

ERAPPA Webinar: National and Regional Trends and Challenges for Facilities

What They Mean for Your Campus

Date: May 15, 2013

Moderated by: Christine Matheson, Vice President of ERAPPA

Panelists: James Kadamus, Sightlines LLC

Jeffrey Lamb, Dalhousie University

Mark Frost, Siena College



Sightlines

Introducing the comparison campuses

Using the Sightlines database to determine national and regional trends



Sightlines



International Database:

Over 380 Campuses

ERAPPA - Public vs. Private:

Over 85 Private Campuses
Over 70 Public Campuses

Context through
benchmarking

Consistent analytical
methodology

Common facilities
vocabulary

Sightlines

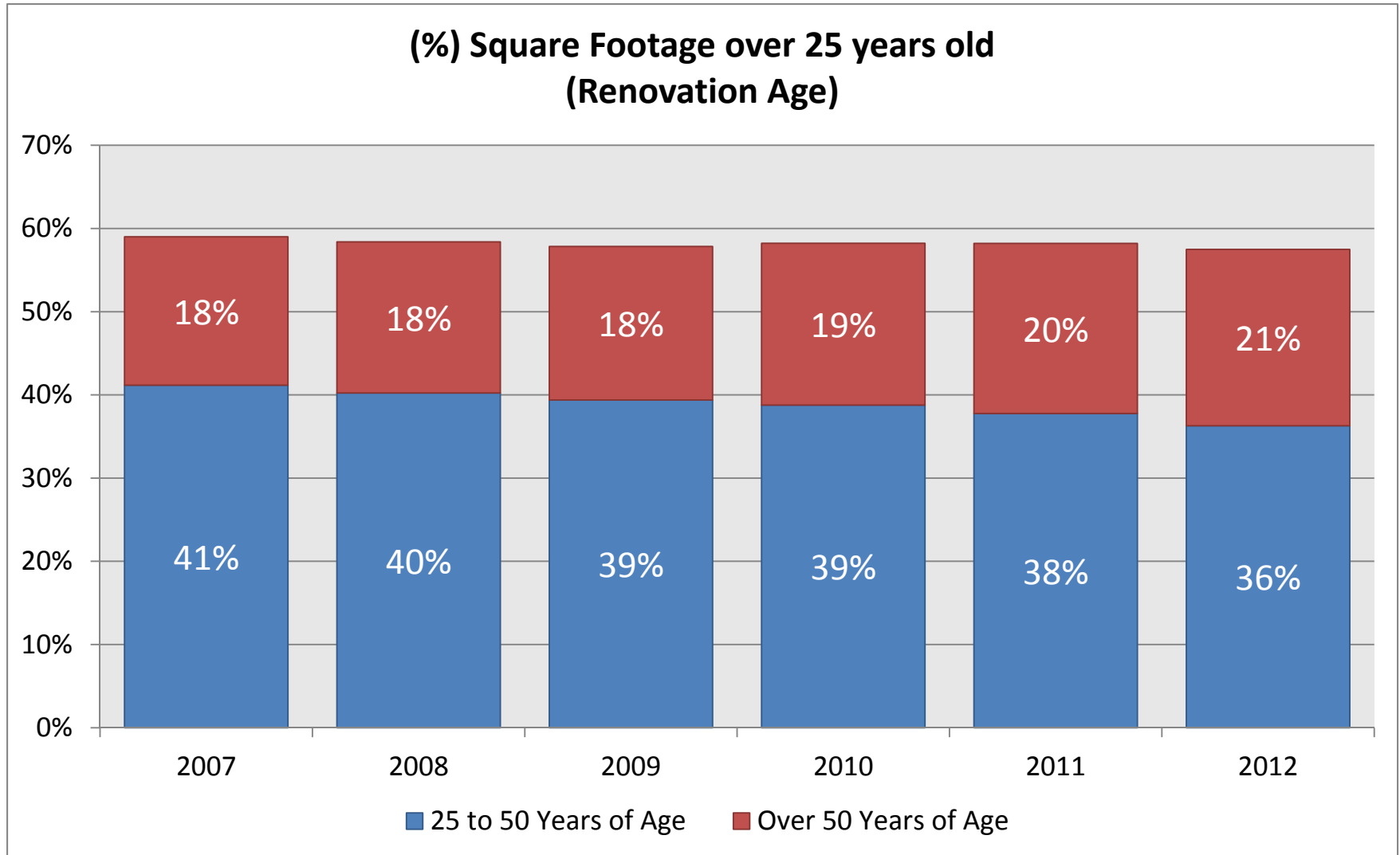


#1 More space in over 50 years of age

Older space profile increases risk for facilities



Sightlines



Sightlines

Overall Database

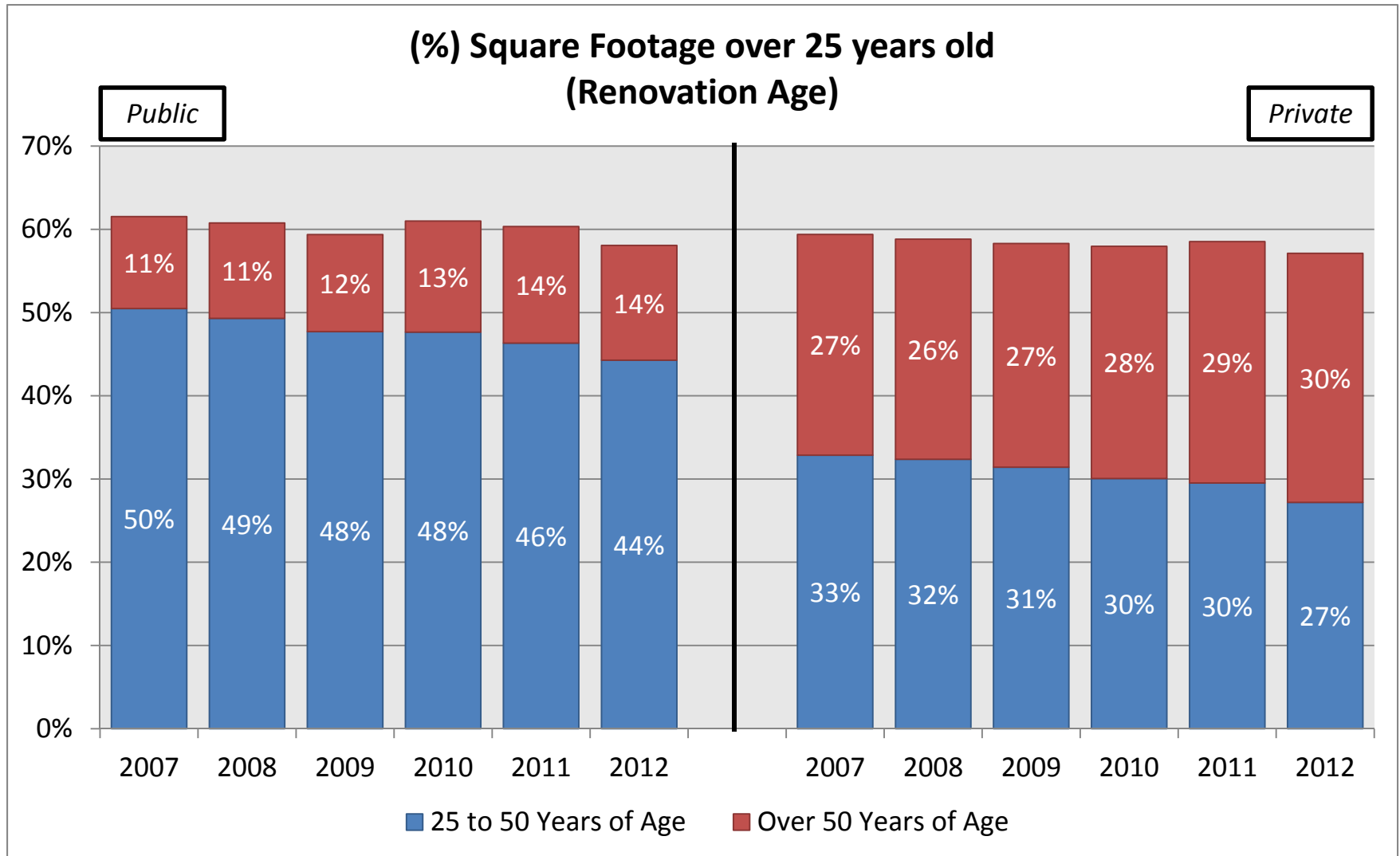


#1 Publics have more space in 25-50; Privates more in over 50

Both groups have increasing percentage of over 50 year old space



Sightlines



Sightlines

(CT, D.C., MA, MD, ME, NH, NY, NJ, PA, RI, VT, Canada)

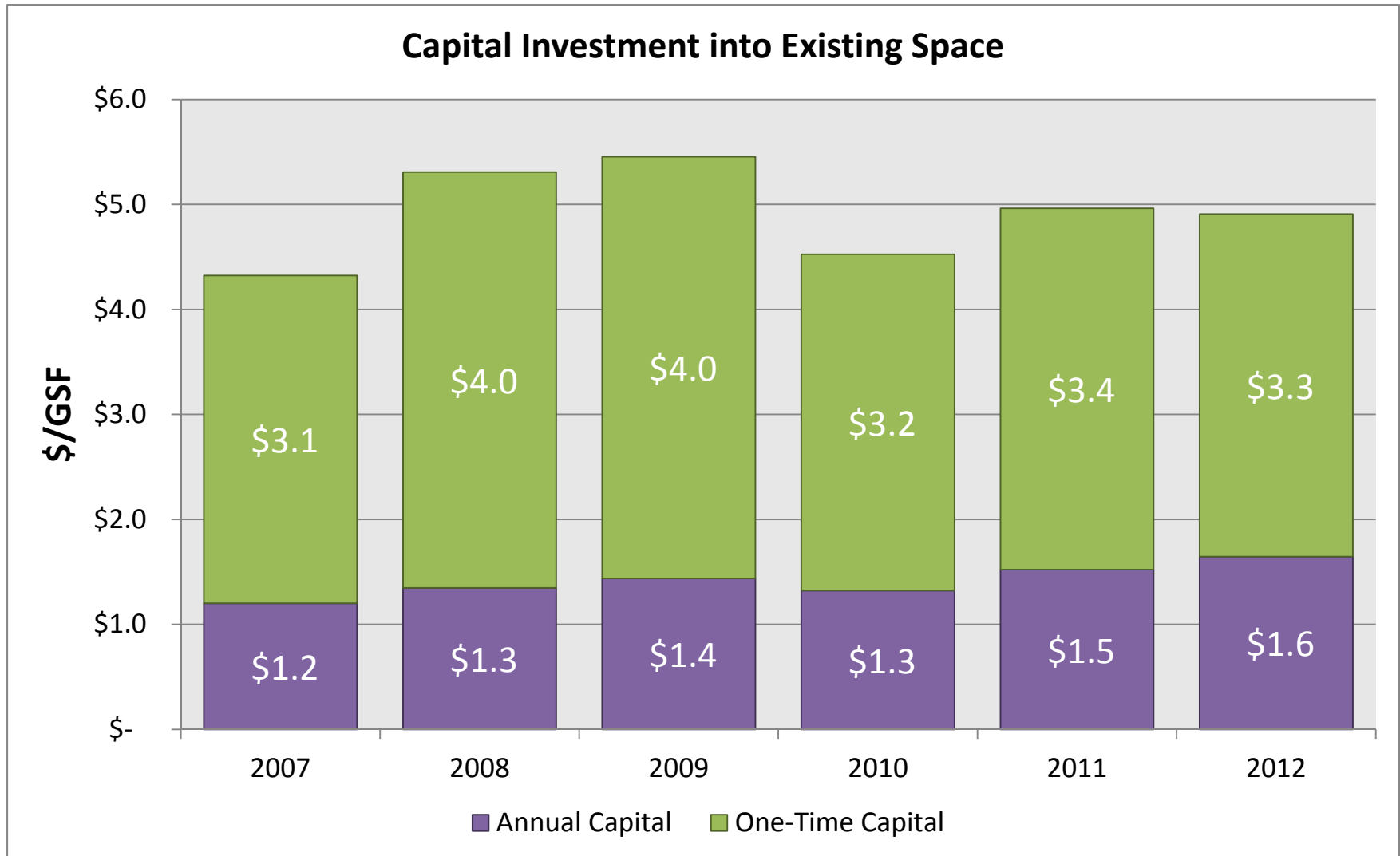


#2 Cyclical capital investments – FY 2012 less than 2008

Annual capital funding is increasing and is the highest in FY 2012



Sightlines



Sightlines

Overall Database

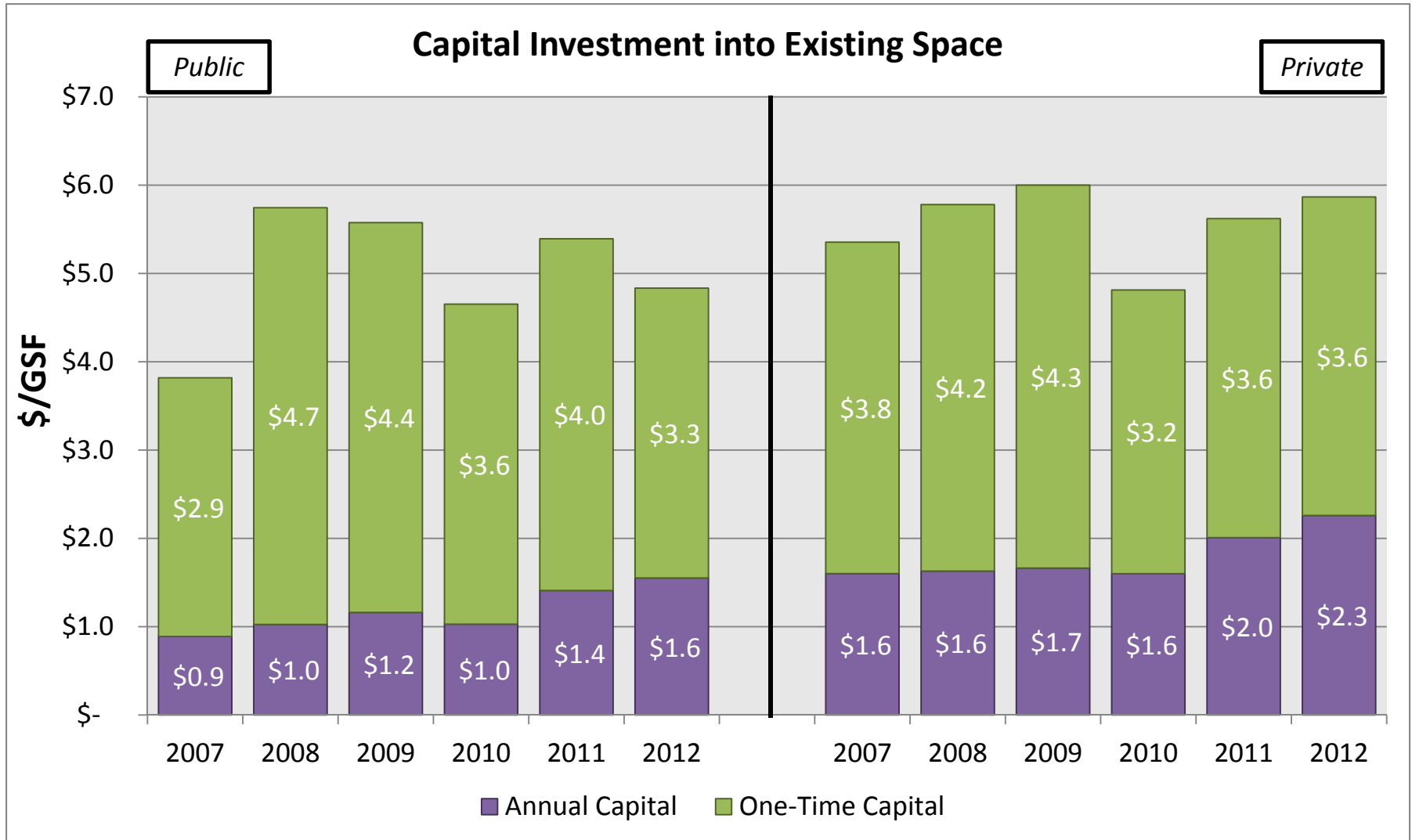


#2 Private campuses recovered from recession faster than publics

Both private and public campuses commit more annual funding



Sightlines



Sightlines

(CT, D.C., MA, MD, ME, NH, NY, NJ, PA, RI, VT, Canada)



