

# BOR Finance Committee

Strategic Planning

Deferred Maintenance and Sustainability

May 27, 2021

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ALL FOUR:**ONE**



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# Defining the problem



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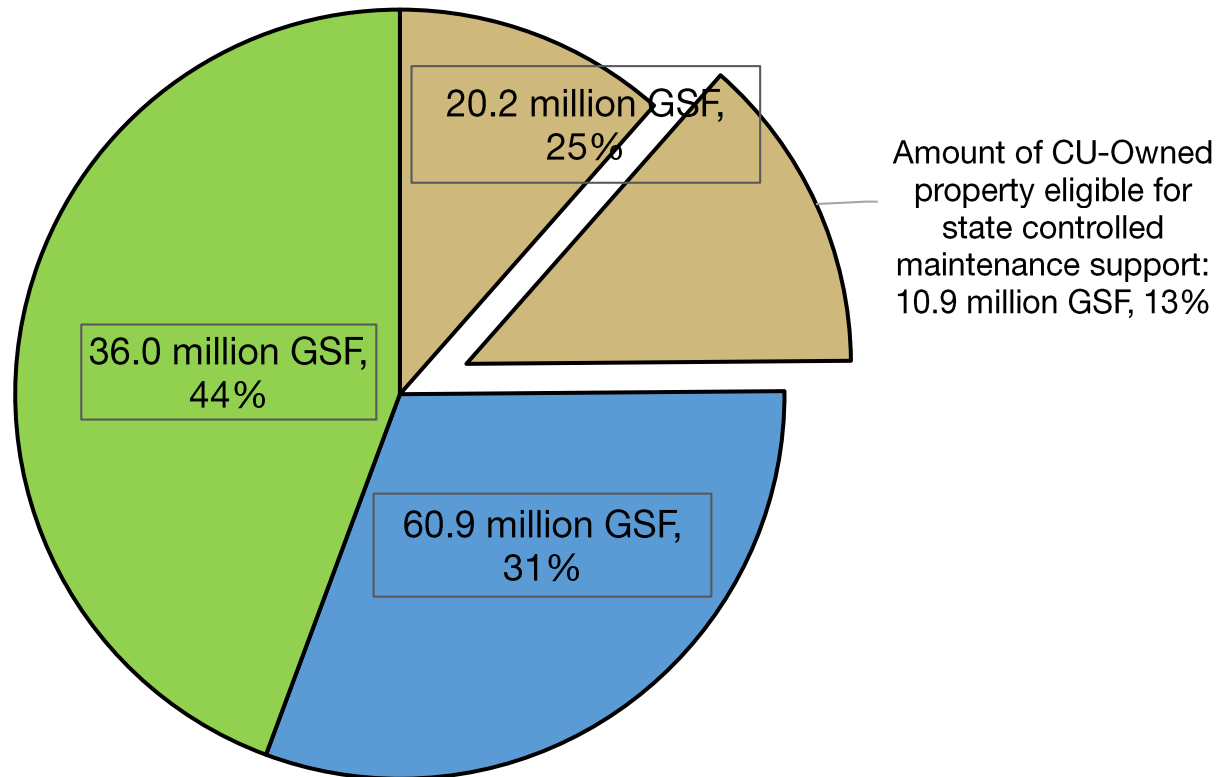
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# Deferred Maintenance – Defined

- Deferred Maintenance – *Outstanding maintenance or repair needs that have been delayed, typically because of budget constraints.*
- Controlled Maintenance – *The statutory term for deferred maintenance.*
  - **State funding eligibility is limited** by several factors, such as the age of a building or what source of funds was used to construct a building.
  - Higher education campuses have significant deferred maintenance need, but **only some need meets the definition of controlled maintenance.**



