

Wesleyan University

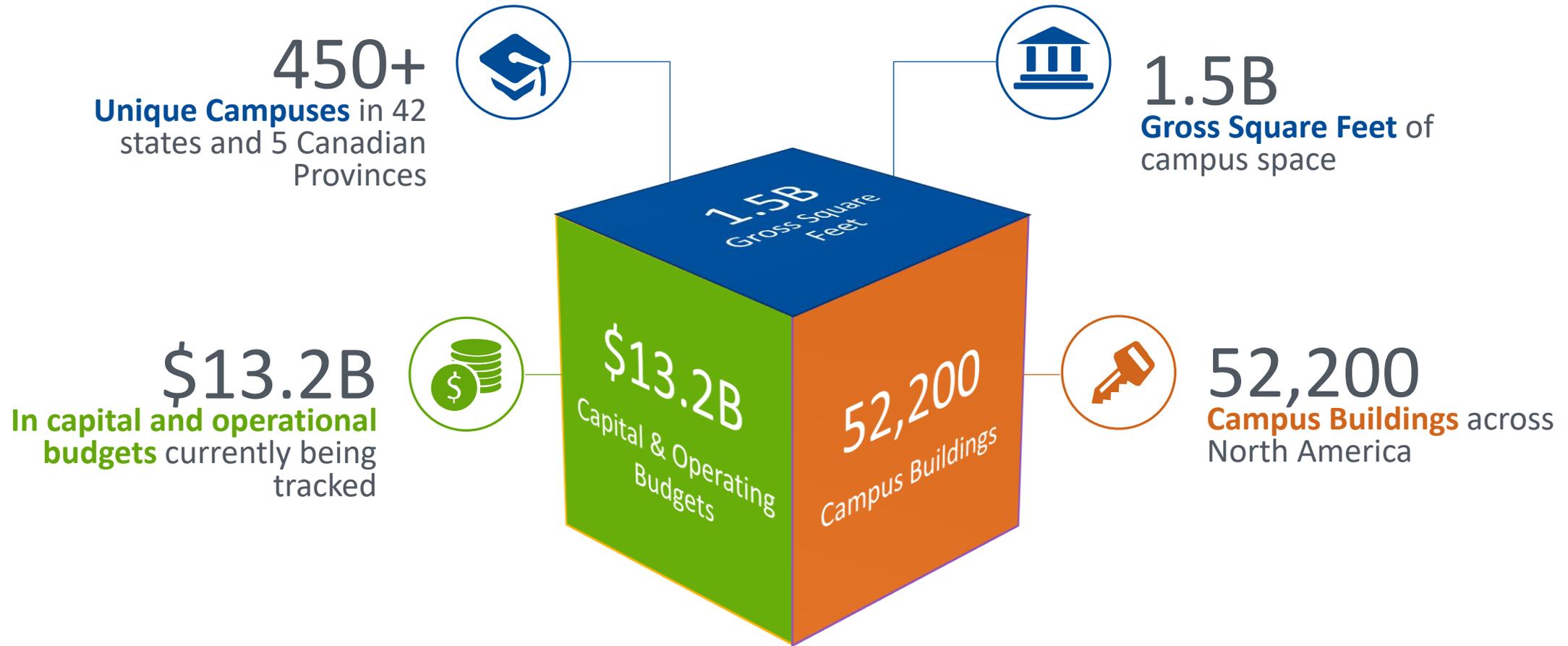
FY20 ROPA+ Presentation

April 2020

University of the Sciences in Philadelphia
University of Toledo
University of Vermont
University of Washington
University of West Florida
University of Wisconsin - Madison
Vanderbilt University
Virginia Commonwealth University
Wake Forest University
Washburn University
Washington State University
Washington State University - Tri-Cities Campus
Washington State University - Vancouver
Washington University in St. Louis
Wayne State University
Wellesley College
Wesleyan University
West Chester University
West Virginia Health Science Center
West Virginia University
Western Oregon University
Westfield State University
Widener University
Williams College
Worcester Polytechnic Institute
Worcester State University
Xavier University

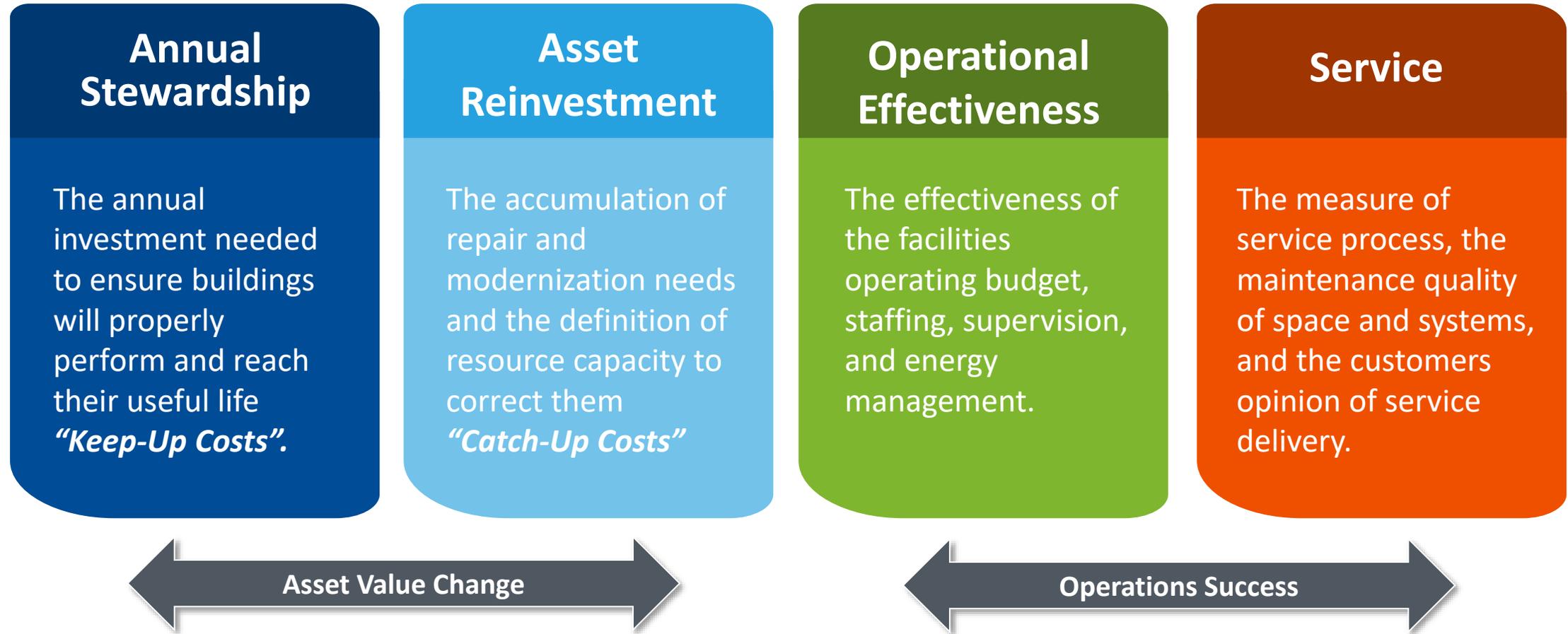
Gordian and Sightlines

Owners of the largest verified facilities database in higher education



Sightlines members serve **over 20%** of US College Enrollment

Vocabulary for the Return on Physical Assets (ROPA) Model



Wesleyan Peer Institutions

SLAC Institutions

Institution	Location
Amherst College	Amherst, MA
Bowdoin College	Brunswick, ME
Carleton College	Northfield, MN
Davidson College	Davidson, NC
Haverford College	Haverford, PA
Mount Holyoke College	South Hadley, MA
Pomona College	Pomona, CA
Swarthmore College	Swarthmore, PA
Williams College	Williamstown, MA



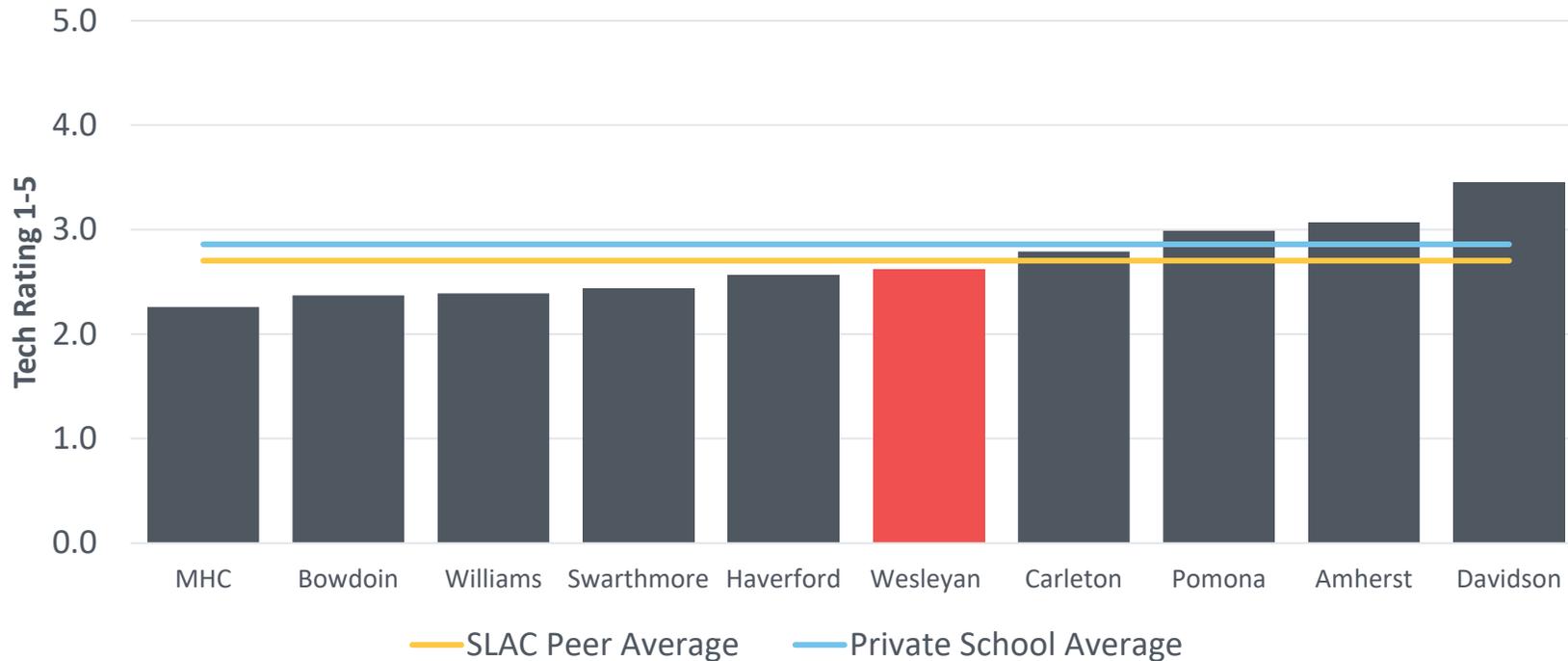
Comparative Considerations

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

Complexity of Building Systems Similar to Peer Average

A higher tech complexity will typically drive operational and capital costs higher

Technical Complexity



Tech Rating Affects:



Staffing Demands

More complex systems will require higher skillsets to maintain.



Repair & Replacement Cost

Complex systems will require more capital investment to repair and replace.



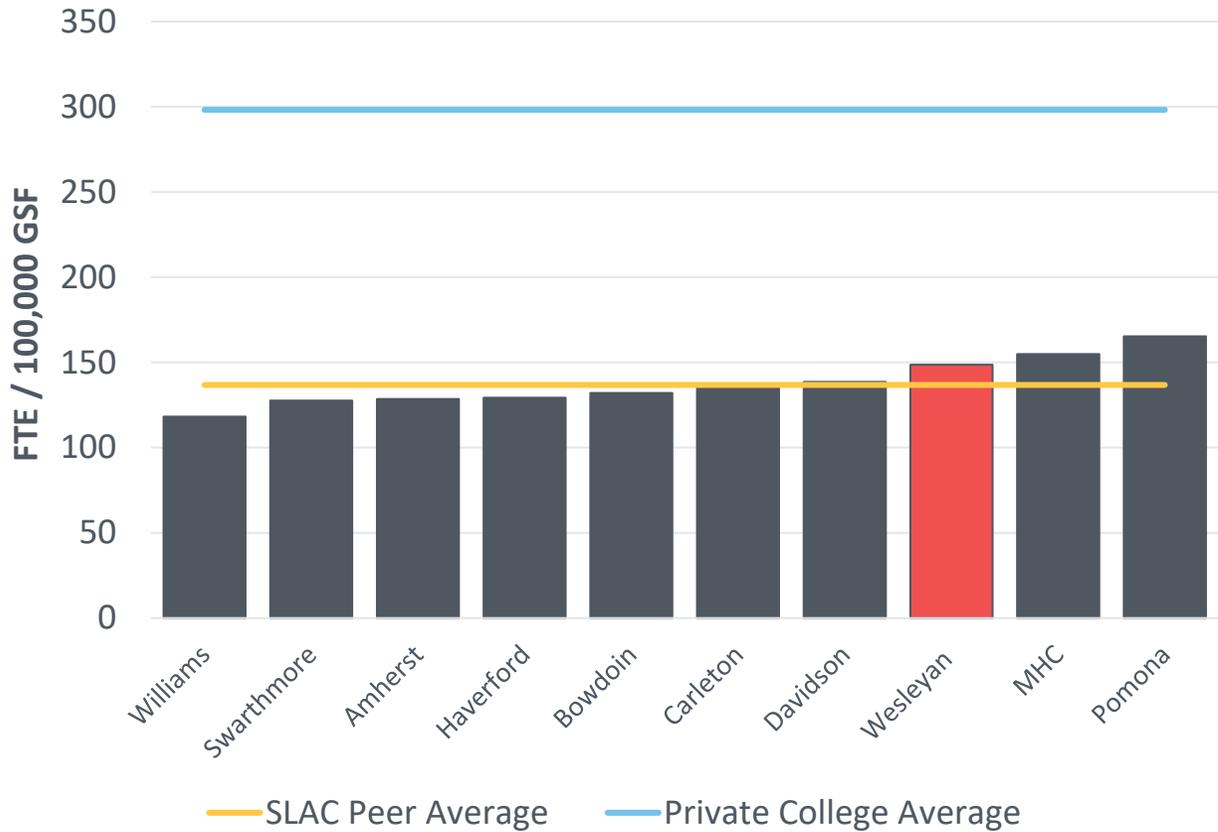
Energy Consumption

Complex systems can be more energy intensive.

Wesleyan Third Highest Density Amongst Peers

More people moving through the space creates more wear and tear on facilities

Density Factor



Density: Measures number of users per 100,000 GSF

Users include all student, faculty, and staff FTEs

Measures campus building usage on a daily basis

Density Affects:



Staffing Levels
More space will require more staff to clean/maintain space to meet facility standards.



Material and Supplies
Material and supply demand influenced by how often the space is used.



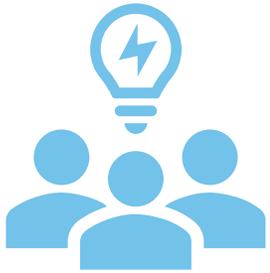
Wear and Tear of Facilities
High traffic and space usage result in sooner lifecycle replacement.

Integrated Campus Stewardship



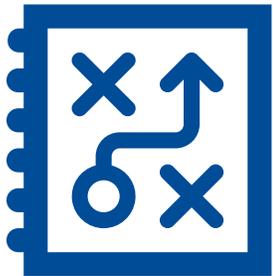
Space: Understanding your largest asset

- Wesleyan's Main Campus growth is similar to peers. However, rental property GSF decreased by 45% since FY02
- The majority of space is in the highest risk category, over 50 years old.



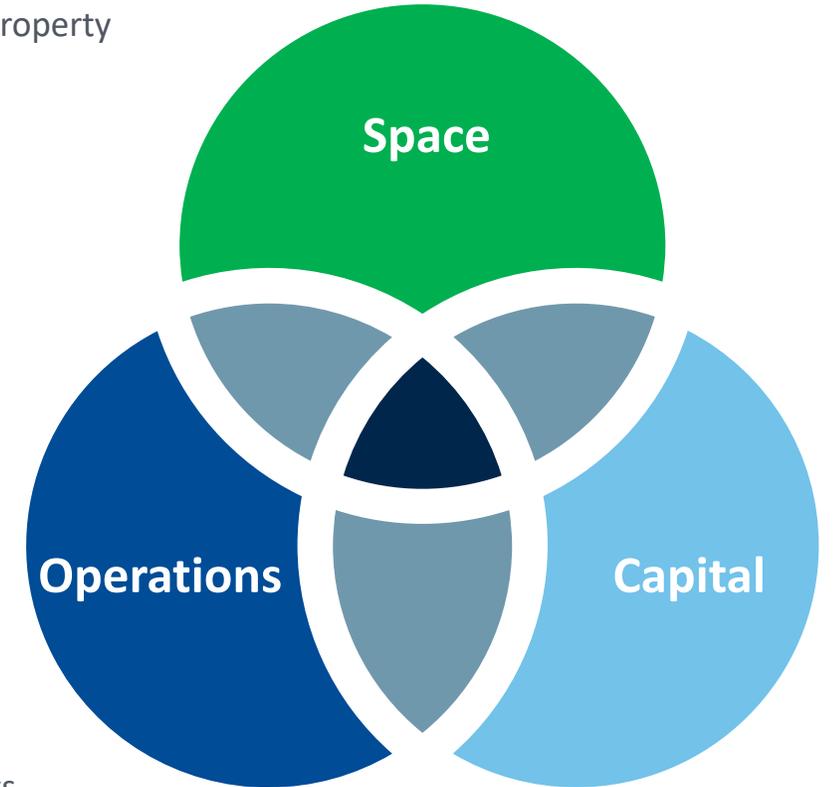
Capital: Investment planning to align mission and risk

- Capital investments into existing space decrease in FY20 by \$1.8M
- Major Maintenance funds are growing, helping Wesleyan to achieve the FY19 Sightlines recommended Annual Investment Target. However, the Major Maintenance fund is projected to decrease by \$2M in FY21
- Backlog of need is higher than peers and growing over time.



Operations: Improve effectiveness and lower overhead

- Daily service resources are lower than peers
- Wesleyan's energy consumption is higher than peers with lower costs

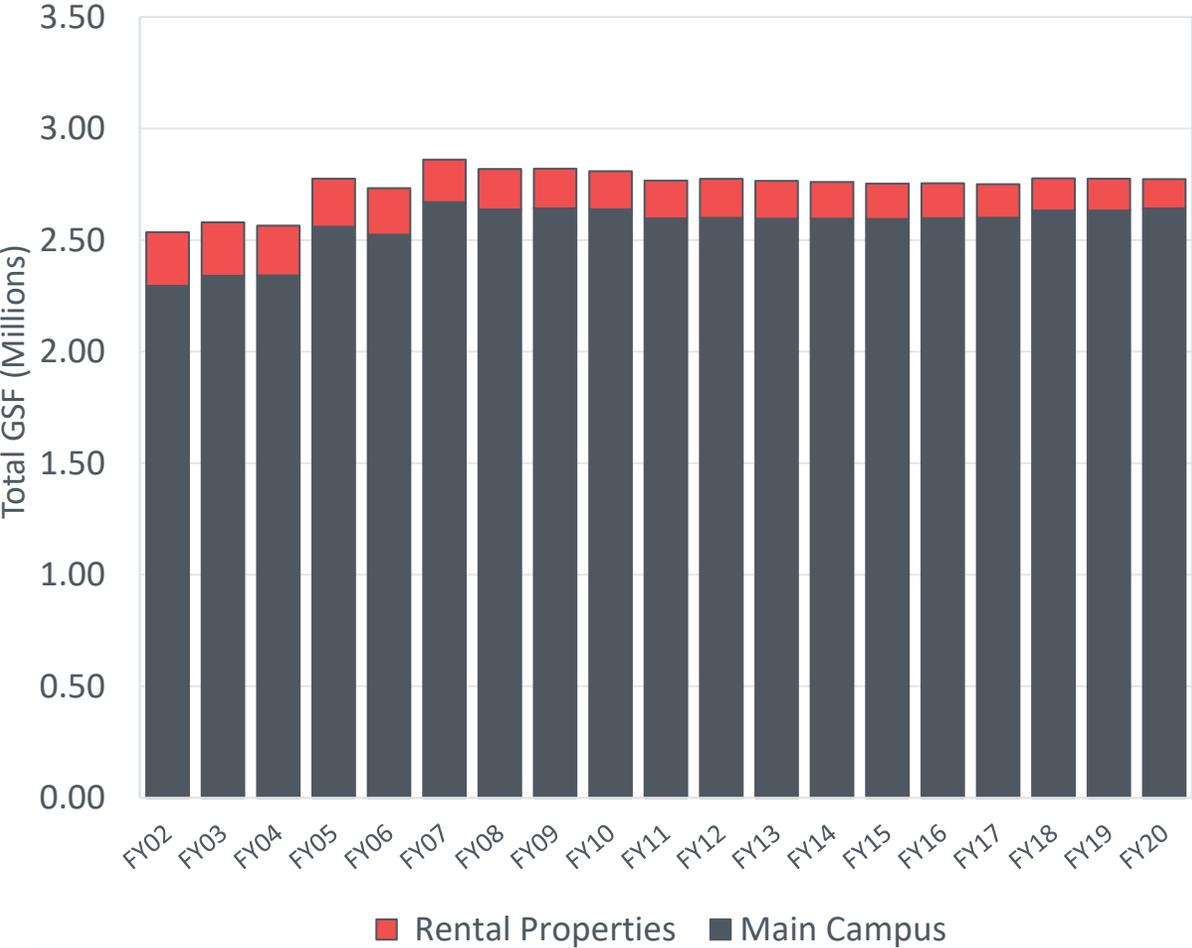


Space Profile

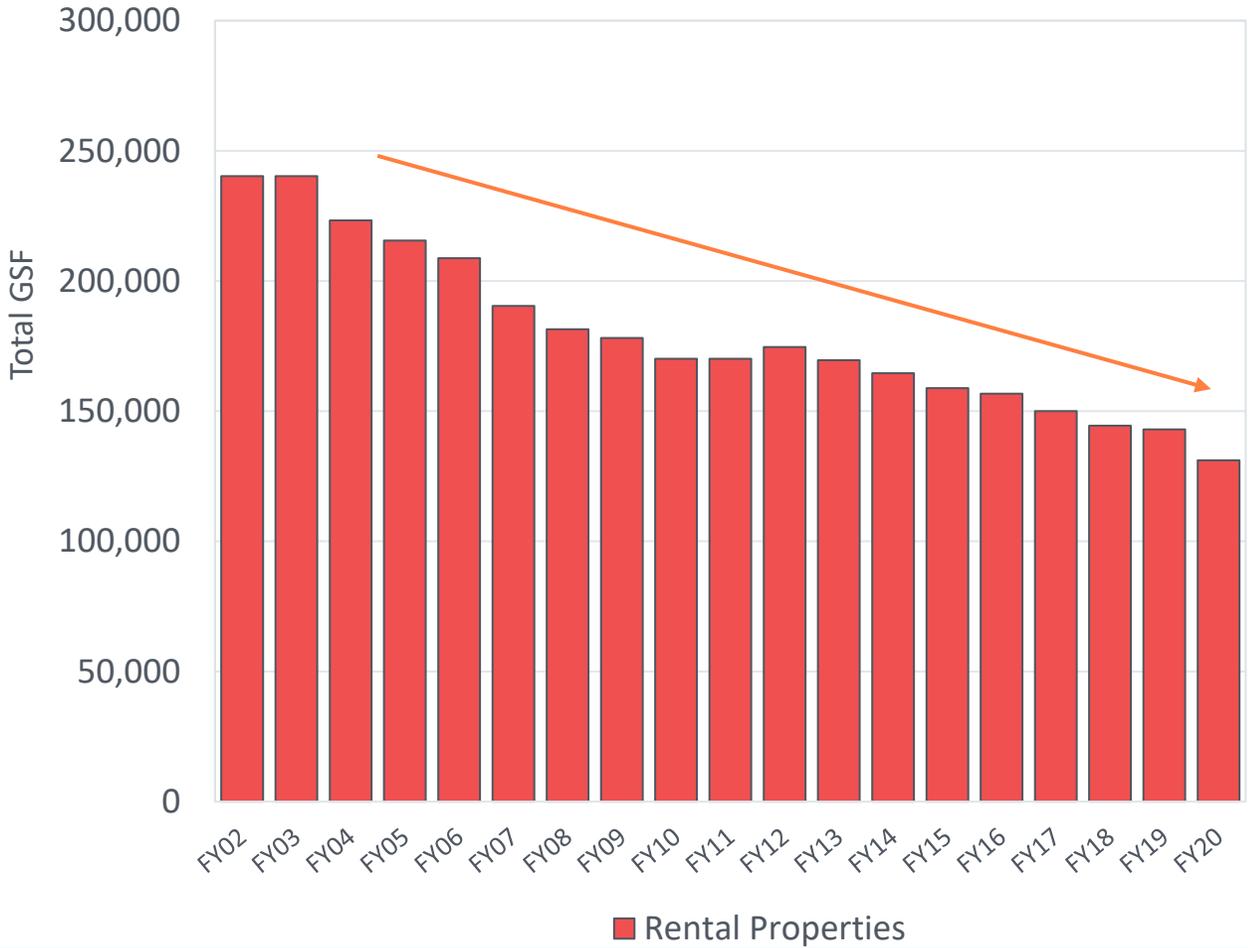
Rental Properties GSF Declining, Main Campus is More Consistent