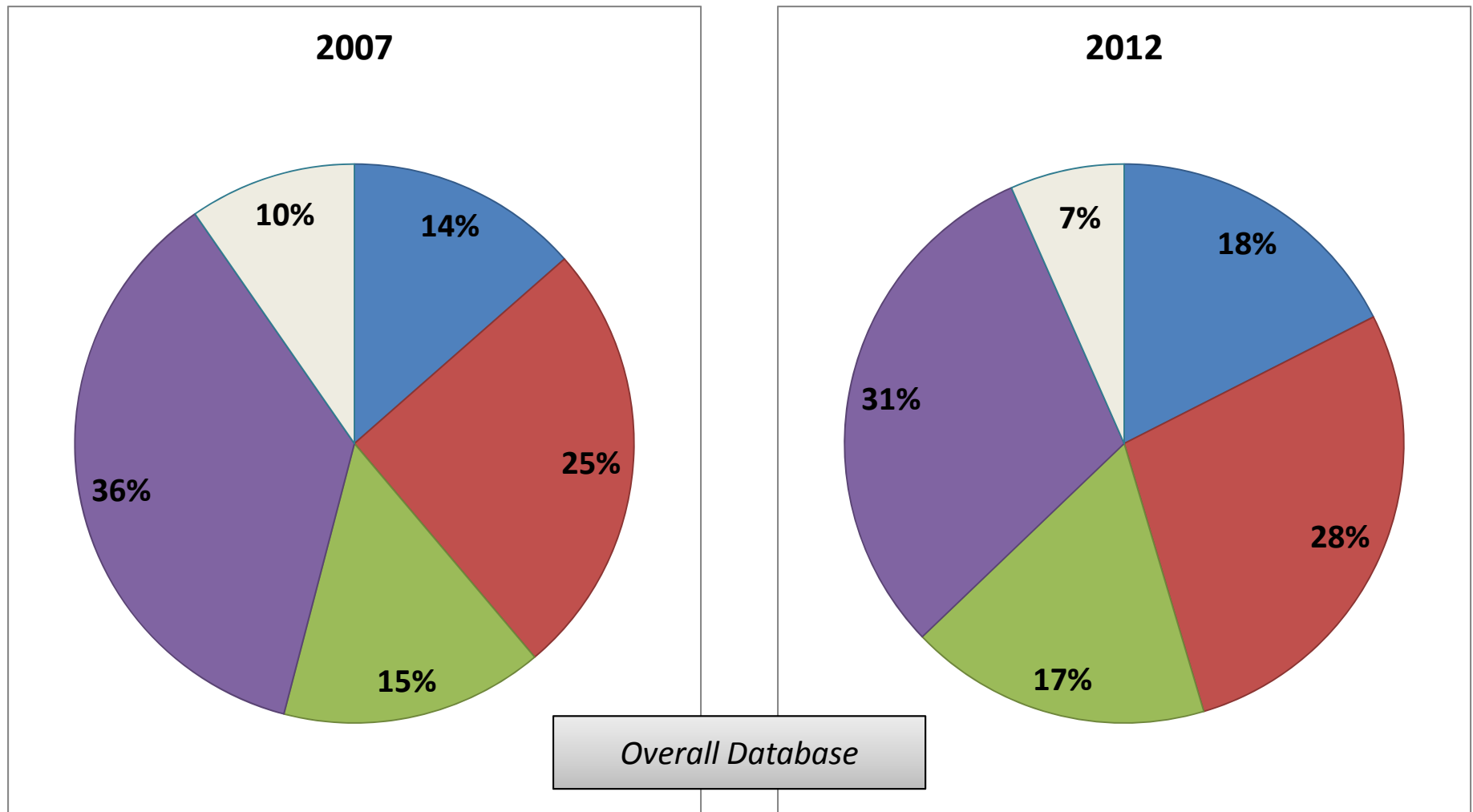
#3 Expenditure mix less focused on space in 2012

More investment into core building components in 2012



Sightlines

Total Project Spending



Sightlines

- Building Envelope
- Building Systems
- Infrastructure
- Space Renewal
- Safety/Code



#3 Public institutions have major increase in mechanical systems

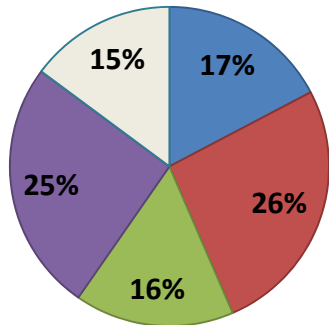
Private institutions have had a significant increase in building envelope



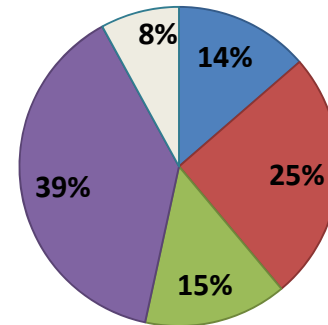
Sightlines

Total Project Spending

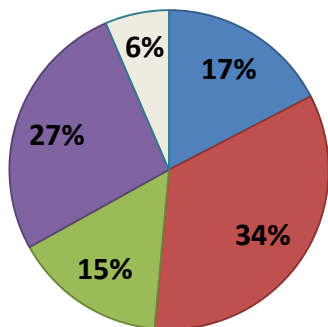
2007 Public



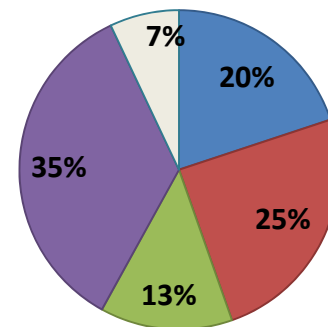
2007 Private



2012 Public



2012 Private



(CT, D.C., MA, MD, ME, NH, NY, NJ, PA, RI, VT, Canada)

Sightlines

- Building Envelope
- Building Systems
- Infrastructure
- Space Renewal
- Safety/Code

