

Net Asset Value



Density Factor



*Model assumes 2.8% inflation year over year and current investment level of $31.1M for FY16 and FY17

**These models assume investments on a yearly basis.

55

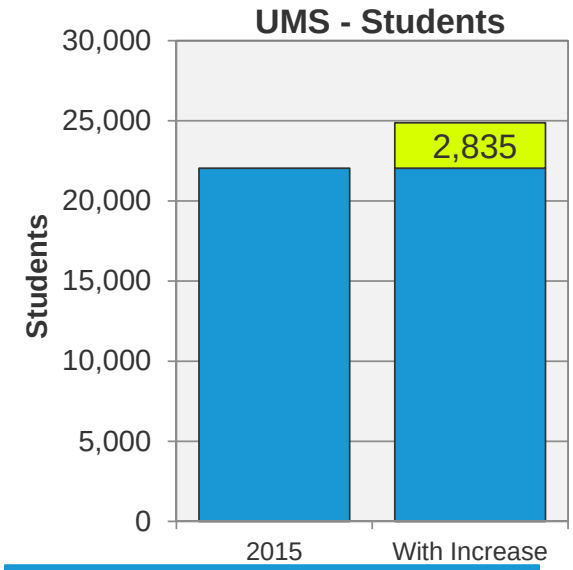
sightlines

10.1

Strategic Roadmap for UMS: Combination

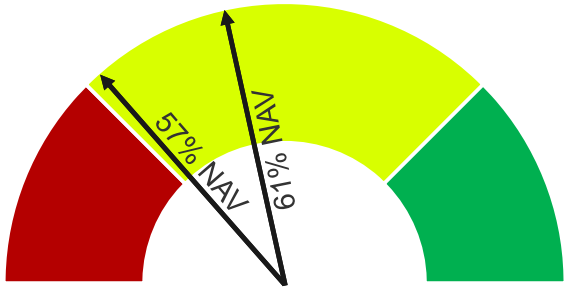
Scenario #4: Combination of the three elements

Investment Level	**$50M for 5 Years**
Enrollment Level	**2,835 Increase**
Space Reduction	**400K GSF**

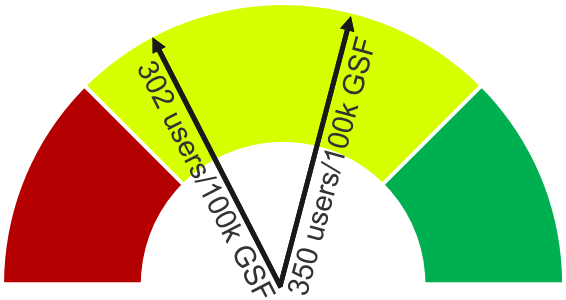


2,835 students needed in order to reach 350 users/100k GSF

Net Asset Value



Density Factor



*Model assumes 2.8% inflation year over year and current investment level of $31.1M for FY16 and FY17

**These models assume investments on a yearly basis.

56

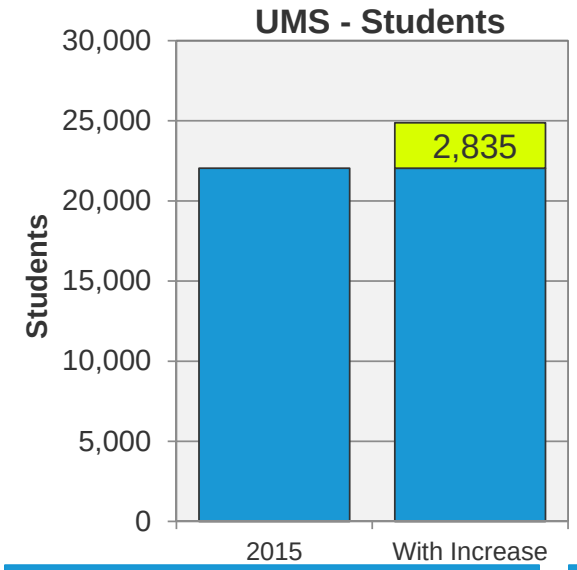
sightlines

10.1

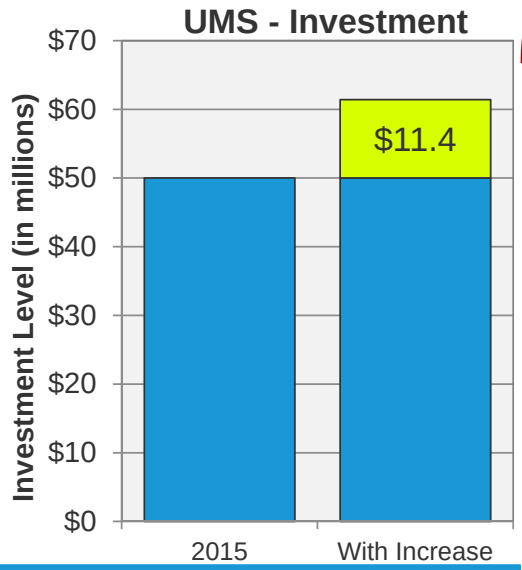
Strategic Roadmap for UMS: Combination

Scenario #4: Combination of the three elements

Investment Level	**$61.4M for 5 Years**
Enrollment Level	**2,835 Increase**
Space Reduction	**400K GSF**

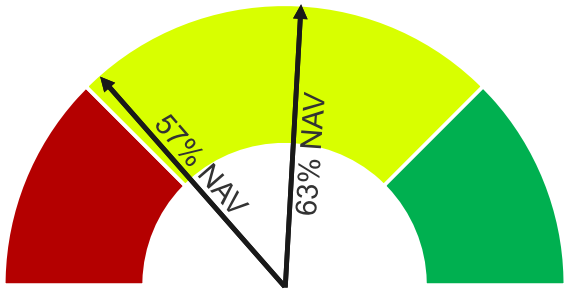


2,835 students needed in order to reach 350 users/100k GSF

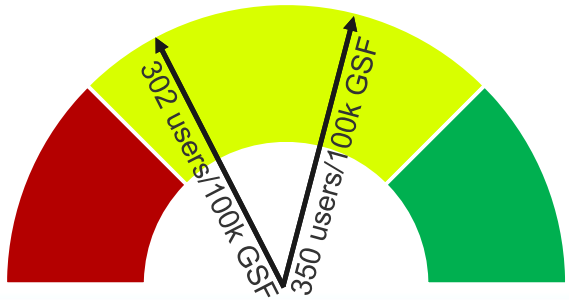


$11.4M increase in yearly investment to reach 63.5% target NAV

Net Asset Value



Density Factor



*Model assumes 2.8% inflation year over year and current investment level of $31.1M for FY16 and FY17

**These models assume investments on a yearly basis.

sightlines

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10.1

Concluding Comments

- Establish stable and sustainable capital investments to improve and protect current UMS building assets.
- Develop a space management plan. Divesting facilities will increase density and increase the Net Asset Value.
- Focus on strategic project selection. Choose projects which will mitigate the risk of failures by targeting reliability, safety/code, and critical asset preservation issues.

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Questions & Discussion

10.1

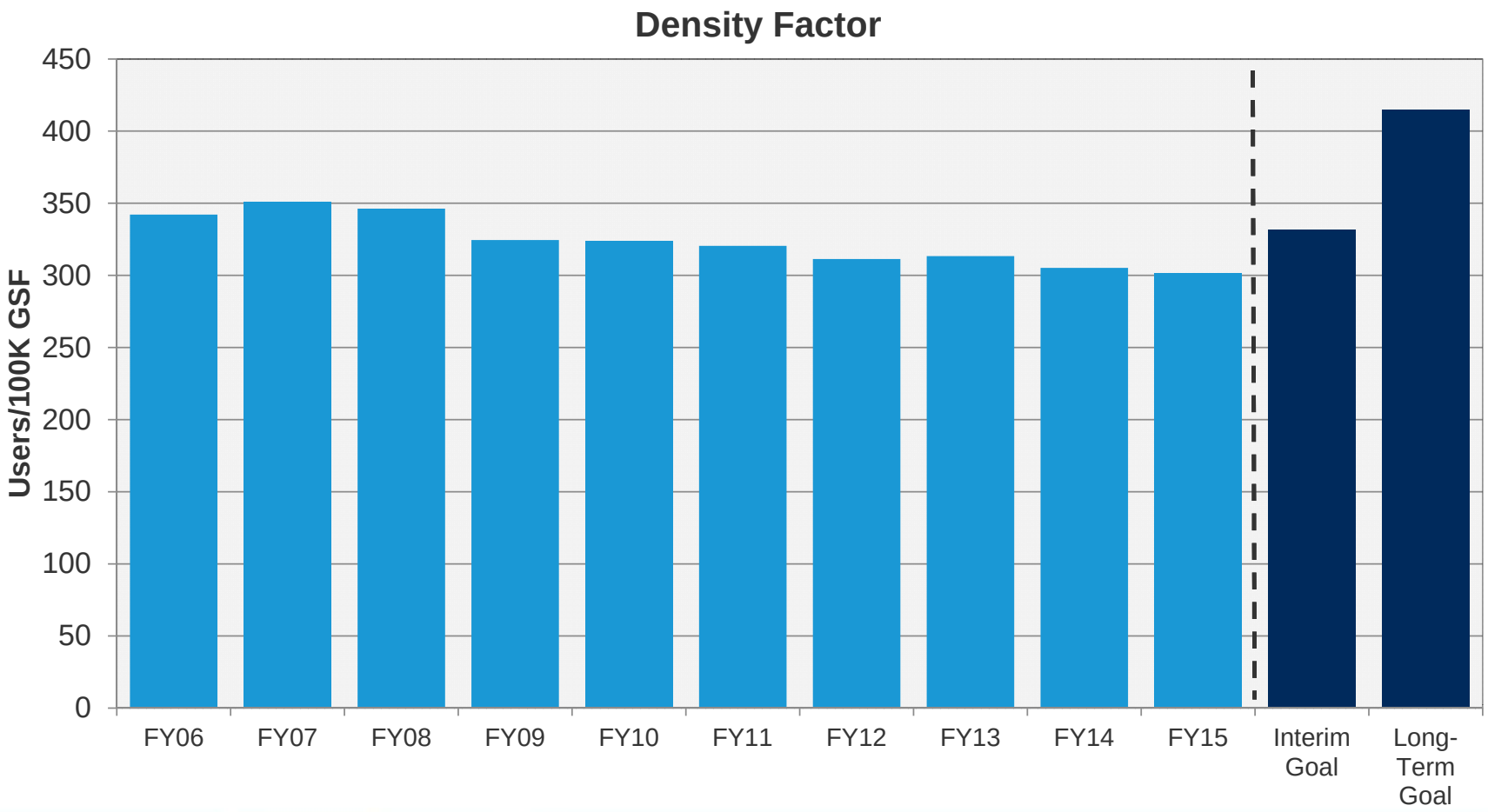
Appendix: UMS Key Performance Indicators