# CU Share of State-Owned Property



■ CU System   ■ Other Higher Ed   ■ State Agencies



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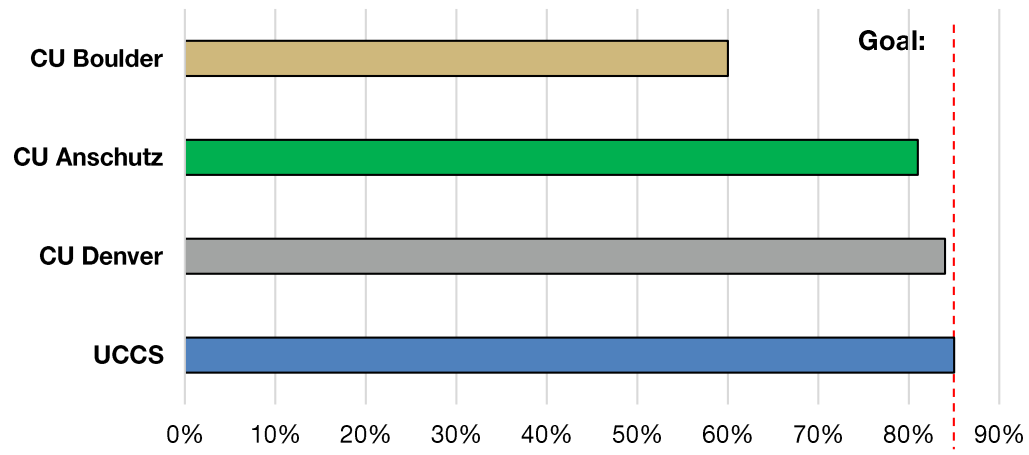
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# Best Practices

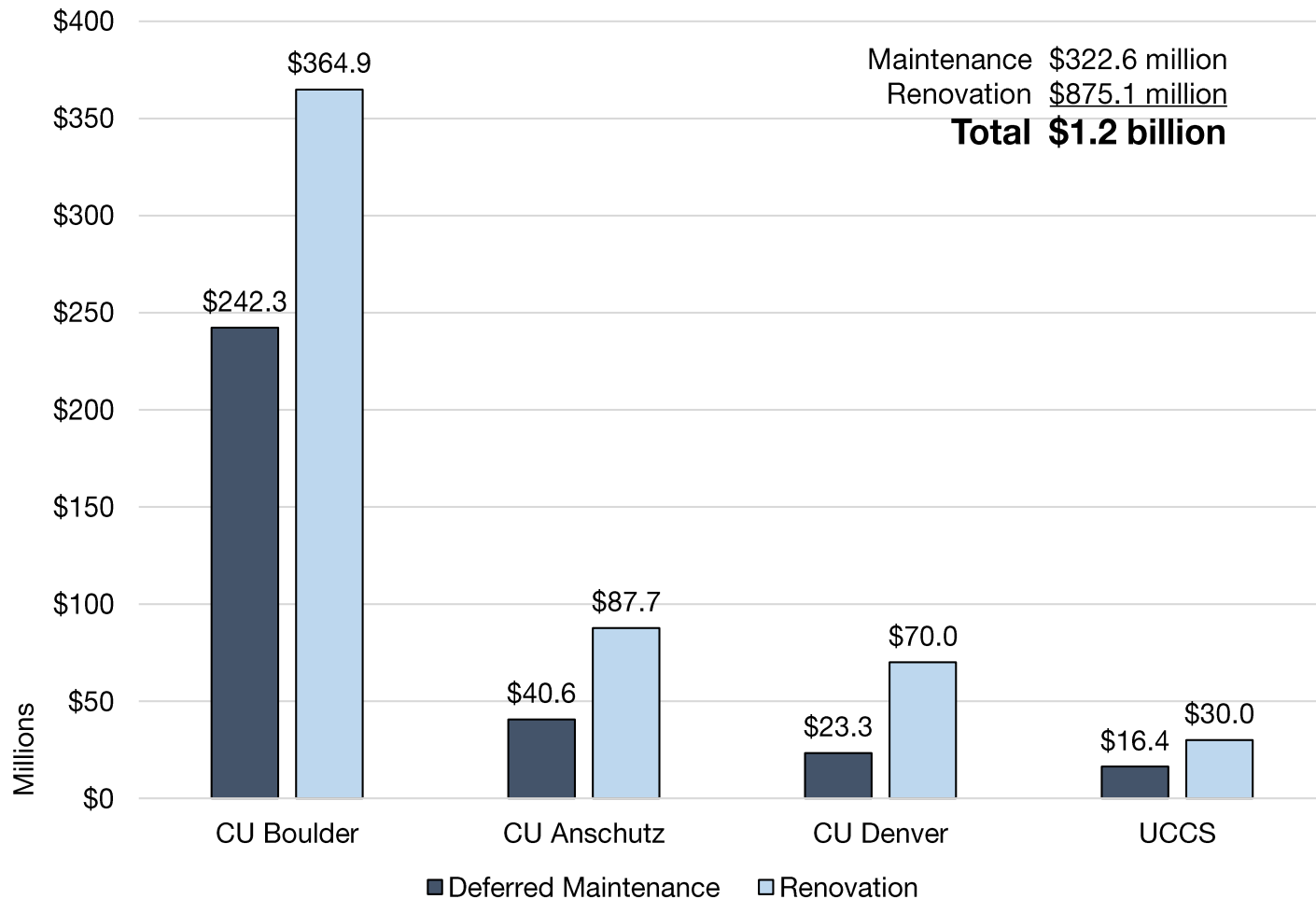
- Industry Standard – **Reinvest 1 to 4 percent of current replacement value** of total asset inventory annually.
  - State’s goal: Reinvest 1 percent of the current replacement value of eligible facilities into controlled maintenance funding annually.
- Facility Condition Audits
  - Ongoing, conducted by CU personnel.
  - Goal: Maintain a Facility Condition Index (FCI) Score of 85 or better.