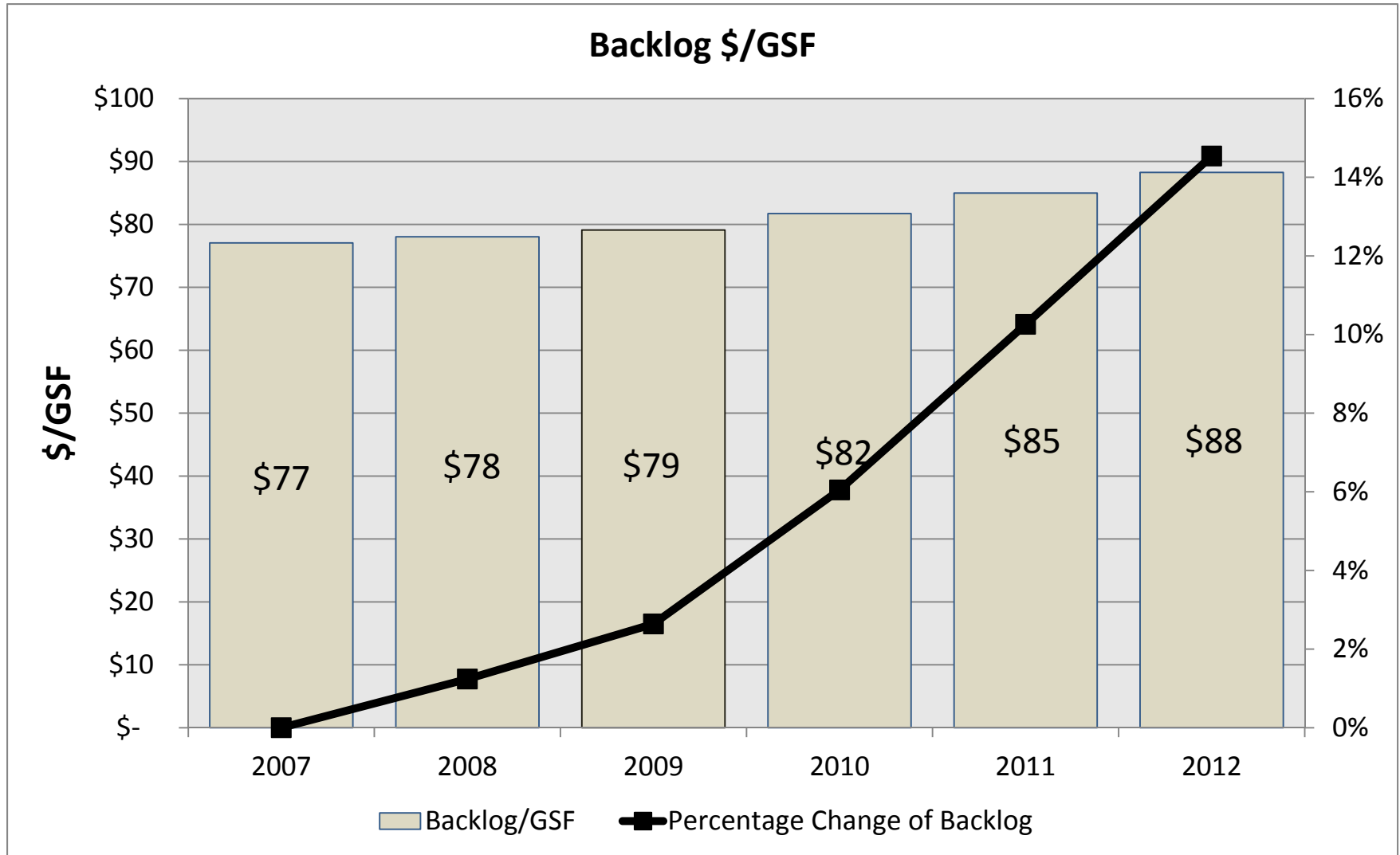


#4 Steady increase in backlog

Backlog is up almost 15% since 2007; accelerating from 2009-2012



Sightlines



Sightlines

Overall Database

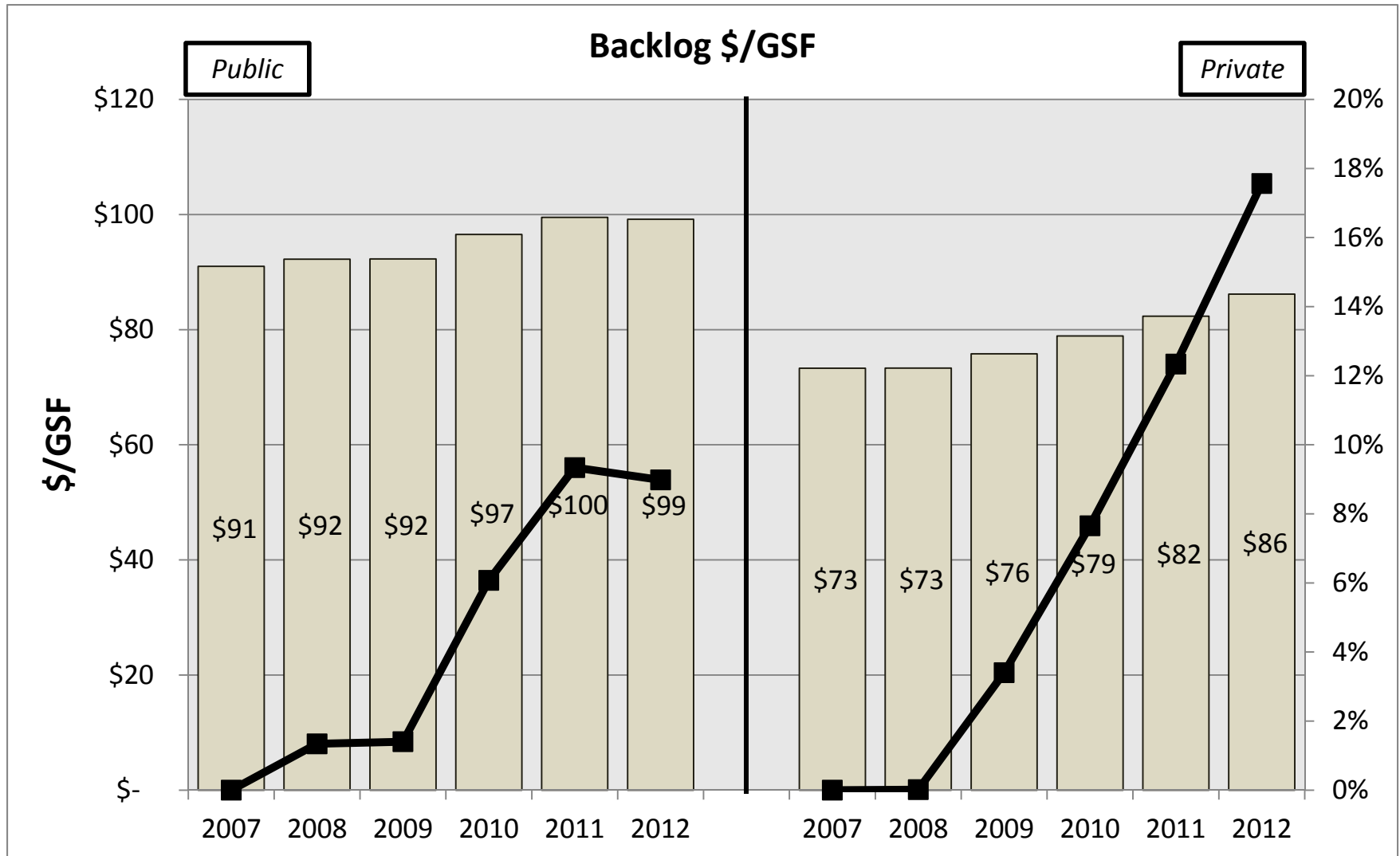


#4 Public institutions have high backlog, but stable

Private institutions backlog is less, but growing at a faster rate



Sightlines



Sightlines

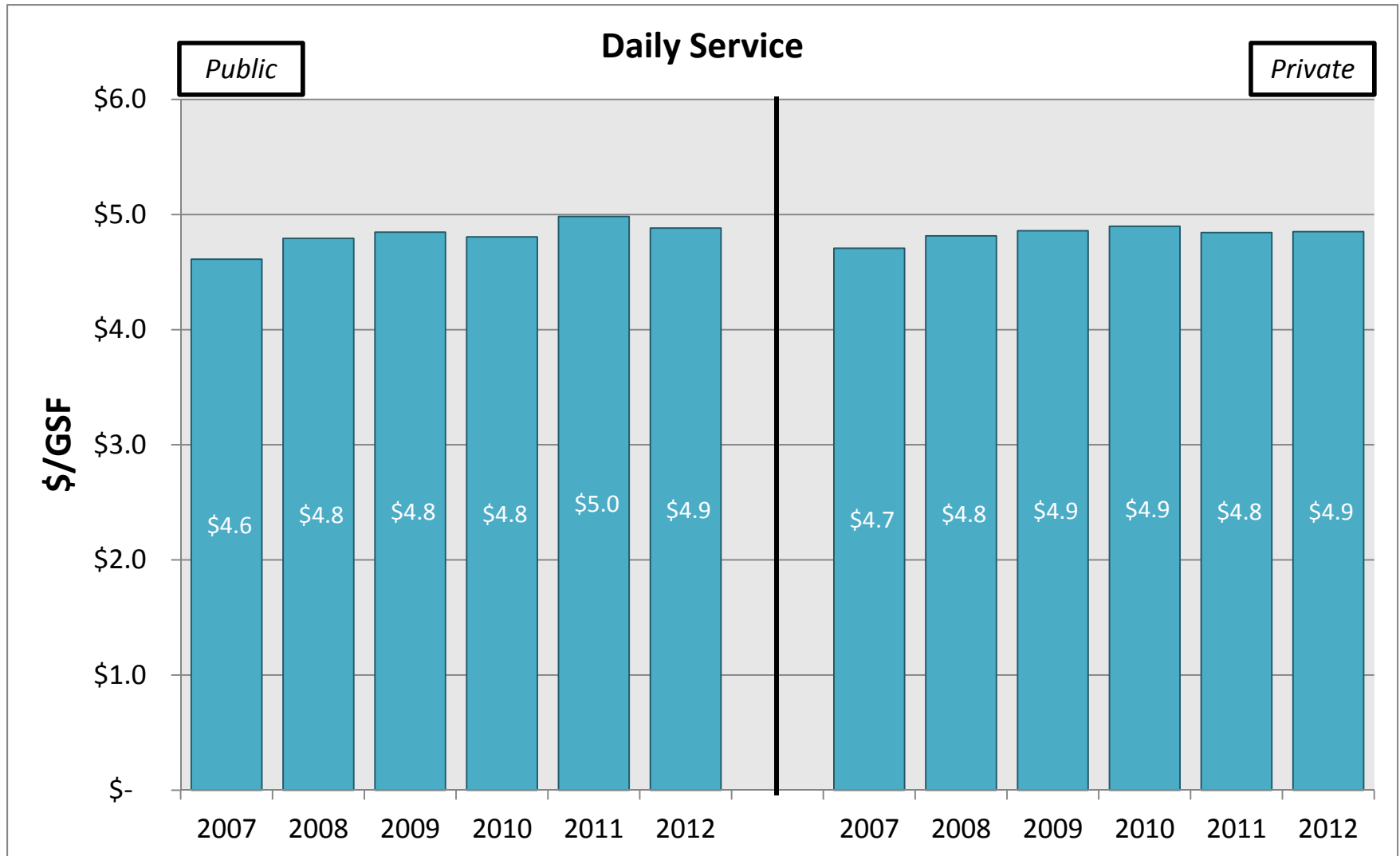
(CT, D.C., MA, MD, ME, NH, NY, NJ, PA, RI, VT, Canada)



#5 Northeast institutions have flat daily service spending



Sightlines



Sightlines

(CT, D.C., MA, MD, ME, NH,
NY, NJ, PA, RI, VT, Canada)

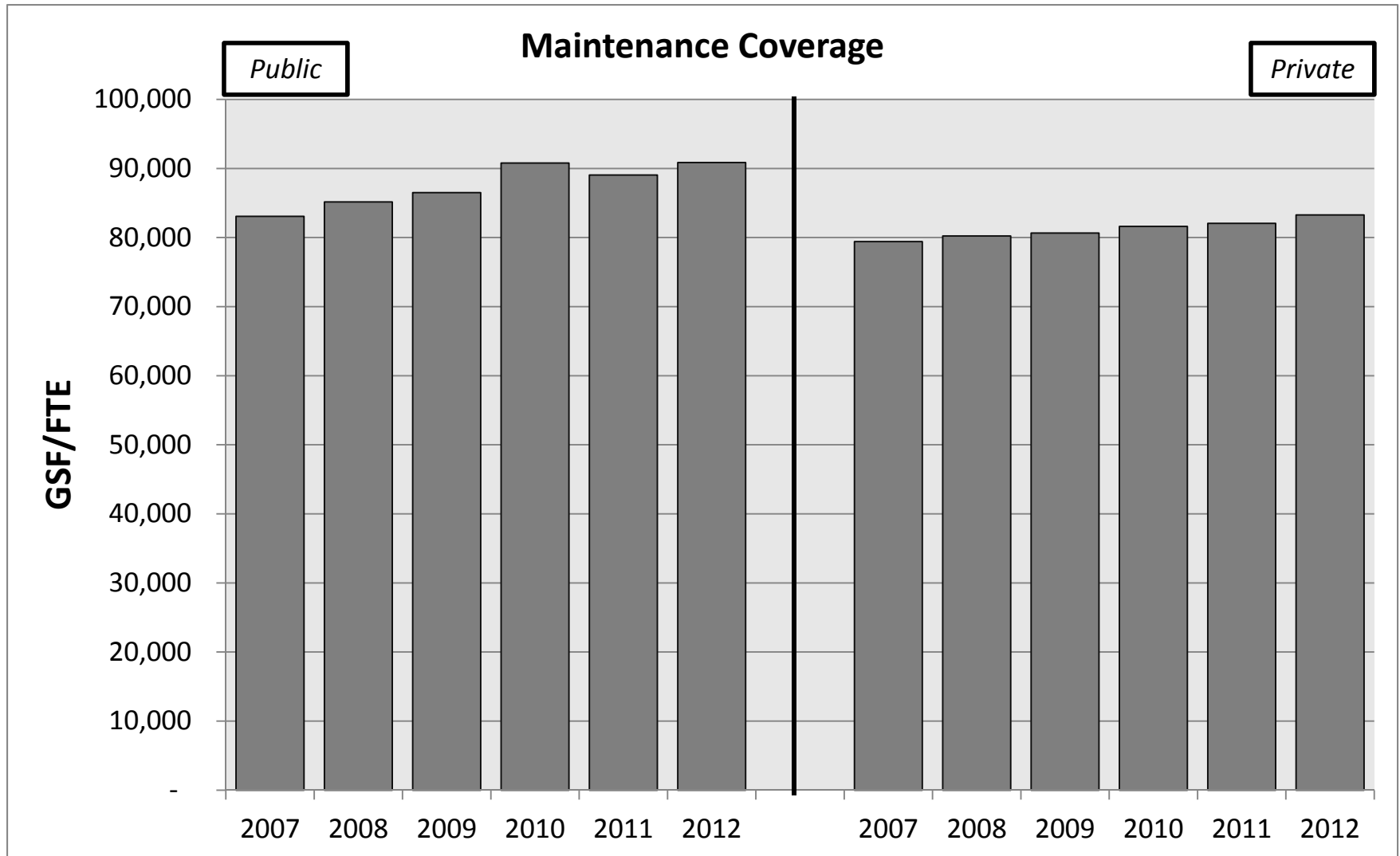


#6 Maintenance workers covering more space

Publics cover more space (have less staff) than Privates



Sightlines



Sightlines

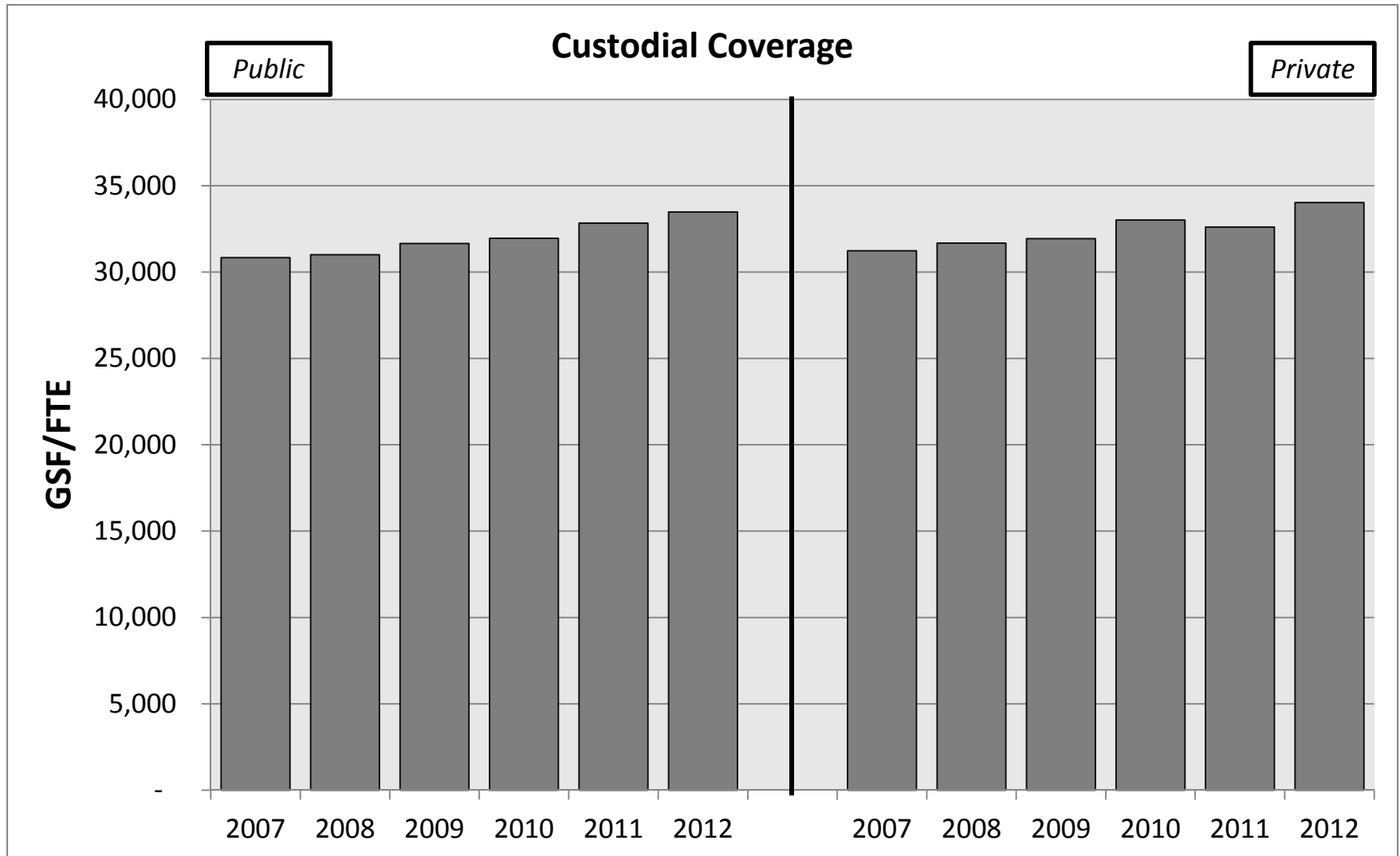
(CT, D.C., MA, MD, ME, NH,
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#7 Both public and privates increasing custodial coverage



Sightlines



Sightlines

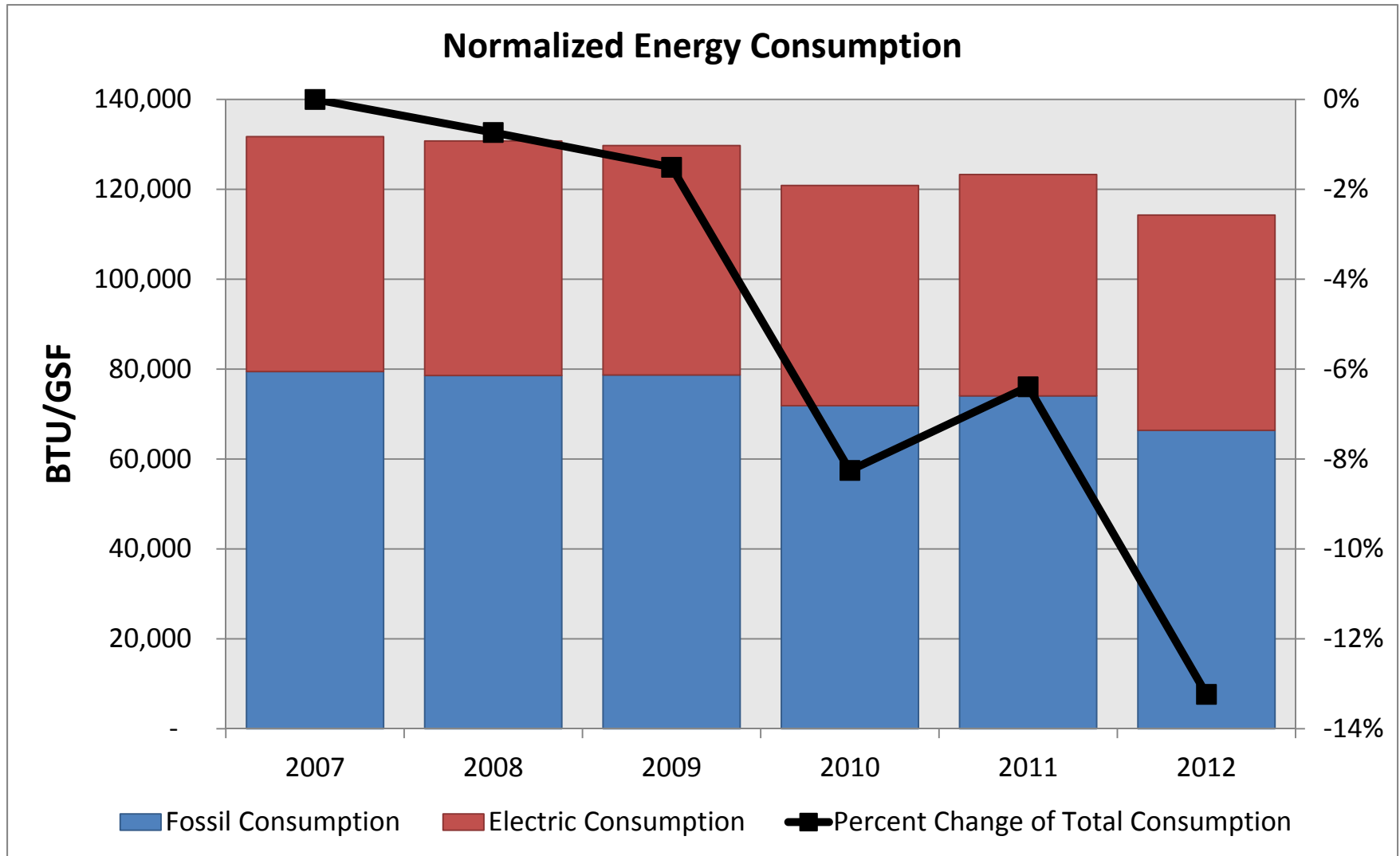
(CT, D.C., MA, MD, ME, NH,
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#8 Increasing energy efficiency, especially in fossil usage