Rental properties GSF have decreased by 45% since FY02

Institutional GSF Over Time



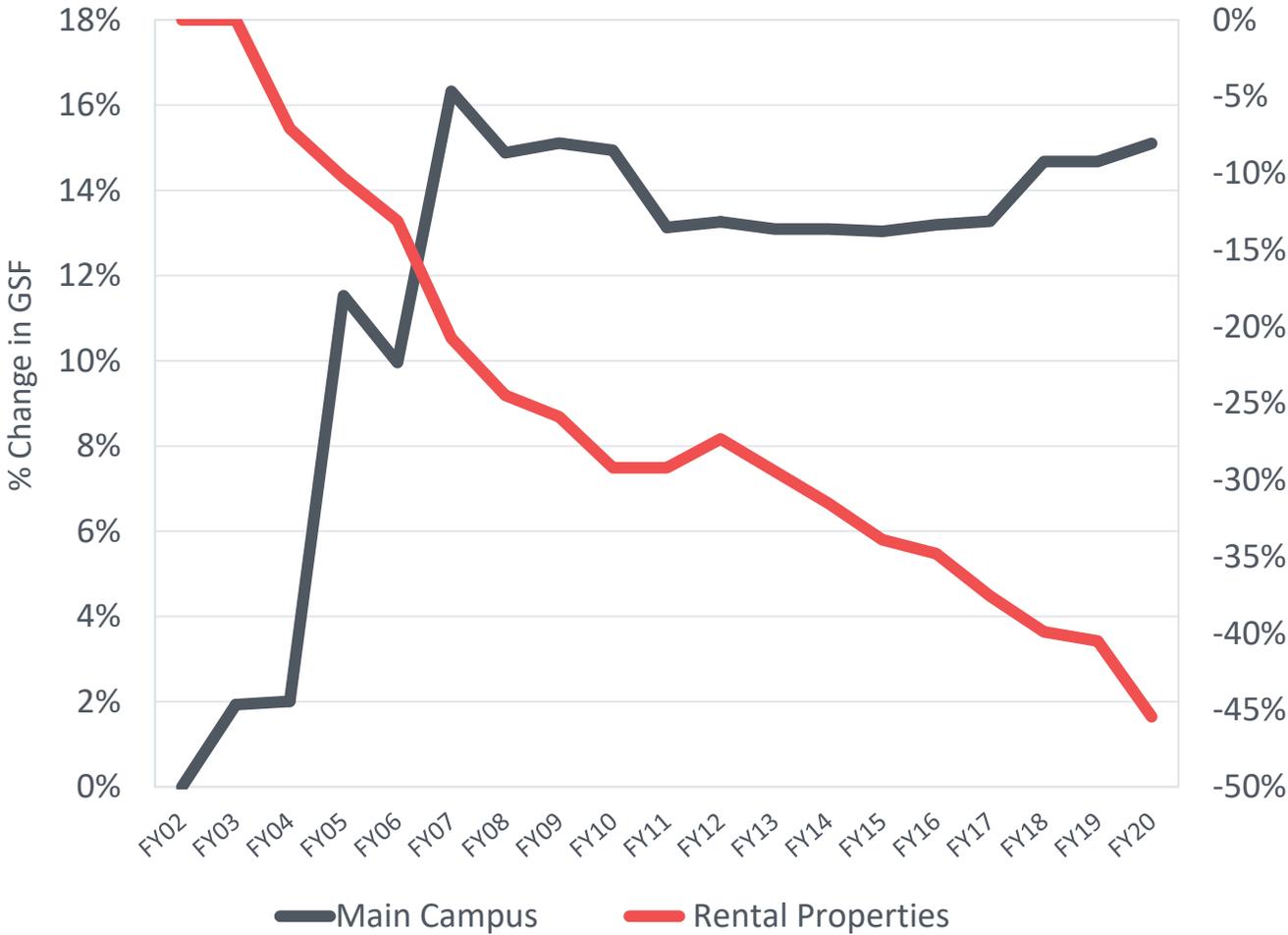
Rental Properties GSF Over Time



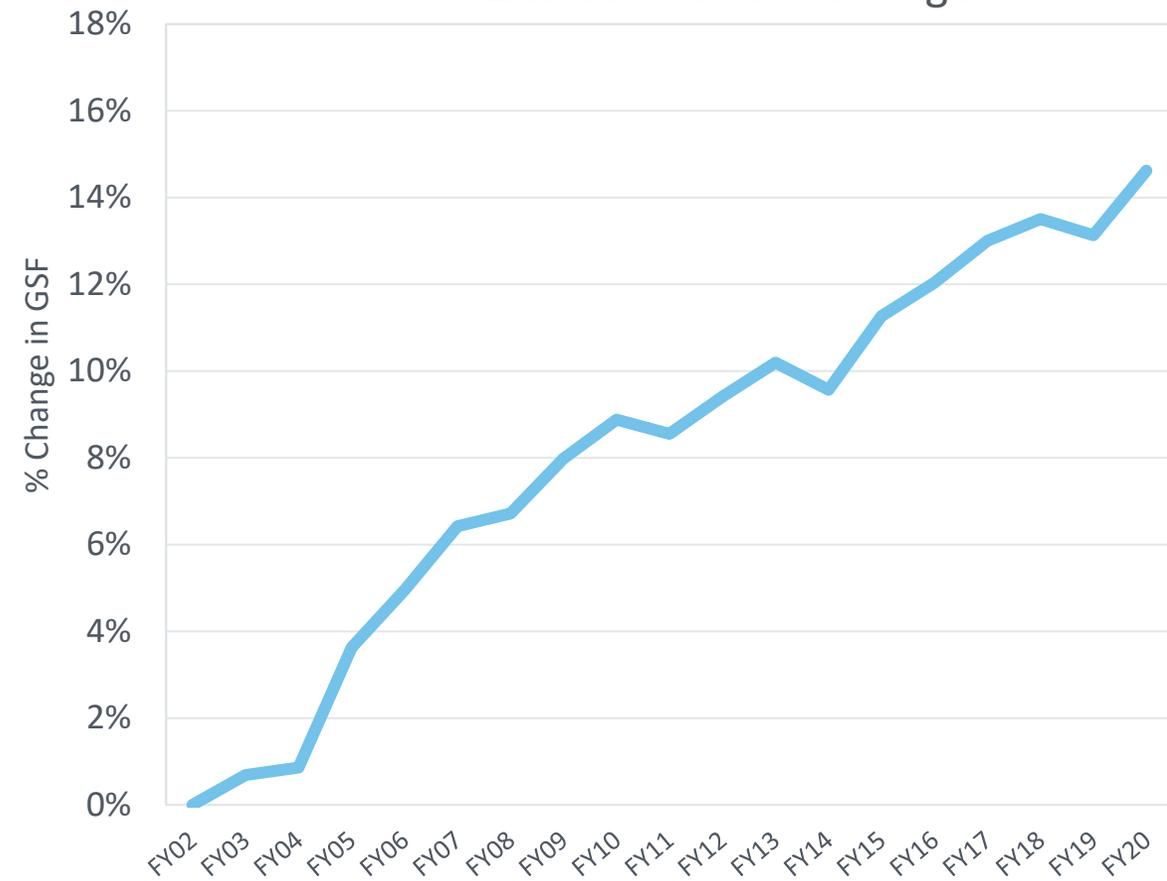
Main Campus GSF Has Changed 15% Since FY02

Peers' GSF experienced a steady incline, where Wesleyan had more fluctuations over time

Wesleyan GSF Percent Change



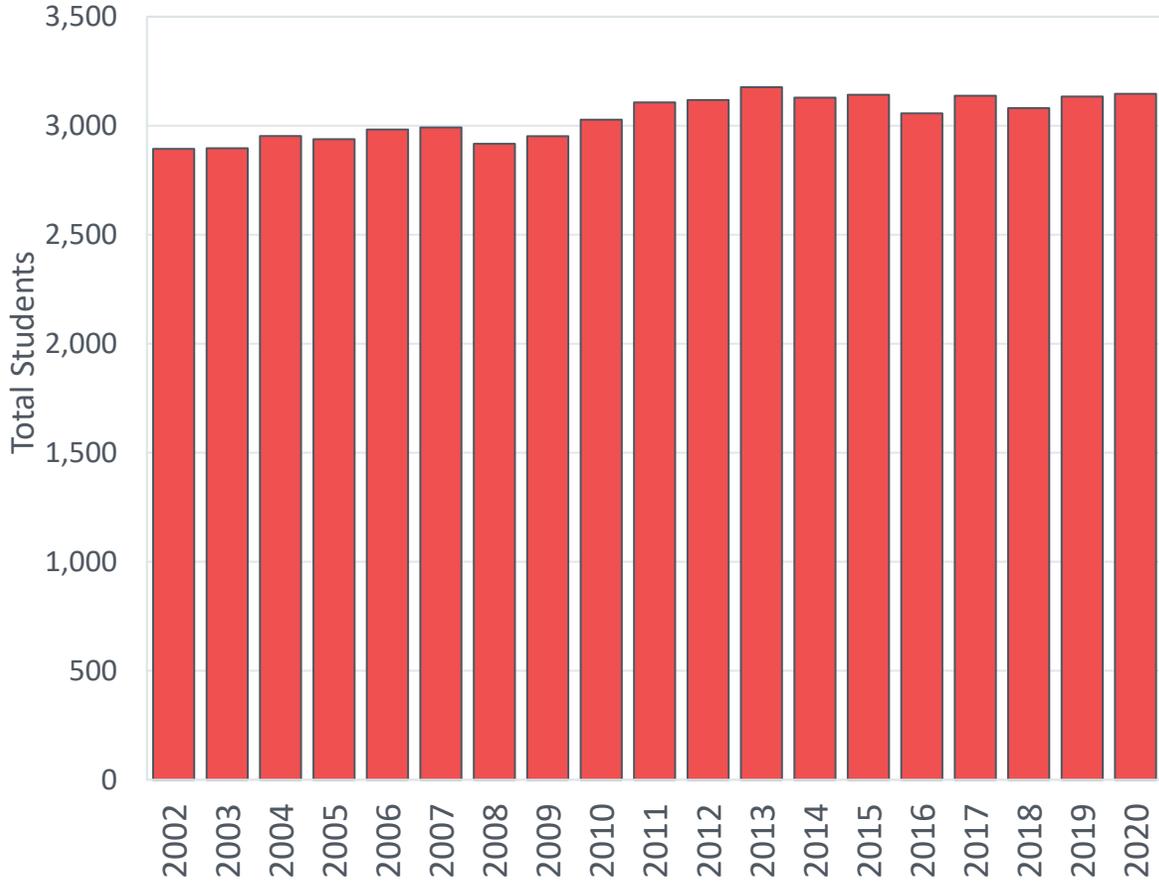
SLAC GSF Percent Change



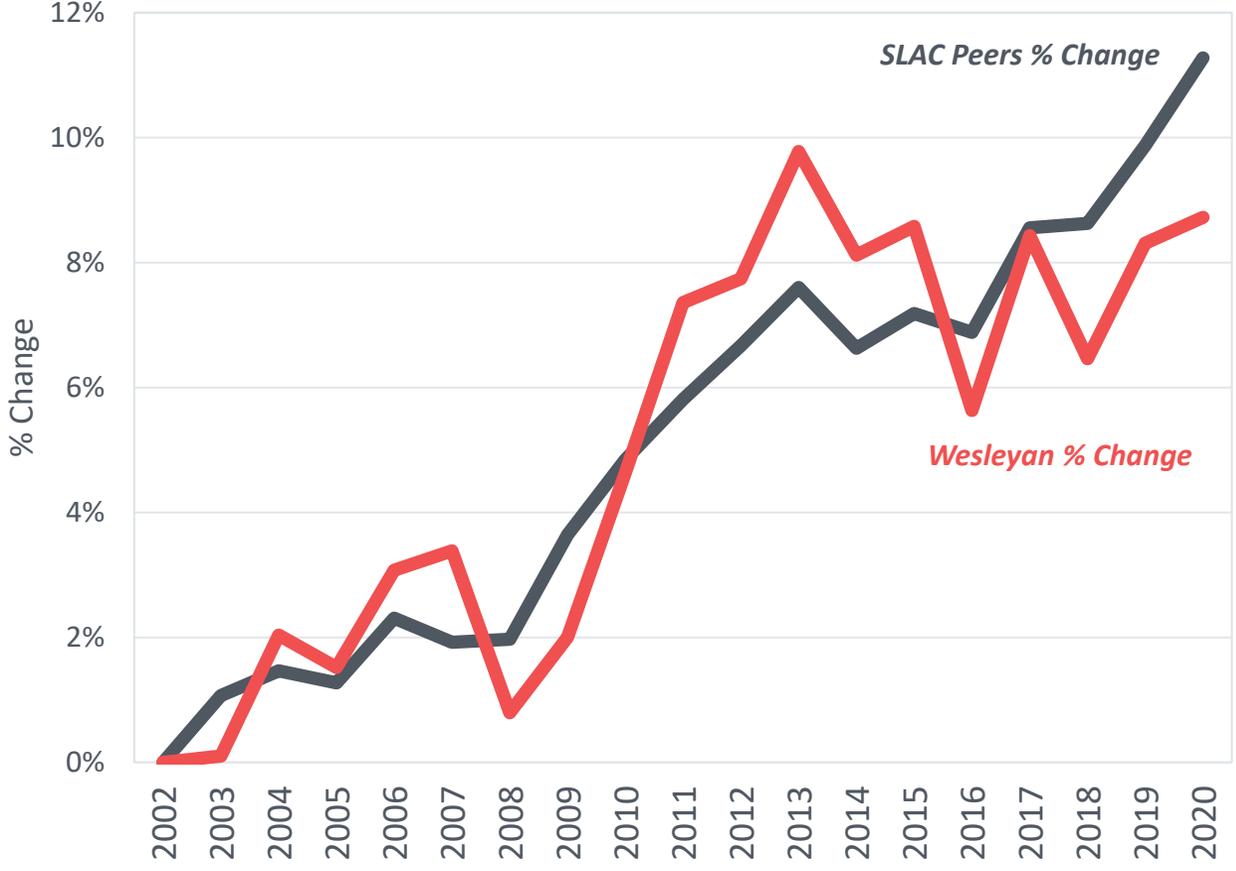
Wesleyan Student Growth Trends Similar to Peers

Wesleyan enrollment grows by 9%, while SLAC grows by 11% since FY02

Wesleyan Students Over Time

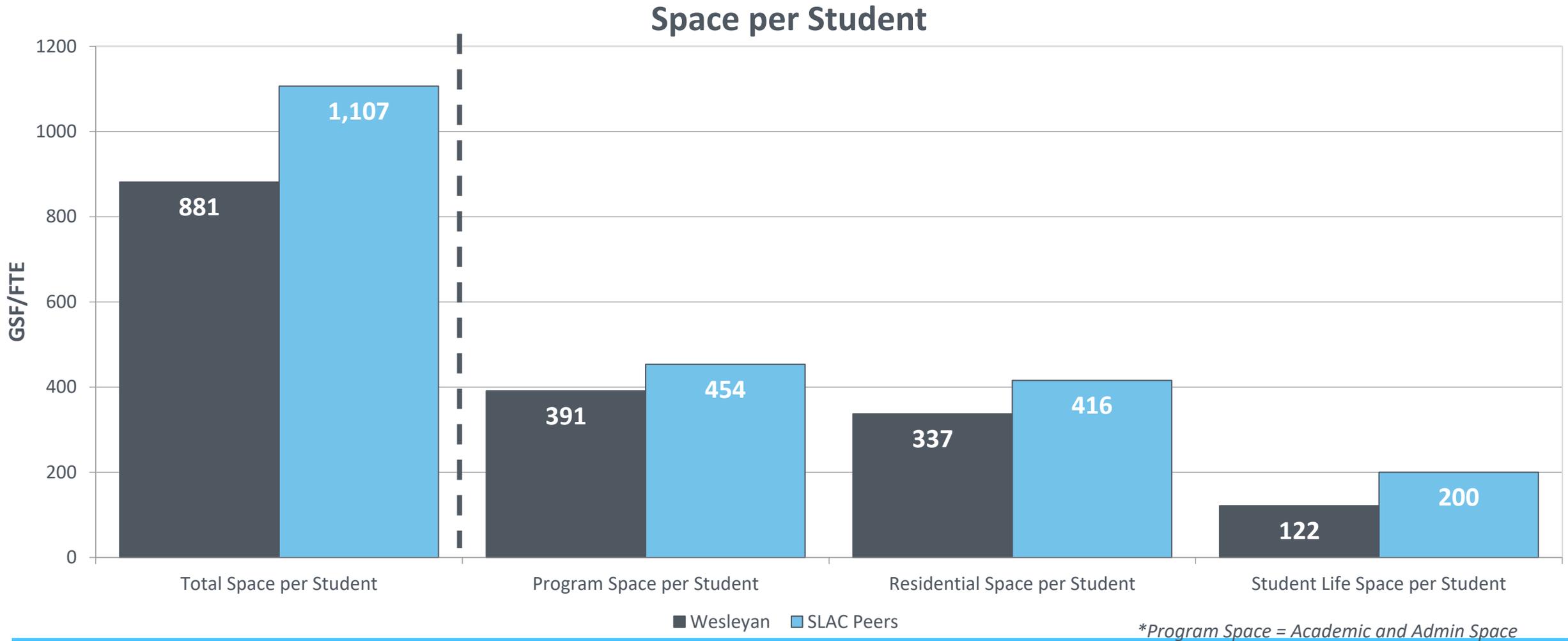


Percent Change In Students



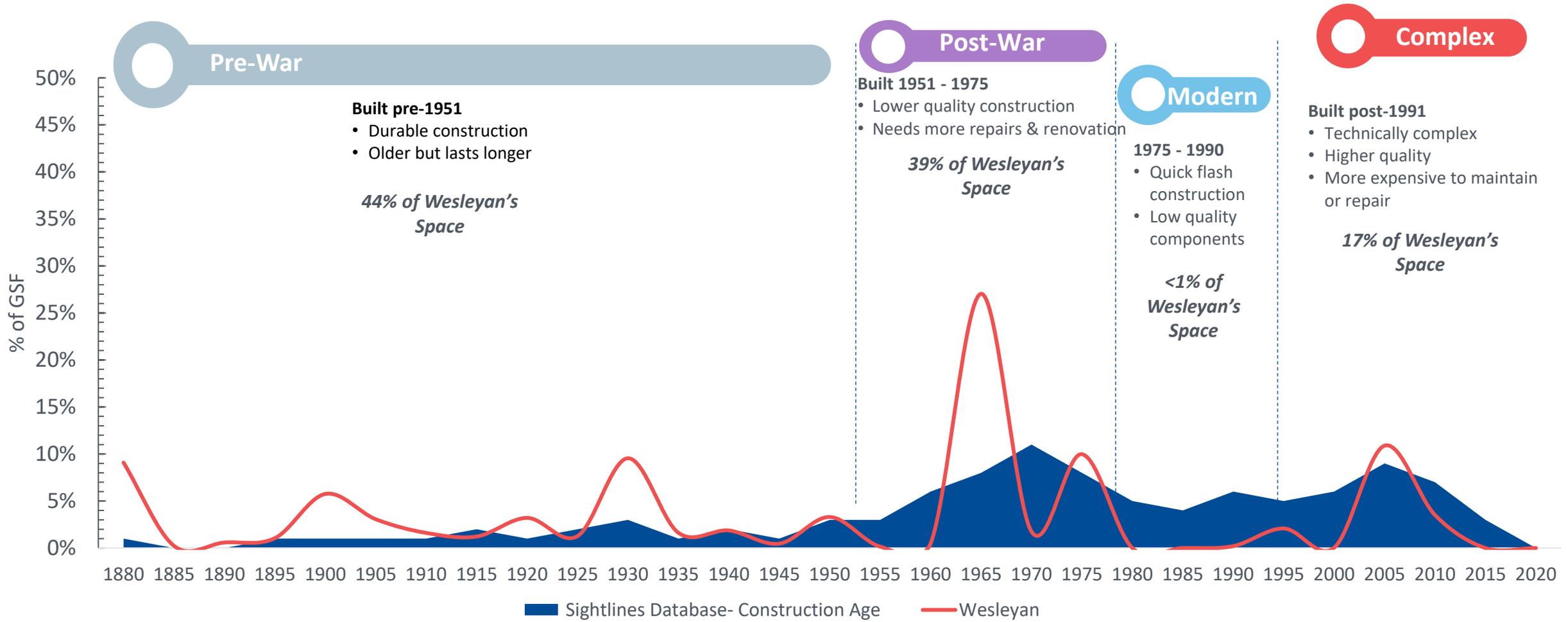
SLAC Peers Have More Space per Student Than Wesleyan

Student life space is the most dense



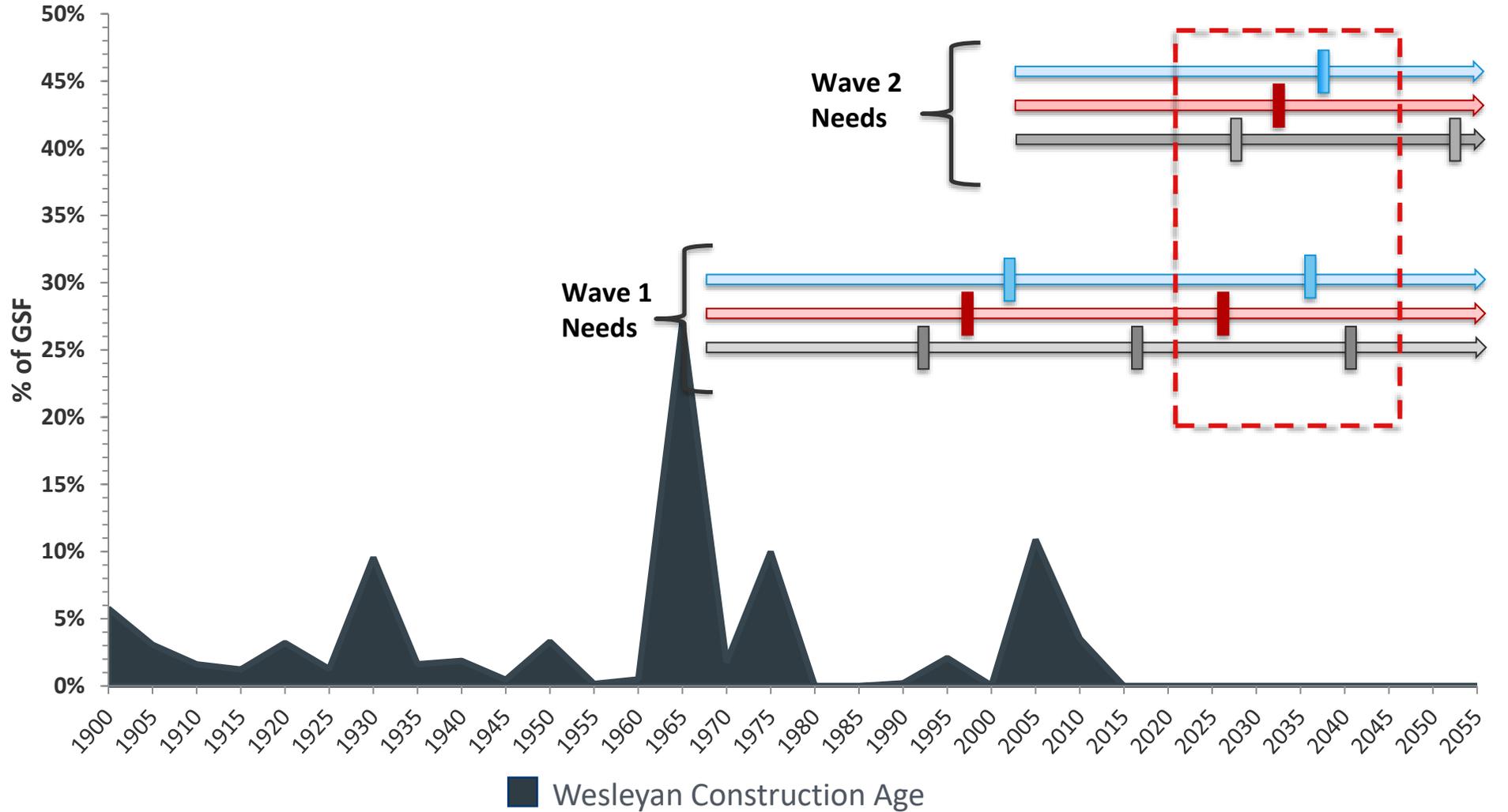
Putting Wesleyan's Building Age in Context