**Average FCI: Academic and Research Buildings**



Facility Condition Index	
< 25%	critical
25 - 55%	poor
55 - 70%	fair
70 - 85%	good
> 85%	very good

# Ten-Year History of University-Funded Deferred Maintenance and Renovation



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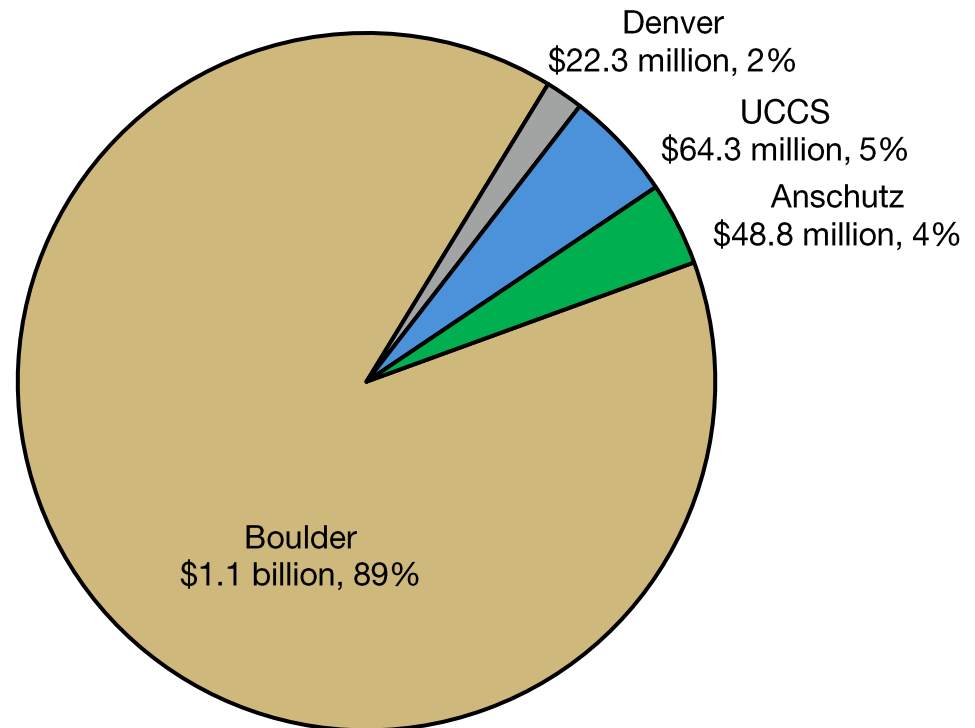
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# Deferred Maintenance: Magnitude of Backlog

## Total CU Backlog = \$1.3 Billion

<b>Boulder</b>	<b>\$1,126,941,402</b>
General Fund	\$666,848,420
Non-General Fund	\$460,092,982
<b>Denver</b>	<b>\$22,294,698</b>
General Fund	\$15,973,069
Non-General Fund	\$6,321,629
<b>UCCS</b>	<b>\$64,284,306</b>
General Fund	\$59,261,268
Non-General Fund	\$5,023,038
<b>Anschutz</b>	<b>\$48,791,183</b>
General Fund	\$35,951,120
Non-General Fund	\$12,840,063
<b>Total</b>	<b>\$1,262,311,589</b>
General Fund	\$778,033,877
Non-General Fund	\$484,277,712



Note: Campus deferred maintenance backlog numbers reflect the cost to get the Facility Condition Index (FCI) to 85%.



# Addressing the problem



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# Strategic Plan Metric and Goal

1. Metric: Facility Condition Index (FCI)
  2. 2026 Goal: Varies by campus
  3. Long-term goal: 85% FCI in every building
- Deferred maintenance is a natural consequence of building ownership and must be approached as something to be actively managed on an ongoing basis.
  - Criticality of deferred maintenance can vary significantly.