Sightlines



Sightlines

Overall Database

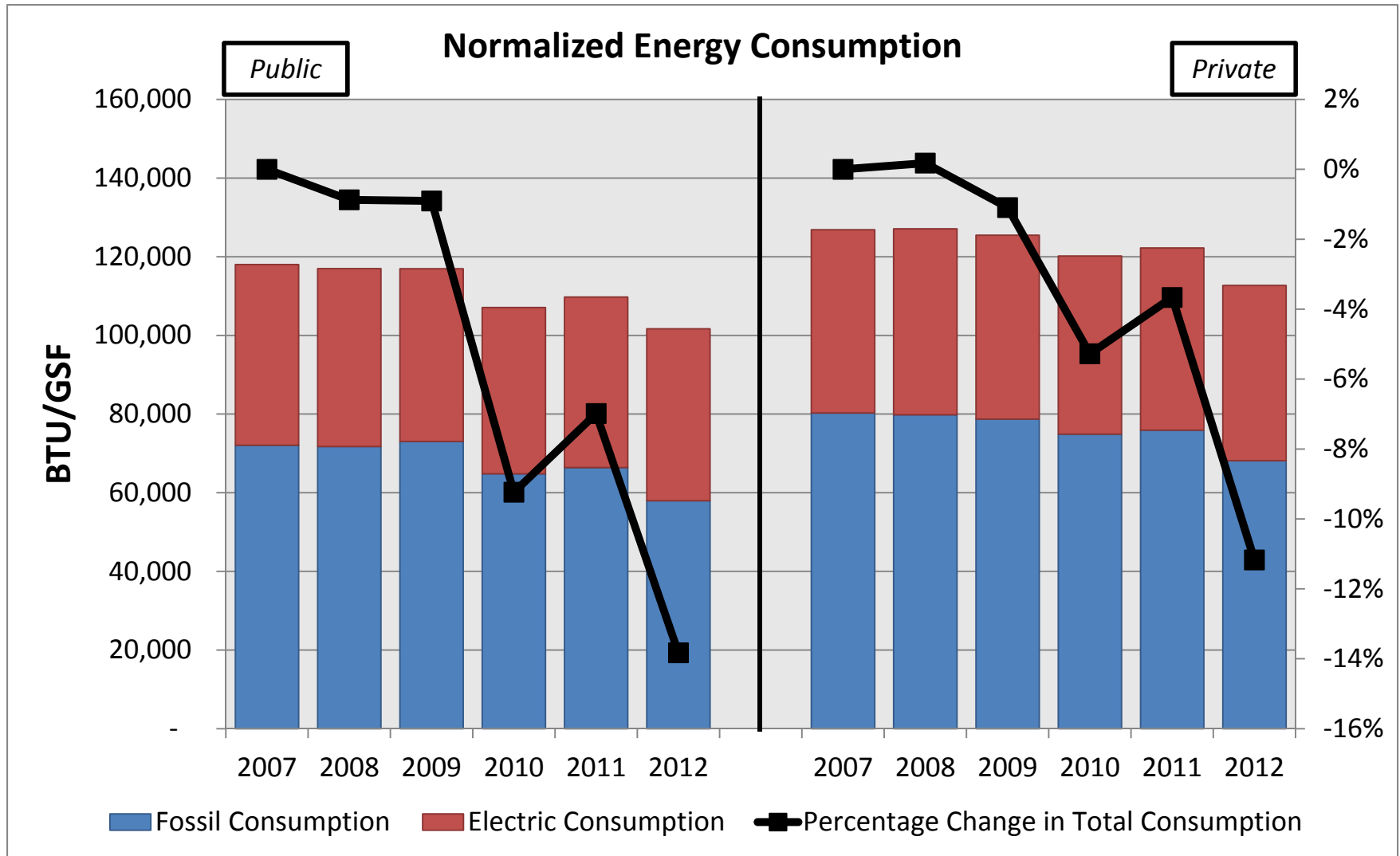


#8 Greater gains in efficiency seen in public institutions

Both public and private campuses are reducing consumption



Sightlines



Sightlines

(CT, D.C., MA, MD, ME, NH, NY, NJ, PA, RI, VT, Canada)





Age Profile of Campus

- Age profiles of ERAPPA campuses indicate that both public and private institutions face growing deferred maintenance needs and overdue life cycles

Capital and Operating Expenditures

- Declines in capital funding since 2009 puts campuses further at risk of having building systems that will fail in the near future
- Flat operating budgets mean coverage rates for maintenance and custodial are increasing

Backlog Growth

- Backlogs are growing and already reaching high risk levels at public institutions
- Private institutions have lower backlogs ; but backlogs are growing faster as buildings age

Positive Steps

- Positive steps include: More focus on durable investments, building systems; Annual stewardship investment increasing despite economic downturn; Reductions in energy consumption and costs.

Dalhousie University

Jeffrey Lamb, AVP Facilities Management



Dalhousie University - Campus Profile

Halifax, Nova Scotia, Canada



Sightlines

Dalhousie University is a large, public research university using a strong operational profile to manage an aging campus and pointed capital strategies to address deferred maintenance.

Fast Facts:

- Founded: 1818
- 98 buildings
- 4.7 Million Gross Square Feet
- 18,220 students
- Consistently ranked one of Canada's top universities
- Leader in marine research



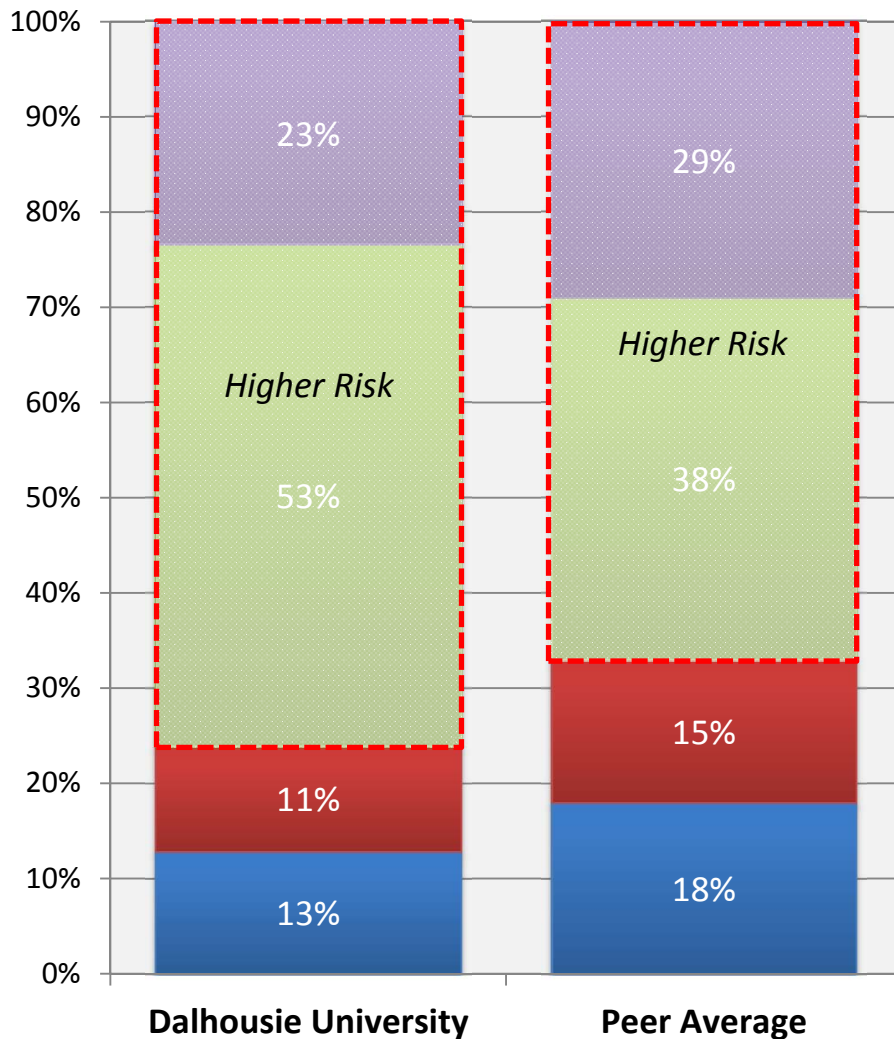
Campus age older than peers

Dalhousie has more high risk space than peers



Sightlines

% of Space by Age Category



■ Under 10 ■ 10 to 25 ■ 25 to 50 ■ Over 50

Buildings over 50
 Life cycles of major building components are past due. Failures are possible. Core modernization cycles are missed.
Highest Risk

Buildings 25 to 50
 Life cycles are coming due in envelope and mechanical systems. Functional obsolescence prevalent.
Higher Risk

Buildings 10 to 25
 Lower cost space renewal updates and initial signs of program pressures.
Medium Risk

Buildings Under 10
 Little work. "Honeymoon" period.
Low Risk

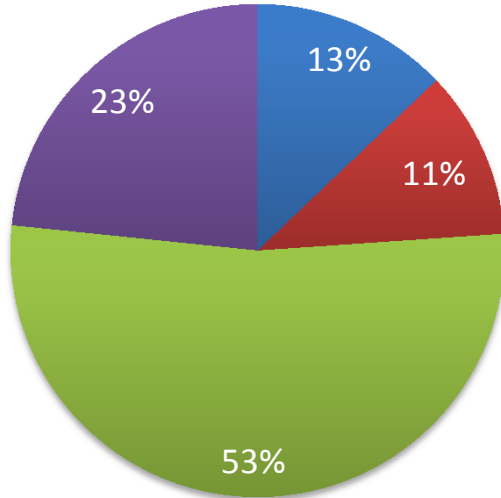
Campus age profile impacts the cost of Operations