% of GSF by Construction Year



Future Forecast Determined by Life Cycle Models

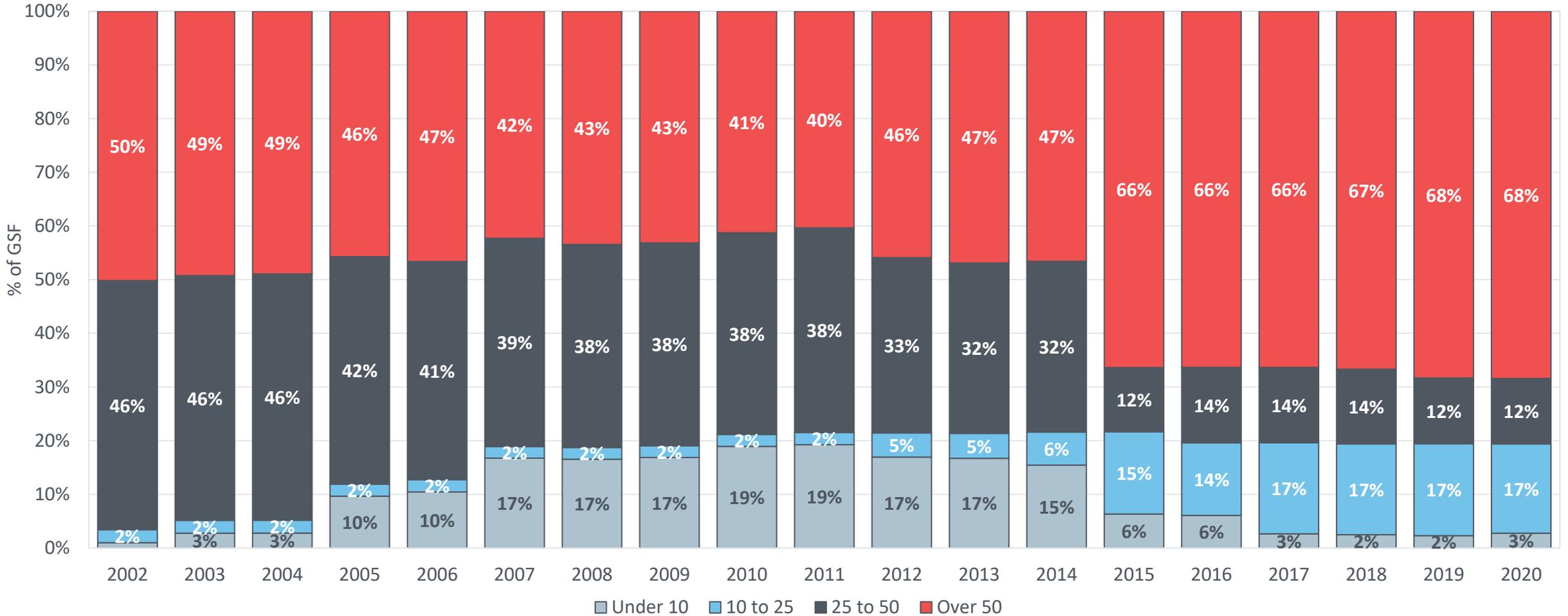
Two waves of needs will come due at once



System	SL Standard Life Cycle
Roofing	25 years
Electrical	25 years
Exteriors	30 years
HVAC	30 years
Plumbing	35 years

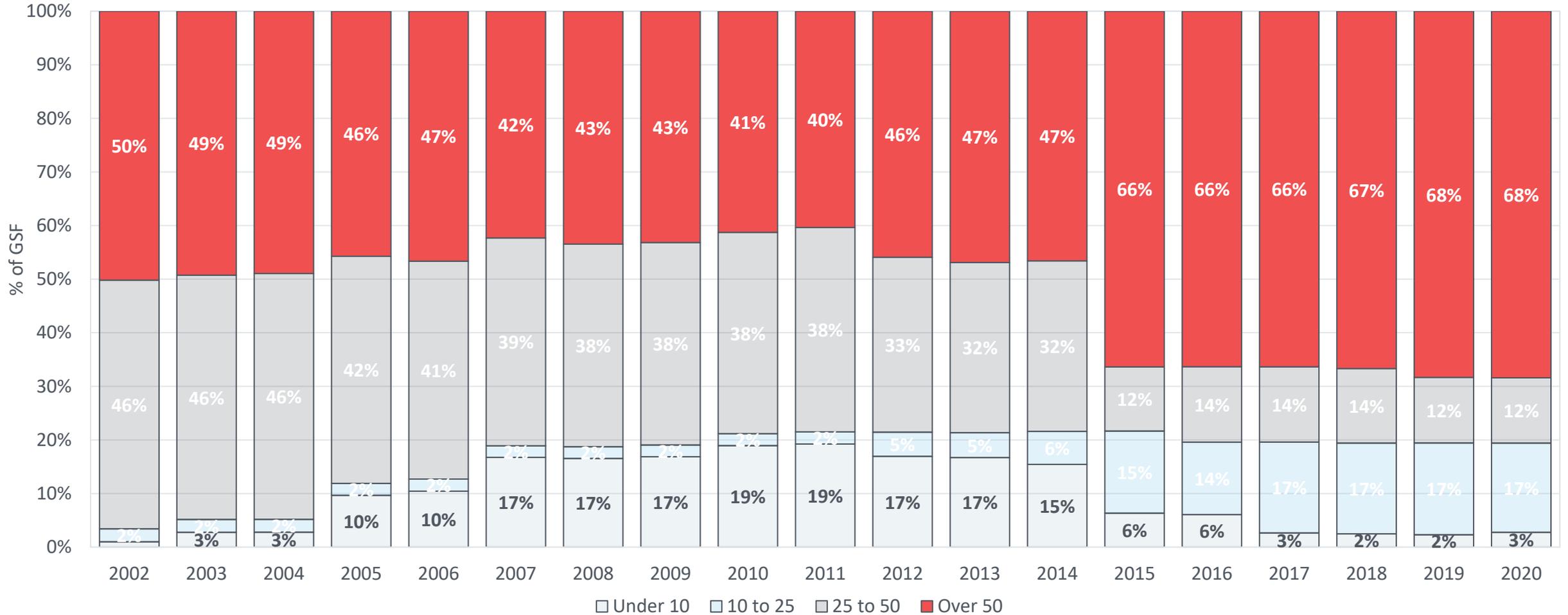
Wesleyan's Building Profile Aging Over Time

Campus Reno Age by Category



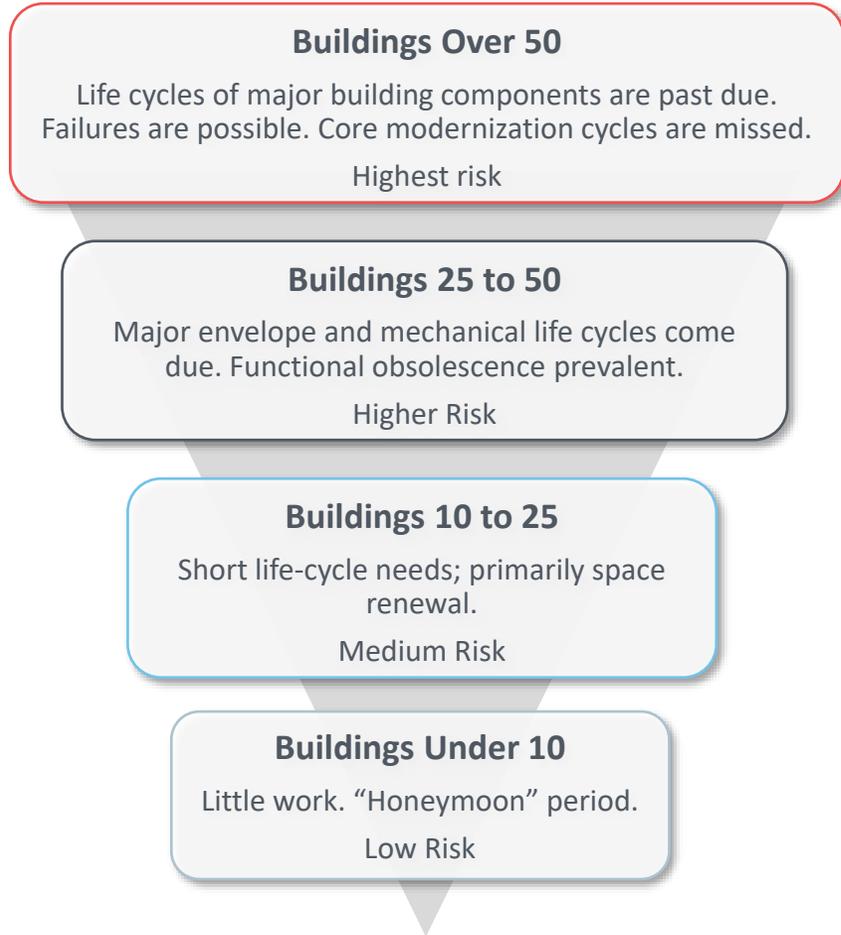
Over 50 Category Grows 18% Since FY02

Campus Reno Age by Category

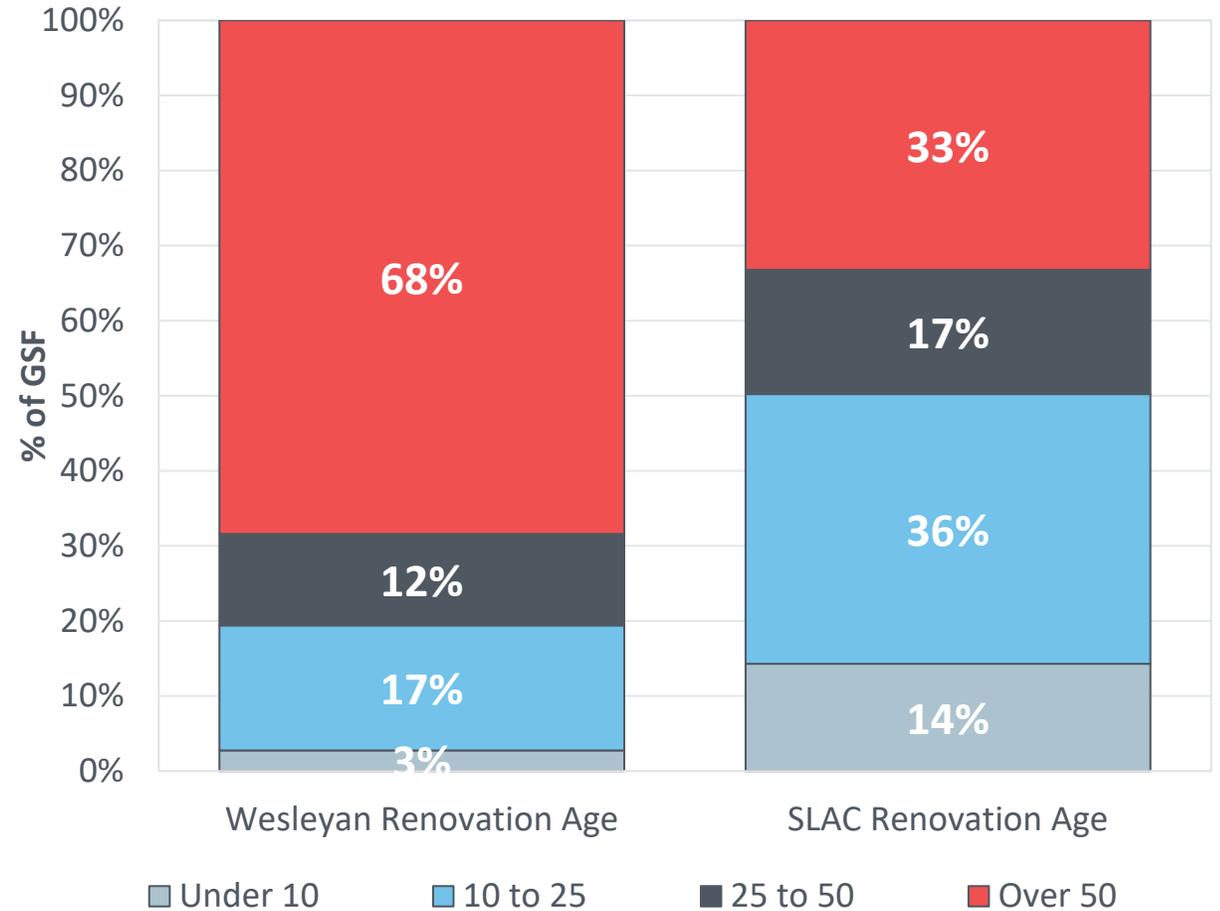


Majority of Space is Over 50 Years Old

Peers' renovation age profile is more evenly distributed



Campus Renovation Age by Category



Wesleyan's Age Distribution Falls Mostly in Over 50

Wesleyan has a higher risk profile with 35% more space in the over 50 category than peers

Capital Risk:

Highest Risk:
Life cycles of major components past due – end of building life cycle approaching.

Higher Risk:
Life Cycles coming due in core building components.

Medium Risk:
Lower cost space renewal updates needed.

Low Risk:
“Honeymoon” period – little need for capital reinvestment.

Operational Demands:

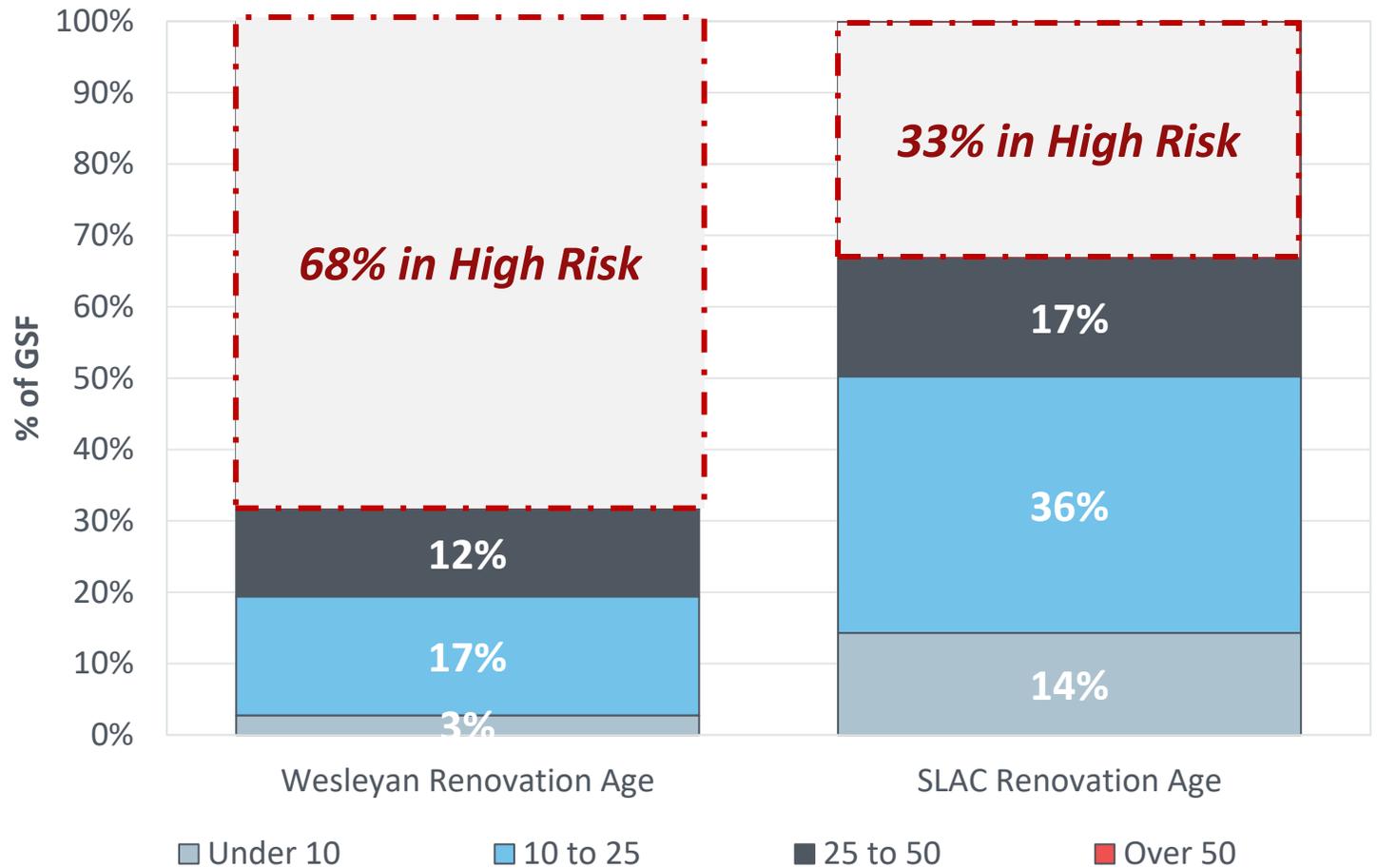
React as Needed:
Issues in components past the end of their lifecycles will demand reactive maintenance.

Balance PM and Reactive Maintenance:
Younger components still require PM.

Aging components require reactive maintenance.

Focus on PM:
Significant need for PM in young systems.

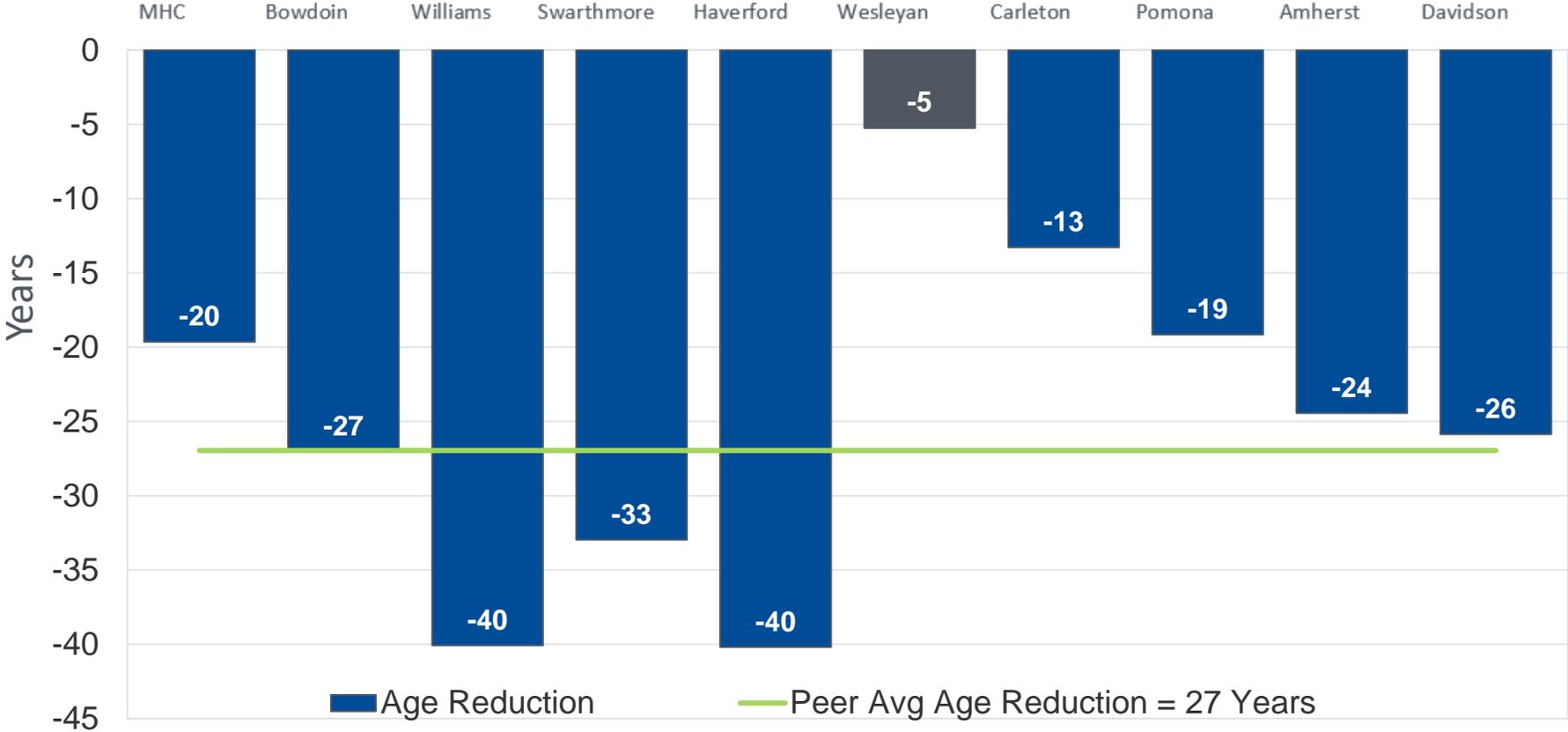
Campus Renovation Age by Category



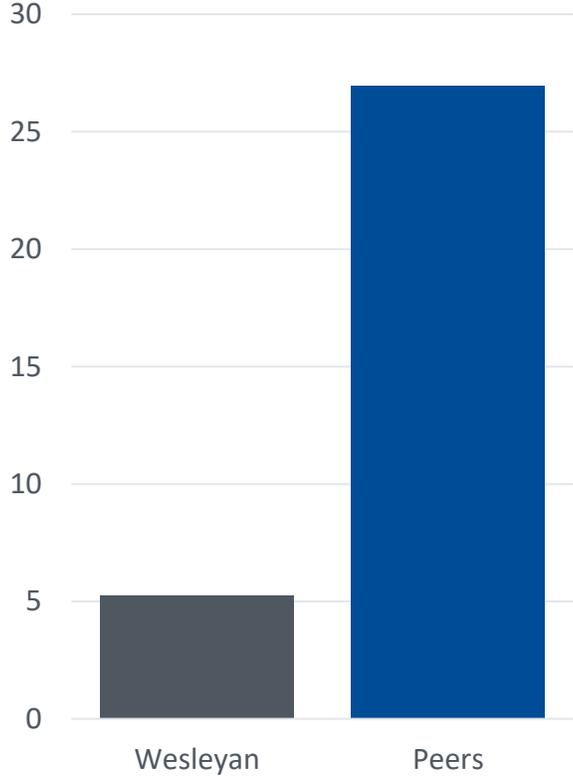
Peers Use Full Renovations As A Strategy To Lower Risk