Using Sightlines Data to Monitor UMS KPIs

1. Density: Number of users ▪ Current UMS measure: 297 ▪ Interim Goal: 332 ▪ Peer/Industry standard: 460 ▪ Long-term System goal: 415	**2. NAV: Net Asset Value** ▪ Current UMS measure: 59% ▪ Interim Goal: 63.5% ▪ Peer/Industry standard: 75% ▪ Long-term System goal: 70%	**3. Capital Expenditures on Existing Space;** *%CRV* ▪ Current UMS measure: 1.88-2.34% ▪ Peer/Industry standard: <1.5% ▪ Periodic reporting recommended.
4. Annual Facilities Operating Expenses; *Maintenance, Custodial, Grounds, & Paid Utilities % GIR* ▪ Current UMS measure: 9.67% ▪ At this time, there are no commonly accepted standards in this area. UMS will continue to track, report, & internally benchmark their progress.	**5. Total Cost of Ownership (TCO);** ▪ UMS should formally consider lifetime cost of a facility and other KPIs in planning and decision making, not only one-time construction costs.	**6. Energy Cost;** *per GSF* ▪ Current UMS measure: $1.72 ▪ Peer/Industry standard: $1.98 ▪ Periodic reporting recommended.
7. Annual Facilities Operating Expenses; *Maintenance, Custodial, Grounds, & Paid Utilities % CRV* ▪ Current UMS measure: 2.89 - 3.60% ▪ Peer/Industry standard: TBD ▪ Periodic reporting recommended.	**8. Annual Facilities Operating Expenses;** *Maintenance, Custodial, Grounds, & Paid Utilities per GSF* ▪ Current UMS measure: $6.70 ▪ Peer/Industry standard: $6.13 ▪ Establishment of specific goals to be revisited in FY17.	**9. Preventive Maintenance/ Demand Maintenance;** *% Annual Expenditures* ▪ Current UMS measure: 3% ▪ Peer/Industry standard: in evaluation ▪ Establishment of specific goals to be revisited in FY17.
10. Coverage: FTE (Maintenance, Custodial, Grounds); *per GSF* ▪ Continue to monitor GSF/FTE ratios. ▪ Strive to meet or exceed APPA/Sightlines benchmarks, i.e.: Custodial target zone: 29,213 – 37,000 GSF/FTE	**11. Energy Cost;** *per Million BTUs* ▪ Current UMS measure: $17.73 ▪ Peer/Industry standard: $19.00 ▪ Periodic reporting recommended.	**12. Energy BTUs;** *per GSF* ▪ Current UMS measure: 97,015 ▪ Peer/Industry standard: 121,131 ▪ Continue to meet/exceed peer/industry standards, strive to improve existing UMS performance, & establish specific goal for FY16.

Density Factor

Density: Measures number of users per 100,00 GSF



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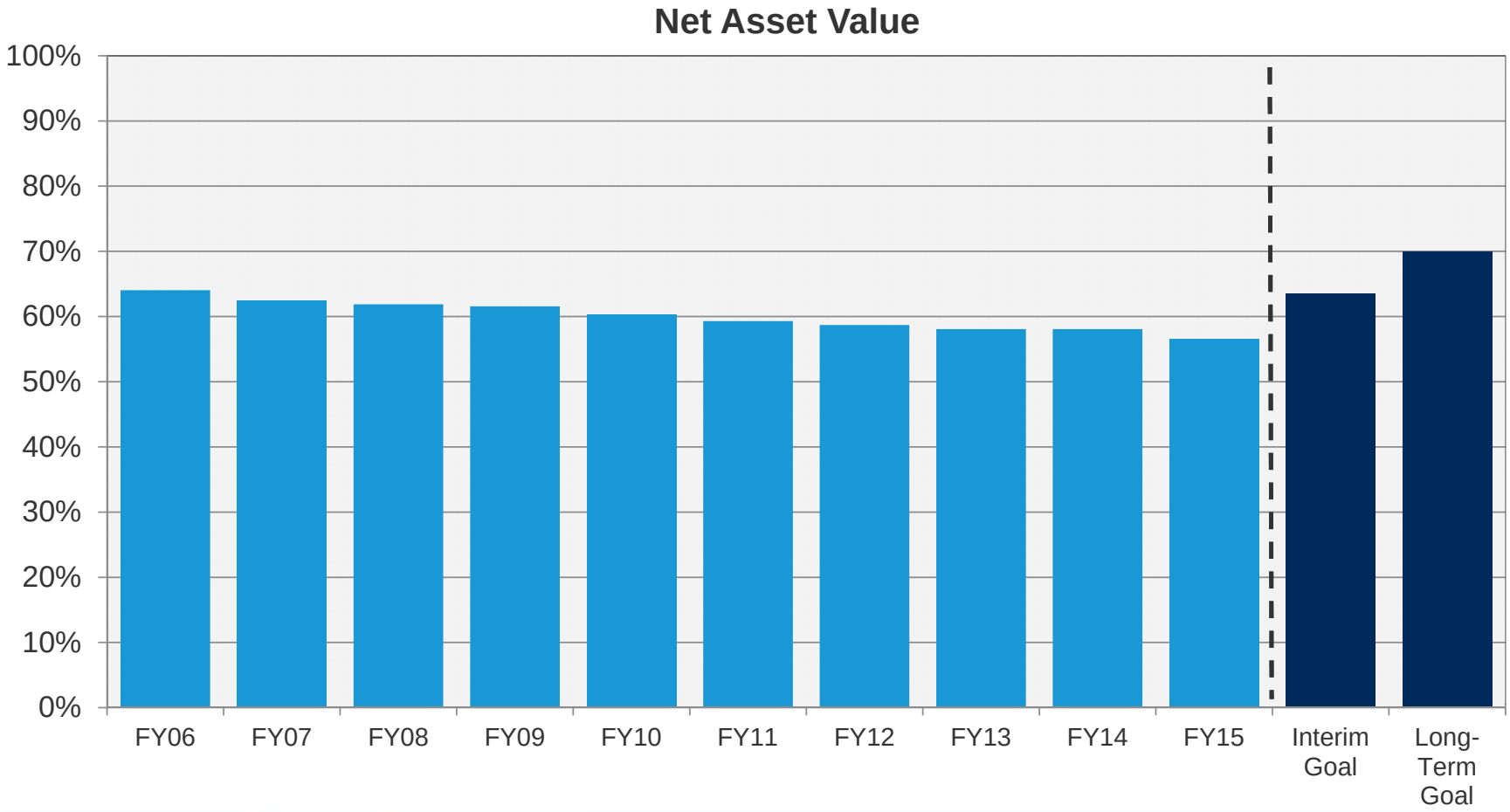
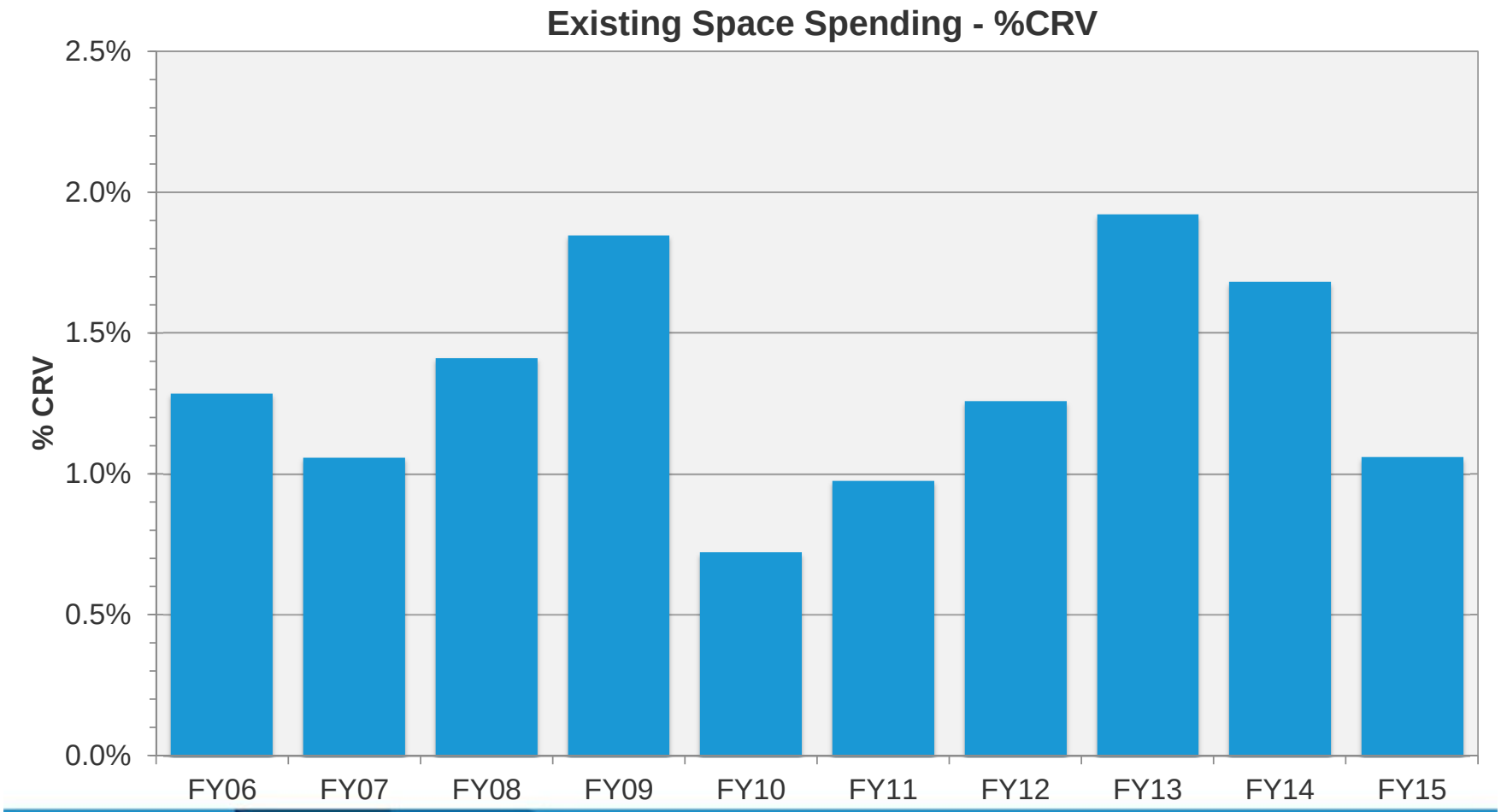
Net Asset Value