Work orders in buildings 25-50 years carry a premium cost

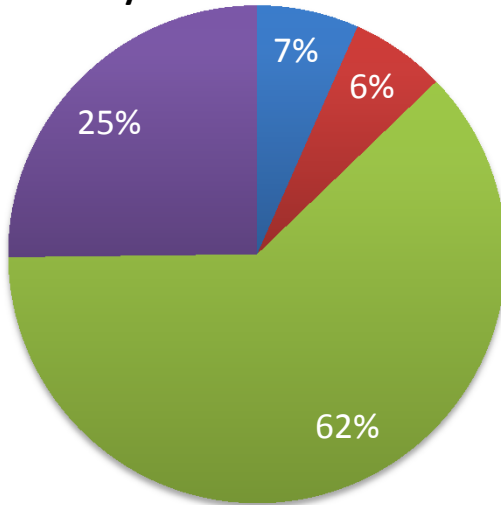


Sightlines

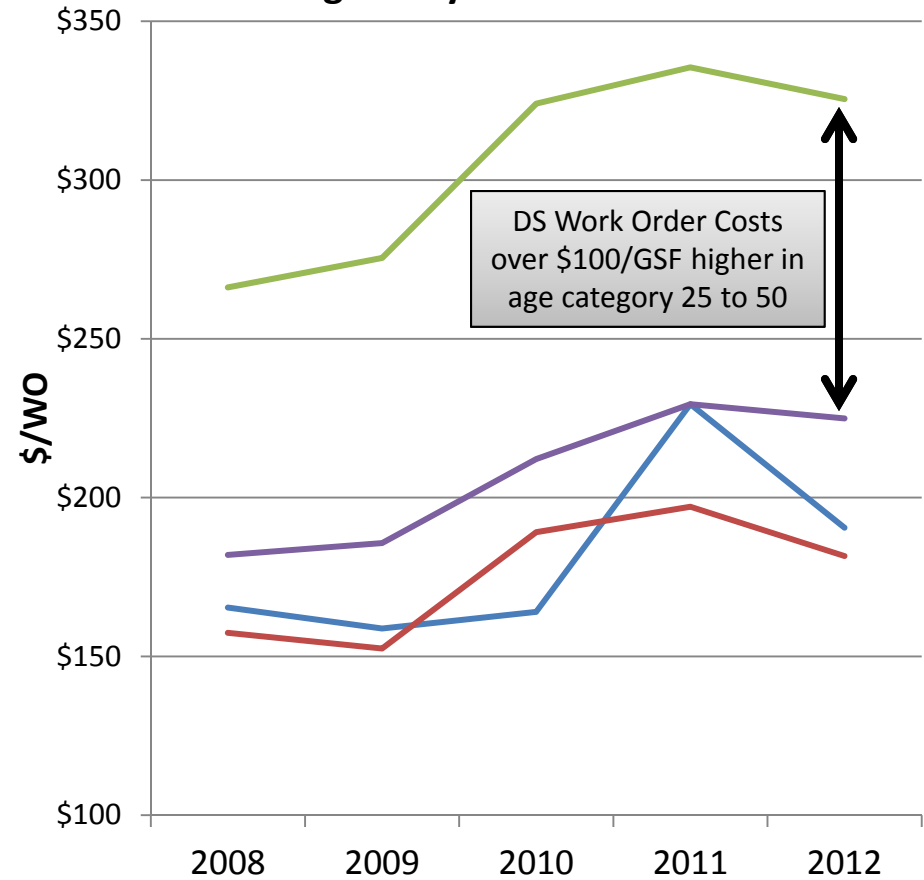
Dalhousie Renovated Age Profile



Total Daily Service Work Order Costs



Average Daily Service Work Order Cost

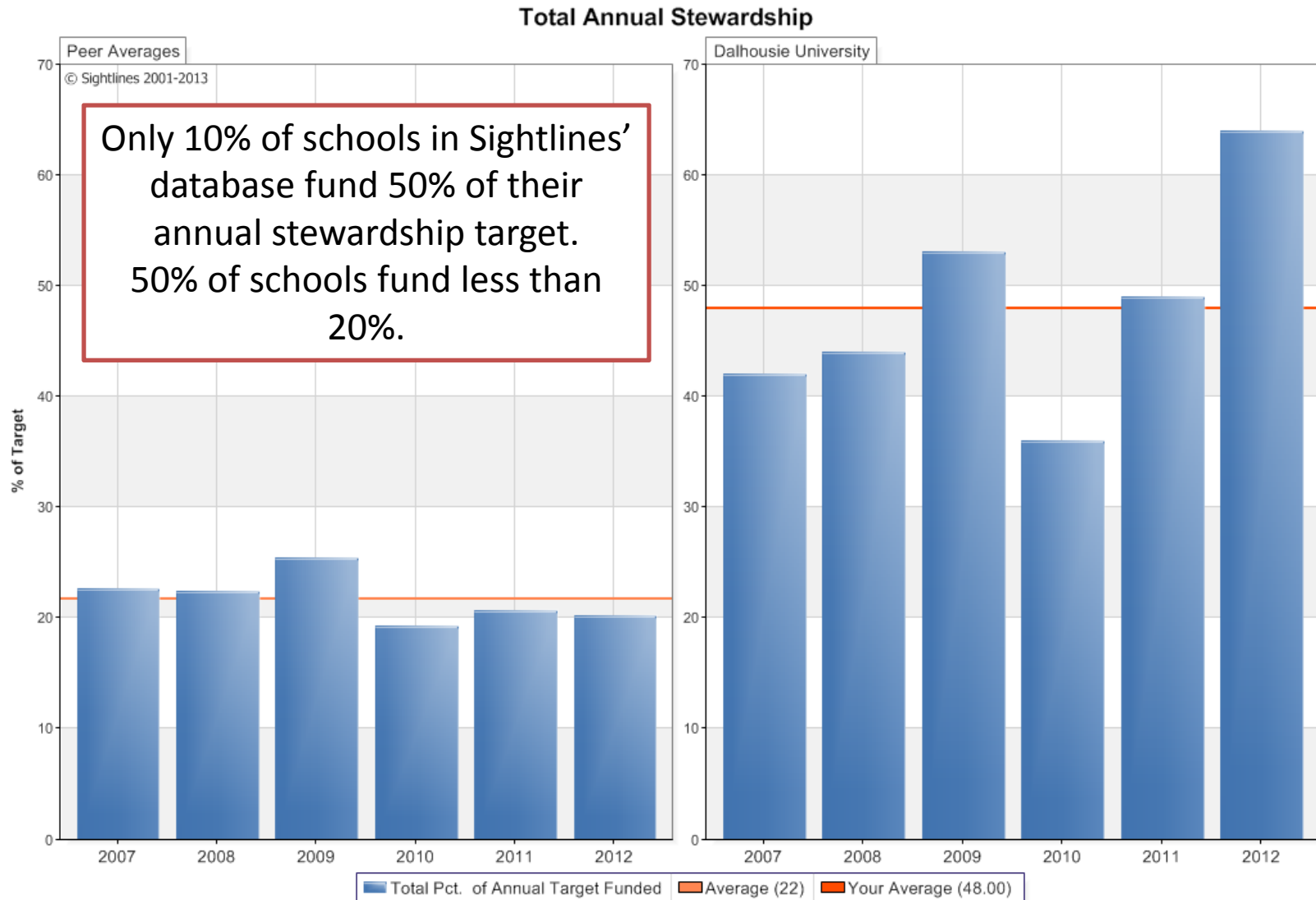


Annual stewardship compared to peers

Dalhousie consistently outperforms peers in Annual Stewardship investment



Sightlines



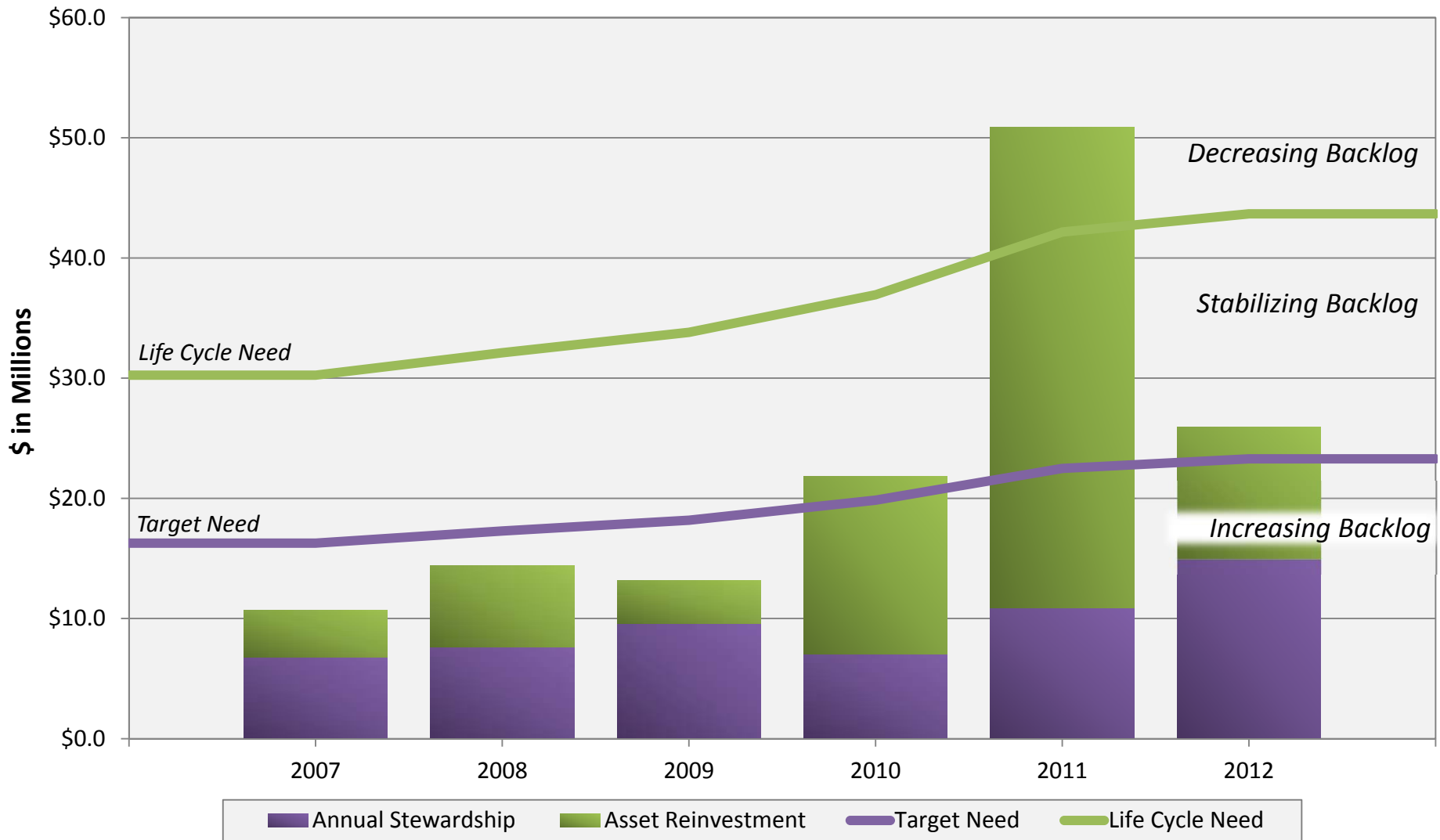
Total capital investment vs. annual funding targets

Dalhousie has been spending at least into the target range since 2010



Sightlines

Total Capital Investment



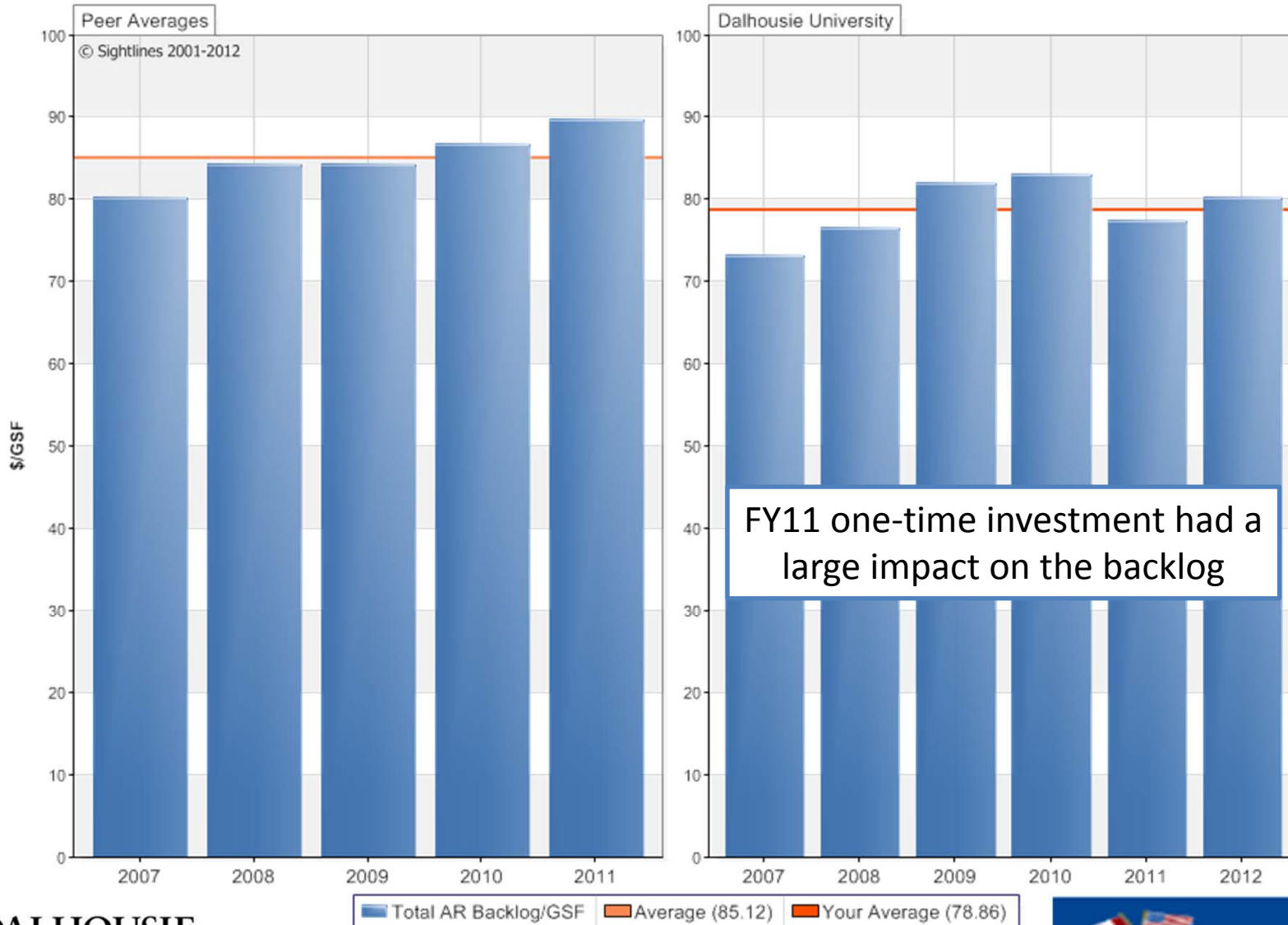
Dalhousie's Backlog

Strategic capital investment has stabilized campus backlog



Sightlines

Total Asset Reinvestment Backlog \$/GSF

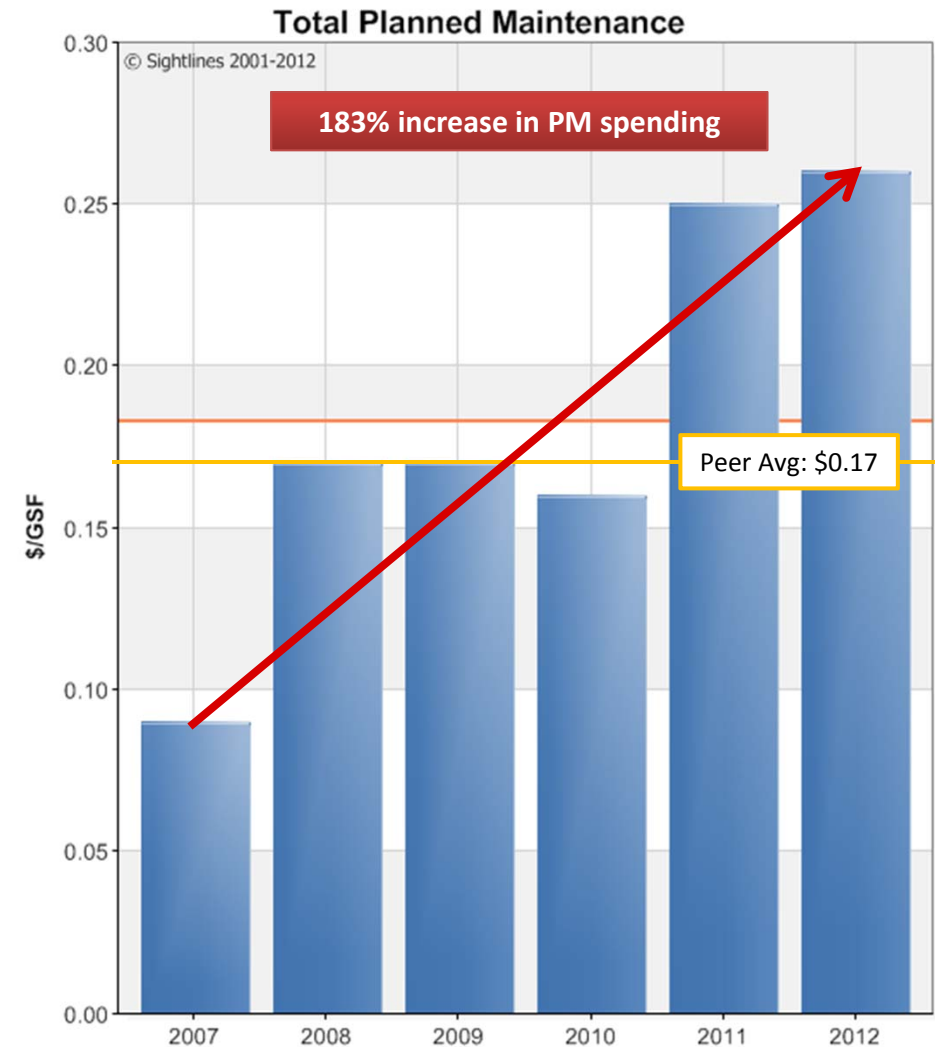
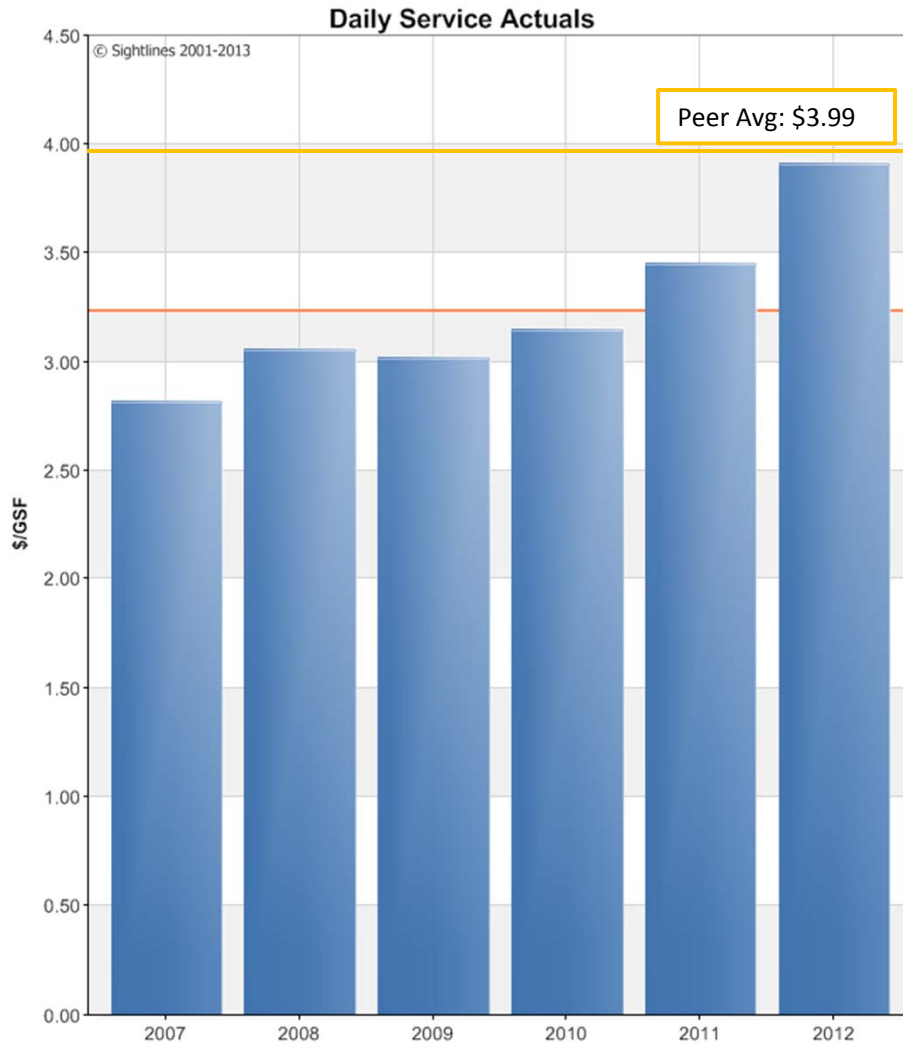