On average, peers' offset campus age five times more than Wesleyan

Years Offset Through Renovations

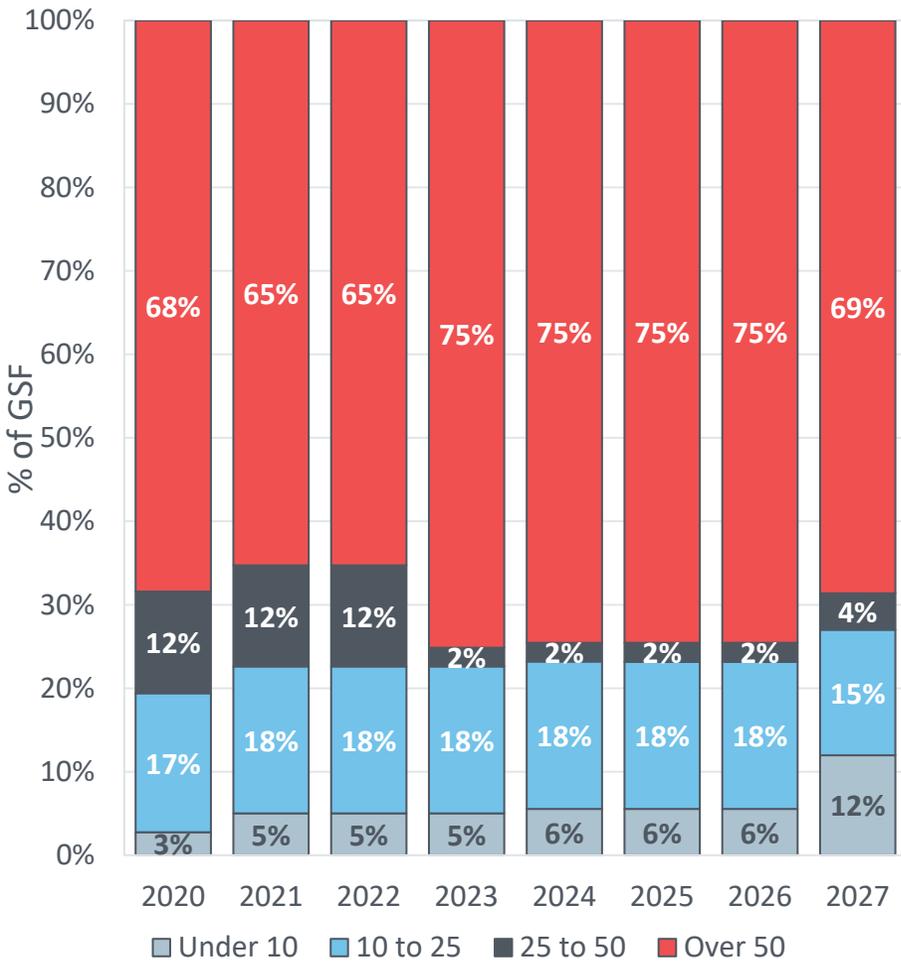


Years Offset Through Renovations

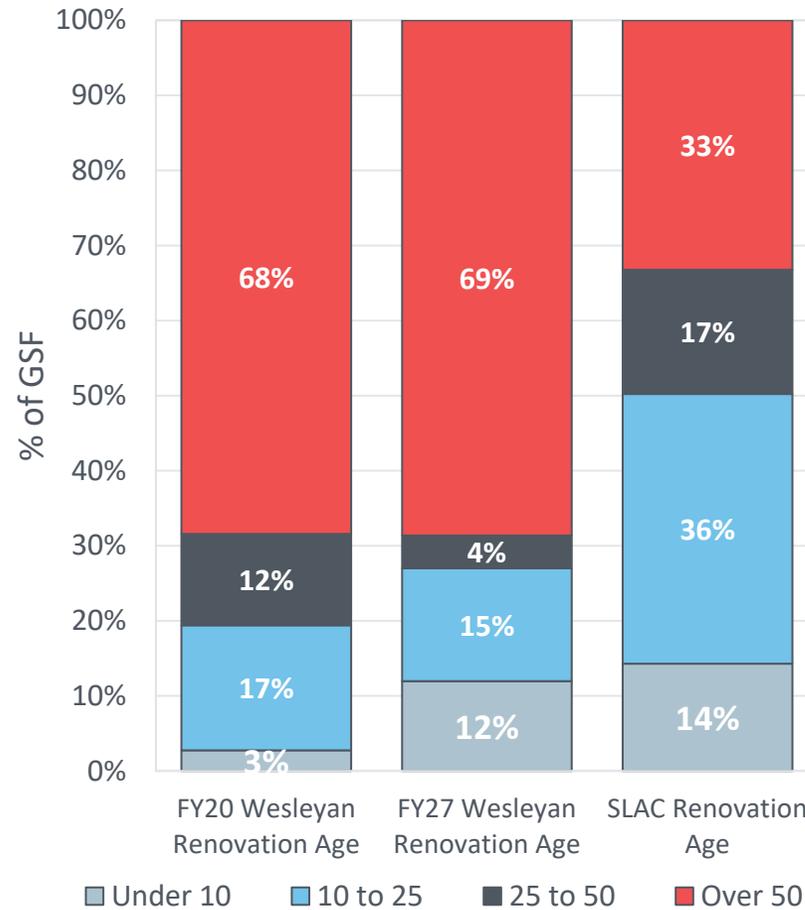


Impact of Upcoming Space Changes on Campus Age

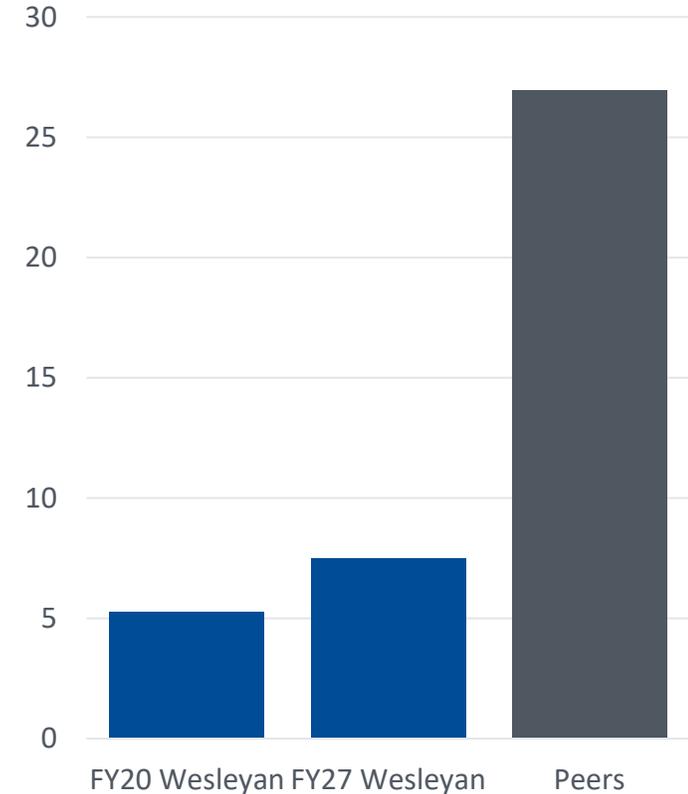
Campus Reno Age by Category



Campus Renovation Age by Category



Years Offset Through Renovations

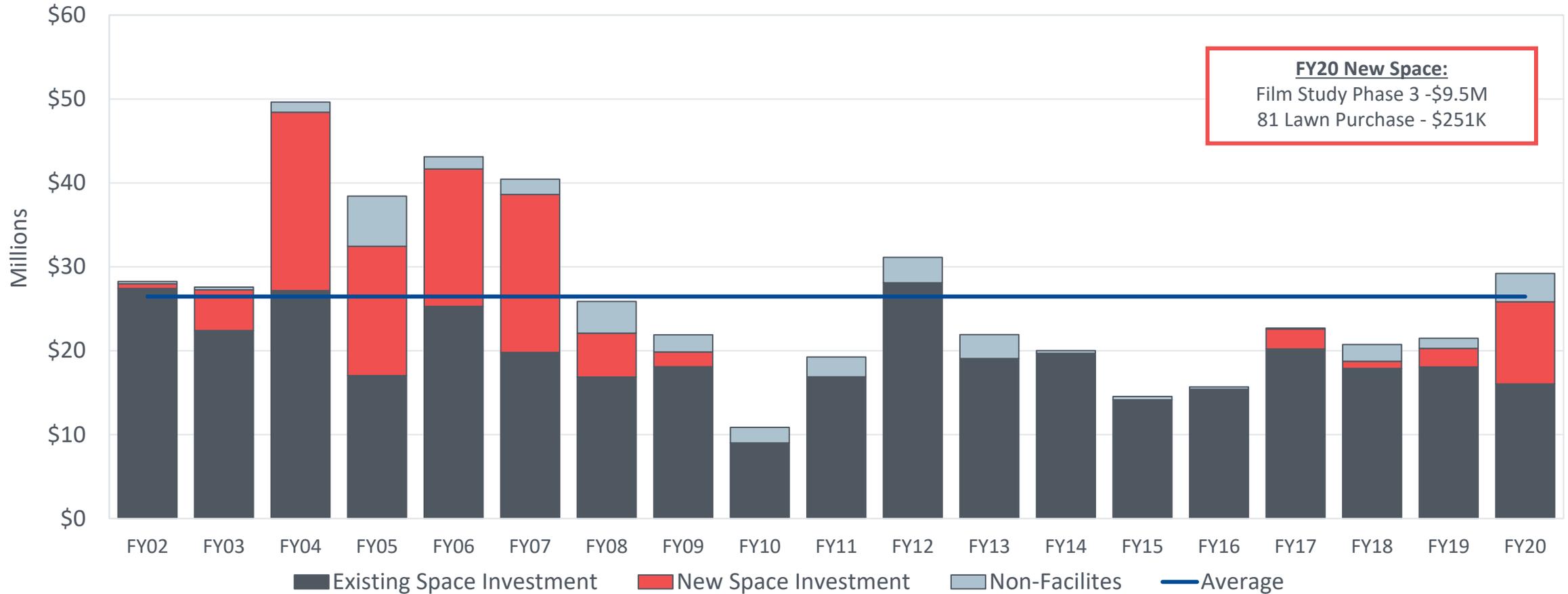


Asset Value Change

Total Investment FY02-FY20: \$502.7M

FY20 investment \$29.2M

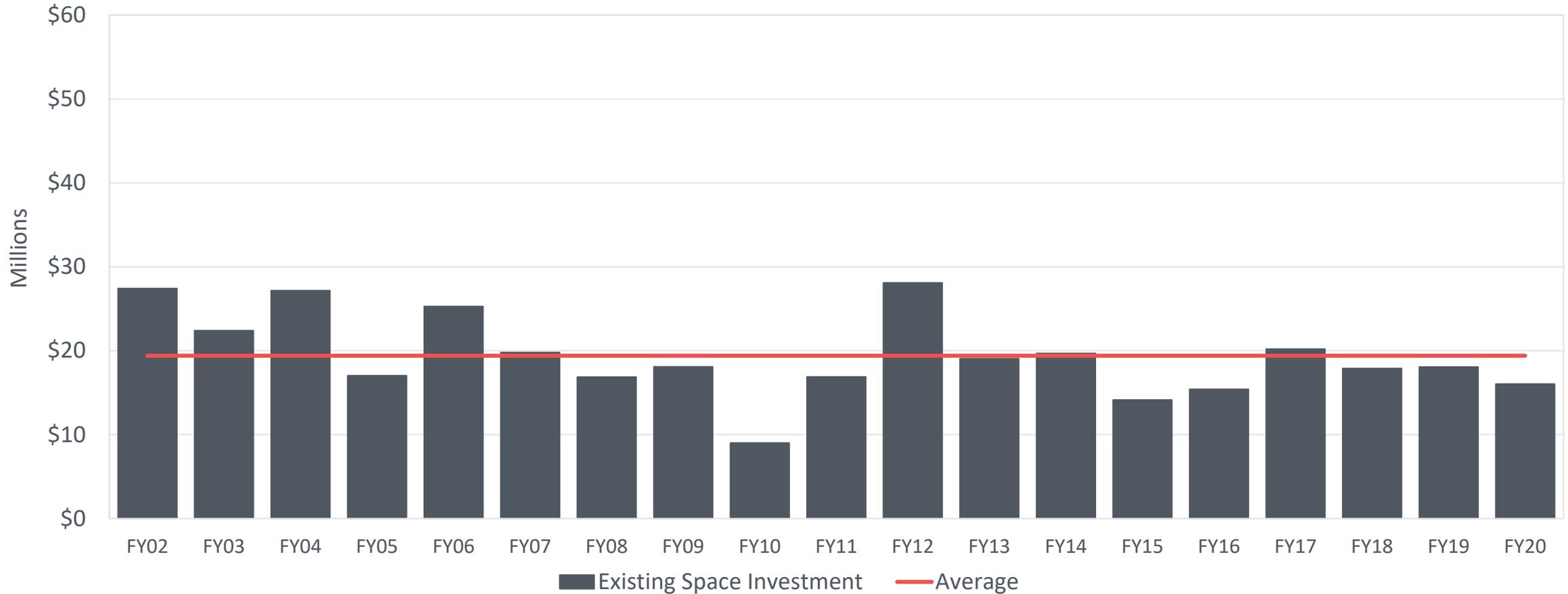
Total Capital/Major Maintenance Investments from FY02-FY20



Investment into Existing Space Decreases in FY20

Average annual investment: \$19.4M

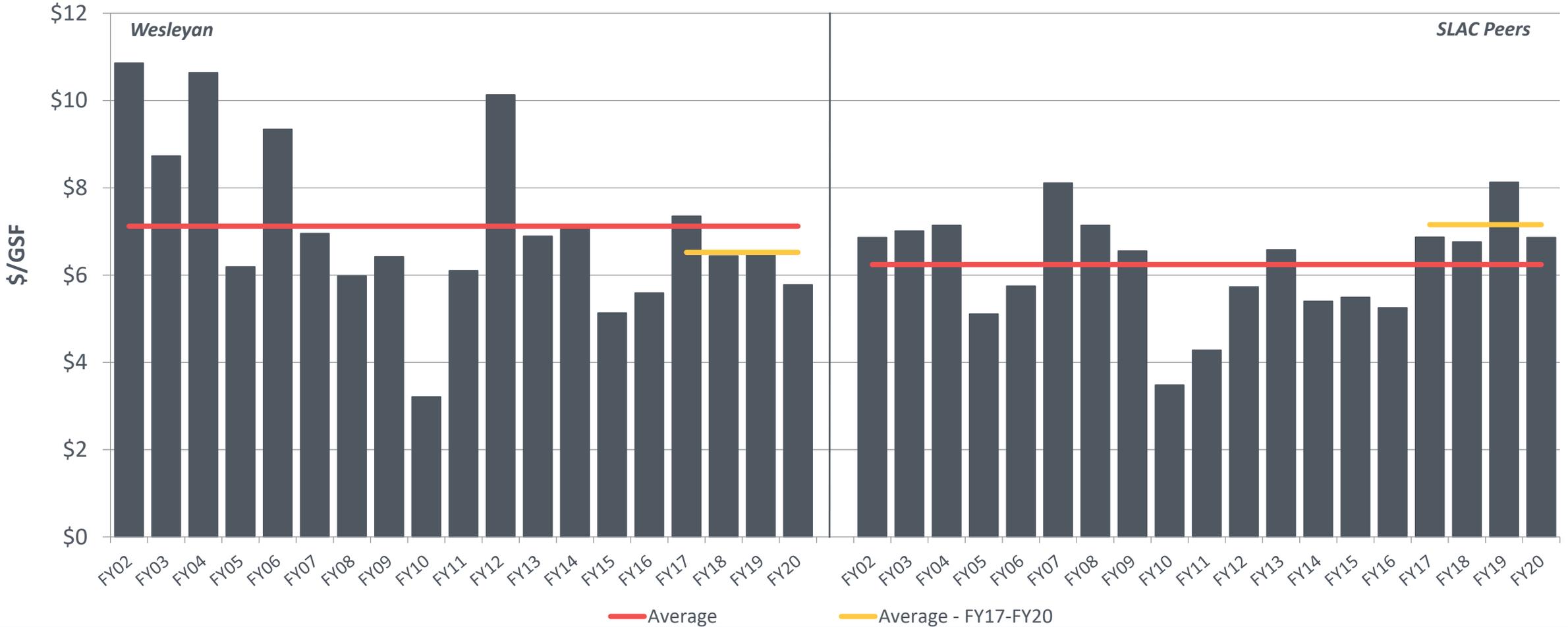
Total Capital/Major Maintenance Investments from FY02-FY20



Investments into Existing Space Below Peers in FY20

On average, Wesleyan invests \$.88/GSF more than peers from FY02-FY20

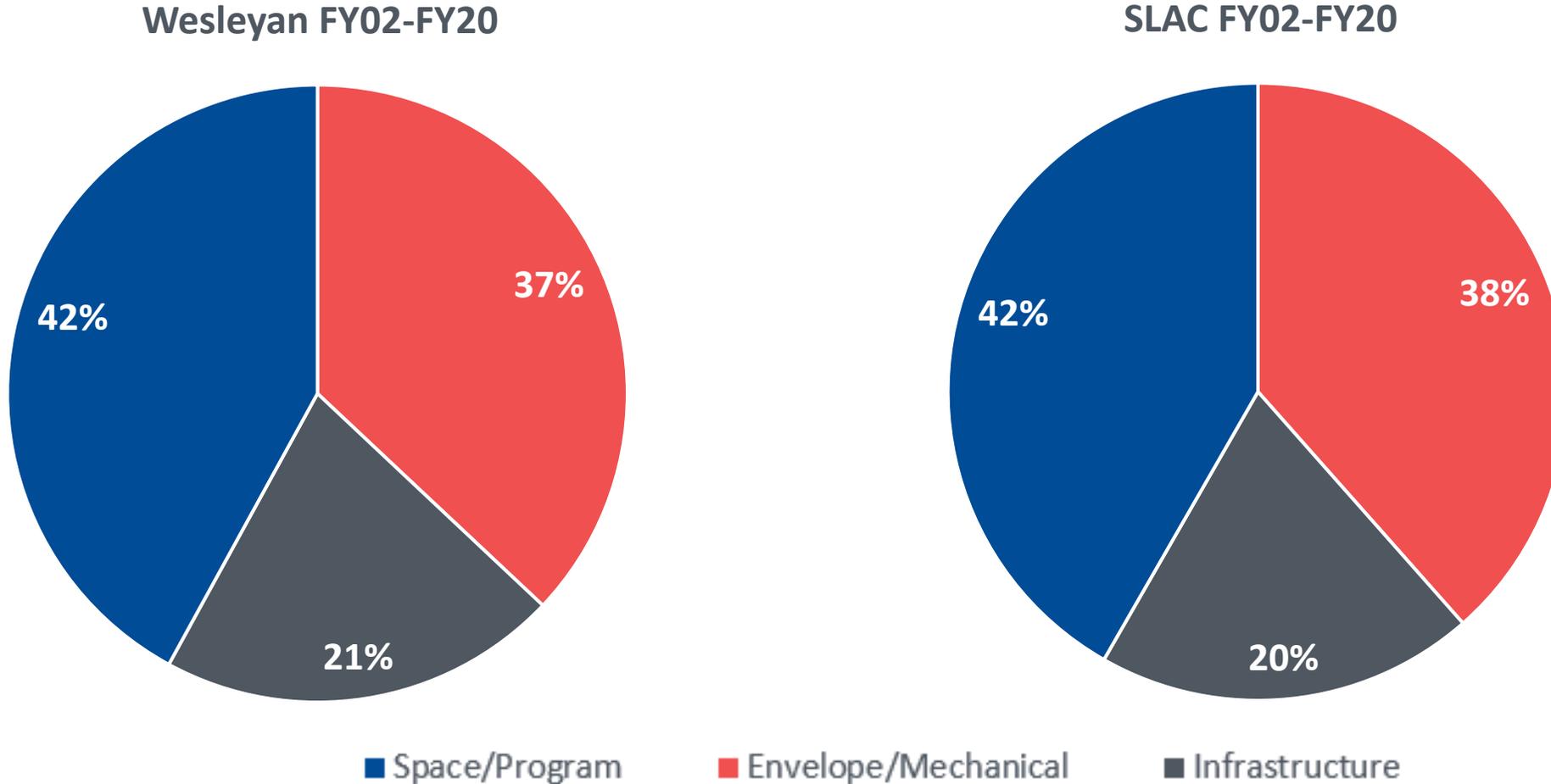
Total Investment \$/GSF vs. Peers



*Investment into existing space

Historic Investments by Package Similar to SLAC Distribution

The Envelope and Mechanical package has the highest ROI and should be prioritized