Capital Spending - %CRV

Existing space investment only



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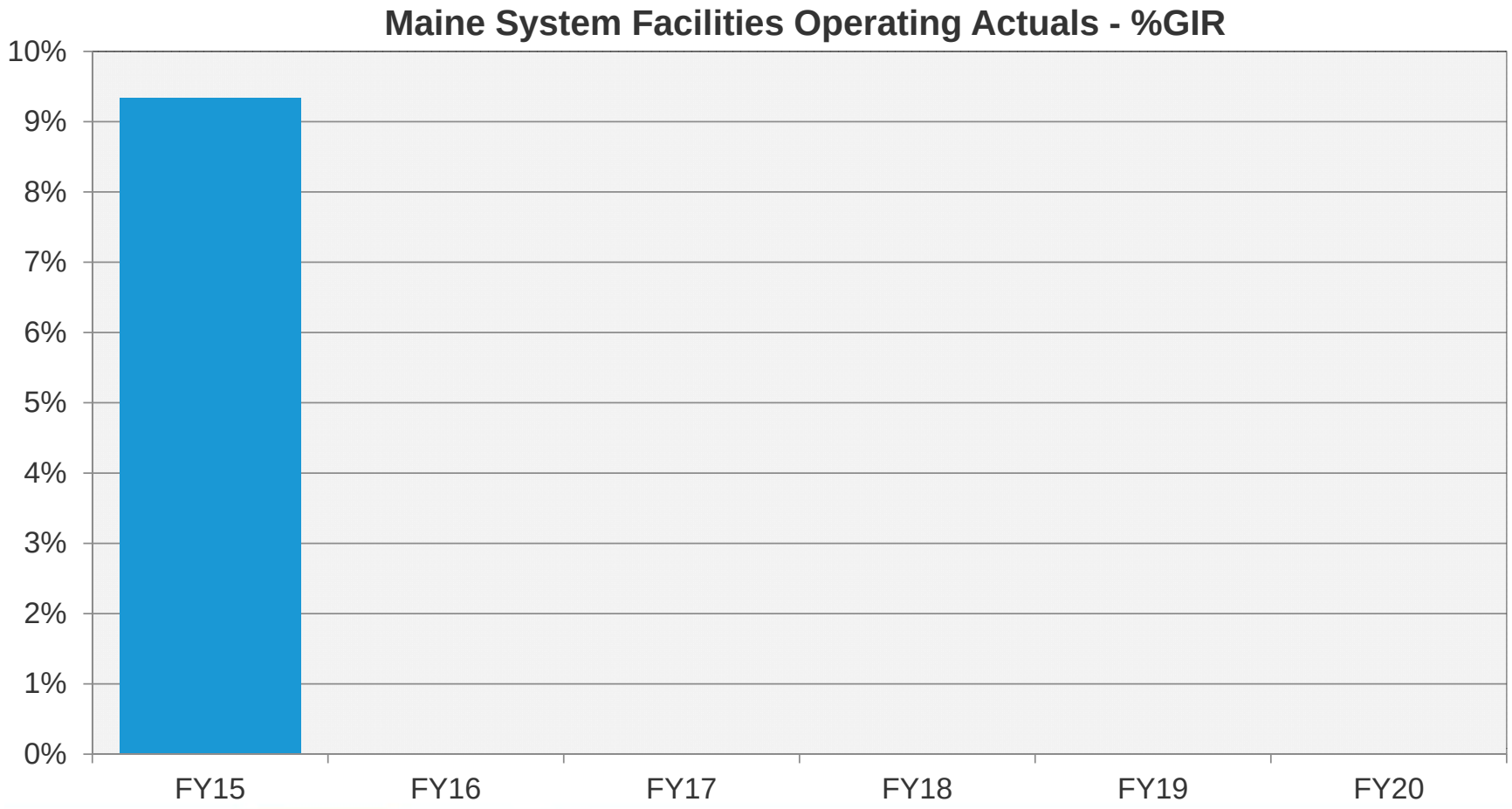
Facilities Operating Actuals as % of GIR



*This information will be tracked moving forward.

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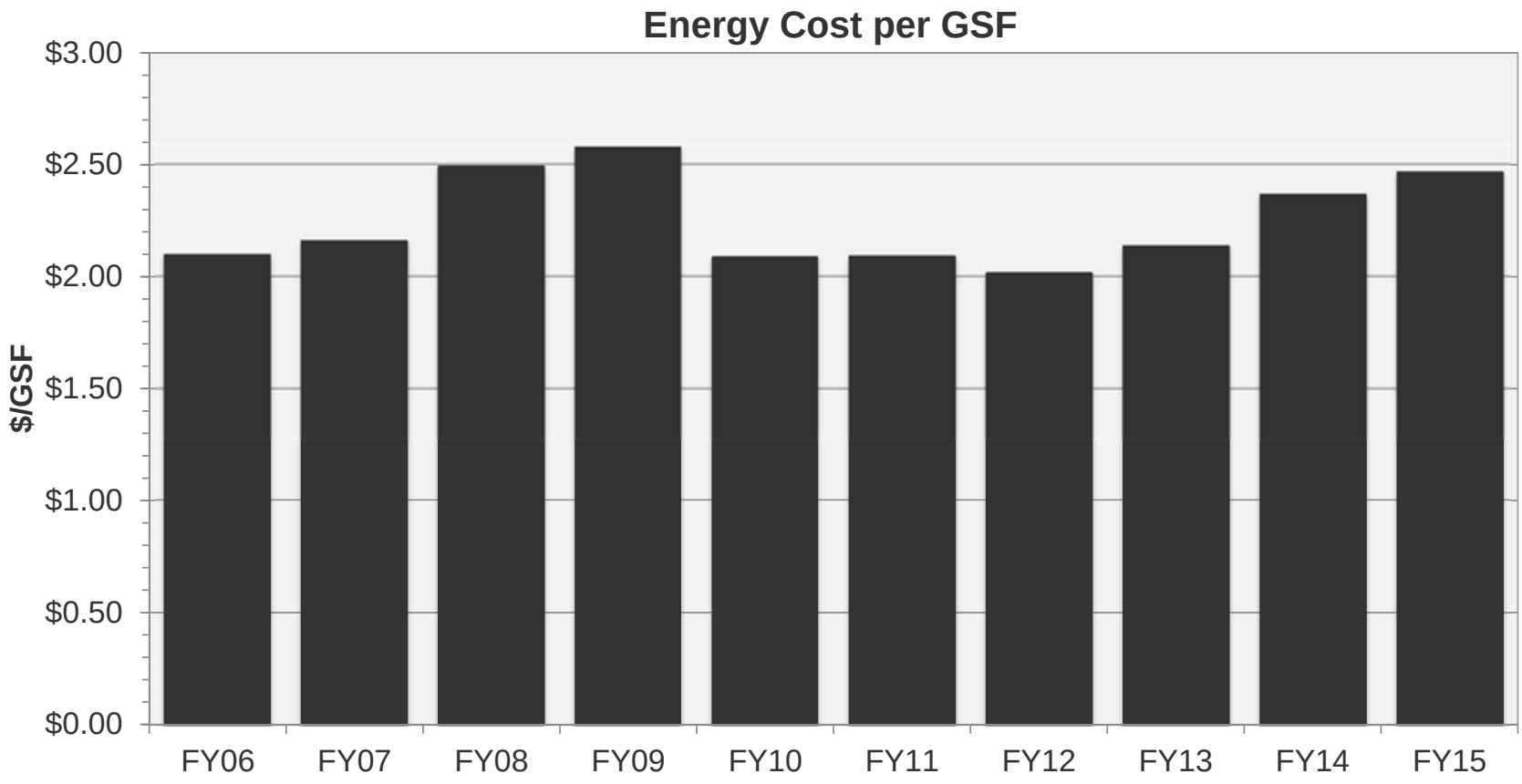
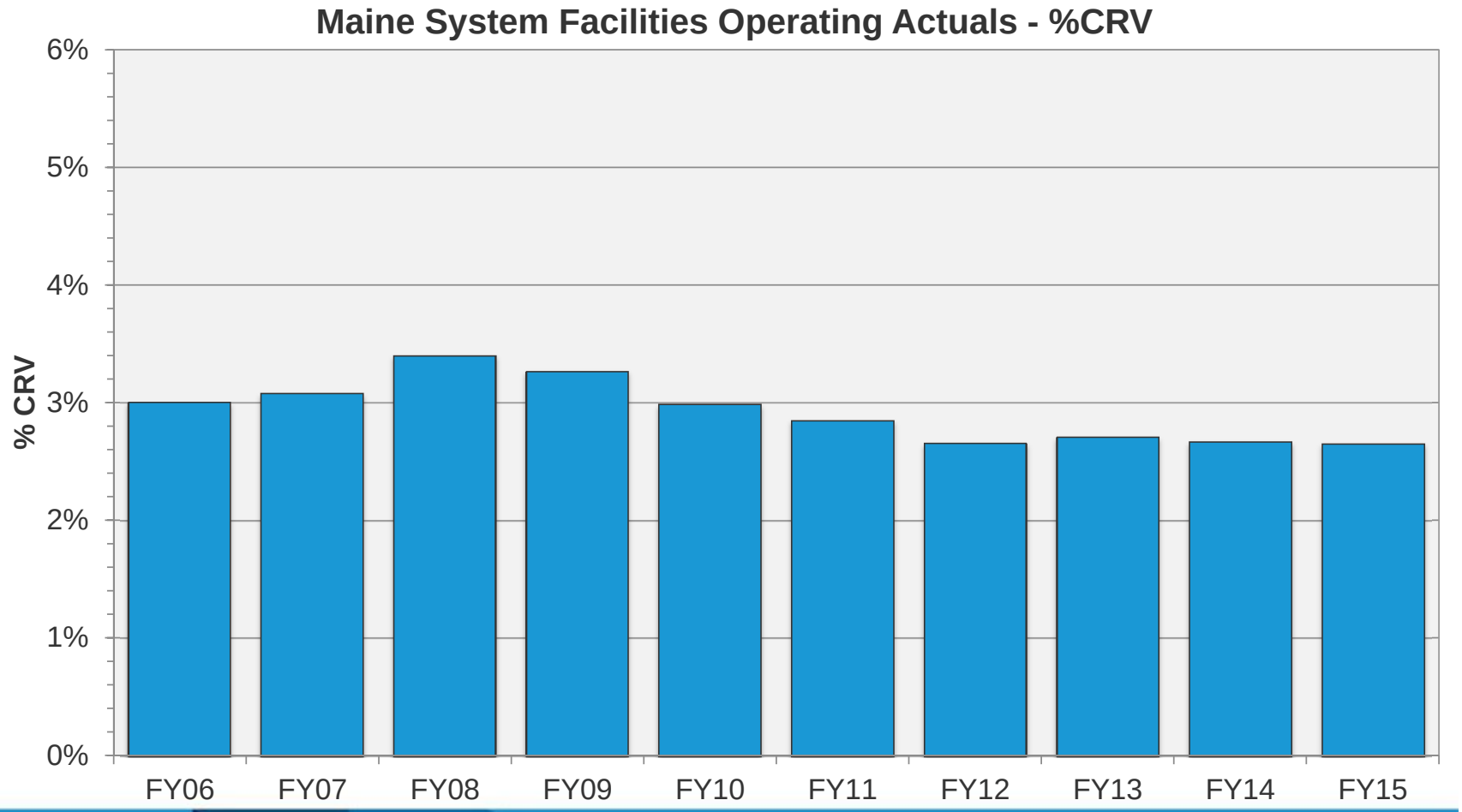
Energy Cost per GSF