Longitudinal daily service and planned maintenance

Proactive planned maintenance have increased more than reactive daily service



Sightlines



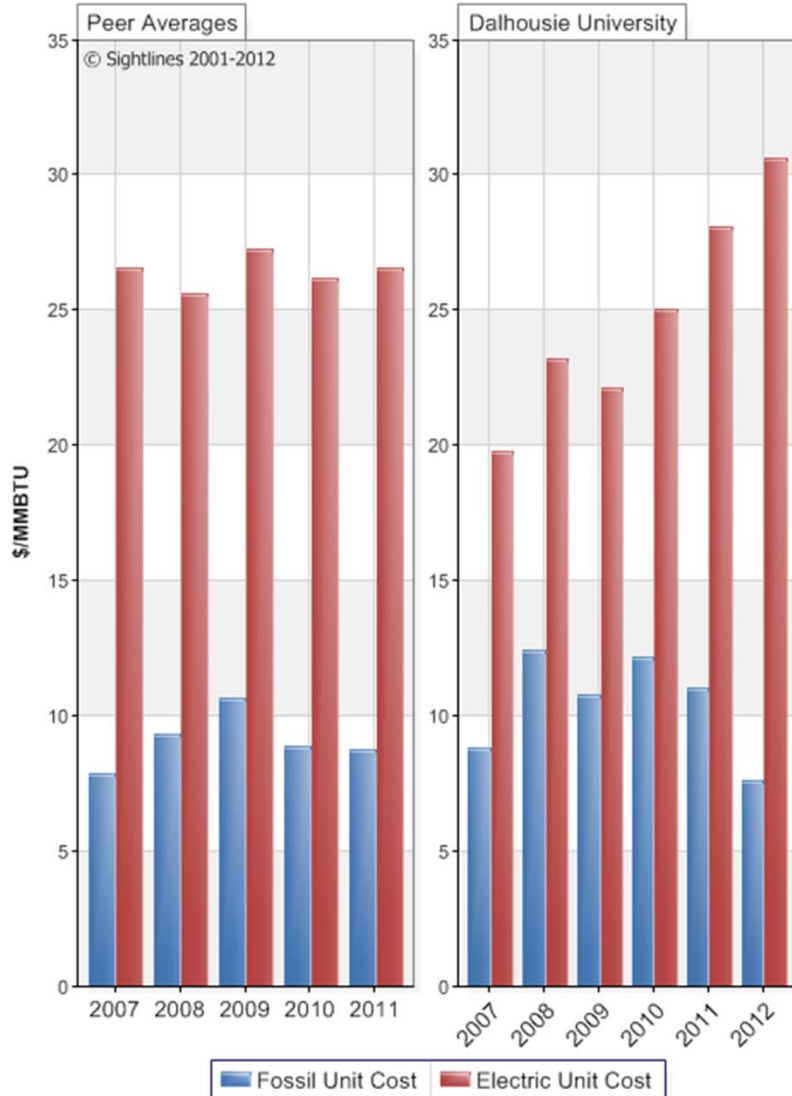
Cost saving opportunity realized by switching to Nat Gas

Over \$1M was saved in FY12 due to switching from fuel oil to Natural Gas

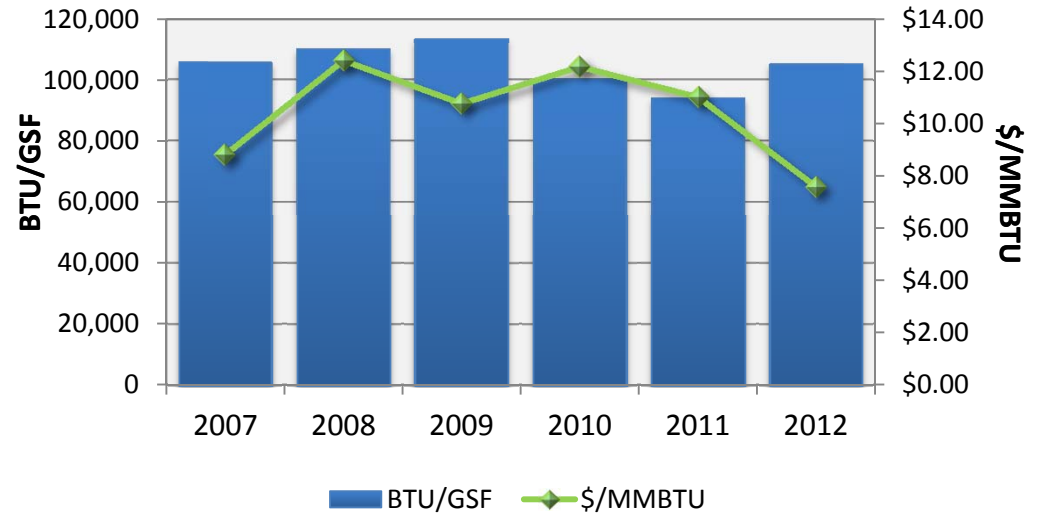


Sightlines

Energy Unit Cost By Fuel



Fossil Fuel Consumption and Cost



Despite increased consumption, switching to Natural Gas saved Dalhousie \$1.2M in FY12

If consumption was brought back down to FY11 levels, an additional \$400K could be saved yearly...

\$ This amounts to a total of \$1.6M in annual savings from switching to natural gas

Opportunity to release operational FTEs

Buildings between 25-50 yrs. old take longer to service



Sightlines

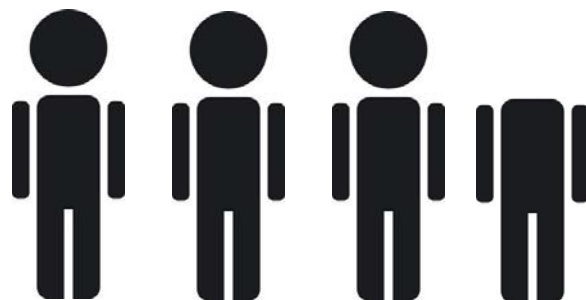
<u>Age Category</u>	<u>Average hours/ DS Work Order</u>
Less than 10	2.75
10-25	2.5
25-50	5.0
Over 50	3.3

<u>Age Category</u>	<u>Total Daily Service Work Orders</u>
Less than 10	1,538
10-25	1,569
25-50	7,878
Over 50	4,748

Reduce average work order time in 25-50 yr. old buildings by 1 hour.

7,878 work orders/1 hour = 7,878 hours released!

7,878 hours/2080 hours (1 FTE) = **3.8 Maintenance FTEs**



Operational strategies at Dalhousie University



Sightlines

76% of Dalhousie's campus is over 25 years old. Space that exceeds 25 years often requires significant capital reinvestment and carries an elevated operational demand due to major building components due for replacement.

Dalhousie's Annual Stewardship program is stronger than peers, funding 48% of target on average and focusing on core asset reliability and asset protection projects. Increases in Annual Stewardship and influxes of one-time capital have stabilized campus backlog since FY2009.

Utilities cost savings from shifting primary fossil fuels and increases in preventive maintenance have improved overall operational effectiveness.

Utilizing data in the work order system to aid in capital project selection and to discover areas that could release operational resources represents an opportunity to further improve operational effectiveness.

Siena College

Mark Frost, AVP Facilities Management



Siena is a private institution located in upstate NY

Campus profile



Sightlines



Catholic Franciscan Institution in Loudonville, NY founded in 1937

Institutional Information:

Total Gross Square Feet:
1.25 Million GSF

Total Maintained Acres:
175 Acres

Number of Buildings:
64 Buildings

Student Faculty Ratio:
12:1

Total Undergraduate Enrollment:
3,214

Percent Out of State:
19%



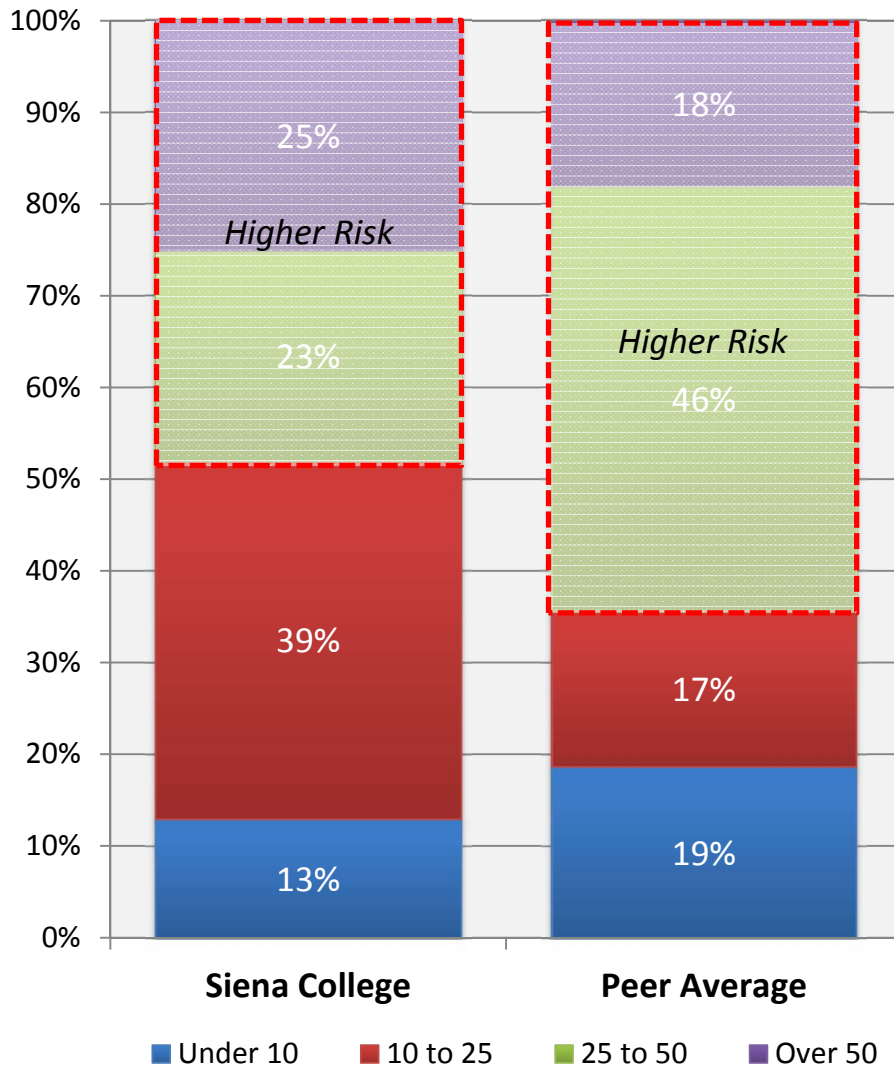
Siena has 25% of space over 50 years old

Generally favorable age profile relative to peers; Over 50 year old space is challenge



Sightlines

% of Space by Age Category



Buildings over 50
 Life cycles of major building components are past due. Failures are possible. Core modernization cycles are missed.
Highest Risk

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 Lower cost space renewal updates and initial signs of program pressures.
Medium Risk

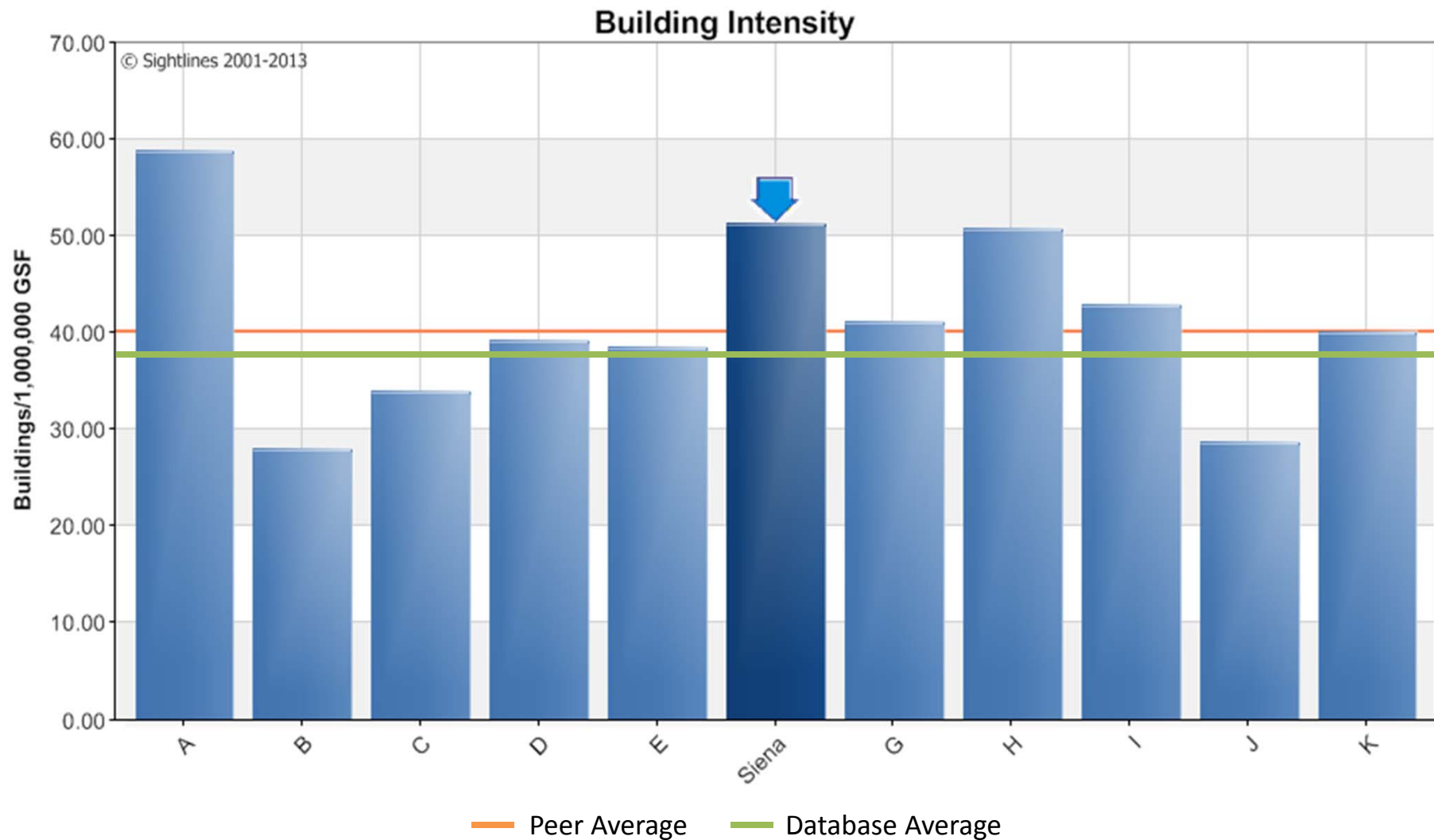
Buildings Under 10
 Little work. "Honeymoon" period.
Low Risk

Building intensity measures the size of facilities

Smaller buildings on campus than peers challenges facilities operations



Sightlines



*Institutions ordered on the basis of density factor



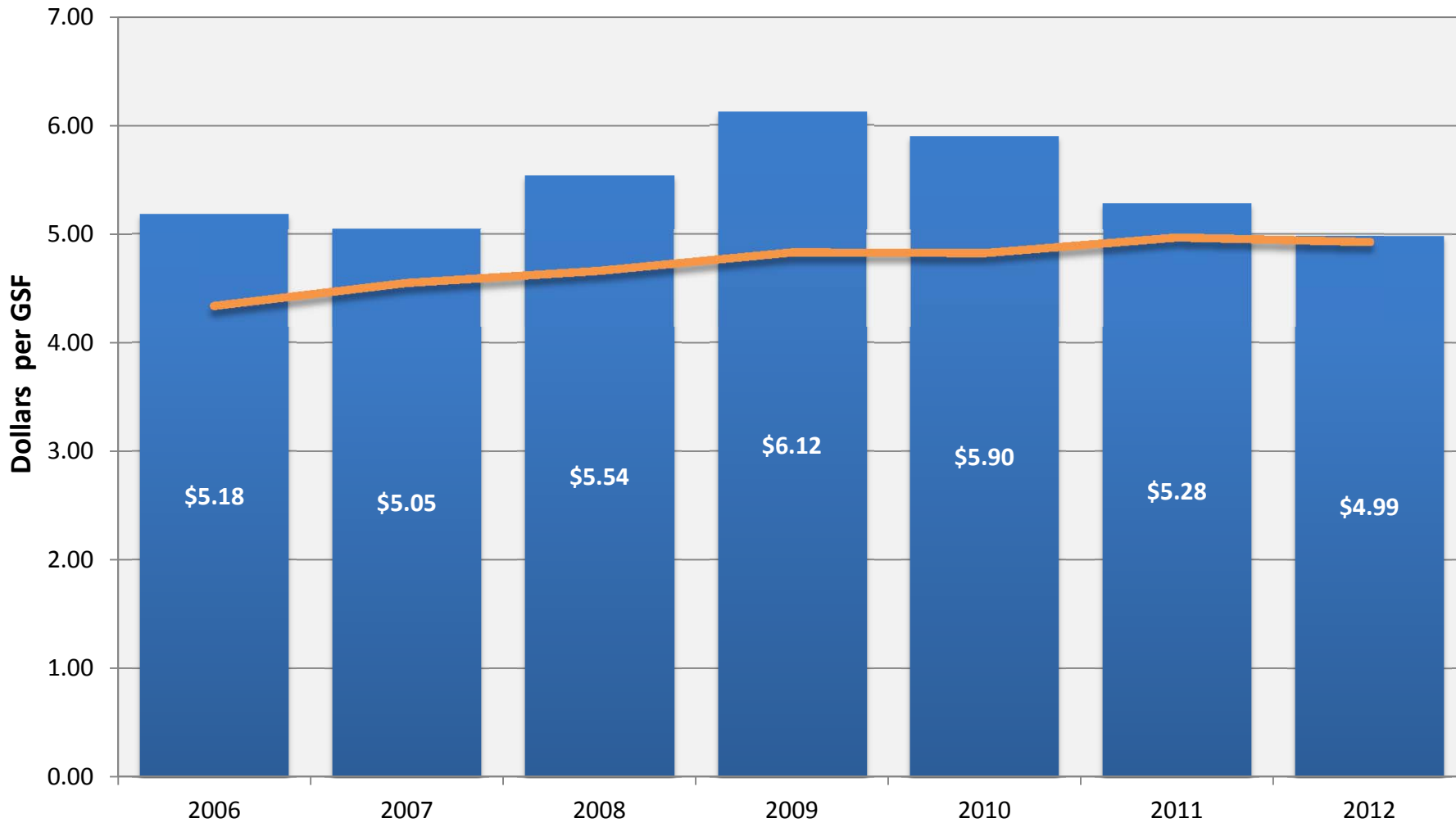
Siena restricts daily service allocations over time