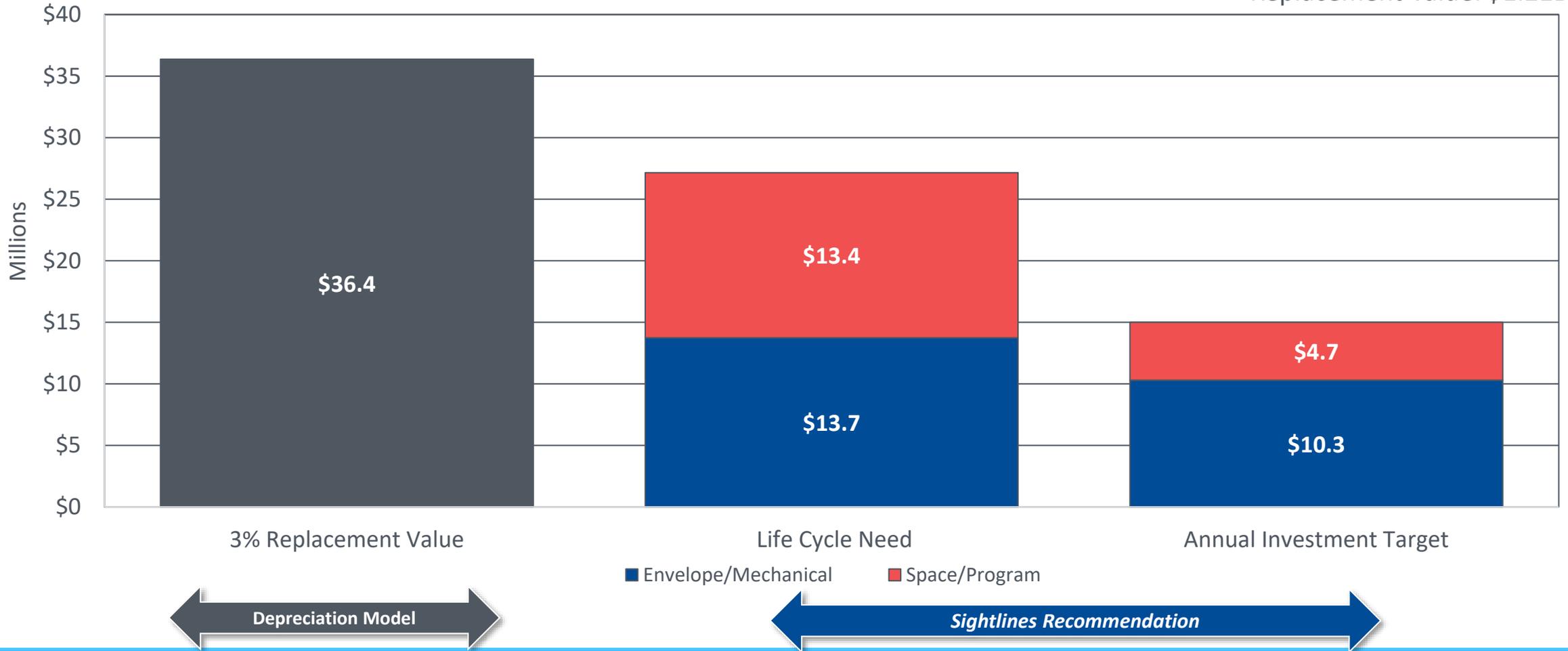
**Investment into existing space*

Defining an Annual Investment Target for Wesleyan

Annual Funding Target: \$15.0M

FY20 Annual Investment Target

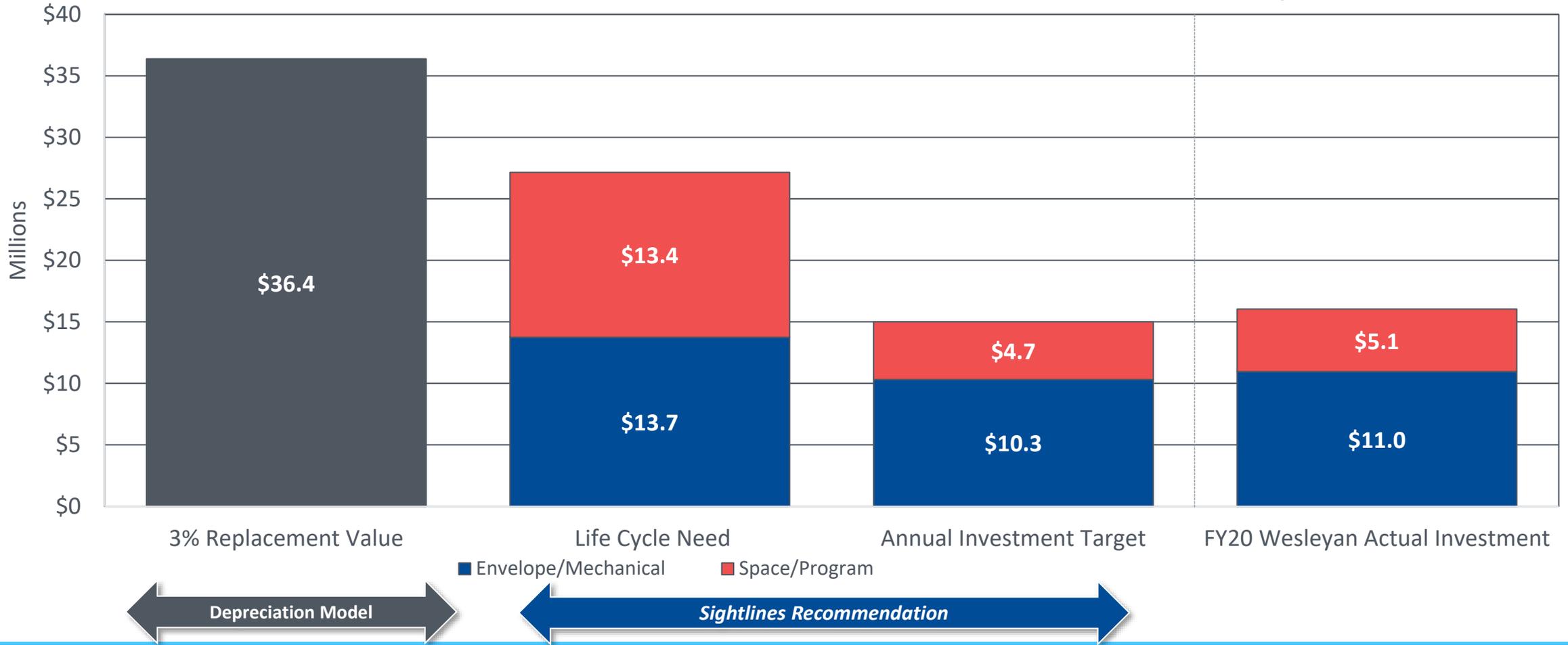
Replacement Value: \$1.21B



FY20 Capital Investment Meets Annual Need

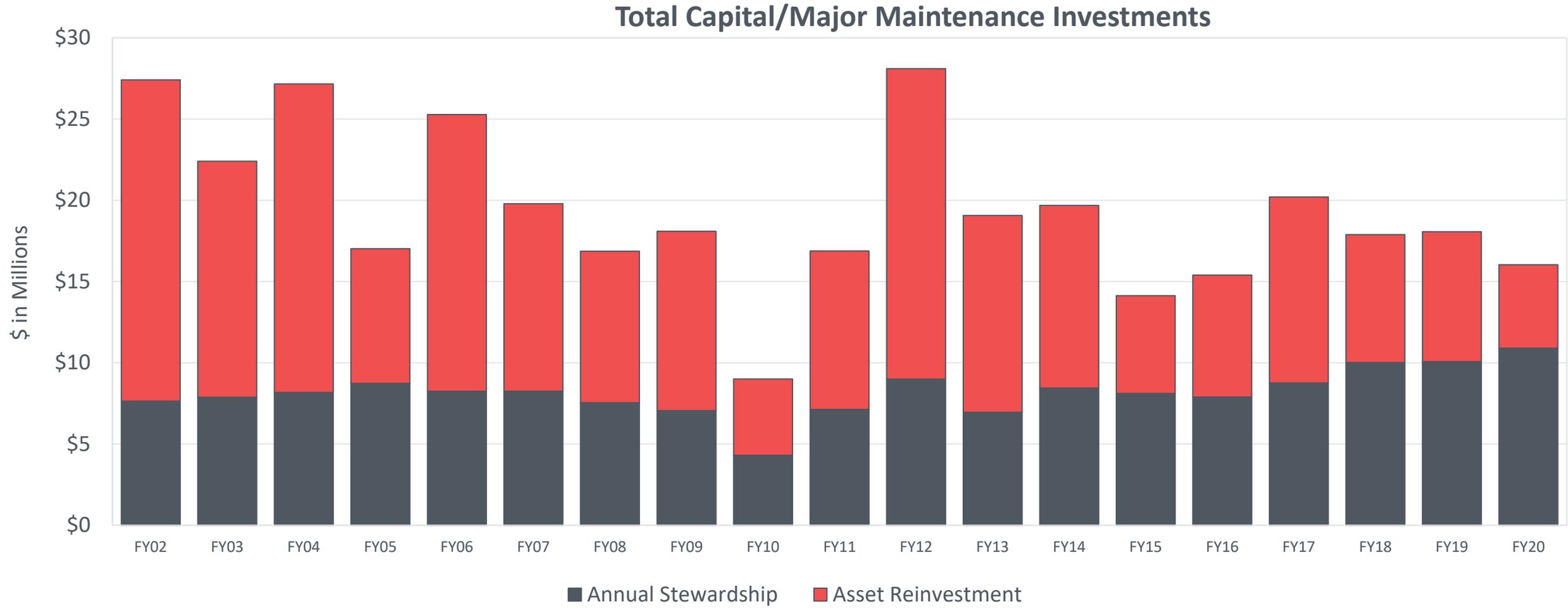
FY20 Annual Investment Target

Replacement Value: \$1.21B



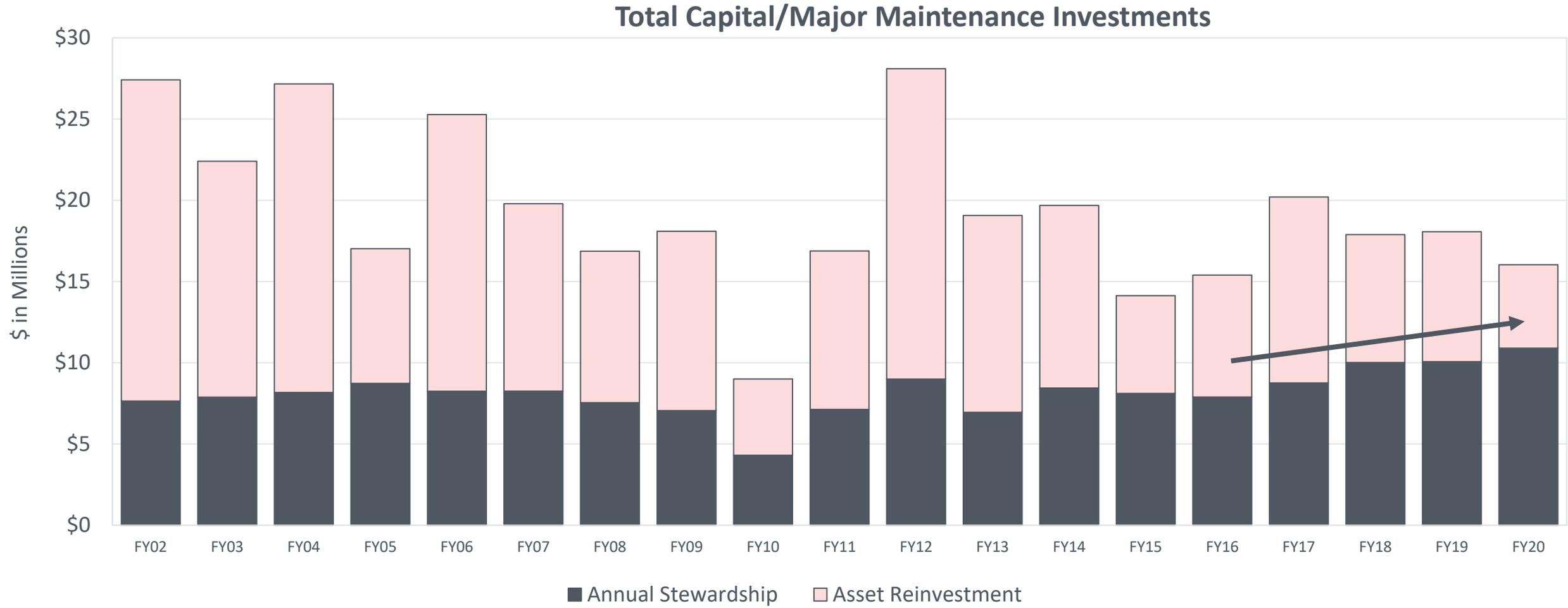
Growing Major Maintenance Funds

Major Maintenance funds have been on the rise since FY16



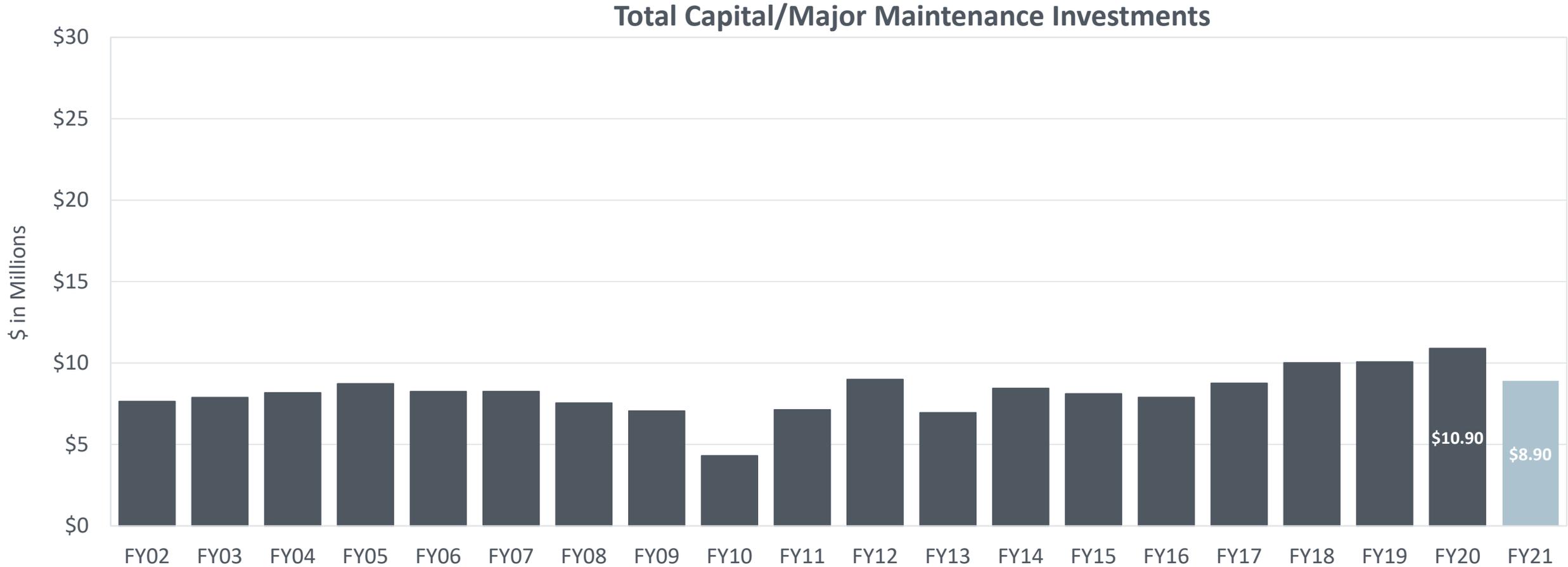
Growing Major Maintenance Funds

Major Maintenance funds have been on the rise since FY16



Major Maintenance Fund Expected to Decrease in FY21

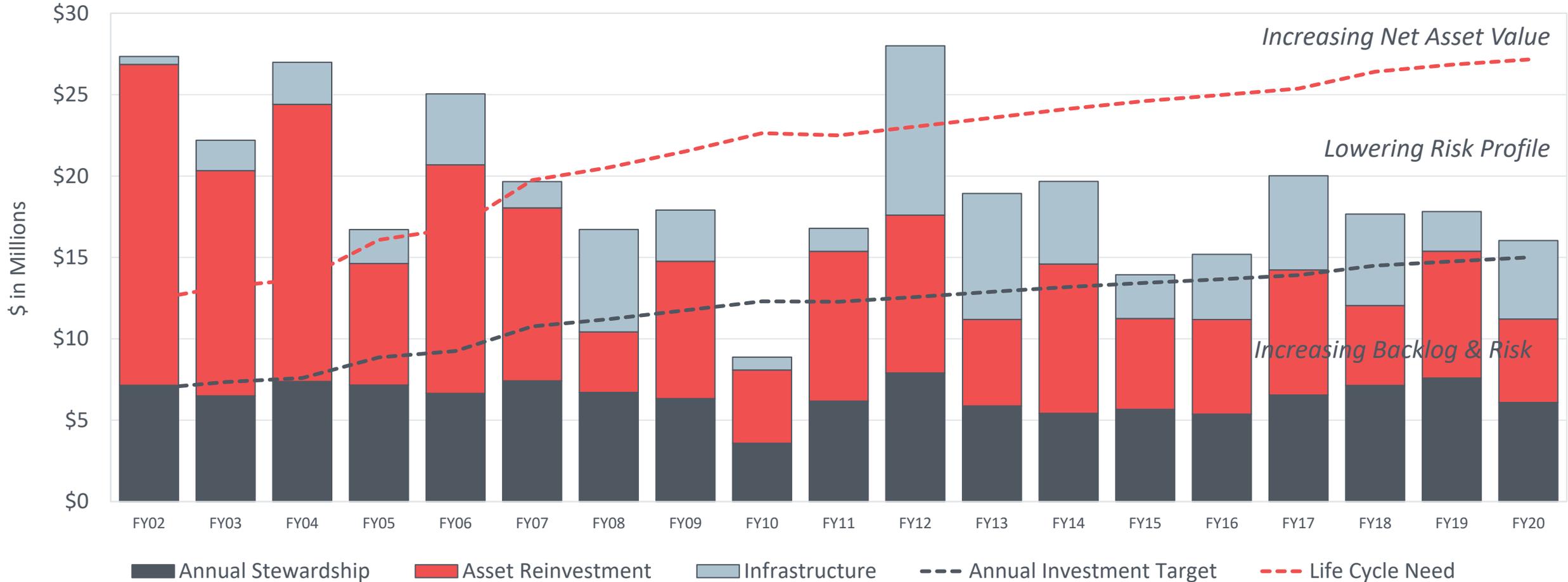
Major Maintenance funds projected decrease: \$2M



Chasing A Growing Target

Wesleyan meets target in FY20

Capital/Major Maintenance Investments to Target



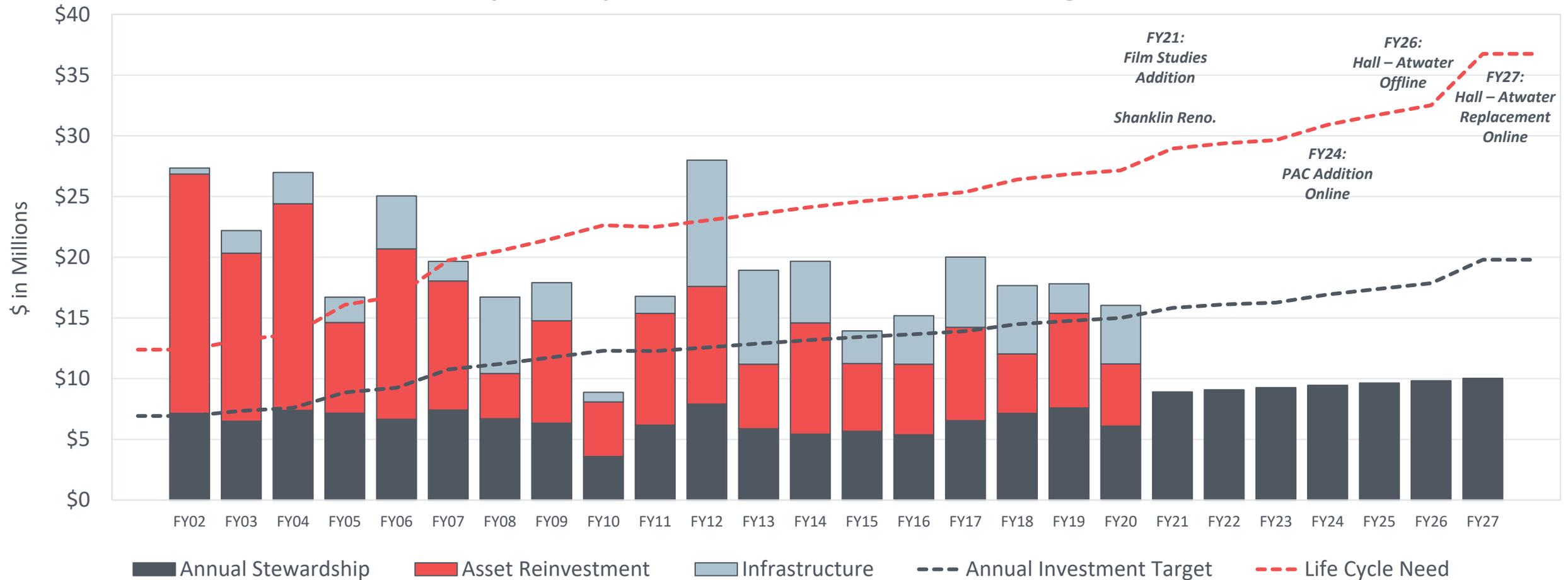
*Investment into existing space

**Sightlines Annual Investment target does not include infrastructure need. Wesleyan estimates approximately \$2M of infrastructure need each year.

Planned Renovations Provide Insight into Future Target

Stewardship target increases to \$19.8M by 2027 due to renovations and new space

Capital/Major Maintenance Investments to Target



*Investment into existing space

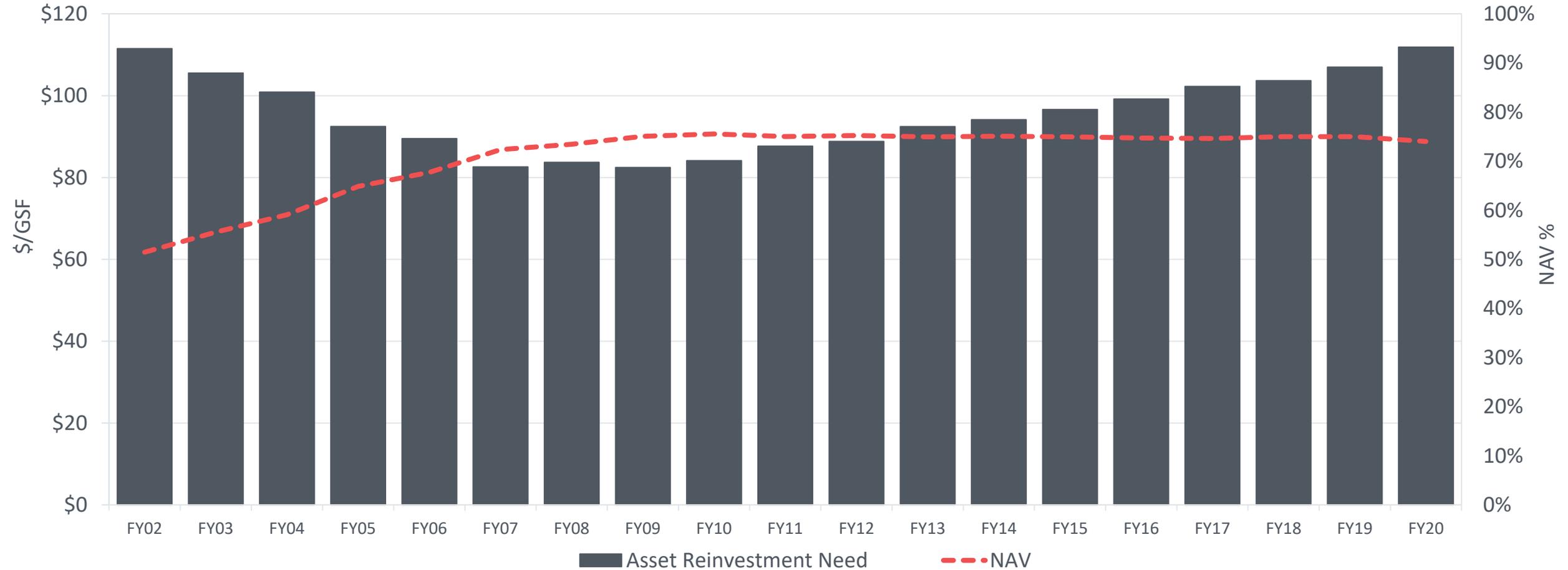
**Sightlines Annual Investment target does not include infrastructure need. Wesleyan estimates approximately \$2M of infrastructure need each year.

*Projections reflect Film Studios addition and renovations of PAC in 2023 and Hall Atwater in 2026

Asset Reinvestment Continues to Grow at Steady Pace

In the last 10 years, AR Need have increased by 27%

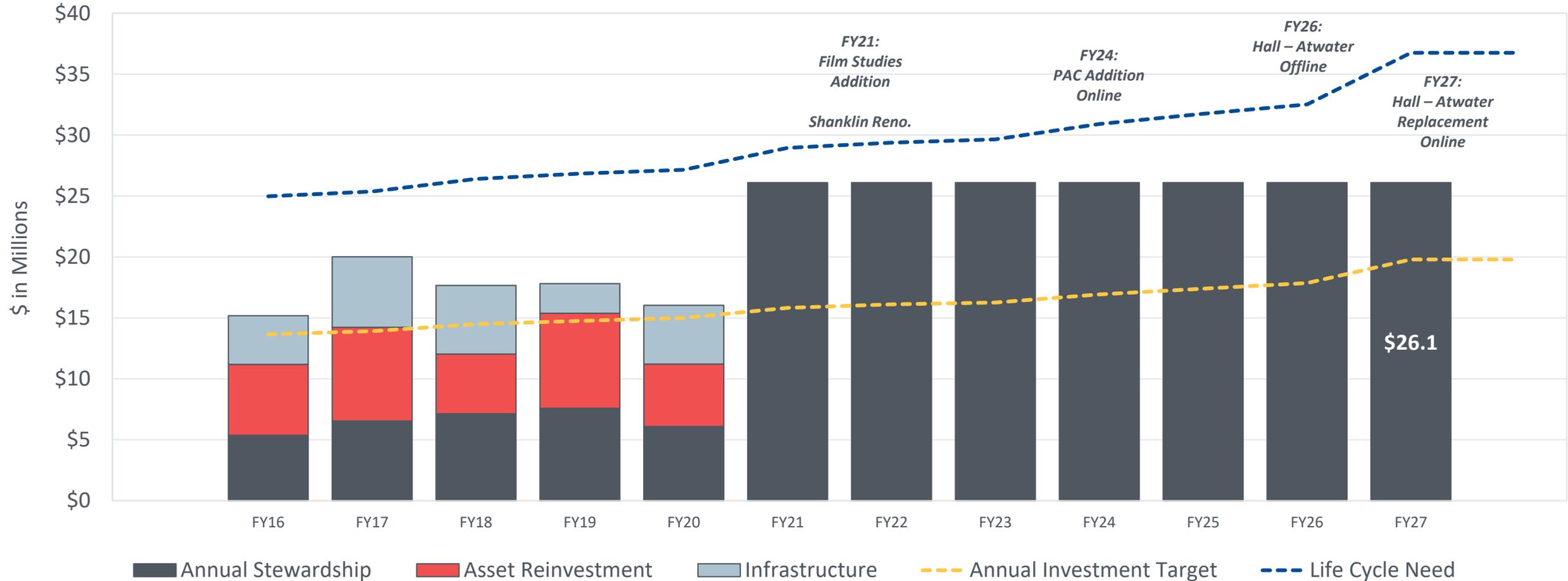
Total Asset Reinvestment Need



\$26.1M per Year to Reach \$100/GSF Campus Need

Wesleyan needs to invest \$26.1M per year until FY27 to decrease backlog from \$112/GSF to \$100/GSF

Capital/Major Maintenance Investments to Target



*Investment into existing space

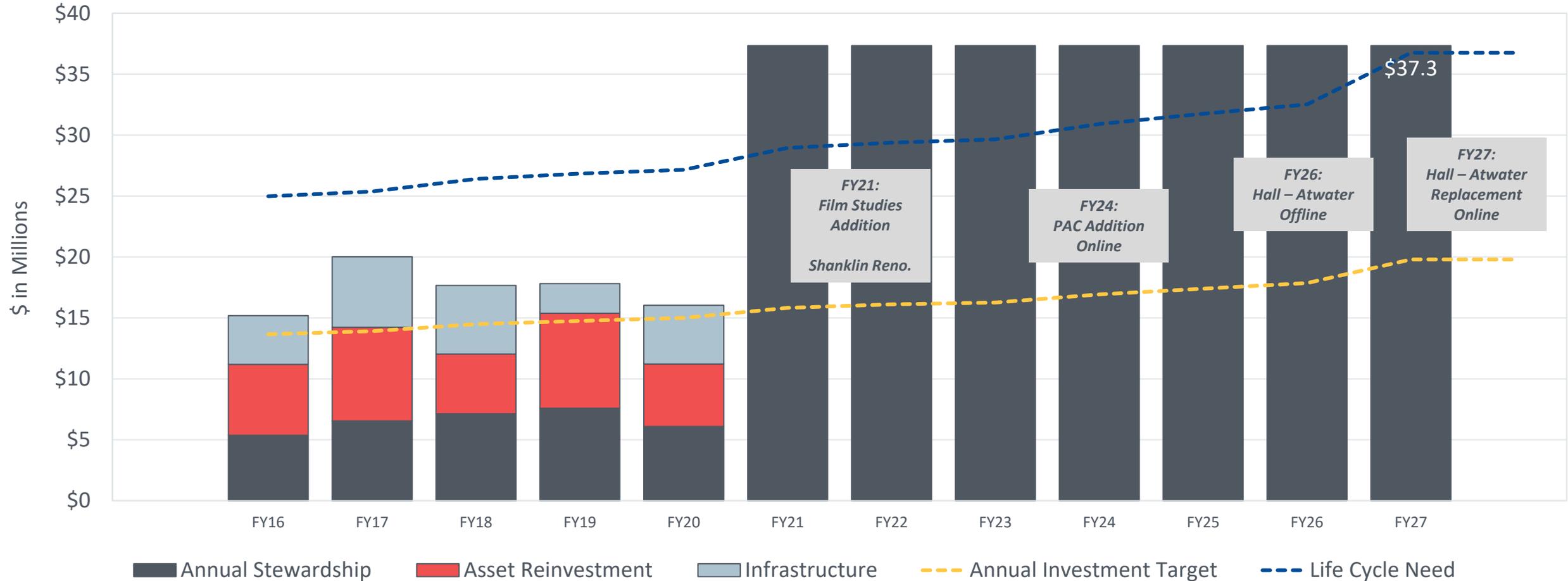
*Projections reflect Film Studies addition (2021), renovations of PAC (2023), and Hall Atwater Renovation through replacement (2026)

**Sightlines Annual Investment target does not include infrastructure need. Wesleyan estimates approximately \$2M of infrastructure need each year.