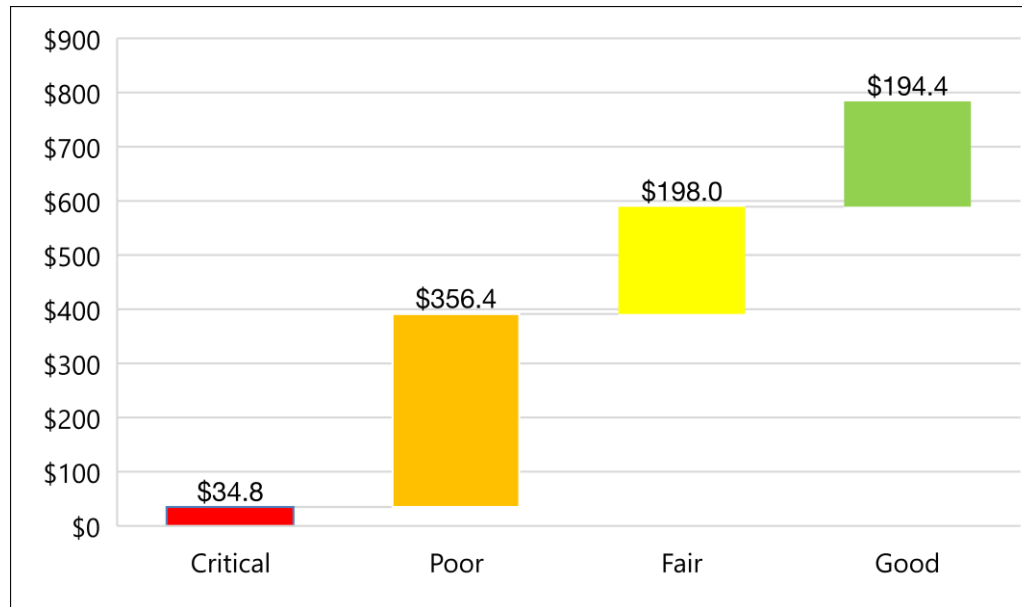


# Impact of Deferred Maintenance Goals on Campus Backlog

Metric	2026 Under Status Quo	2026 Under Strategic Plan
<b>CU Boulder</b>		
FCI	55	62
5-Year Spending	\$25 million	\$212.5 million
<b>CU Anschutz</b>		
FCI	80	82
5-Year Spending	\$10 million	\$18 million
<b>CU Denver</b>		
FCI	83	84.5
5-Year Spending	\$5 million	\$9 million
<b>UCCS</b>		
FCI	84	86.5
5-Year Spending	\$6 million	\$7.8 million



# Deferred maintenance backlog for state General Fund buildings shown by level of criticality



Facility Condition Index		
■	< 25%	critical
■	25 - 55%	poor
■	55 - 70%	fair
■	70 - 85%	good
■	> 85%	goal FCI

**Critical:** Components of system exhibit signs of imminent failure. Possible service interruptions.

**Poor:** Condition mostly below standard, with many elements approaching the end of their service life.

**Fair:** Some deterioration requires attention. Some significant deficiencies in condition and functionality.

**Good:** Some deterioration requires attention. Some deficiencies. Safe and reliable, with minimal capacity issues.

Notes:

1. Buildings with an FCI greater than 85% are not reflected in chart.
2. Boulder backlog level of criticality is an estimate.
3. UCCS backlog includes both General Fund and non-General Fund.



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# What is the best way to achieve goal?

- A routine assessment of facility condition and deferred maintenance.
  - Ongoing.
- An evaluation of whether new construction is necessary.
  - Justified through program plans. Subject to Regent approval.
- A plan for funding maintenance of new and renovated buildings.
  - Requirement added to APS 3002 in 2020.
- A long-term funding and spending plan to:
  - Stop the growth of the deferred maintenance backlog;
  - Significantly reduce the backlog of deferred maintenance, particularly critical need; and
  - Proactively fund preventative maintenance.



# CU Boulder

## Factors Determining Selection of 2031 Goal

- Current FCI: 60; 2026 Target FCI = 62
- CRV: \$2,580,916,166 (academic/research only)
  - 1% of CRV: \$25,809,162 (academic/research only)
- Total cost of general fund deferred maintenance backlog (cost to achieve 85 FCI): \$666.8 million