In FY2012 budgets are aligned with peer averages but less resources are available



Sightlines

Daily Service vs. Peer Averages



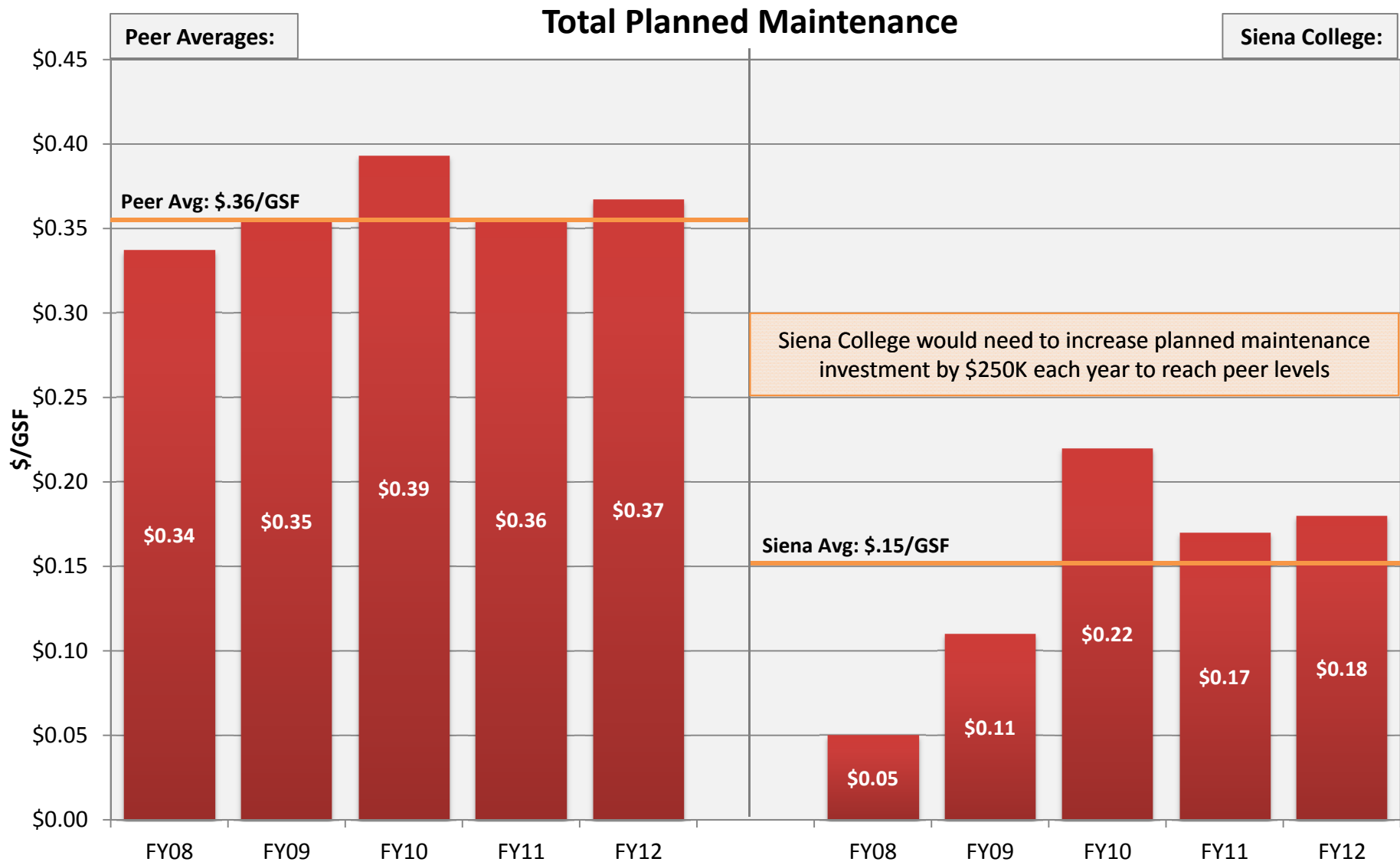
■ Siena Daily Service — Peer Average Daily Service

Siena's planned maintenance is 3% of operating budget

Below peers but growing over time



Sightlines



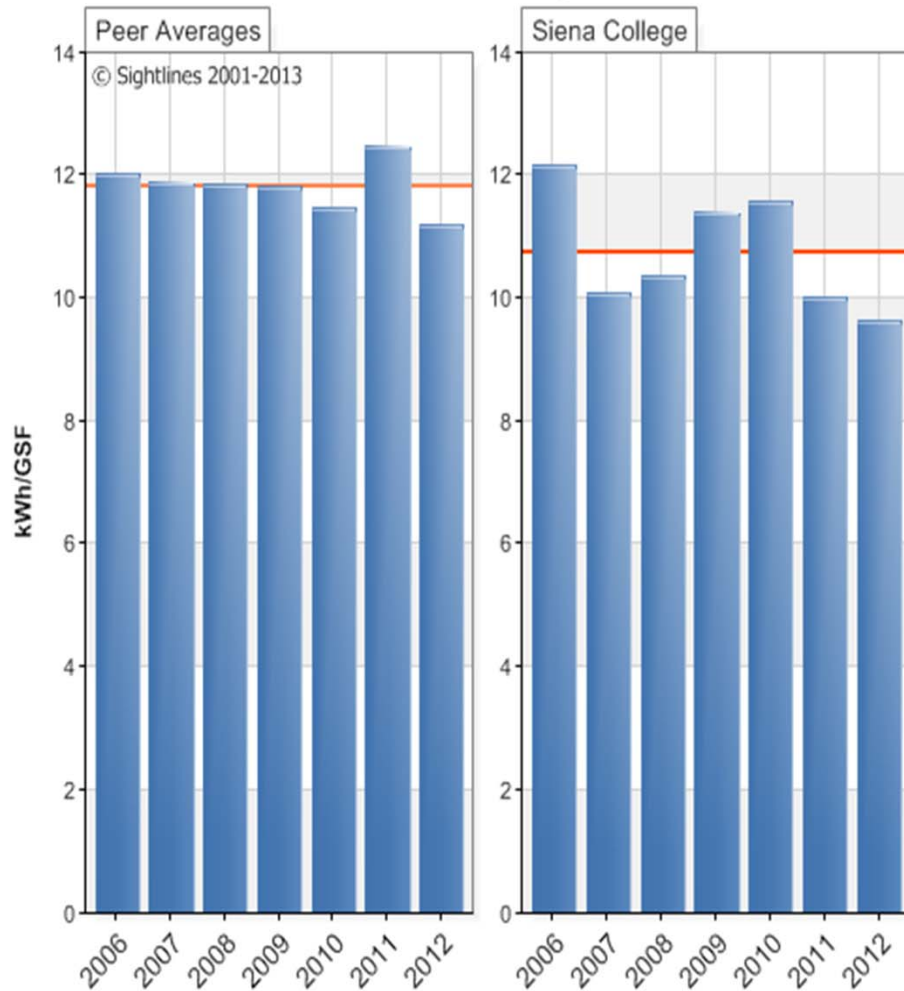
Strong energy management at Siena College

Energy reduction enables Siena to reallocate savings into facilities operations

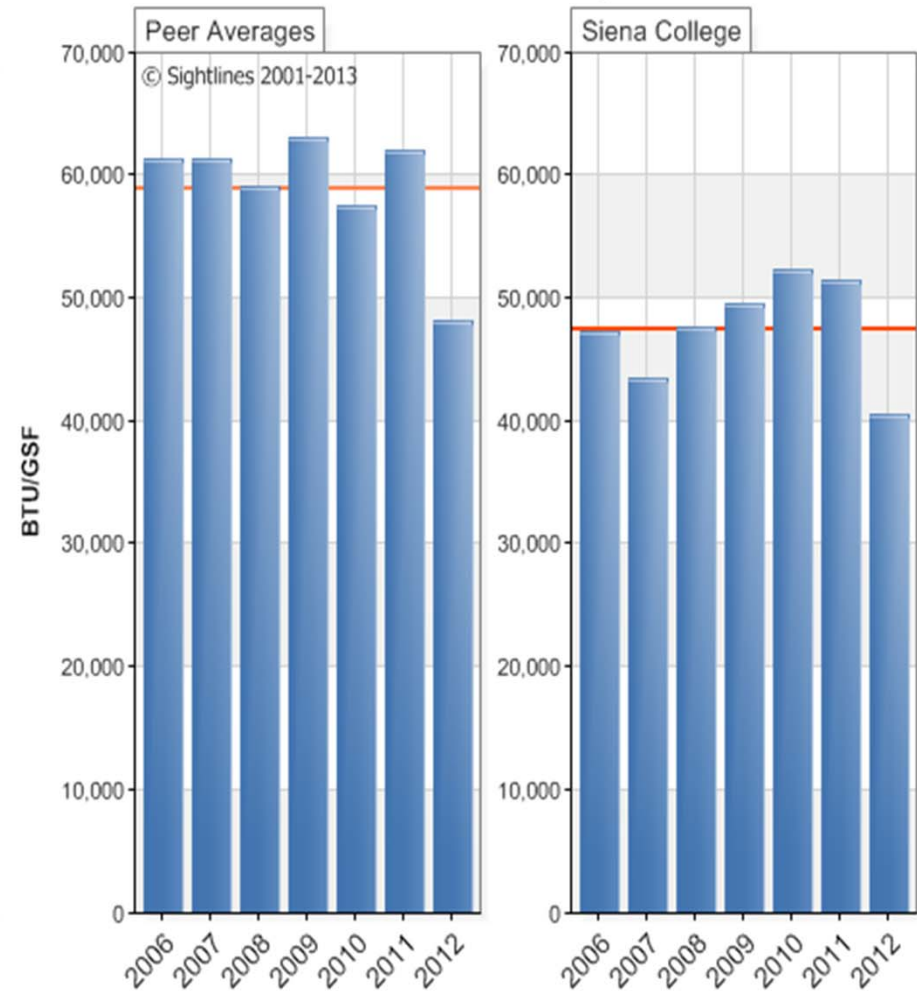


Sightlines

Electric Consumption



Fossil Fuel Consumption



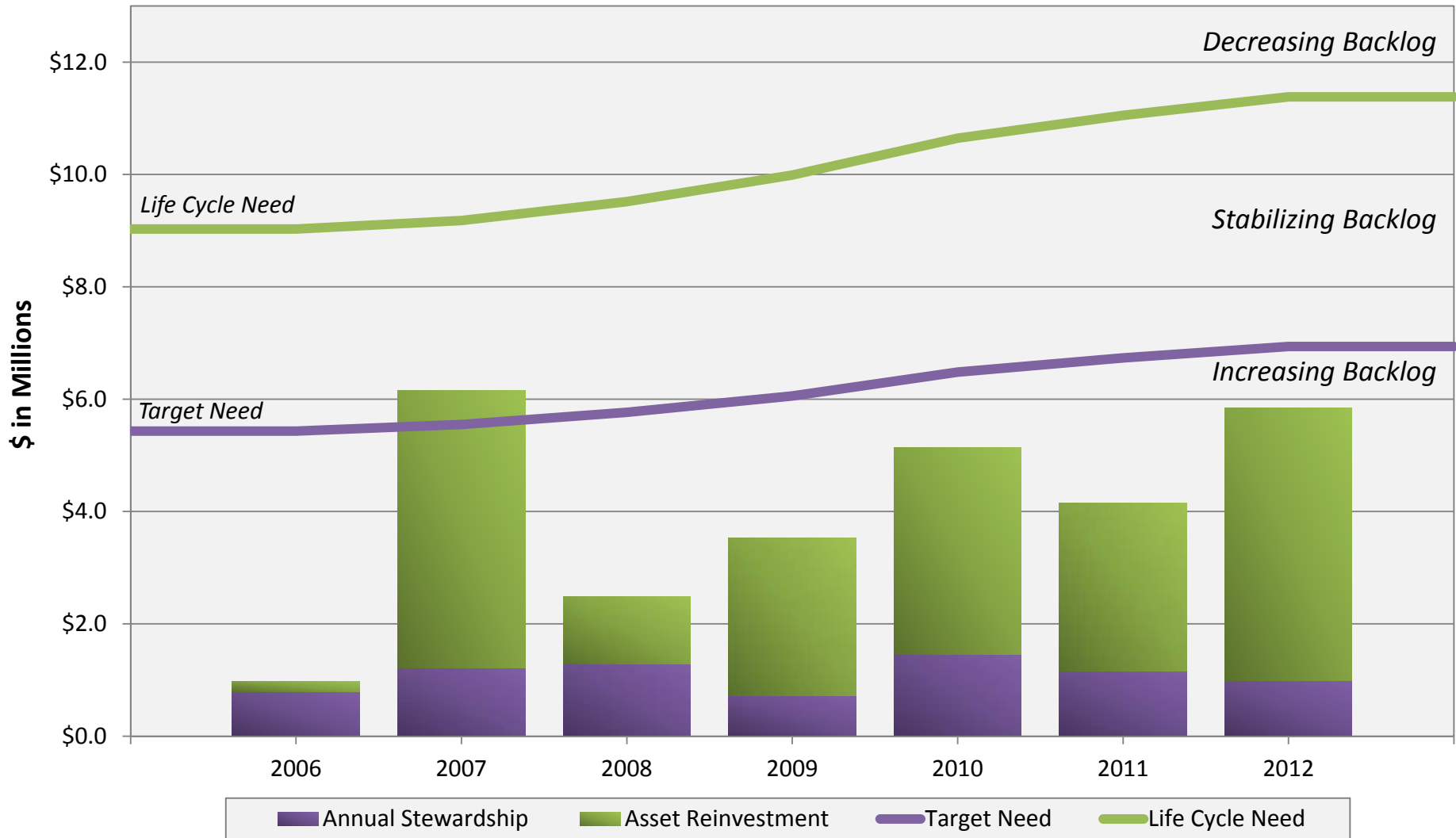
Consistent capital investment is not enough to hit targets