\$37.3M per Year to Reach \$70/GSF Campus Need – SLAC Average

Wesleyan needs to invest \$37.3M per year until FY27 to decrease backlog from \$112/GSF to \$70/GSF

Capital/Major Maintenance Investments to Target



*Investment into existing space

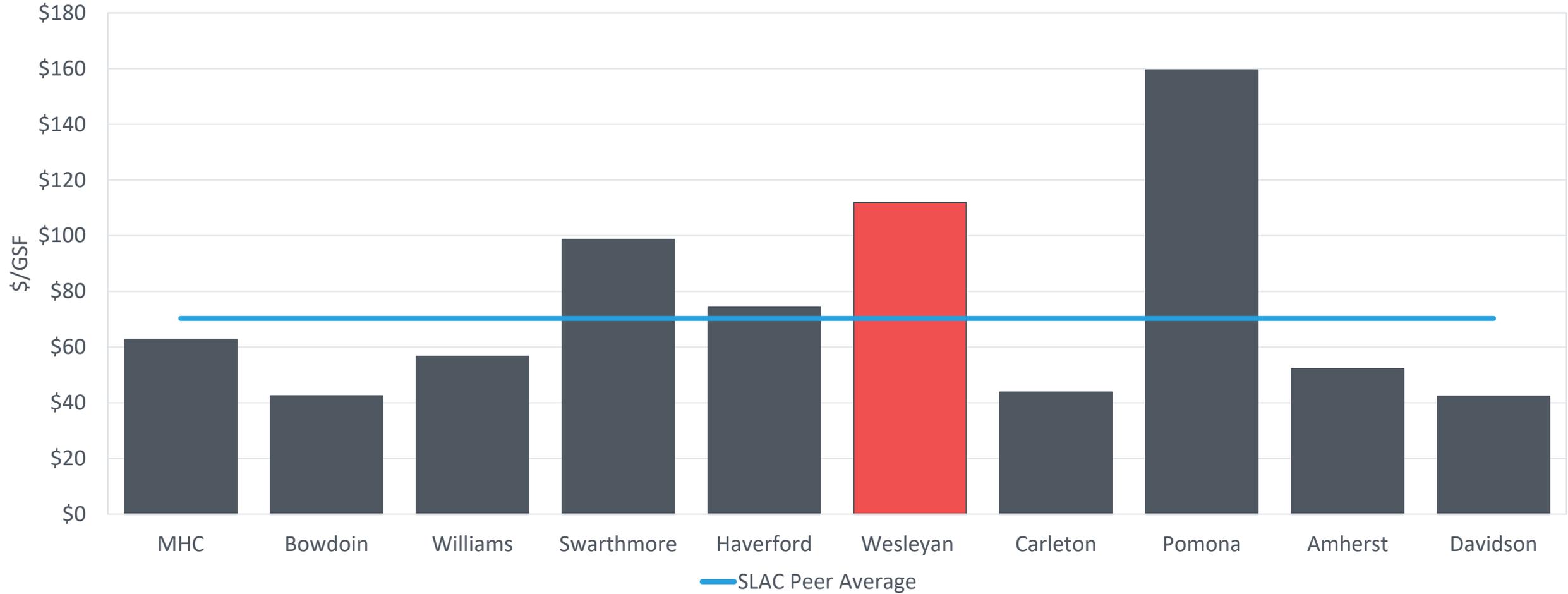
*Projections reflect Film Studies addition (2021), renovations of PAC (2023), and Hall Atwater Renovation through replacement (2026)

**Sightlines Annual Investment target does not include infrastructure need. Wesleyan estimates approximately \$2M of infrastructure need each year.

FY20 Total Asset Reinvestment Need Above SLAC Average

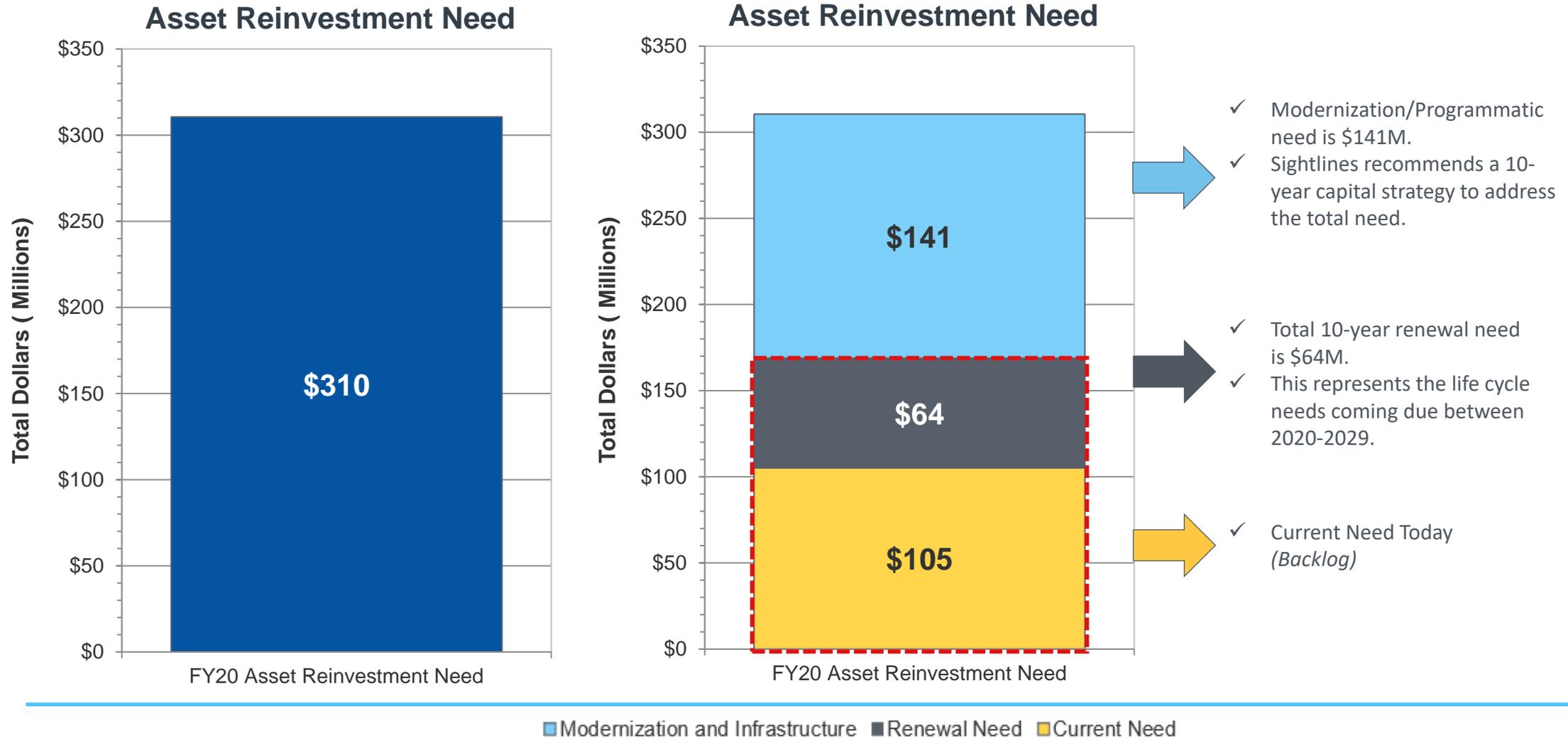
Wesleyan's Backlog is at \$112/GSF; SLAC Peers: \$70/GSF; SL database: \$90/GSF

Total Asset Reinvestment Need vs. SLAC Average

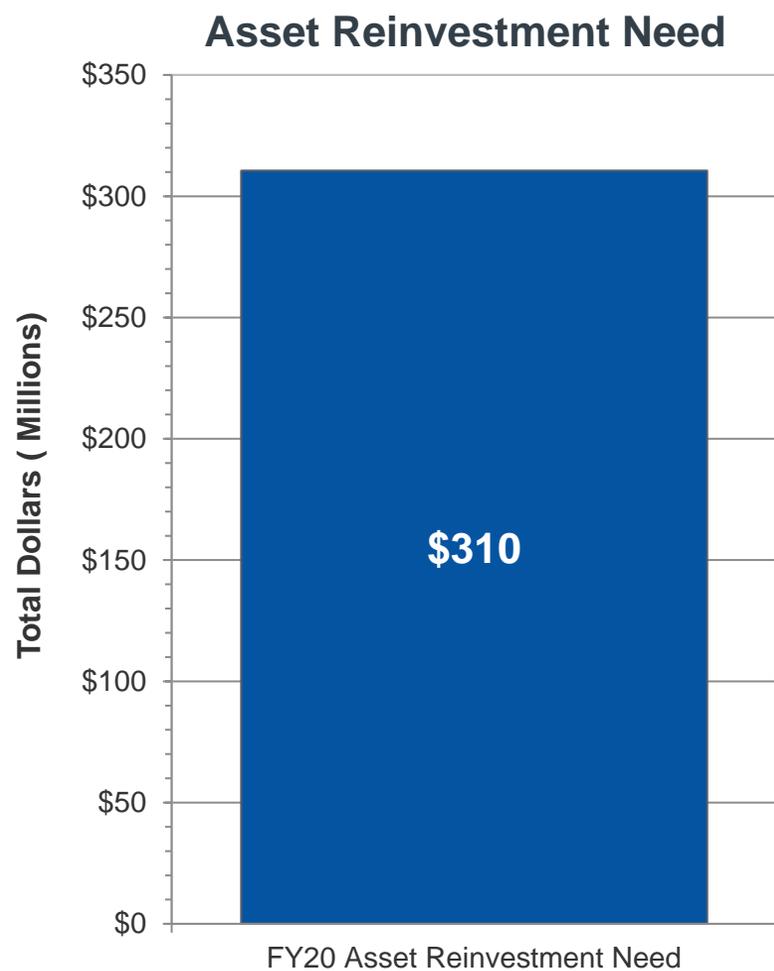


Wesleyan's Ten-Year Backlog of Need

Sightlines quantifies \$169 Million in system-specific need



Wesleyan's Average Capital Spend Keeps Campus Steady State



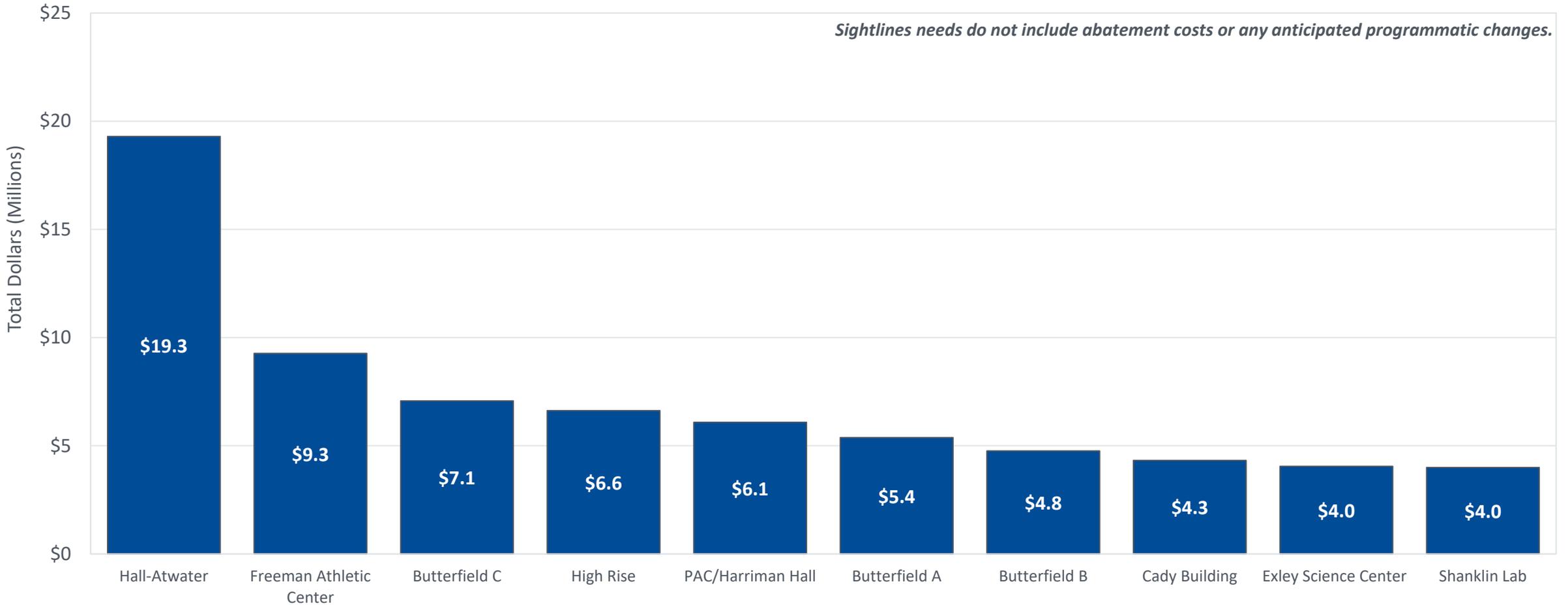
■ Modernization and Infrastructure ■ Renewal Need ■ Current Need

■ Annual Stewardship ■ Asset Reinvestment

Top 10 Buildings with Highest Need (Total Dollars)

These buildings make up 32% of Wesleyan's space

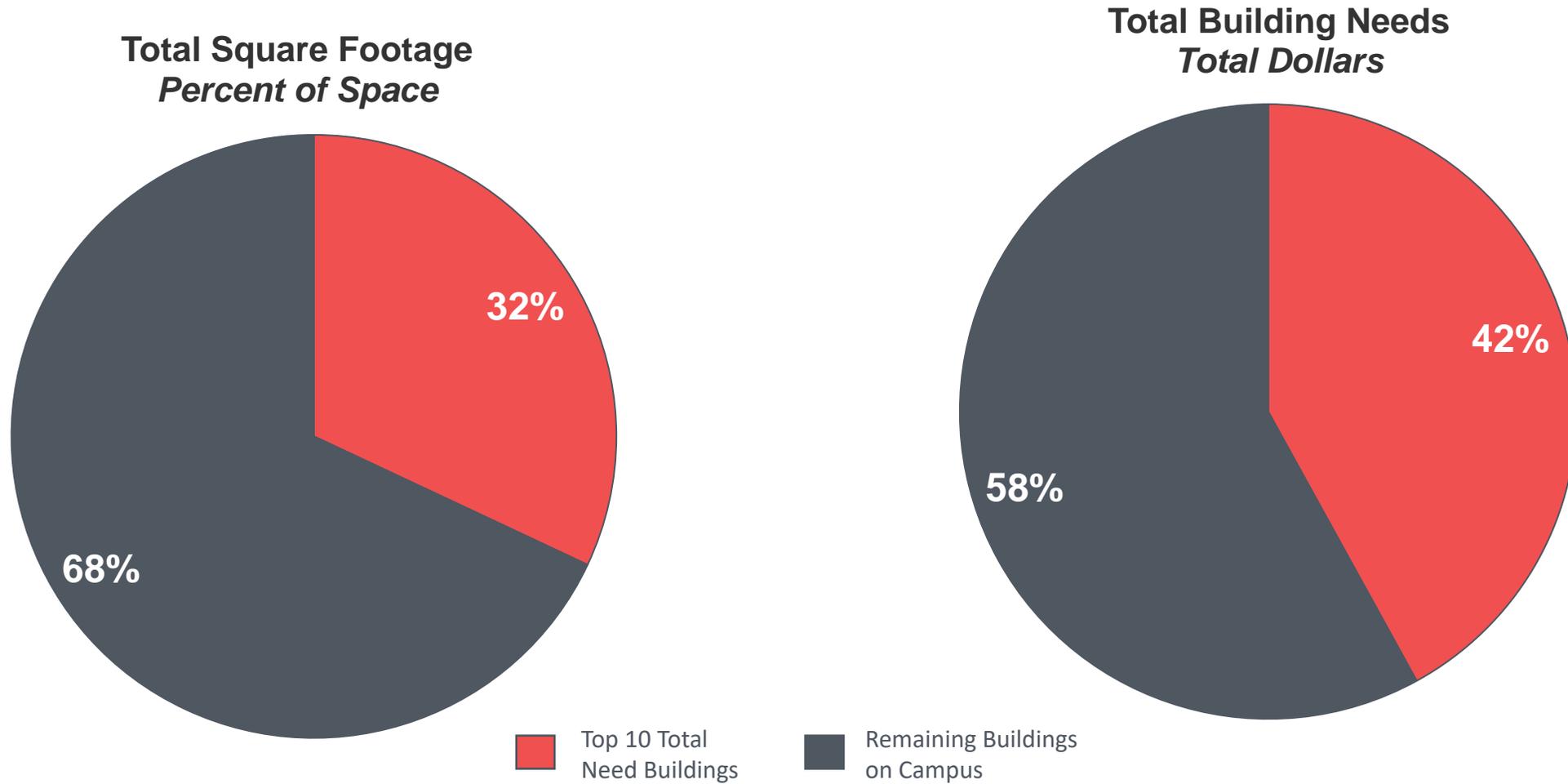
Buildings with Highest Total Need



*Includes only current and renewal needs

Understanding Wesleyan's Top 10 Total Building Needs

Buildings represents 32% of Wesleyan space and 42% of total building needs



**Includes only current and renewal needs*

Top 10 Buildings with Highest Need (\$/GSF)

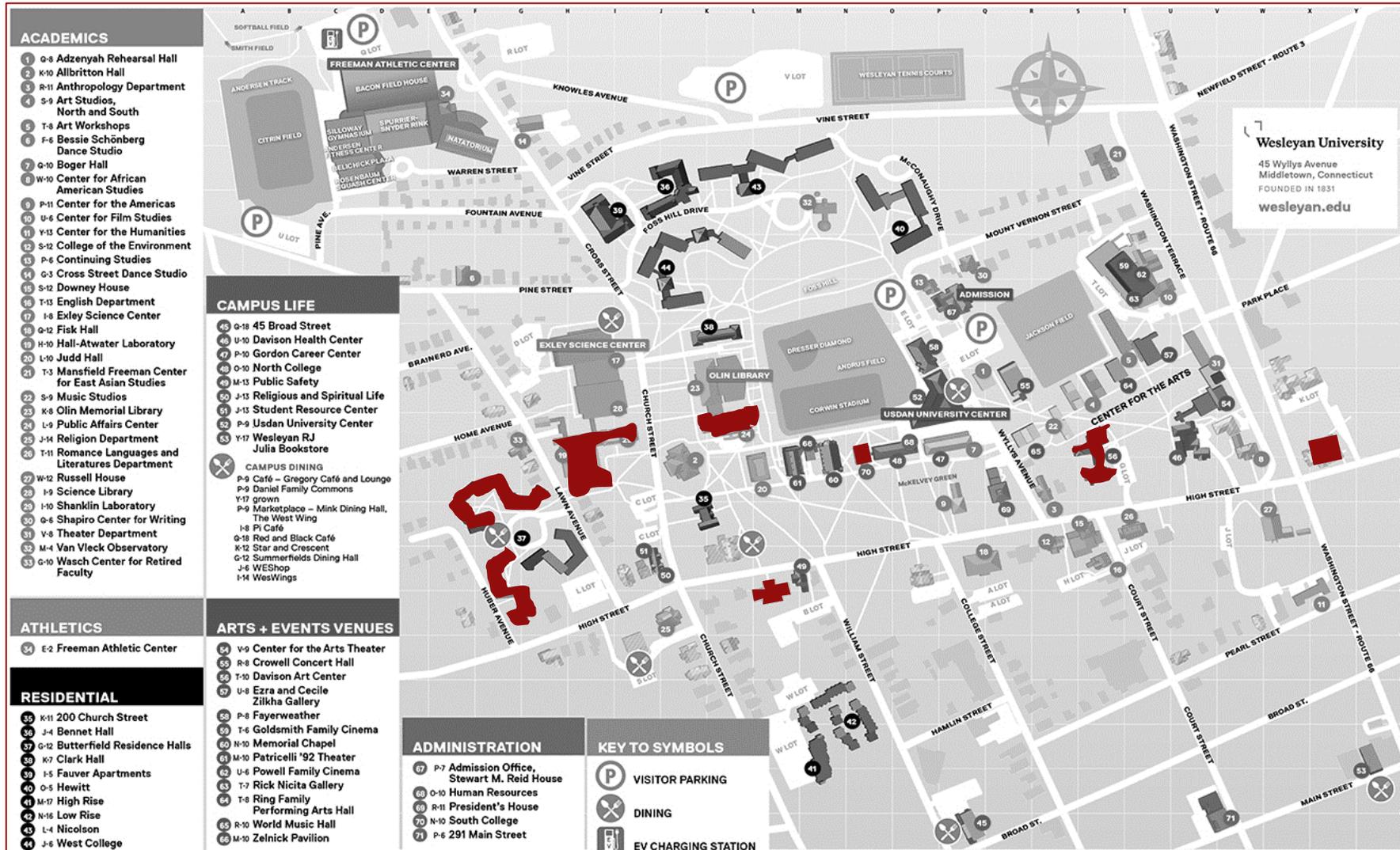
These buildings make up 13% of Wesleyan's space