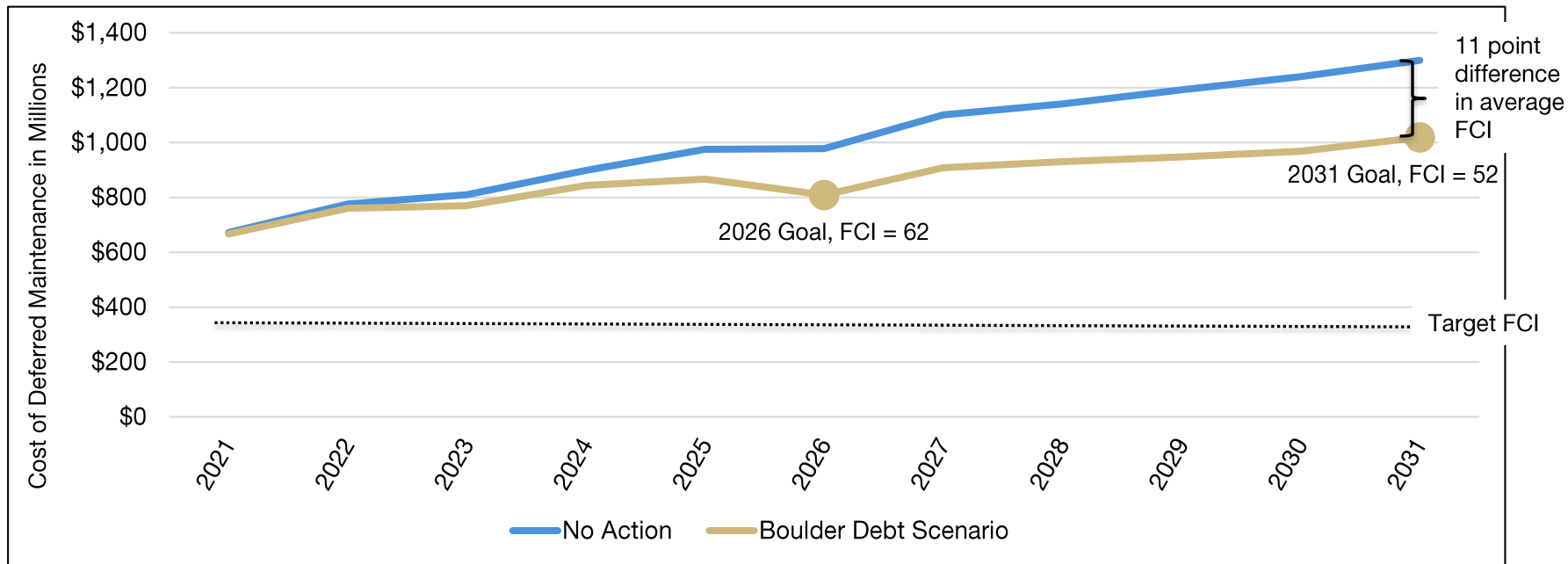


# CU Boulder 2031 Goal: Reduce Backlog **Growth** by 75%

2021 General Fund Backlog (Cost to Achieve 85 FCI) = \$666.8 million

Backlog Addressed by 2031 Goal*	\$325,000,000
<b>Cost to Address 2031 Goal</b>	<b>\$425,000,000</b>
Campus Funding Contribution	\$50,000,000
Proposed Borrowing (Over 10 Years)	\$285,000,000
State Support	\$90,000,000

\*The cost to address the goal is greater than the amount of backlog addressed because costs include administrative expenses and some programmatic improvements.



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# CU Anschutz

## Factors Determining Selection of 2026 Goal

- Current FCI: 81; 2026 Target FCI = 82
- Current Replacement Value (CRV): \$1,519,155,010 (academic/research only)
  - 1% of CRV: \$15,191,550 (academic/research only)
- Total cost of general fund deferred maintenance backlog: \$36.0 million
- Estimated maximum spending in five-year period (based on capacity limitations): \$18.0 million