Facilities Operating Actuals as % of CRV



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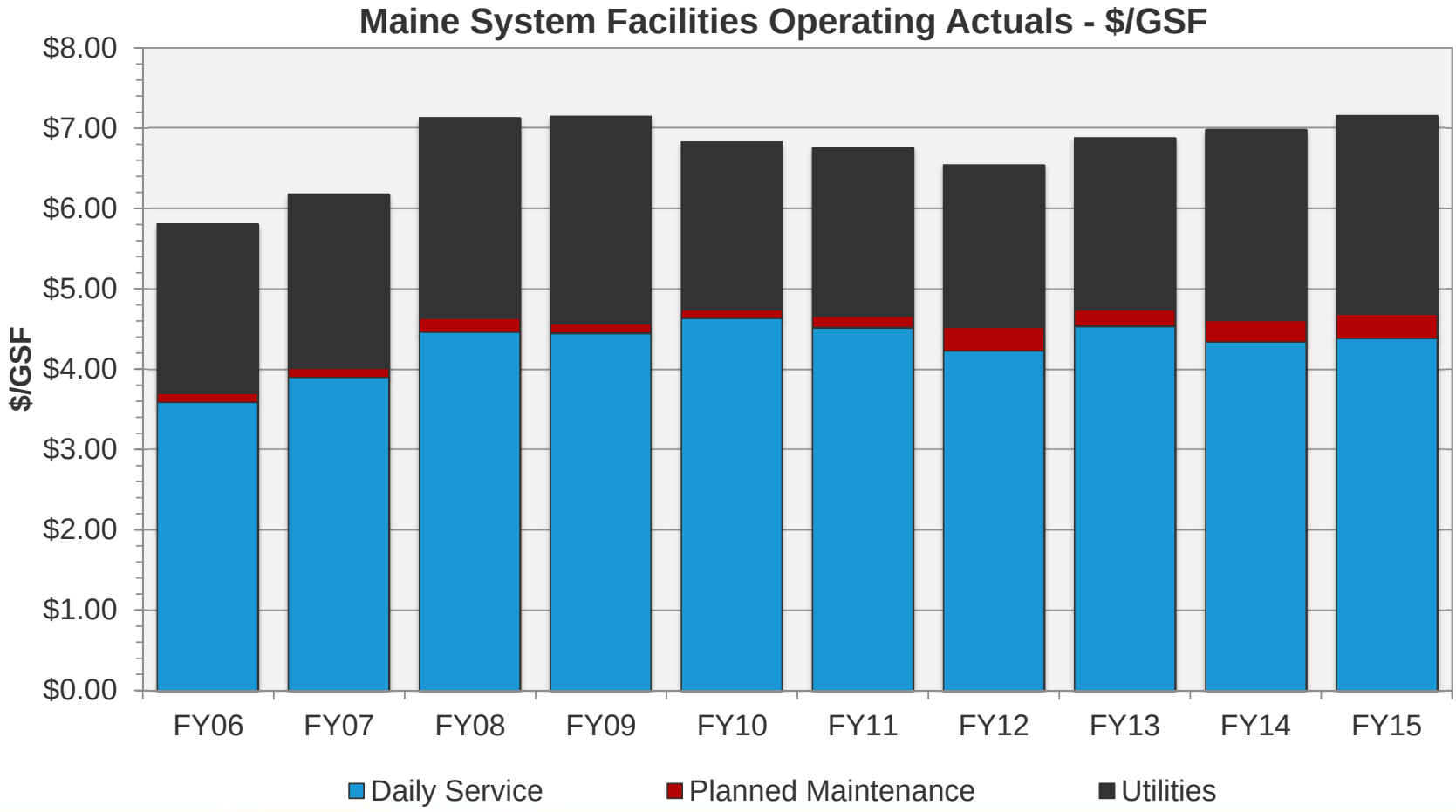
Facilities Operating Budget Actuals



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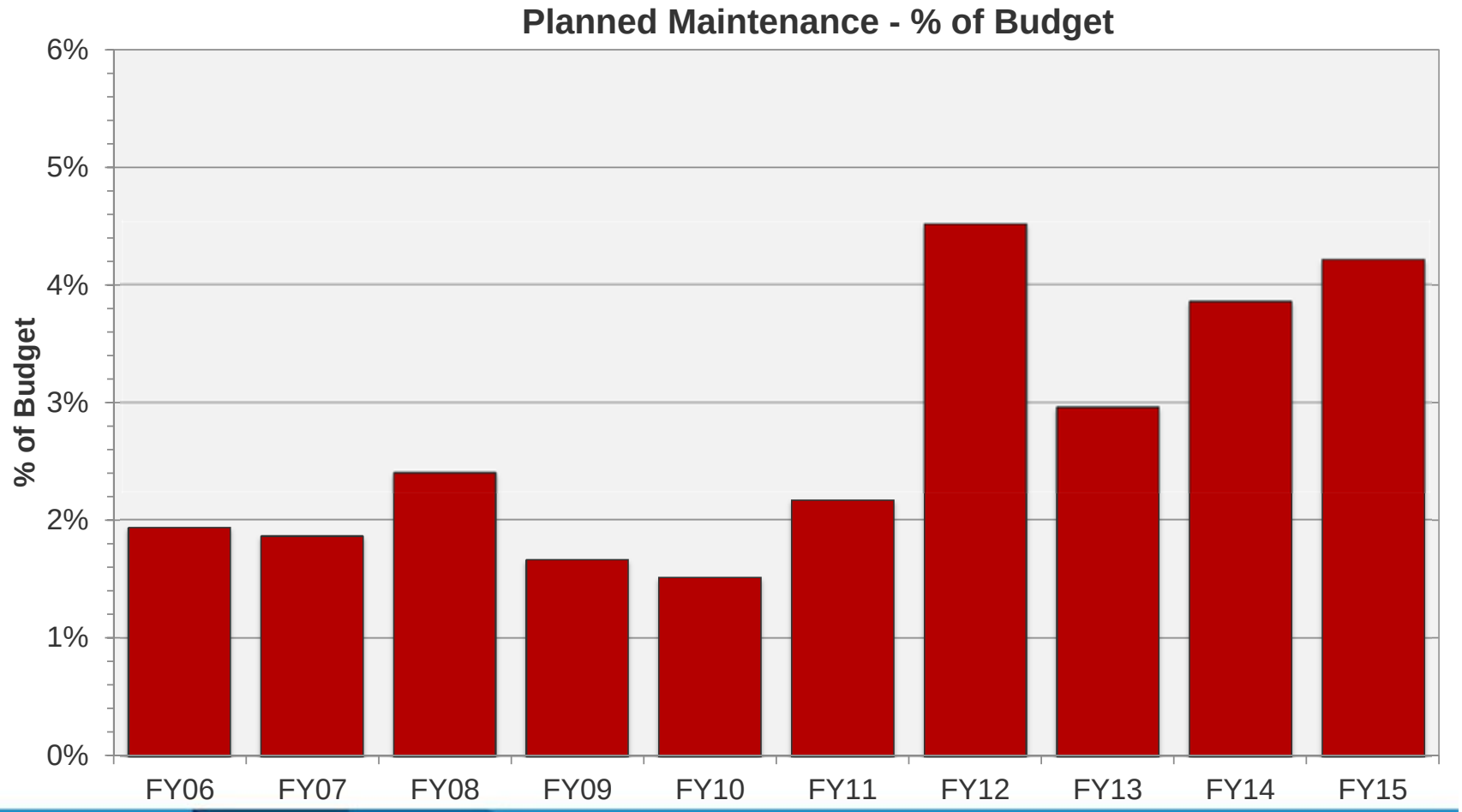
Planned Maintenance



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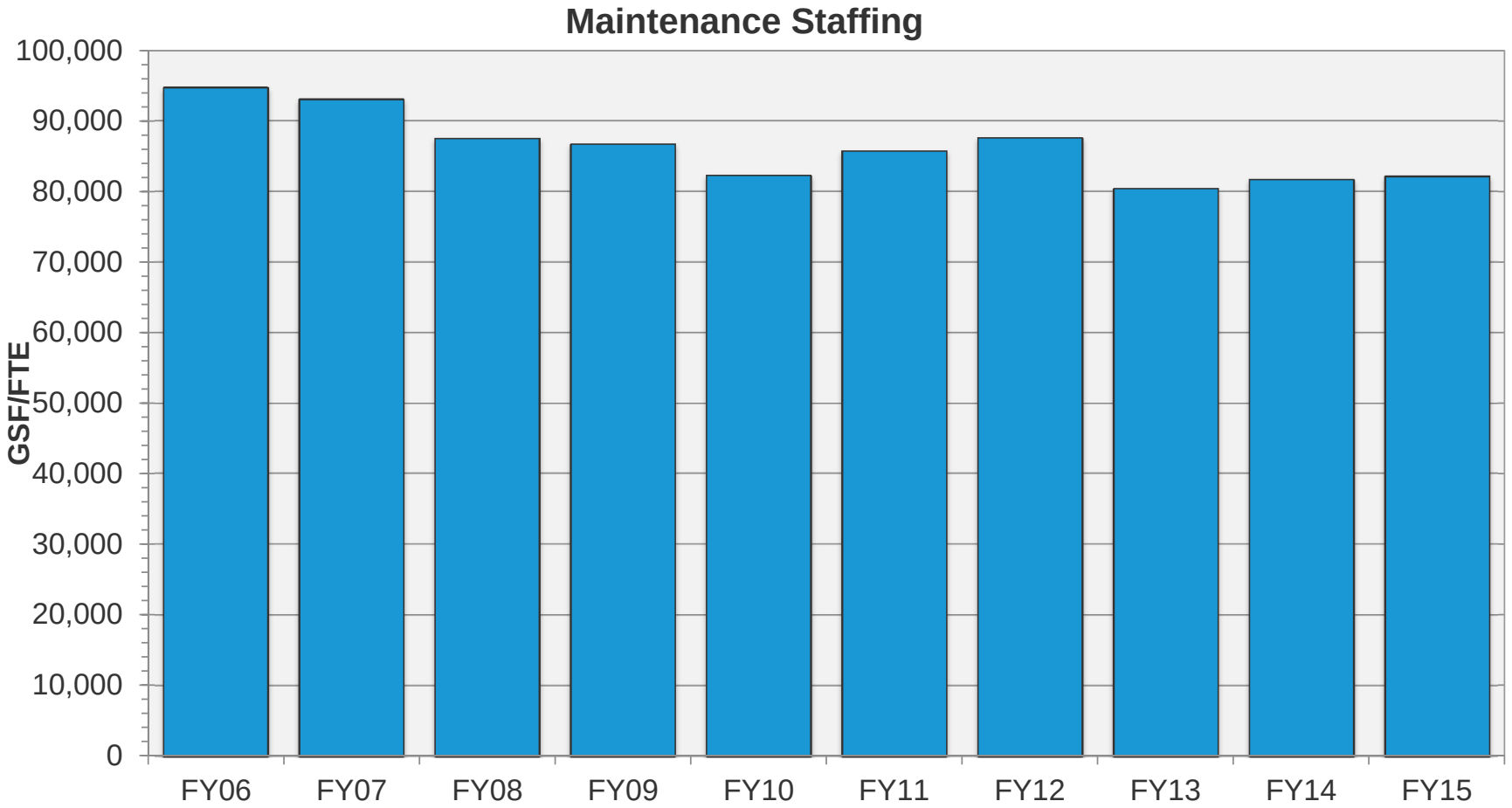
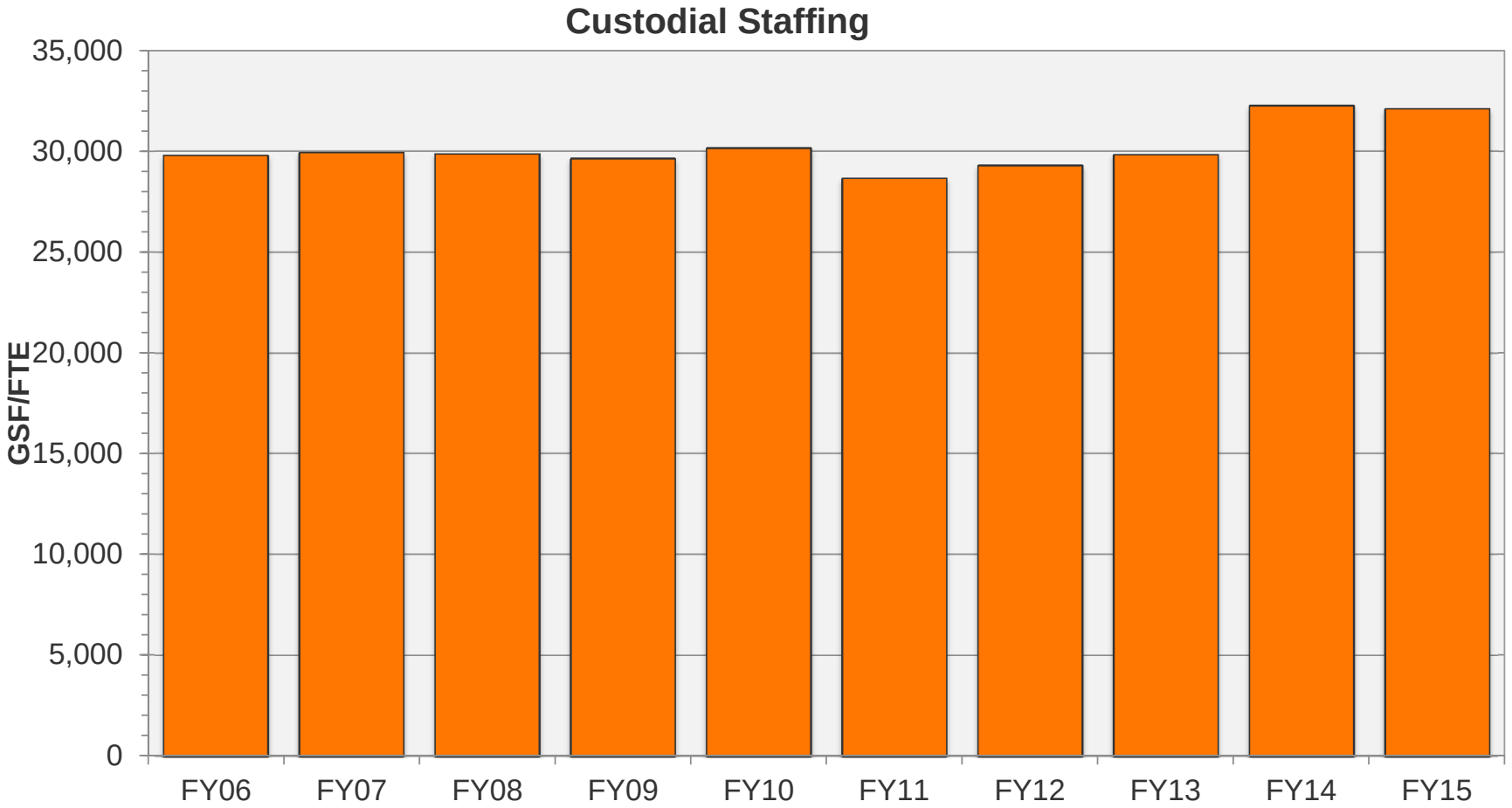
Maintenance Staffing