Backlog of need increases in spaces each year as investment targets are not met



Sightlines

Total Capital Investment

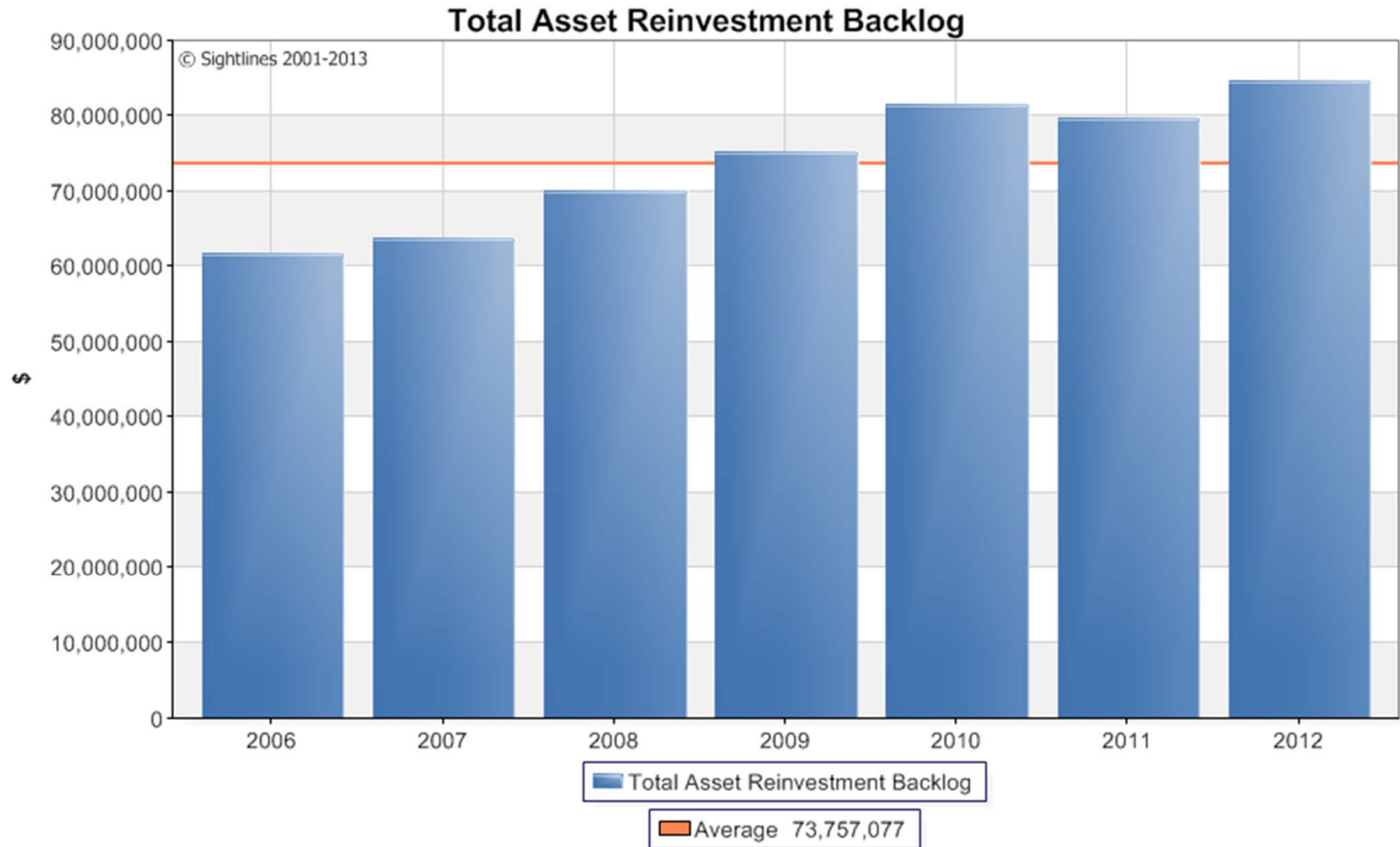


Lack of investment yields an increasing backlog

Backlog increased by over \$20 M since FY06



Sightlines



Identifying highest-risk space on campus

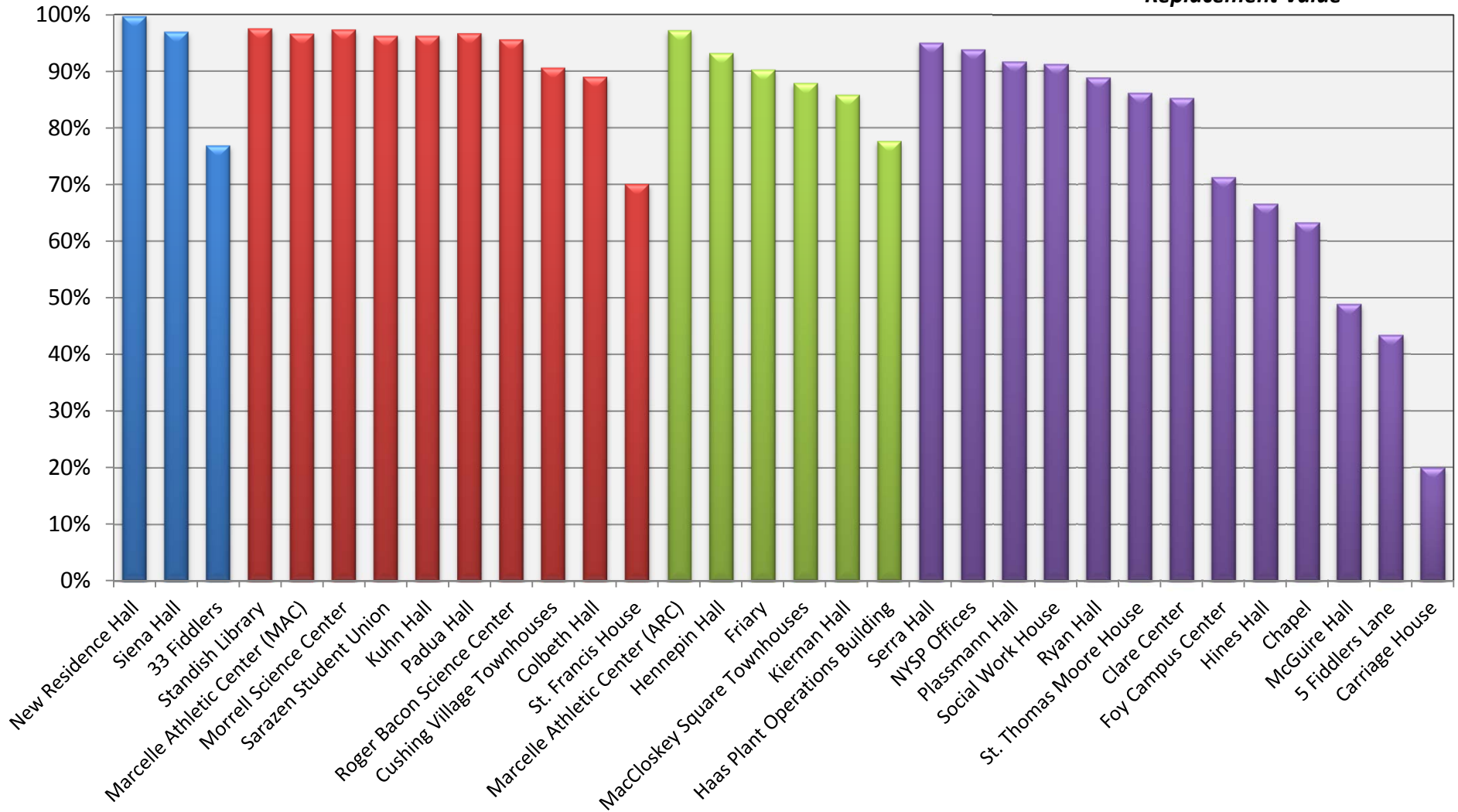
Internal study identifies areas to target with larger capital infusions



Sightlines

Net Asset Value

$$NAV = \frac{\text{Replacement Value} - \text{Backlog}}{\text{Replacement Value}}$$



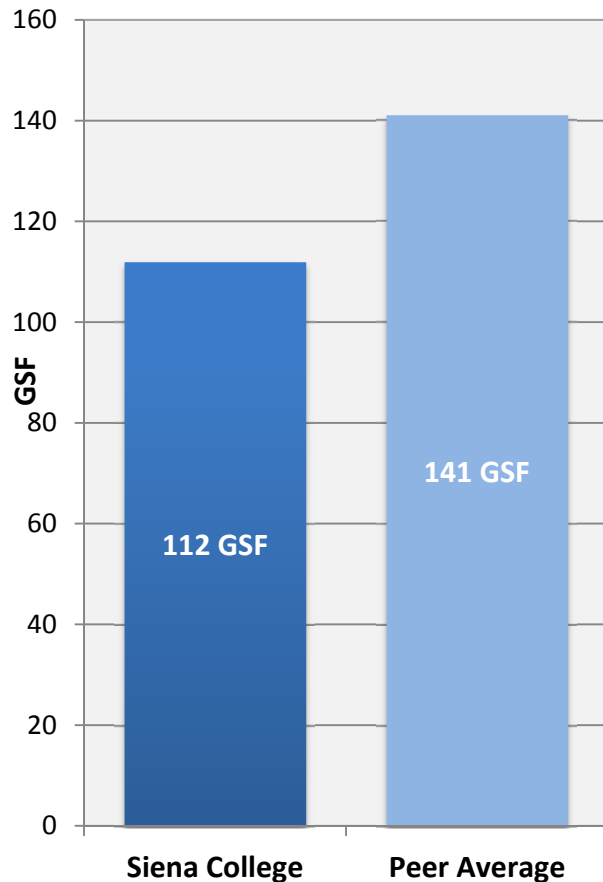
Siena has less program space per student

Fall 2013 will see the opening of Rosetti Hall aligning Siena to peers with academic GSF

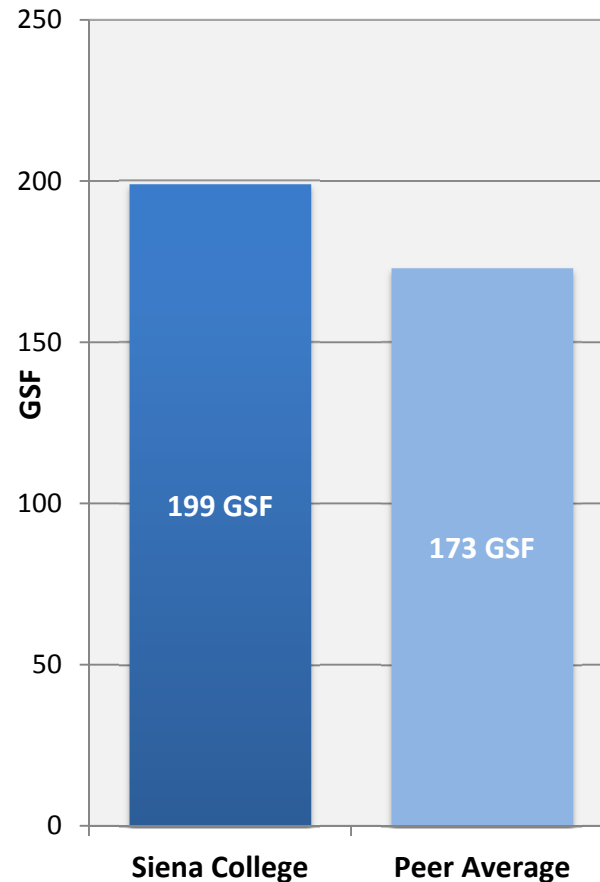


Sightlines

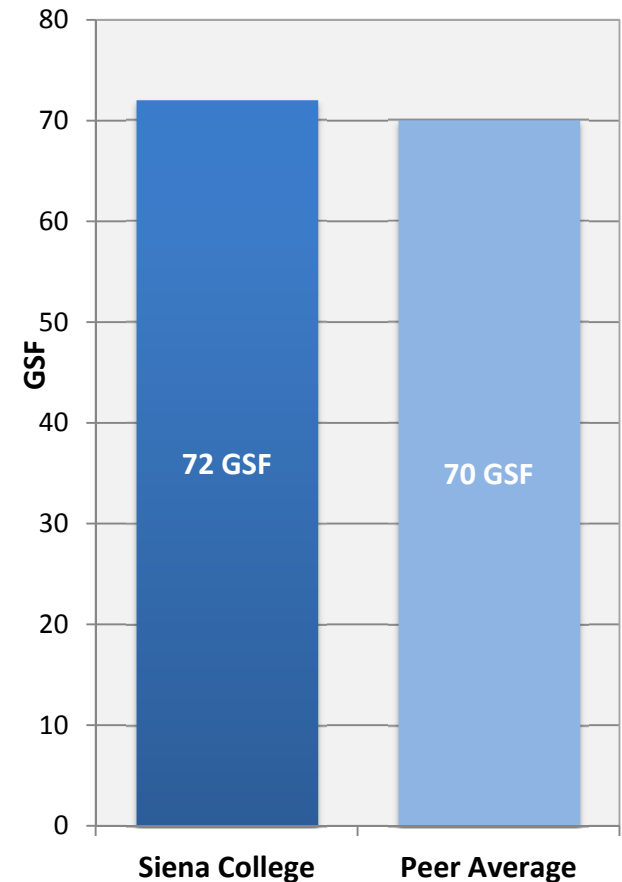
Program Space Per Student



Residential Space Per Student



Student Life Space Per Student



Even at peer averages for space distribution, Siena feels overcrowded and confined with the current space available.

Discovering key information from utilization analysis

Utilization findings provide Siena insight into programmatic-driven challenges



Sightlines

Room Condition & Technological Inspection



Assessment of Institutional Scheduling Data



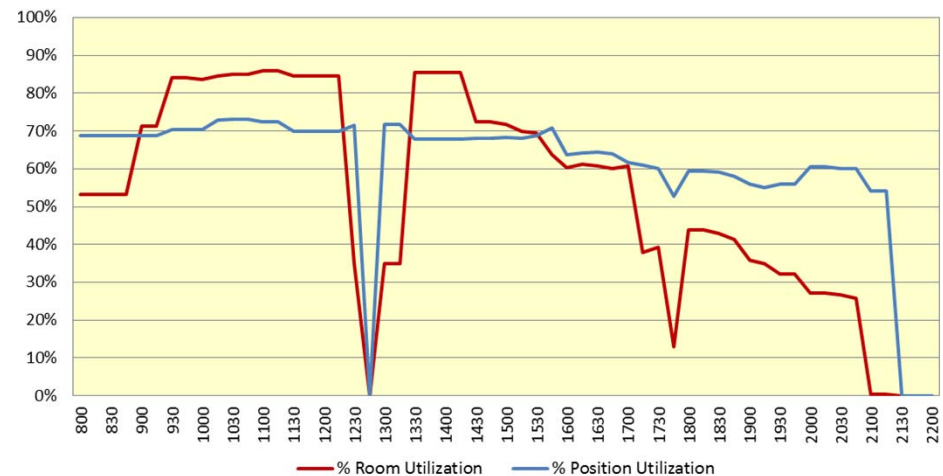
Use of Focus Groups to Determine User Perceptions



End Result – Informed Decision Making



Fall 2012: Classrooms, MTWRF



Operational strategies at Siena College



Sightlines

Despite many younger buildings on campus compared to peers, 25% of campus is over 50 years old. Those oldest buildings will require significant capital infusions.

Solid Facilities metrics allows for more effective operations through planned maintenance growth and strong energy management at Siena.

Limited capital resources challenge Siena to hit annual investment targets. This is exposing lower quality space on campus and enabling growth in deferred maintenance needs.

Rosetti Hall coming online in Fall 2013 will address some of the immediate academic space needs. Classroom Utilization Analysis will help identify under-utilized space and classrooms that are not appropriately sized for program needs.

Questions and Discussion