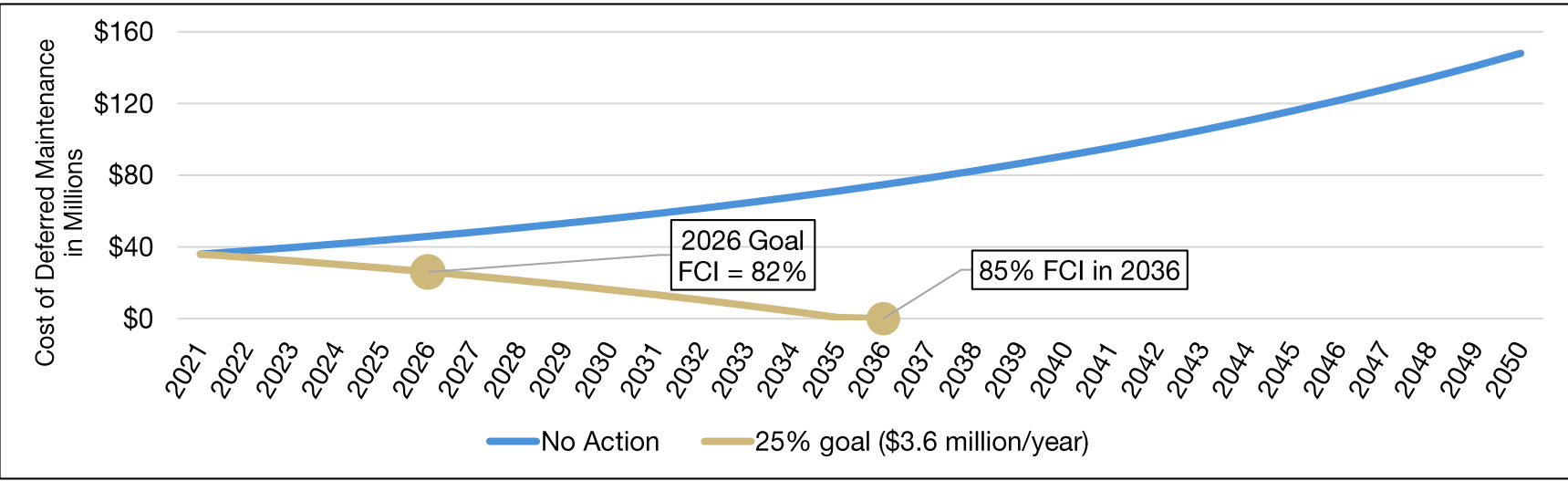


# CU Anschutz 2026 Goal: Reduce Current Backlog by 25%

## Long-Term Goal: 85% FCI by 2036

2021 General Fund Deferred Maintenance Backlog: \$35.9 million

<b>Cost of 2026 Goal</b>	<b>\$18,000,000</b>
Campus Funding Contribution	\$10,000,000
State Support: Controlled Maintenance	\$2,500,000
Redirect Retiring Debt Payments	\$3,200,000
Grants	\$800,000
Energy Savings	\$1,500,000





# CU Denver

## Factors Determining Selection of 2026 Goal

- Current FCI: 84%; 2026 Target FCI = 84.5%
- CRV: \$276,832,426 (academic/research only) 304,116,417
  - 1% of CRV: \$2,768,324 (academic/research only) 3,041,164
- Total cost of general fund deferred maintenance backlog: \$16.0 million
- The Auraria Higher Education Campus deferred maintenance backlog is about \$85M and is not reflected in the CU Denver totals or goals.
  - CU Denver contributes \$750,000/year to the cost of AHEC deferred maintenance projects, or about 1 percent of the cost of the total backlog.