Buildings with Highest \$/GSF Need



**Includes only current and renewal needs*

Mapping Out Buildings Needs Over \$100/GSF



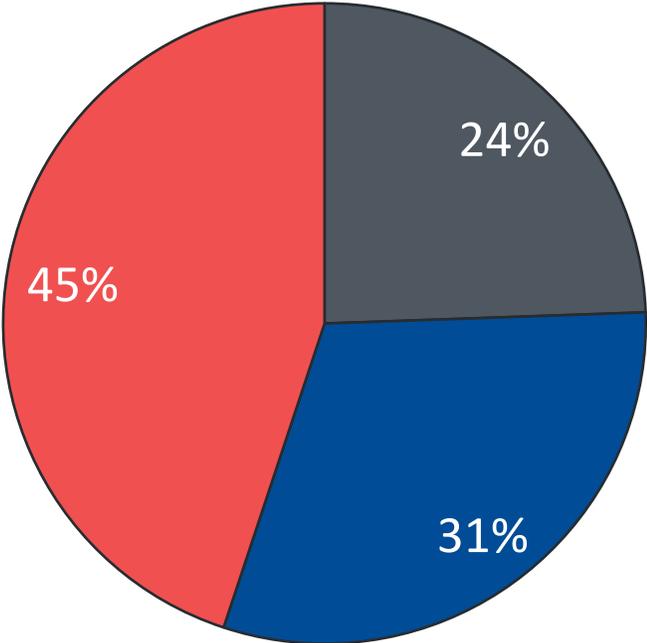
Top Buildings with Highest \$/GSF Need:

- Hall-Atwater
- Shanklin Lab
- Cady Building
- South College
- Writing House/Full House
- Butterfield C
- PAC/Harriman
- Davidson Art Center
- Butterfield B
- 200 High Street

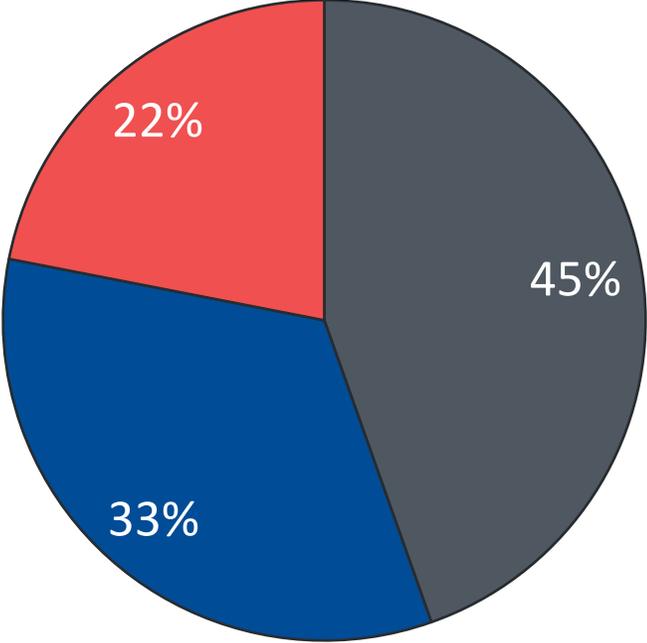
*Cady Building not shown on map

Capital Investment Does Not Map To Future Needs

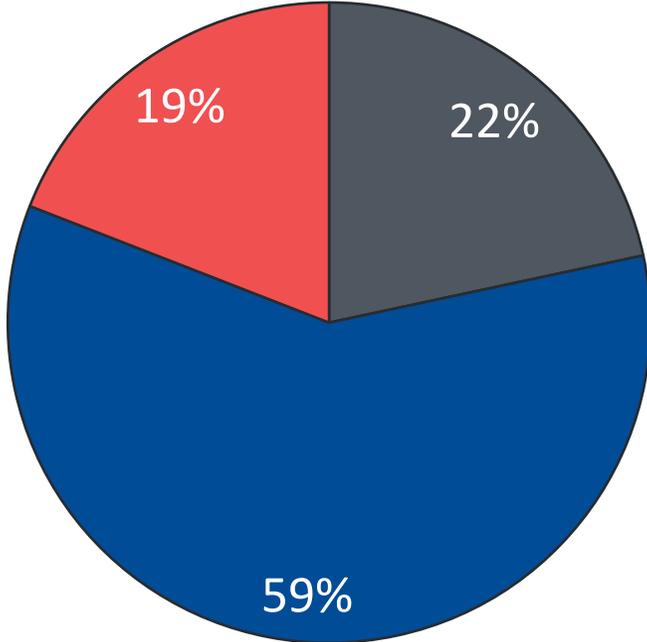
FY02-FY20 Total Capital Investment Mix



FY02-FY20 Major Maintenance Funds Capital Investment Mix



FY21-FY30 Future Identified Needs

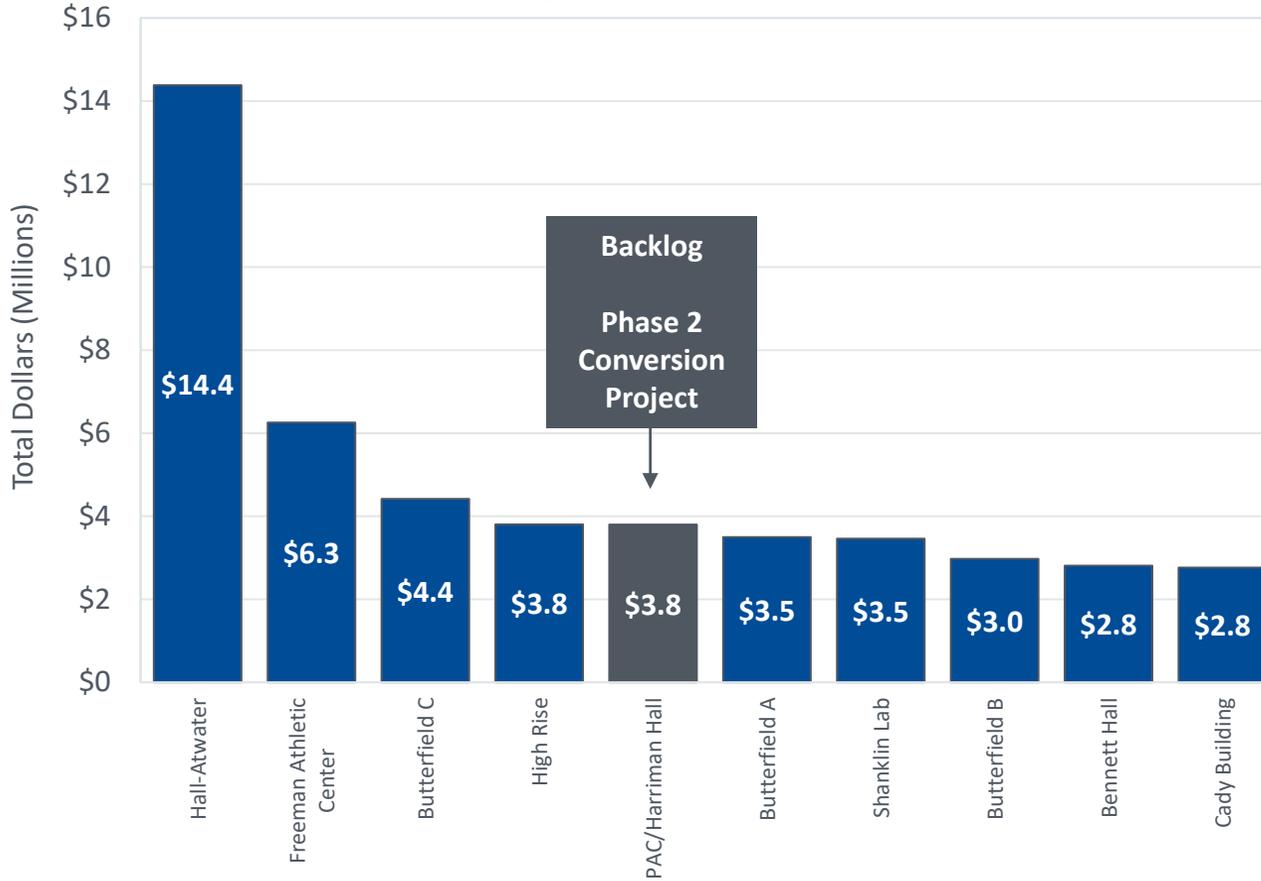


■ Envelope ■ Mechanical ■ Space/Program

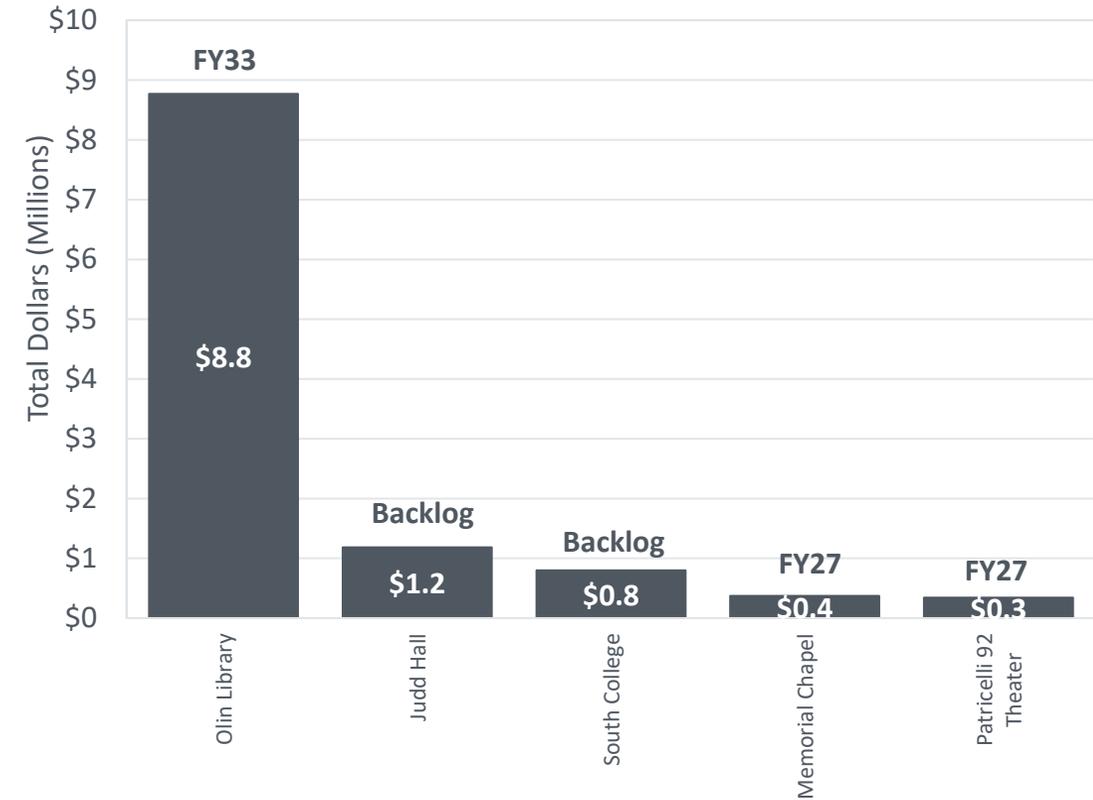
*FY02-FY19 investment mix does not include new space, non-facilities, or safety/infrastructure

Top 10 Upcoming Mechanical Need Current Need and FY21-FY30 Life Cycles

Buildings with Highest Mechanical Need FY21-FY30



Phase 2 Conversion Steam to Hot Water Mechanical Needs



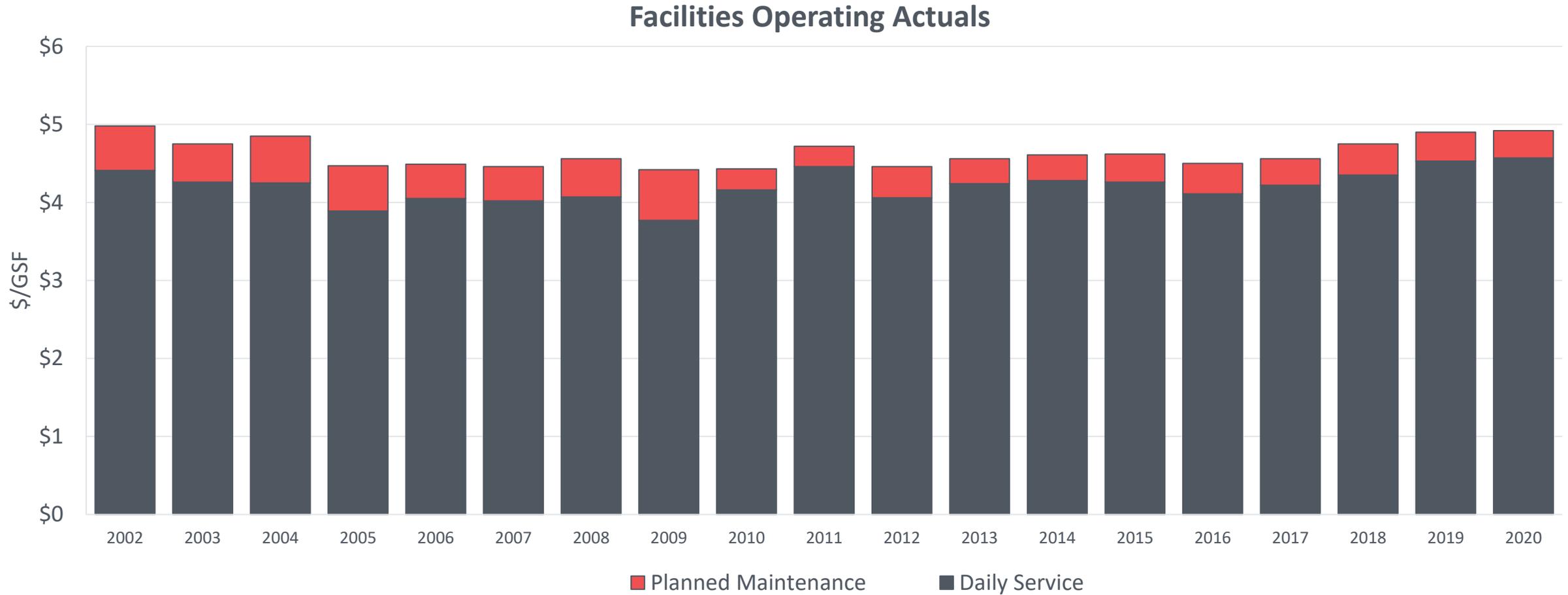
Matching Campus Need to Campus Values

- Program Value
- Building Function
- Space Utilization
- Campus Mission



Operations

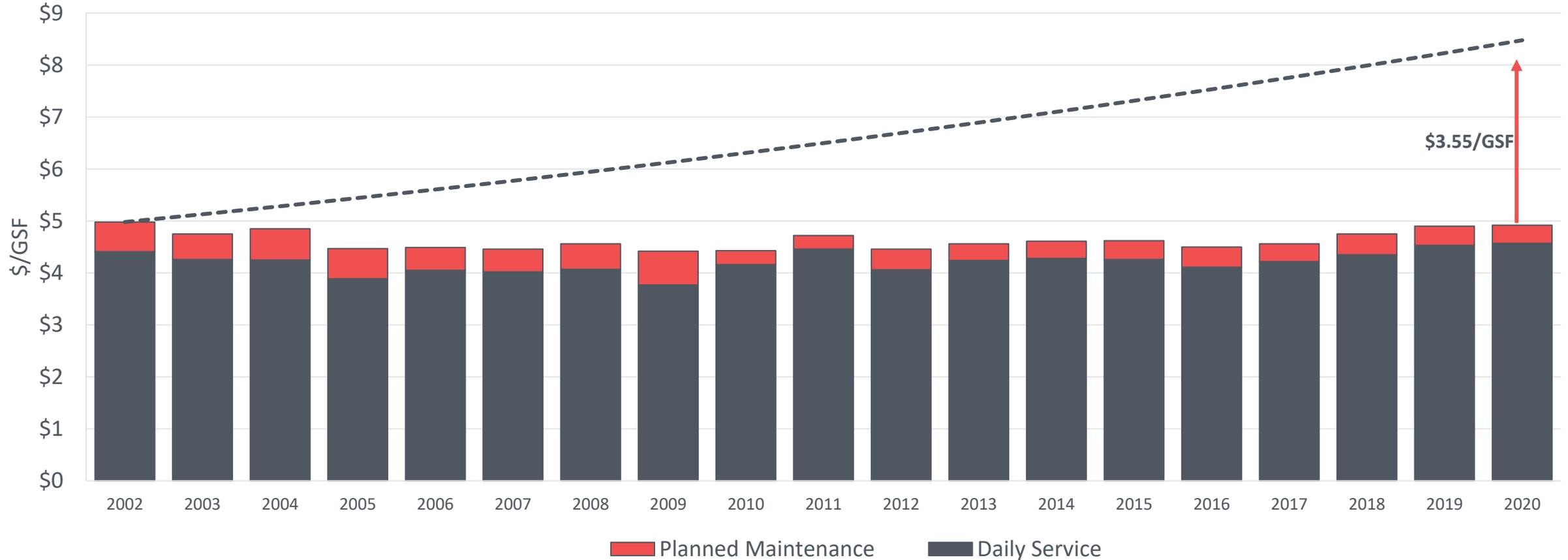
Facilities Operating Expenditures Over Time



Operating Efficiencies Save \$9.6M Annually by FY20

Investment of \$3.55/GSF or \$9.6M additional resources to match inflation growth in FY20

Facilities Operating Actuals

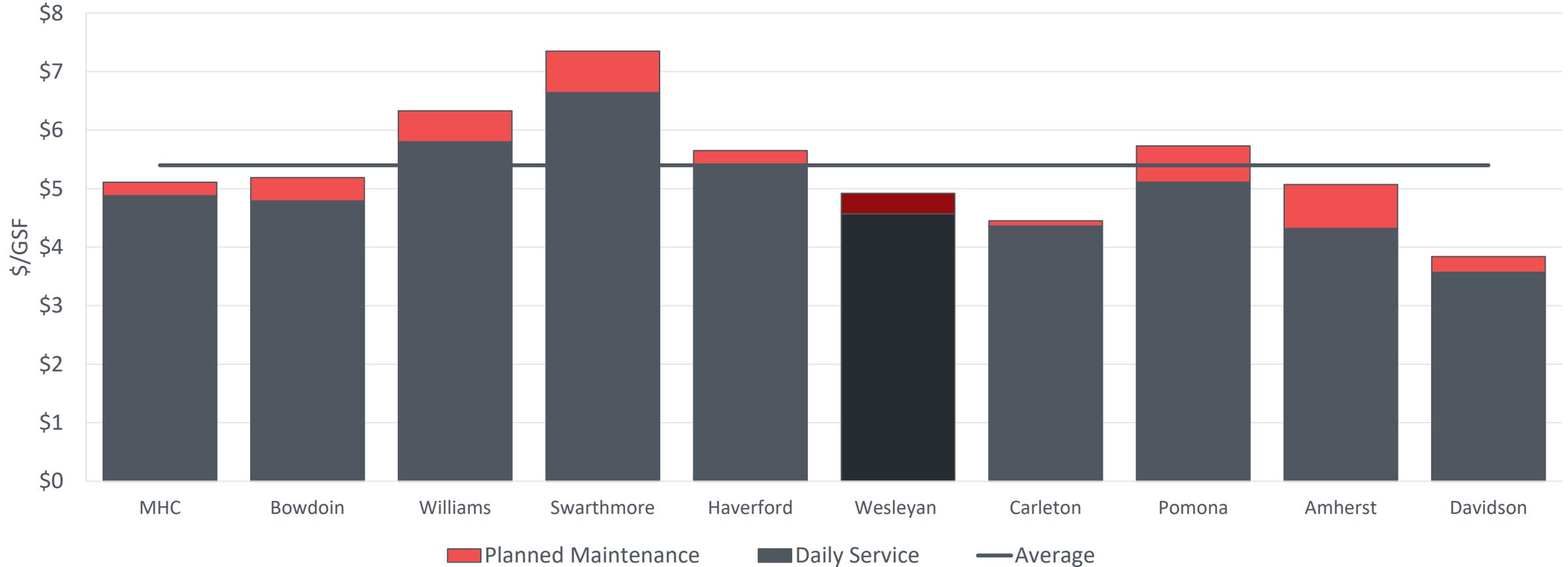


*Assumes 3% Inflation Growth Year Over Year

FY20 Facilities Operating Expenditures

Wesleyan operates with \$1.33M less annually in total operating actuals compared to SLAC peer average

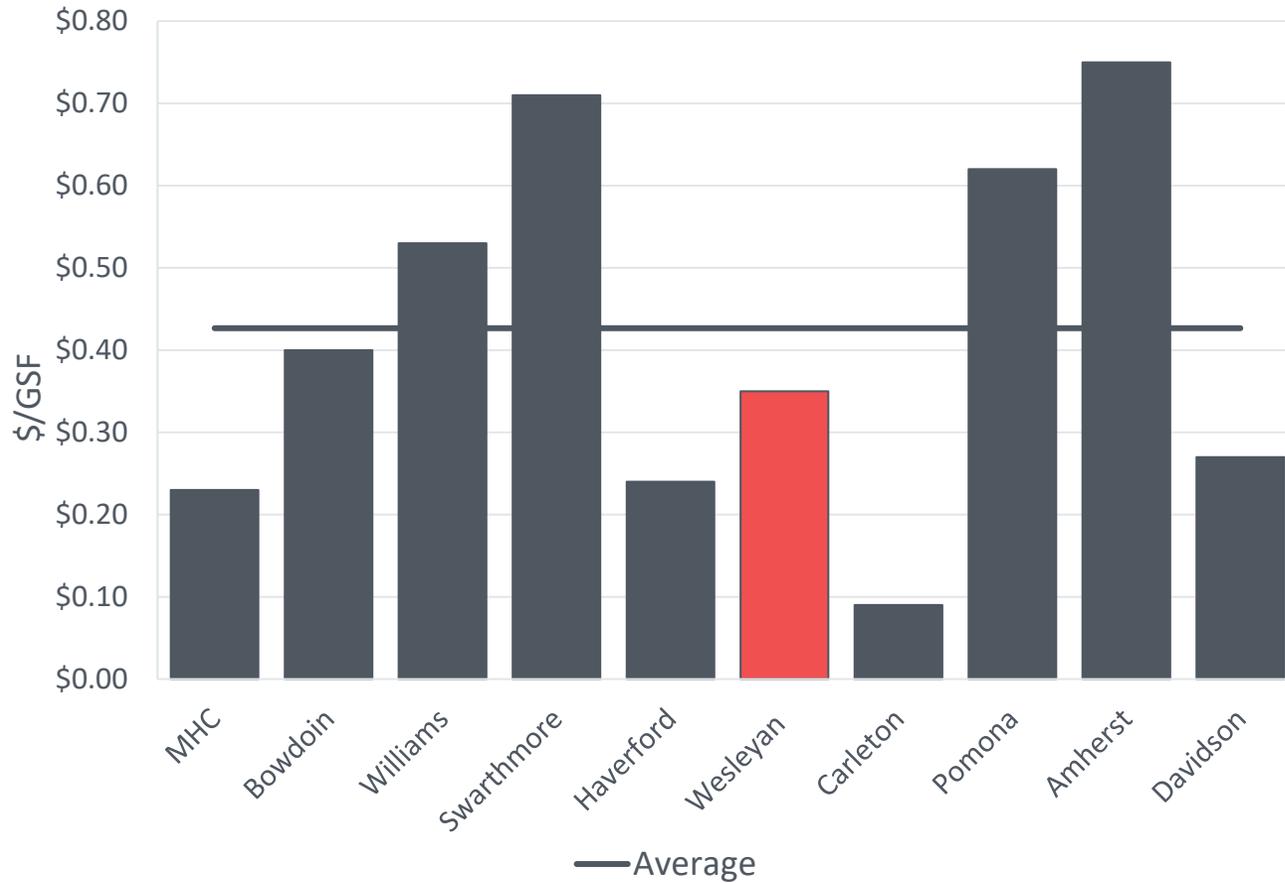
Facilities Operating Actuals



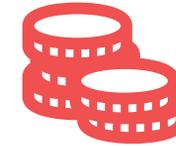
Planned Maintenance Below SLAC Average

Additional \$212K needed to reach SLAC average

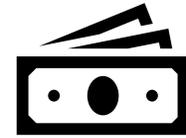
Total Planned Maintenance



THEORY



\$1.00 invested in
Planned
Maintenance now



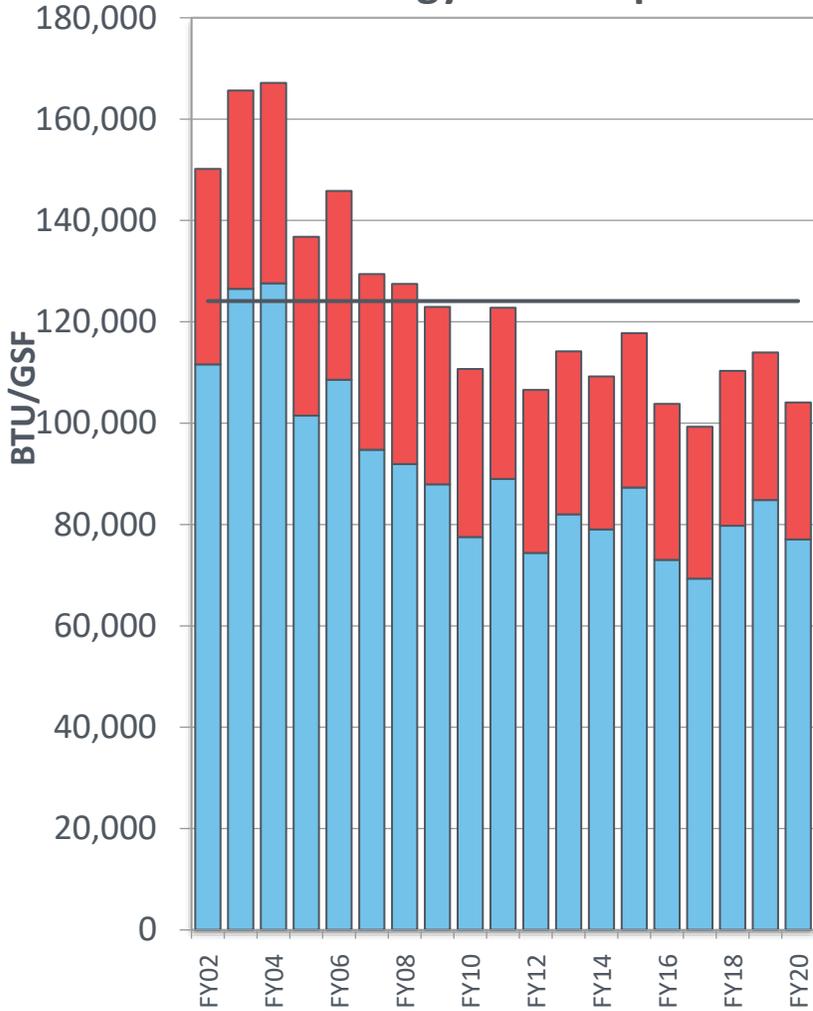
SAVES \$2.78 in reactive
maintenance later