Custodial Staffing



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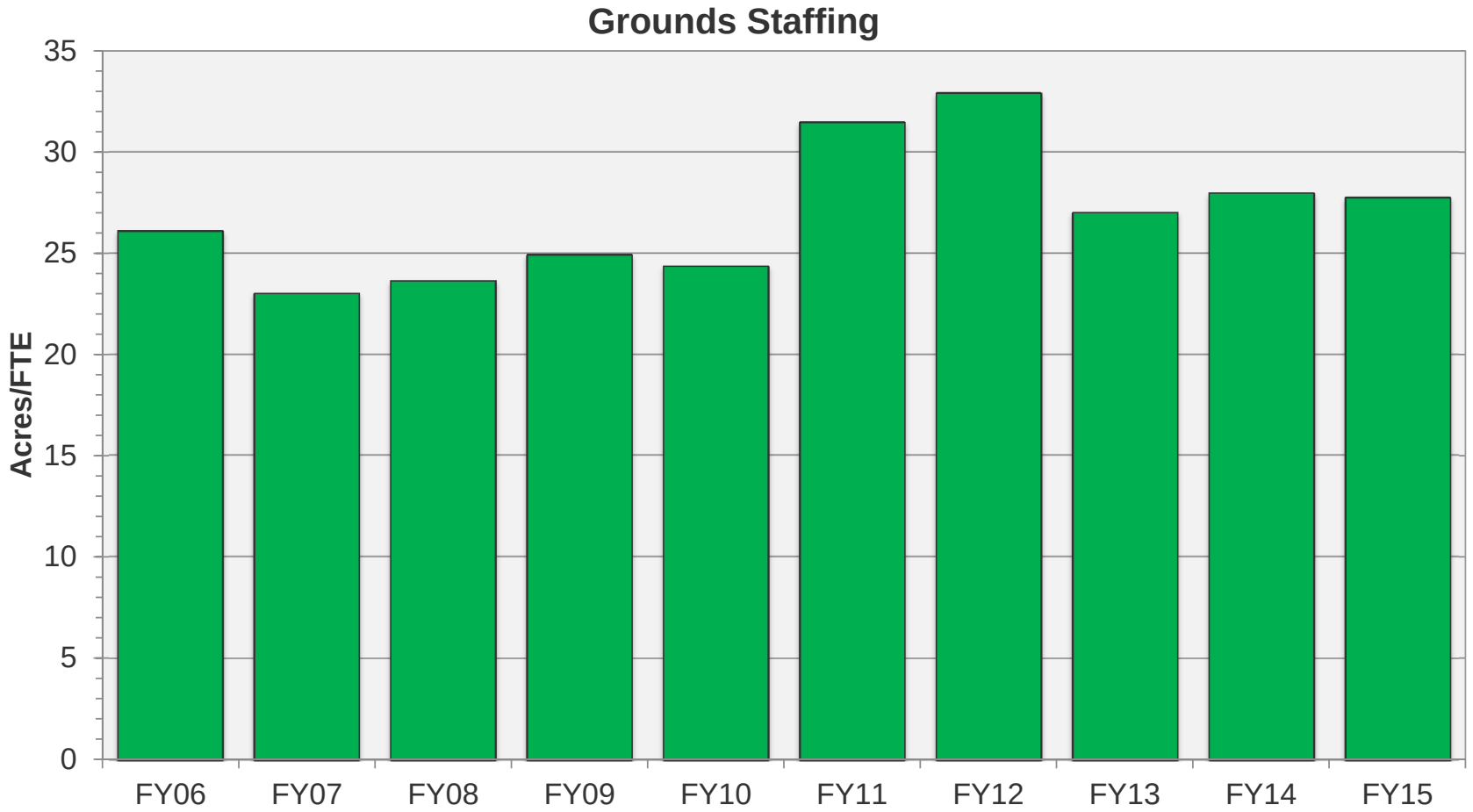
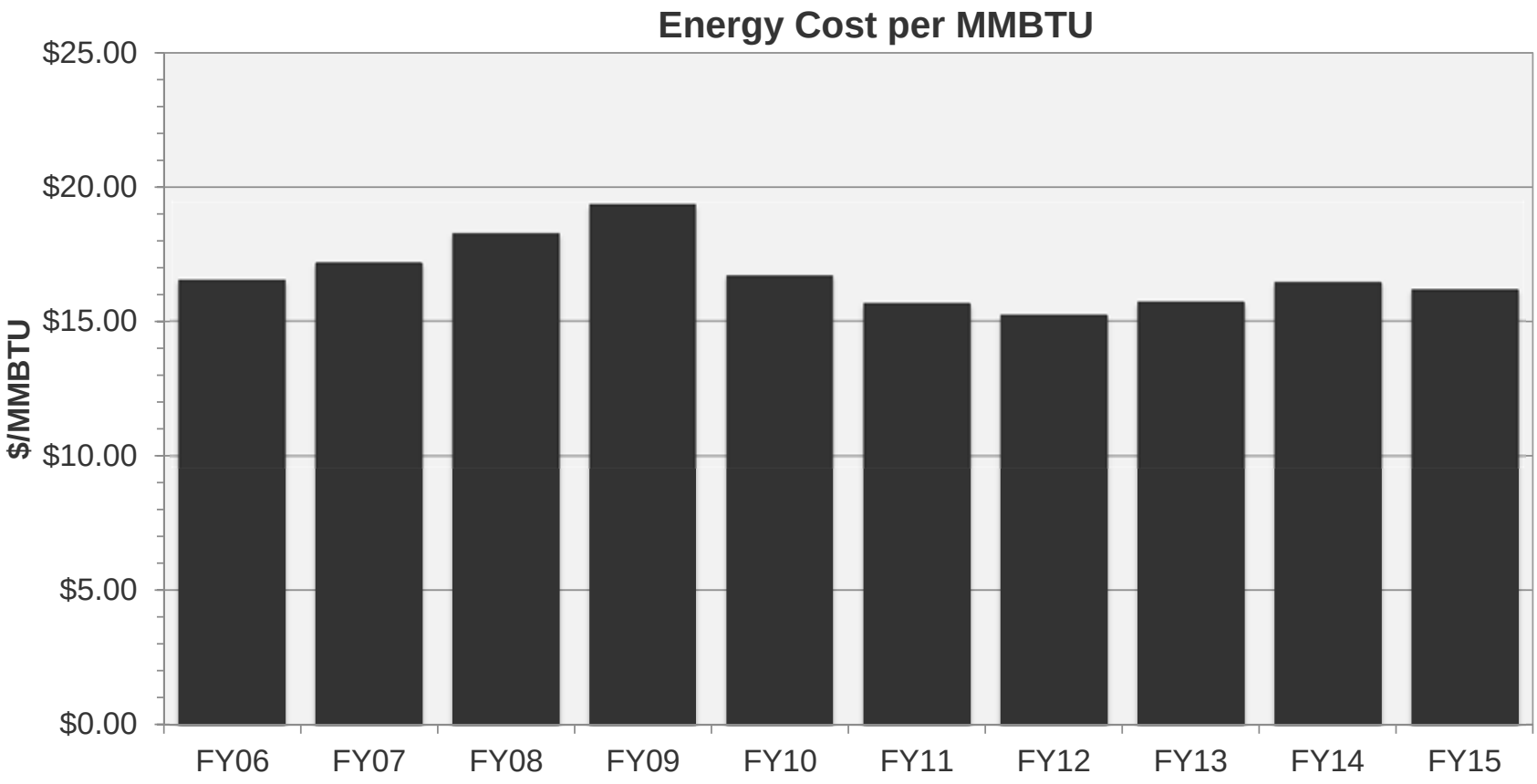
Grounds Staffing