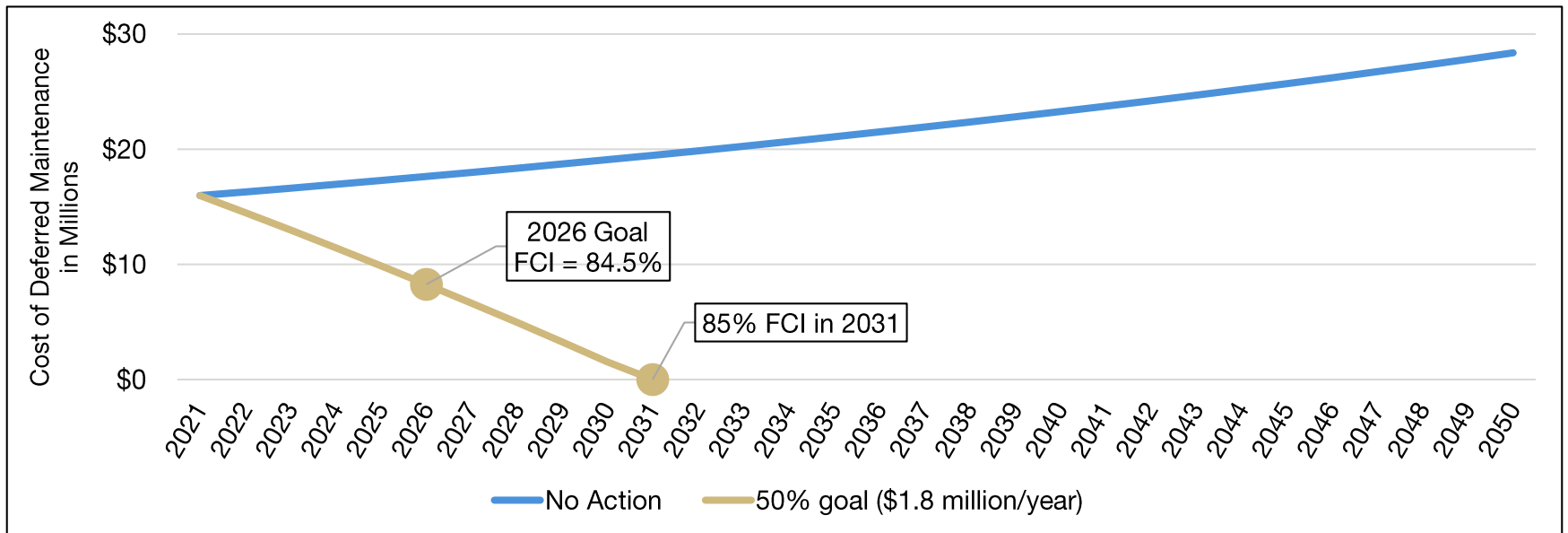


# CU Denver 2026 Goal: Reduce Current Backlog by 50%

## Long-Term Goal: 85% FCI by 2030

2021 General Fund Deferred Maintenance Backlog: \$16.0 million

<b>Cost of 2026 Goal</b>	<b>\$9,000,000</b>
Campus Funding Contribution	\$9,000,000



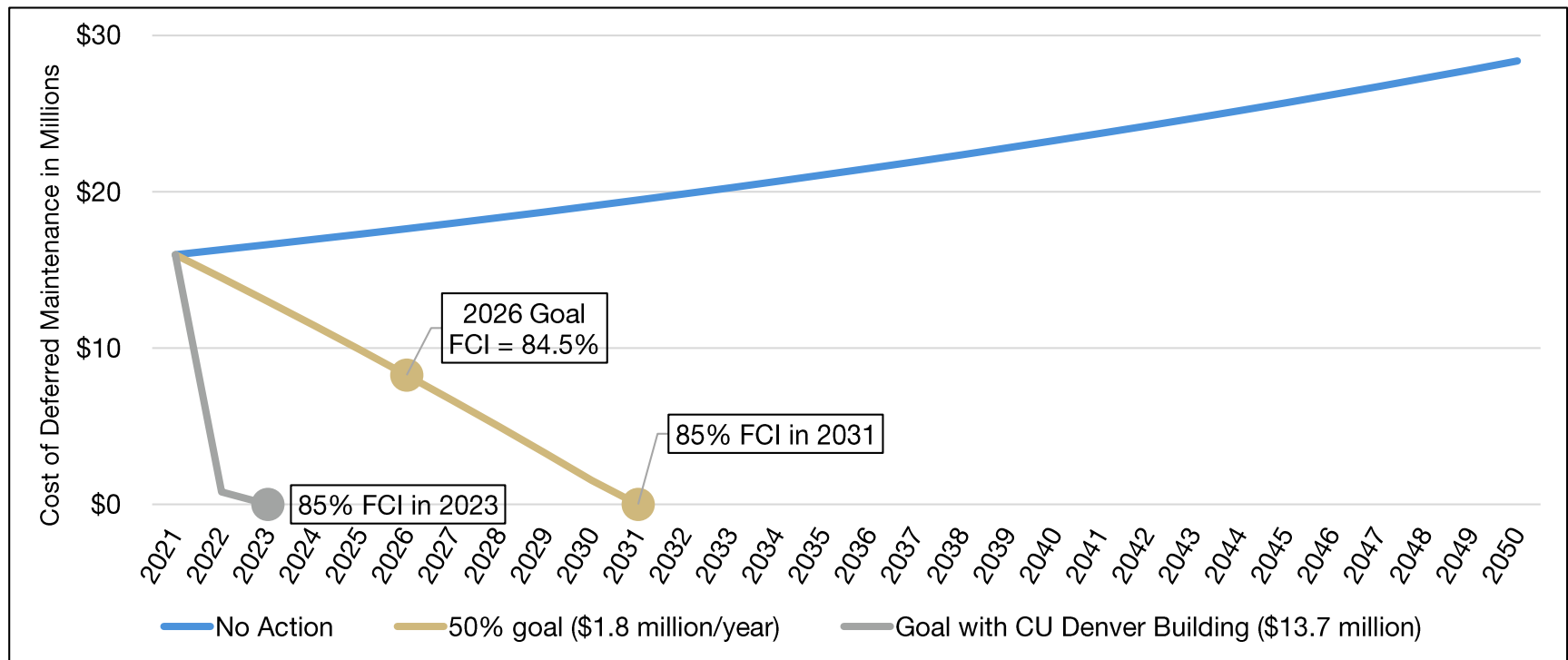
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# State-Funded Capital Budget Request CU Denver Building

The renovation project will address \$13.7 million in deferred maintenance in addition to the 2026 goal, and eliminate most of the Denver backlog.