Strategic Deferral of PM

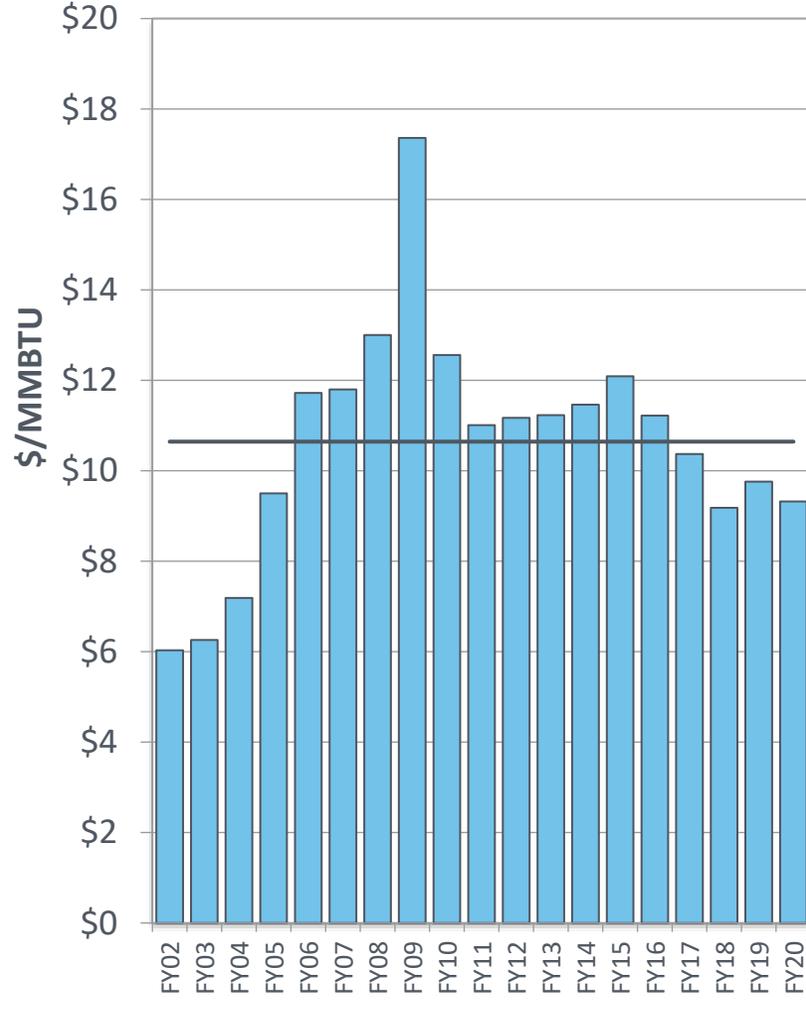
- Usually in buildings/systems over 50 years old targeted for renovation or replacement
- Reallocates resources from the older buildings/systems to younger buildings and systems.
- Use Assessment in coordination with work order reporting to start identifying these opportunities.

Wesleyan's Historical Utility Consumption and Cost

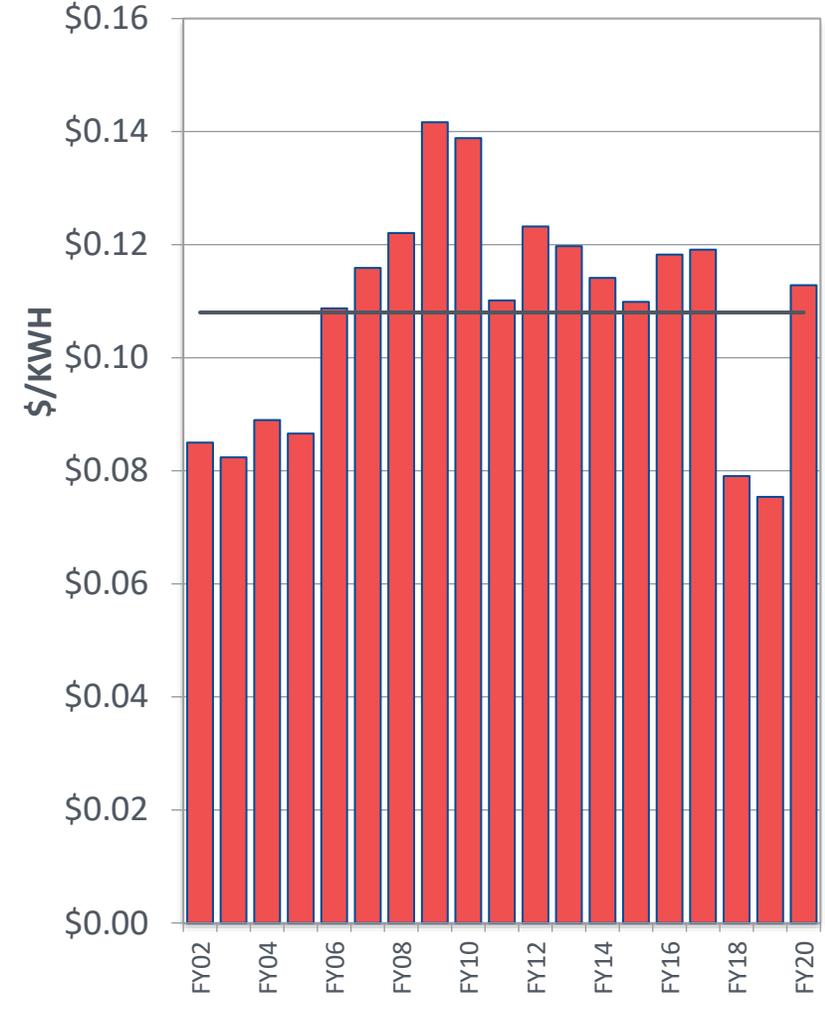
Energy Consumption



Fossil Costs



Electric Costs

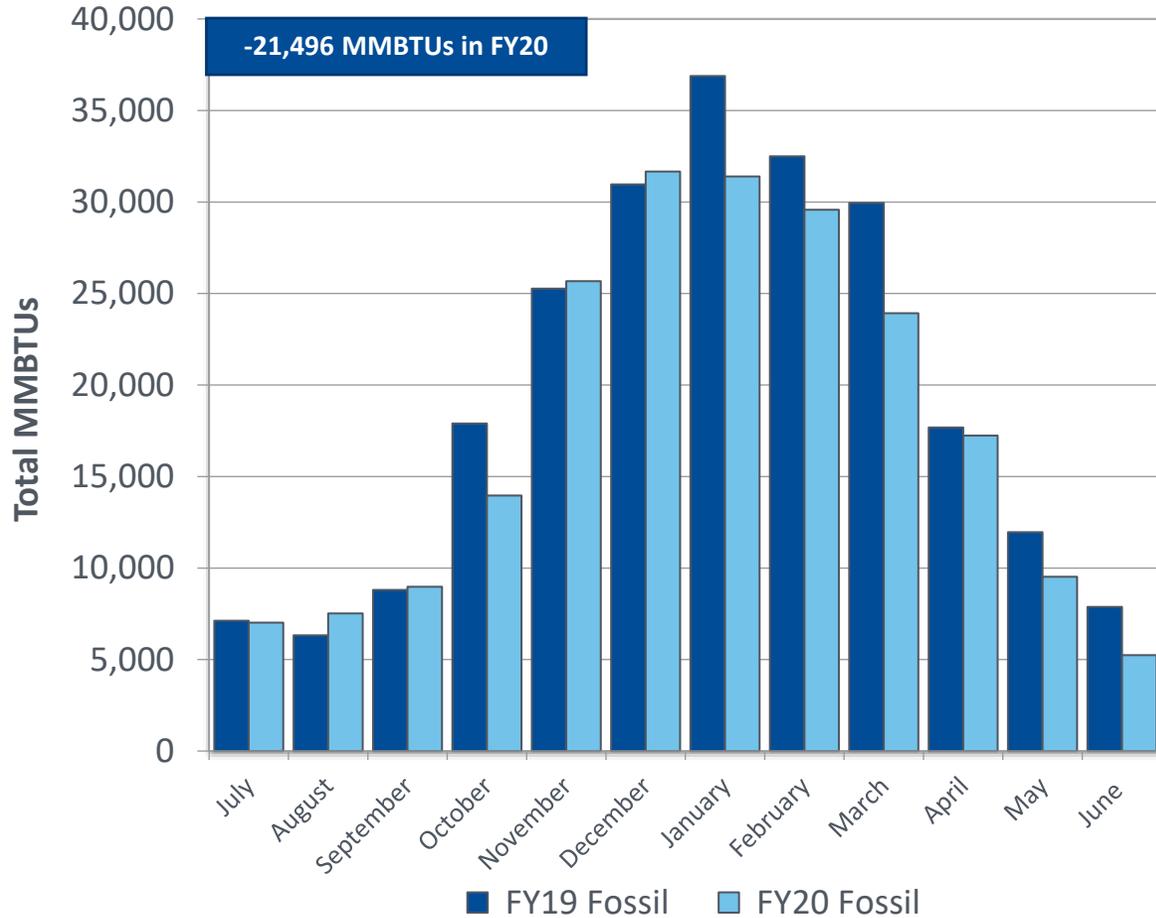


■ Electric
 ■ Fossil
 — Average

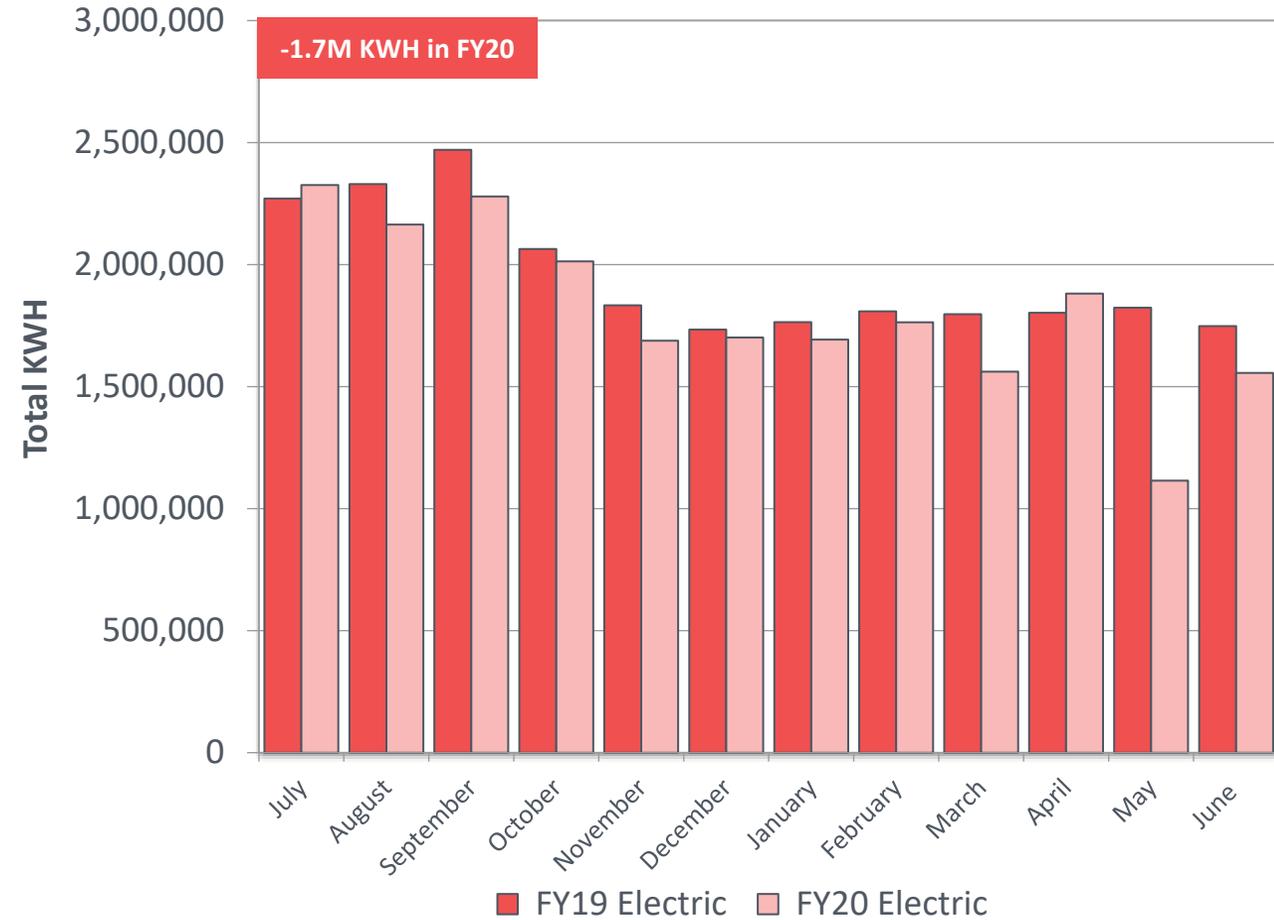
Monthly Energy Consumption FY19 vs. FY20

FY20 sees a dip in both Fossil and Electric consumption

Fossil Consumption

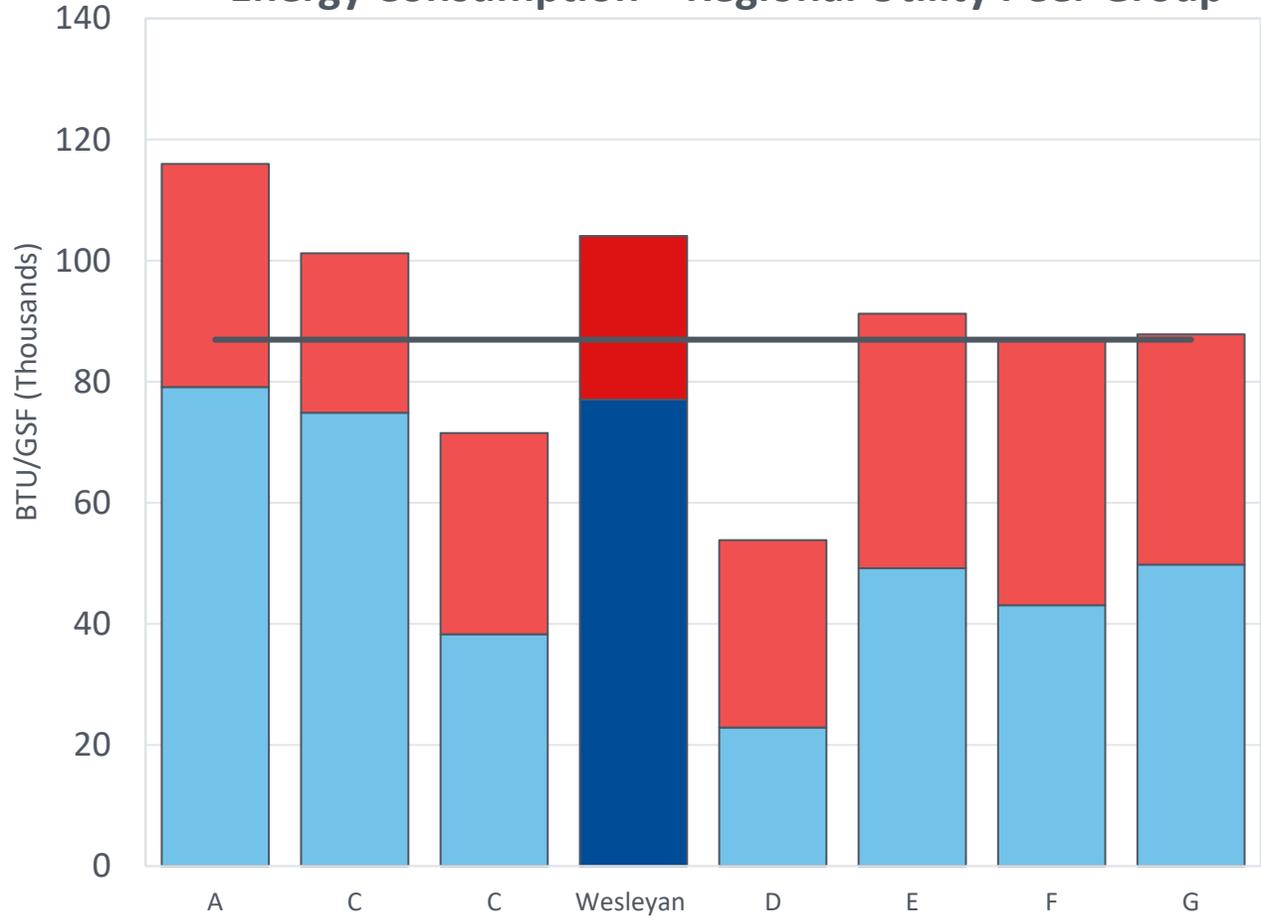


Electric Consumption

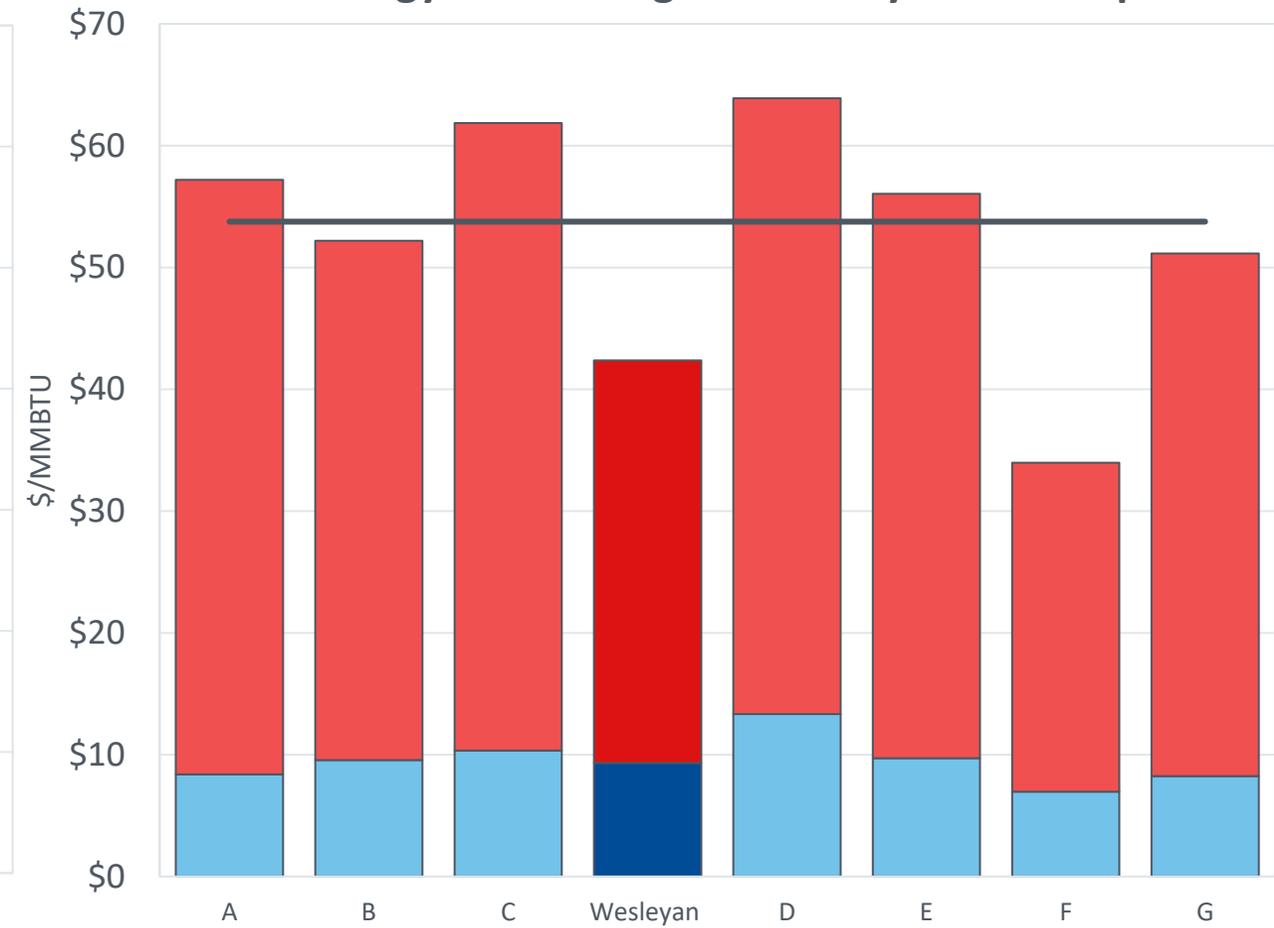


FY20 Regional Energy Peer Consumption and Unit Costs

Energy Consumption – Regional Utility Peer Group



Energy Costs – Regional Utility Peer Group



Electric Fossil Average

*Regional Energy Peer Group: Bentley College, Bryant University, Connecticut College, University of Connecticut, University of Hartford, University of New Haven, and Williams College

FY20 Regional Facilities Utilities Costs

Wesleyan achieves \$1.4M in Utility Cost Savings compared to peers

Facilities Utilities Costs

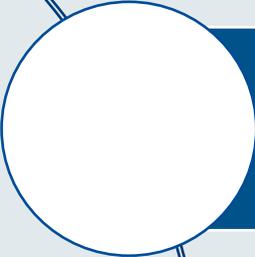


FY20 Regional Utility Peers

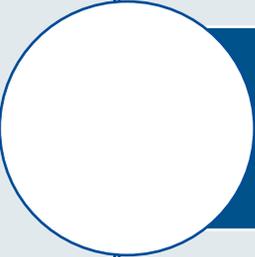
- Bryant University
- Connecticut College
- University of Connecticut
- University of Hartford
- University of New Haven
- Bentley College
- Williams College

Concluding Comments

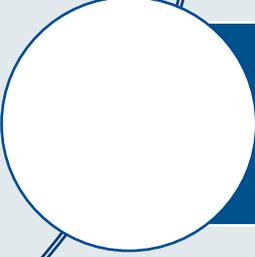
Key Takeaways



Campus age is increasing due to limited strategic age-resetting renovations



Major Maintenance funds are increasing. Sightlines Annual Investment Targets are being met.



Facilities Operations are running with less resources than peers.