Energy Cost per MMBTU



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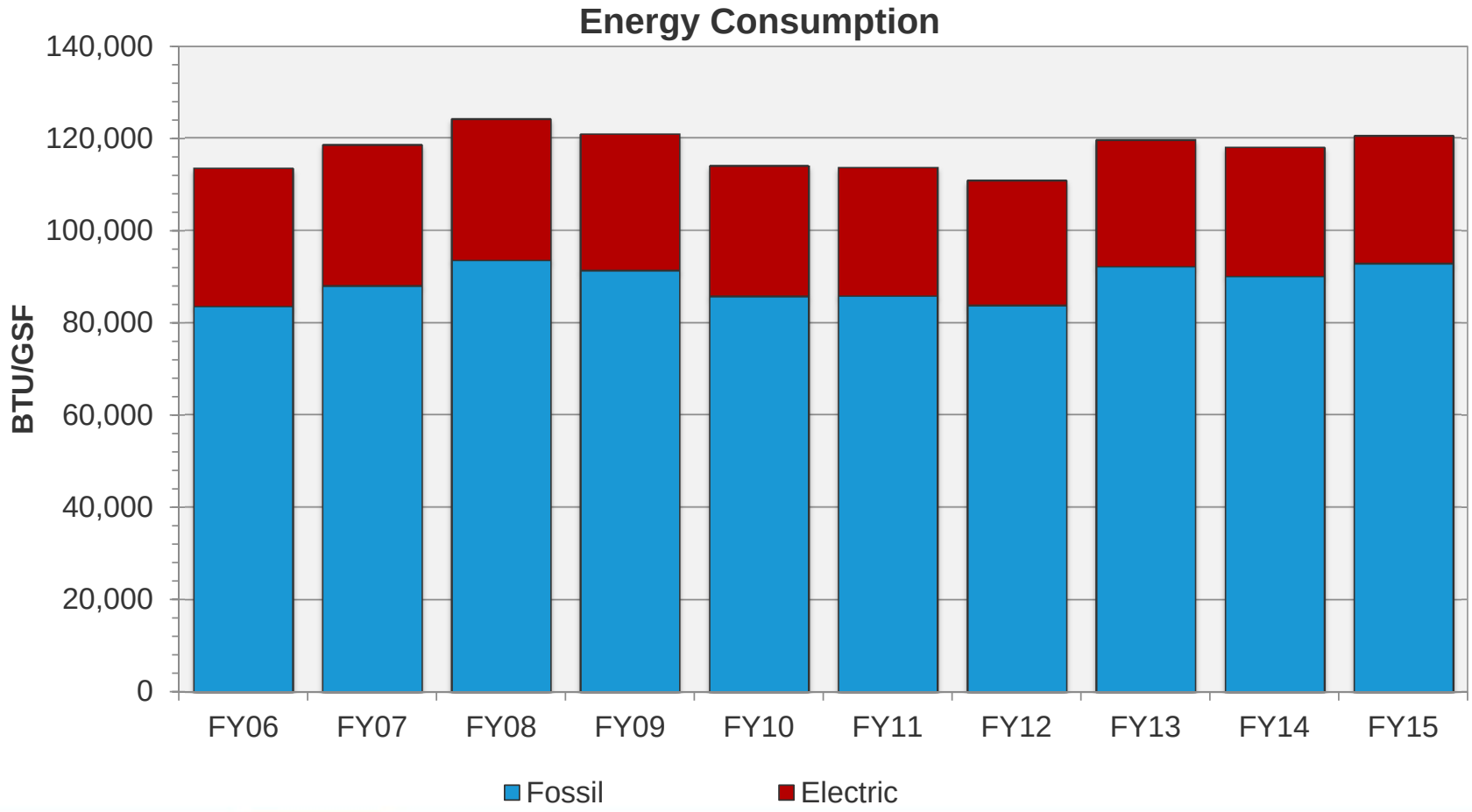
Energy Consumption

Fossil consumption increases in FY15, electric remains consistent



**Fossil Fuels contain all heating fuel sources, including alternative sources (ie biomass, wood chips, etc.)*

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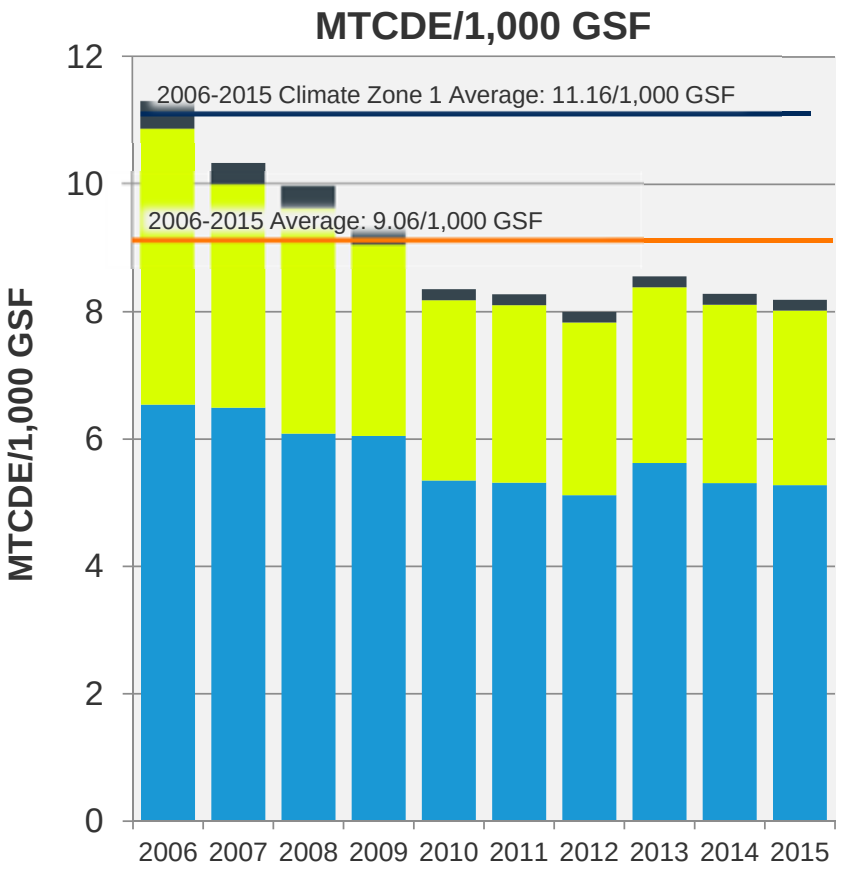
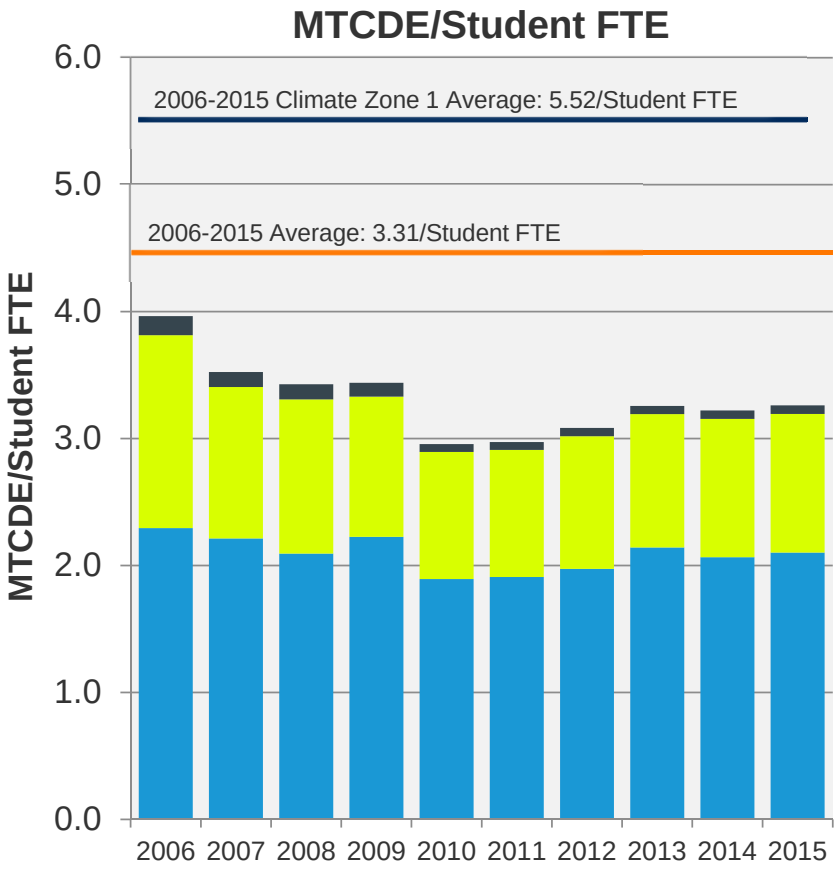
Maine System Emissions Summary





MTCDE = Metric Tons of Carbon Dioxide Equivalent

Scope 1 Scope 2 Scope 3

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Item 4:
Trusteeship Magazine Article

Back to Agenda

AGB ASSOCIATION OF GOVERNING BOARDS OF UNIVERSITIES AND COLLEGES

TRUSTEESHIP MAGAZINE

PREVIOUS ARTICLE NEXT ARTICLE

Stress Testing: How Can You Ensure Your Institution's Fiscal Health?

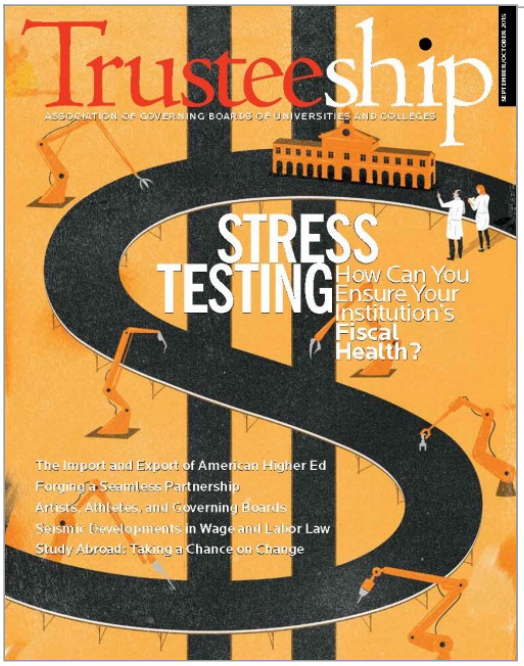
BY STEPHEN G. PELLETIER
SEPTEMBER/OCTOBER 2015

TAKEAWAYS

Challenging financial times underscore the need for colleges and universities to have a deep understanding of their fiscal health. But what measures are best to gauge an institution's financial position?

Existing metrics, including certain widely used ratios, offer essential baseline perspectives on critical factors.

Ultimately, institutions need to augment existing metrics with markers they develop themselves, tailored to their individual circumstances.



These days, finances at most colleges and universities are stretched nearly to the breaking point. By what markers and metrics can board members best gauge an institution's fiscal health?

Prior to Sweet Briar College's subsequent rebirth, its closing raised many questions, not the least of which was, "Couldn't we have seen the college's demise coming?" Or, to be more precise, aren't there markers of financial health that can tell us when an institution risks fiscal meltdown? Similar questions arose around the banking industry after the financial collapse of 2008. In response, federal legislators enacted regulations to make the workings of big banks more transparent.

While no one is clamoring for similar regulations in higher education, might colleges and universities draw lessons from the experience of the banking industry? In an era when many institutions must be especially diligent in working to maintain financial equilibrium, how can boards best assess financial viability and vitality in the institutions they serve?

In short, what forms of financial stress testing work in higher education?

BROAD METRICS

In its official description as law, the Dodd- Frank Wall Street Reform and Consumer Protection Act, which went into effect in 2012, seeks to "promote the financial stability of the United States by improving accountability and transparency in the financial system." Toward that goal, Dodd-Frank introduced requirements that American banks undergo regular "stress tests" to assess their financial health.

While not tantamount to Dodd-Frank's level of scrutiny, the federal government subjects colleges and universities to financial stress tests of sorts. Each year, the U.S. Department of Education assesses the "financial responsibility" of private and proprietary institutions based on its review of their audited financial statements. (Public institutions are assumed to have a governmental safety net and thus are exempted.) The department weighs factors like institutional debt, assets, and net income to derive an institutional composite score that it uses to help assess an institution's suitability to participate in federal student-aid programs.

Institutions with composite scores below 1.5 are subject to inclusion on a federal list of colleges and universities whose financial situation the Department of Education monitors, again in the context of the awarding of federal studentaid funding. The latest roster, issued in July and listing 483 institutions, was dominated by more than 270 proprietary schools, colleges, and universities. But the list also included about 100 private, nonprofit institutions. Public universities and a handful of foreign institutions rounded out the list.

In 2012, the National Association of Independent Colleges and Universities (NAICU)—in consultation with the National Association of College and Business Officers (NACU BO), the Council of Independent Colleges (CIC), and financial experts—issued a report critical of the government's financial responsibility

test. Among other criticisms, the report said government regulators misinterpret or miscalculate financial formulas and use outdated accounting definitions and standards. (After his institution was cited for having "failed" its financial-responsibilitytest for fiscal year 2008–09, then- Guilford College President Kent Chabotar wrote eloquently on the topic in the July/ August 2011 issue of *Trusteeship*.)

A recent task force on federal regulation of higher education, convened by the American Council on Education at the request of a bipartisan group of U.S. senators, examined these issues as well. In a report issued in January 2015, the task force found that the department "has incorrectly interpreted and implemented the accounting definitions and standards used to calculate… financial responsibility" and "failed to follow the statutory requirement to consider the overall financial health of an institution" before failing institutions based solely on their composite scores. The task force called for better policies and more transparency around the test, as well as a provision that would allow institutions to submit additional evidence of their overall financial health.

Yet another marker that is often weighed as a measure of an institution's financial condition is its credit worthiness, as assessed by such organizations as Moody's, Standard & Poor's, or the Fitch Ratings. Those can tell an important part of an institution's financial story, but because not every college or university issues debt, institutions don't necessarily have such a rating. Rating agencies are currently modifying their standards to ensure their continued relevancy.

OTHER MARKERS THAT MATTER

Government ratios and independent credit ratings can add to an institution's knowledge base about its financial health, but college and university leaders know that they need to take a deeper dive into their financial performance to reap the kind of information that can drive informed strategy and decision making. Since the 1970s, many institutions have used financial ratios to better understand and interpret financial statements—a construct that was pioneered by KPMG and subsequently fine-tuned by the accounting/consulting giant and partners such as Prager McCarthy & Sealy. (KPMG ratios informed development of the Department of Education's financial tests.)

Essentially, KPMG built off experience in business to establish key benchmarks to assess the financial health of colleges and universities. Those principles are documented in the seminal book *Strategic Financial Analysis for Higher Education* (Prager & Co.), now in its seventh edition, and most recently authored by KPMG, Prager, Sealy & Co., and the consulting firm Attain. Each edition of the book has reflected changes in economic and market conditions and has offered improvements and updates in the methodology.

To distill a rich set of markers and formulae to their barebones essence, the KPMG model focuses on four distinct inquiries:

- The *Primary Reserve Ratio* explores whether an institution's resources are sufficient and flexible or liquid enough to support its mission.
- The *Net Operating Revenues Ratio* looks at whether operating results show that the institution is living within its available resources.
- The *Return on Net Position Ratio* examines how well the institution's asset performance and management support its strategic direction.
- The *Viability Ratio* assesses how strategically the institution's financial resources, including debt, are managed to advance the institution's mission.

The four ratios are melded to produce the Composite Financial Index (CFI), a summary measure of an institution's financial health. The CFI model is predicated on an assumption that institutional strategic planning, risk management, and financial analysis are all interrelated. As the introduction to the most recent edition of *Strategic Financial Analysis for Higher Education* states, "The alignment of strategic financial goals with actions and risk assessment will improve strategic decision making and chances of institutional success.... The mission, as articulated in the strategic plan, is the institutional driver; financial capacity and affordability measure the feasibility of the institution's aspirations."

On the plus side, the KPMG approach to financial ratio analysis proffers important tools proven to help colleges and universities conduct their own version of financial stress testing. Overall, the methodology's intentionality about linking finances, strategy, and risk assessment creates a powerful lens for viewing institutional health. Shedding considerable light on an institution's resources, financialratio analyses help institutions measure performance against strategic goals. The ratios and composite index form a robust framework through which institutions can assess their overall financial standing, risks, and operating efficiency. The data enable institutions to plumb critical questions, such as how liquid their resources are and how well they are using and managing debt. The tools help institutions identify problem areas that need attention and can suggest avenues for improving financial practices. Moreover, the ratios lend themselves to at-a-glance, dashboard reporting, and to presenting complex information in ways that may be more accessible to users not intimately familiar with spreadsheets and more technical presentations of financial data.

Experts are quick also to note the limits of financial-ratio analysis. The ratios shine light on financial statements, but they cannot substitute for deep understanding of the statements themselves. Similarly, the ratios tell only part of an institution's story—institutions need a deeper analysis that includes both qualitative and quantitative assessment. Decisions should not be made based on ratios alone, experts say, but rather should also reflect qualitative evaluations. Looking at data over too short a timeframe might suggest false trends. In addition, colleges and universities that benchmark their ratios with peer institutions need to be very careful to ensure that such comparisons are truly apples-to-apples, as it were.

ADDITIONAL FACTORS

While the KPMG framework can provide a certain level of assessment of an institution's fiscal position, experts say those reviews alone do not provide enough detail to fully test financial strength. Rather, they say, every institution needs to also factor in circumstances that are not fully reflected in the ratios. Key markers might include an institution's net assets, the tuition discount rate, and spending of the endowment. Overall, colleges and universities need more robust, comprehensive, but nuanced analytical tools to evaluate these and other critical factors as a means to assess an institution's fiscal vitality. And each institution needs to shape its own markers, tailored to its unique circumstances. For example, an institution might have a sound and strategic reason for a temporary decline in its net assets.

AGB board member Verne O. Sedlacek, a visiting fellow at the M.J. Murdock Charitable Trust, retired as president and CEO of Commonfund in 2015. Earlier he served as president of John W. Henry & Company, Inc., a large alternative investment manager, and as executive vice president and chief financial officer for the Harvard Management Company. Sedlacek says that while models like KPMG's ratios are helpful as a start in assessing an institution's financial health, "every institution is going to be different in terms of its sensitivity to revenues and expenses." Accordingly, he says, financial reviews should look at the distinct circumstances of a given institution. "It can't be done generically. It needs to be done on an institution-by-

institution basis," he says. "You have to be able to drill down into individual institutional cash flow." As part of governance, Sedlacek says boards should spend a portion of their meetings talking about different assessments of institutional fiscal health and their impacts and then use that information to "see if there's anything you can do to ameliorate some of the stresses."

"Just having an index score doesn't tell you much," says Michael Townsley, a consultant with Stevens Strategy and former president of the Pennsylvania Institute of Technology. "To really understand what's going on, you need to take those ratios and break them apart, then watch the trends that emerge and manage those."

Townsley, the author of *The Small College Guide to Financial Health: Beating the Odds* (NACUBO, 2009), says that "there are certain other variables that are also predictive of whether an institution is having problems." Trends in new student enrollment are one such marker, he posits, along with graduation rates, student-loan default rates, and student attrition. Other potential financial stressors, he says, are the institution's cash position, uncollected receivables, and, of course, the flow of gifts and grants.

At smaller colleges and universities, for example, Townsley says the balance of financial health could be shifted by loss of cash reserves, significant increases in uncollected receivables, and a tougher federal response to an institution identified as being in a weak financial position. Changes in student demographic trends—such as shrinking pools of 18- to 22-year-olds in some regions—can also be financial game-changers. "You'd better know why students aren't choosing you," he says.

"A metric that I don't think people track very well and should is cash flow out of operations," Townsley says. "In higher education, there are three cash flows to be concerned with. One is the money that comes out of operations, or net income adjusted for receivables. The two others are cash flow from financing activities and from investment activities. If you look at a lot of institutions, you'll discover that there is no cash flow, or there is in fact a negative cash flow out of operations. And the institution is being supported by things like one-time sales of investments or new bonds or additional borrowing for cash or things like that. If an institution isn't generating sufficient cash and is depending upon these other sources to fund itself, it is in a weak position."

Another pertinent question, Townsley says, is to assess the extent to which net tuition revenue, after discounting, covers institutional expenses. Overall, he says, a decade ago, in many institutions, such revenue would routinely cover the costs of instruction, academic affairs, and student services. But now, he says, "it's down to the point where in most institutions it is just barely covering instruction and some academic affairs expenses. So that coverage is an important factor." Townsley's proposed strategies for institutional health also include refining the strategic plan as needed, finding new ways to compete in the existing market, targeting new markets, honing the institution's programmatic array, cutting costs, and partnering with other institutions to realize efficiencies.

For long-term institutional financial sustainability, Townsley points to a model of economic equilibrium first developed by Richard Cyert, who was president of Carnegie Mellon University from 1972 to 1990. Cyert's model is predicated on an institution having sufficient quality and quantity of resources to fulfill its mission, sustain its purchasing power, and maintain its facilities.

Among other factors, the concept of equilibrium weighs net income, what an institution has to do to make up any deficits, how many new students it might need from a financial perspective, the extent of borrowing, and cash flow. "The neat thing about equilibrium," Townsley says, "is that you can look at

current conditions, but you can also apply that to future conditions, to see if things are going to change based on the information that you have about the institution."

Another expert says college price and competition for students go hand in hand as bellwethers that institutions and their boards—particularly at private institutions— need to monitor closely. "Consumers are becoming very cost-conscious, and private universities are having to fight harder for the same number of students," says Richard A. Beyer, a former college president and board chair whose background also includes successful stints as a technology CEO and senior operating executive of a $1-billion public company. "And so issues of cost—and when I say cost, I mean price from the consumer standpoint—become really important. That puts stress on institutions to either adjust their price, lower costs, or come up with innovative ways to deliver education at a more affordable price."

Beyer, who was formerly on the AGB board, emphasizes that it's not enough to just assess an institution's financial information. Beyond that exercise, an institution needs to act strategically on the intelligence it gleans. "Understanding the financial model is critically important," he says. Noting that many institutions are cutting costs, Beyer says that "there's a big difference between cutting costs and lowering costs. Cutting costs is actually very temporary— oftentimes it is basically what might be called 'death by a thousand cuts.'"

In that vein, Beyer says smaller colleges and universities might, for example, rely on trimming salaries or 403(b) contributions as cuts of last resort to meet shortterm financial pressures. "But, if you are having to cut costs like that just to make your numbers, then from a modeling perspective, one might look at that and say that even though you have been able to meet your budget, the way that you did it isn't necessarily sustainable on a long-term basis," he notes. "So I think one of the things that small colleges need to look at is how they can lower their costs as opposed to just cutting costs. Lowering costs has much more permanency to it."

Beyer suggests that a crucial question is: "How can an institution deliver its product differently in ways that might result in lower costs and perhaps higher marginal contributions, but also a lower price from the consumer standpoint?"

He notes, "That really takes innovation. I think one of the big opportunities— it's either going to be an opportunity or a challenge—will be how do colleges become much more entrepreneurial and innovative in how they address the challenges facing higher education as opposed to just simply cutting costs."

GETTING GRANULAR

Michael J. Cooney, a partner in the law firm Nixon Peabody, where he directs the firm's focus on higher education and exempt organizations, says, "I've seen boards go from looking at their financial statements to, for example, looking at what the rating agencies say about them. But from a stress testing perspective, I don't think that's enough. They should look at trend lines particular to their institution and then at their peer group or groups." It is a question, he says, of an institution scrutinizing its data at a more granular level than ratios may suggest, in ways that reflect the broader factors that affect the market in which it competes.

"Because this is a strategic issue, not just a financial one, the entire board, and not just the finance committee, needs to have an understanding of a number of different elements and the trends related to

those elements," Cooney says. "Board members should identify all of the relevant metrics and keep a very close eye on them moving forward, because they will greatly inform their decision making."

He suggests that such metrics might include evolution in the student populations the institution seeks to recruit, and, of course, nitty-gritty attention to what students are paying, how much the institution is discounting tuition, and what levels of net revenue it is realizing. Other markers, he says, might be market penetration in terms of admissions, how fully an institution uses its facilities, and ROI on particular programs.

Moreover, Cooney says, "There absolutely does need to be a continuous review of programs as to which ones are really relevant from the financial efficacy perspective." Regarding capital financing, he says boards need to ask, "What are we building, and why?"

Cooney further urges institutions to assess their financial condition over a sufficiently long period of time. "Looking at any one year can really be very misleading, because even with perfectly clean opinions about the financials, that may not fully indicate what's going on in the market for the institution," he says. Cooney also argues that institutions need to take the long view: "Twenty years ago we could sit back and look at maybe a five-year period of time year-by-year and have confidence that things wouldn't be much different. But the rate of change in the industry is increasing, as it is across most industries. It's just shocking to see how quickly things change."

Assessing an institution's endowment requires its own finesse. Sedlacek, who has spent the bulk of his career managing investments, says that the crash of 2008 was instructive in that it showed how interrelated institutional revenues are. That's something he suggests board members need to pay attention to. For example, he says, student enrollment, discount rates, state support, the flow of philanthropic gifts, and the value of appreciated property are "highly correlated to markets." The implication? Board members need to consider discussion about the endowment in the larger context of all institutional revenues.

While this article focuses on the vagaries of the enrollment-driven budget structures, where instruction is the main cost, institutions that have significant research components must review a different set of budgetary concerns having to do with the flow of revenue through grants as well as regulatory restrictions, risk, and a complex array of other considerations that will not be considered here. Boards at researchintensive institutions must, of course, orient themselves to weigh those complex factors as part of the distinct version of financial stress testing that their universities must undertake.

NO PERFECT ANSWER

"To me, the board's focus should be on working with the administration to do a full stress test of the entire operations of the institution," Sedlacek says. But he offers this caution: "In any risk analysis, we tend to make perfect the enemy of good. But there is no perfect answer." Managing risk, he says, "is much more of an art than a science."

Results from financial stress testing offer insights for institutions willing to act decisively. Beyer says that those that have been focused narrowly on where to pinch pennies need to take a bigger-picture look at their finances. Whether ideas come from the administration, faculty, board, or other stakeholders, "there's great imagination on campus" that can offer new solutions to persistent problems, he says. The trick, he believes, is to "allow that imagination to flourish and enable the institution to address challenges through a different lens, one of prosperity versus disparity."

Beyer continues, "A lot of innovation is going on outside the campus walls." Whether the focus is blended learning, new curricular offerings, online learning, competency-based learning, or any of a number of other areas where education is evolving, "the likelihood of partnering with third parties to implement new models will probably be more of the norm, versus institutions trying to do it themselves."

"Trustees as a group need to be educated and to understand and be willing to look at the metrics of success for their institutions somewhat differently," Cooney says. "Boards should be continually inquisitive as to how things may be different tomorrow and how we need to measure these factors. Then, they need to be prospective in their thinking about where their institutions are going to be in three, five, or 10 years. The stronger ones will be those that, in reaction to a particular event or proposal or situation, have the ability to say, 'We've been thinking about this for a number of years now, and we have a pretty good sense as to what we need to do. Or what we need to avoid.'"

Ultimately, Cooney suggests, helping the institutions they serve pass their financial stress tests—and position themselves for a stronger financial future—is "an essential element in preserving what for the United States has been an industry at the very top, worldwide." Noting that "We are the envy of the world in terms of our colleges and universities," Cooney says that boards "all have a collective responsibility that we do this right."

SAMPLE METRICS AND MARKERS

When thinking about metrics for assessing financial stress in colleges and universities, perhaps the most salient truth is that no one size fits all. That is, if it wants the most value from financial stress testing, an institution has to develop its own set of measures for tracking its financial health, based on its own distinct circumstances, financial conditions, market forces, and mission.

Within that context, institutions and their boards will likely want to take a deep dive into a number of broad buckets, including many of the following:

- Trends in enrollment, tuition rates, tuition discounting and financial aid, and net income from tuition
- Institutional resource allocation, budgeting, spending, and cash flow
- Endowment assets, payouts, restrictions, and liquidity
- Institutional debt, strategic use of debt
- Goals and execution of fundraising strategies
- Liquidity of assets overall and related risks
- The institution's credit rating
- Program productivity and efficiencies, cost of education
- Short- and longterm capital need, merits and risks of capital investments
- Spending on faculty and staff, energy, technology, and investments
- Revenue streams from research support and associated expenses and risks
- Financial risk management, enterprise risk management, financial risk capacity and tolerance
- Institutional financial trend lines compared to peer institutions
- Facilities usage, physical plant deferred maintenance
- Financial implications of federal and state legislative policies and regulations

- Opportunities for new revenue streams and partnerships
- Transparency and integrity of financial reporting, quality of internal financial analysis and reporting
- Market factors, competitive advantages/disadvantages, demographic trends

ABOUT THE AUTHOR ▸

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Item 5:
Updated FY2017 Committee Meeting Schedule

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Finance and Facilities Committee
Meeting Schedule for Fiscal Year 2017
as of January 9, 2017

Mtg #	Date	Topic Count	JSC-LSC Unification	System Consolidation	FY18 Budget Development	FY19 Tuition, Fees, Room & Board	Quarterly Results**, Metrics	Appropriation Requests	Cash, Investments, Endowment	Debt Management	Capital Planning and Projects***	Facilities Management	Grants and Gifts	Policies and Procedures	Special Topics
1	Wed, Aug 24, 2016 (1:56pm - 3:00pm)	5	Standing Topic/Regular Updates	Standing Topic/Regular Updates					Regular quarterly report (per Policy 404)	Debt "101" discussion		Deferred maintenance update	(as needed)	(as needed)	(as needed)
2	Wed, Sep 28, 2016 (1:15pm - 2:30pm) *	7	Unification report to BOT due Sep 29	Standing Topic/Regular Updates			Q4 FY16 Results, reserves and system loans	(Budget Adjustment and Appropriations Bills discussed at BOT)		TD Debt Coverage Covenant for FY16	Discussion of Policy 405 and Legislative Report	Preliminary capital projects list		Policy 411 discussion	
3	Wed, Oct 19, 2016 (11:00am - 12:30pm)	6	Standing Topic/Regular Updates	Standing Topic/Regular Updates			Review of final Fall 2016 enrollment	Capital appropriation request due October 14 (subject to BOT approval)		TD Bank loan refinancing resolution amended to include all debt	Capital Projects list submitted			Repeal of Policy 411, Deferred Payment of Tuition and Fees	
4	Wed, Nov 30, 2016 *	7	(Covered at BOT meeting)	Accounts payable consolidation target date of Nov. 18	Initial discussion informed by Q1 FY17 results		Q1 FY17 Results	(Election results covered at BOT meeting)	Regular quarterly report (per Policy 404)	Debt policy discussion			Addition of Uniform Guidance Compliance Policies	Investment policy review and debt policy discussion	AGB Report update
5	Mon, Jan 9, 2017	7	Standing Topic/Regular Updates	Standing Topic/Regular Updates			Discussion of financial metrics, Composite Financial Index (CFI)	Responses to Budget Adjustment Act (if any)		Debt restructuring update and preliminary schedule	Legislative Report due January 15	"Sightlines" presentation to Umaine			
6	**Wed, Feb 22, 2017 (proposed date change)**	5	Standing Topic/Regular Updates	Standing Topic/Regular Updates	Preliminary FY18 Budgets discussion		Q2 FY17 Results			Debt restructuring discussion and recommend-ation to BOT				Adoption of debt policy for BOT approval	
7	Mon, Mar 13, 2017 *	1	**(Proposed Meeting Cancellation)**												
8	Mon, Apr 10, 2017	5	Standing Topic/Regular Updates	Standing Topic/Regular Updates	Preliminary FY18 Budgets presented	Initial FY19 Tuition discussion			Regular quarterly report (per Policy 404)					Investment policy annual review	AGB Report update
9	Wed, May 31, 2017	6	Standing Topic/Regular Updates	Standing Topic/Regular Updates	Vote on FY18 Budgets	Preliminary FY19 Tuition request	Q3 FY17 Results		Regular quarterly report, Annual Banking & Investment Resolution (per Policy 404)						
10	Wed, Jun 21, 2017 *	3	Standing Topic/Regular Updates	Standing Topic/Regular Updates		Vote on FY19 Tuition									AGB Report update

* Last meeting before quarterly Board of Trustees Meeting
*** Unification report due September 28 BOT (done)*
*** Report due to Joint Fiscal Committee during November 2016 on use of $700,000 "to increase need-based aid for Vermont students" (done)*
*** "Long term strategic plan… for the most effective use of capital funds…" due January 15, 2017 to Institutions Committees (also from UVM)