# UCCS

## Factors Determining Selection of 2026 Goal

- Current FCI: 85%; 2026 Target FCI = 86.5%
- CRV: \$665,444,109 (academic/research only: \$415,189,891)
  - 1% of CRV: \$6,654,441 (academic/research only: \$4,151,898)
- Total cost of deferred maintenance backlog: \$64.3 million
- Estimated maximum spending in five-year period (based on capacity limitations): \$7.8 million



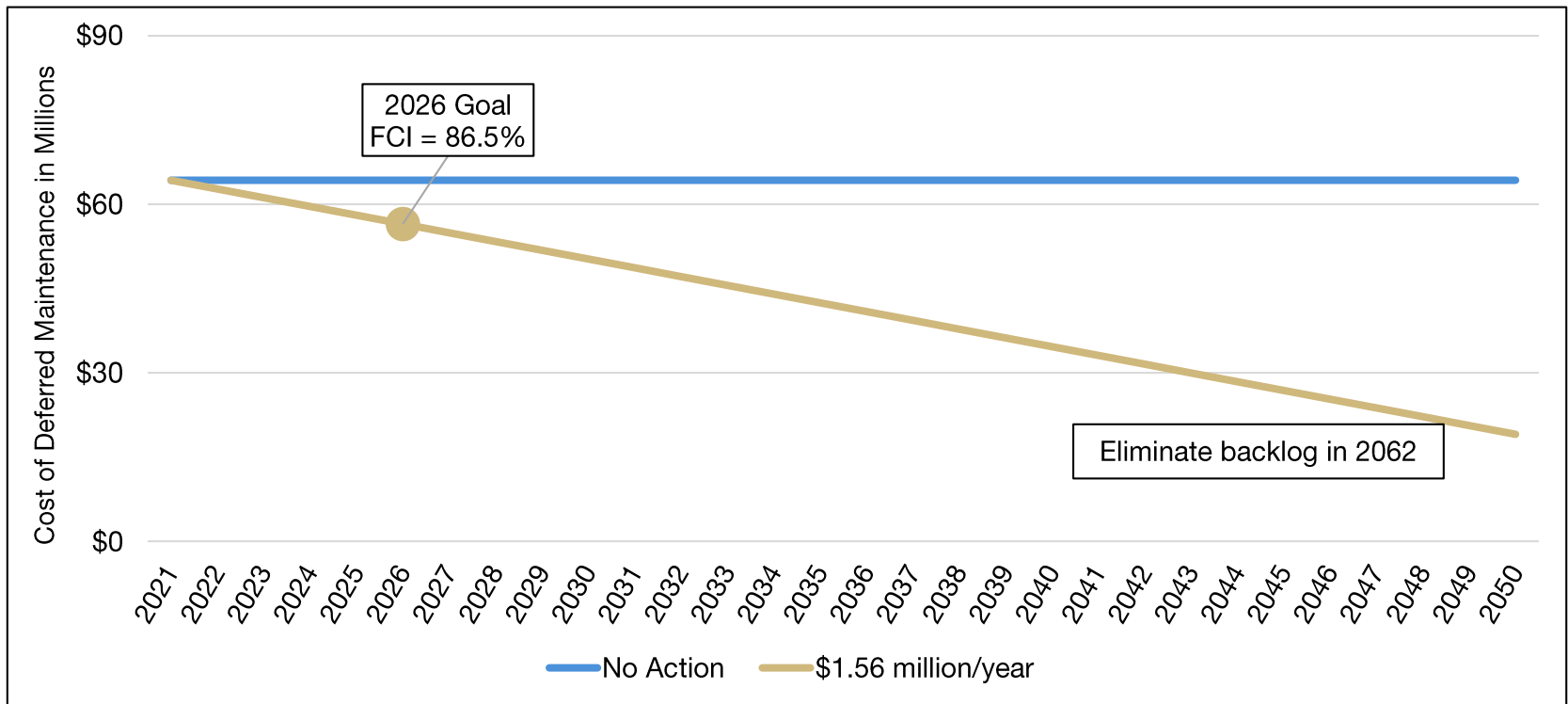
# UCCS 2026 Goal: Reduce Current Backlog by 10%

## Long-Term Goal: Maintain FCI Greater than 85%

2021 Deferred Maintenance Backlog: \$64.3 million

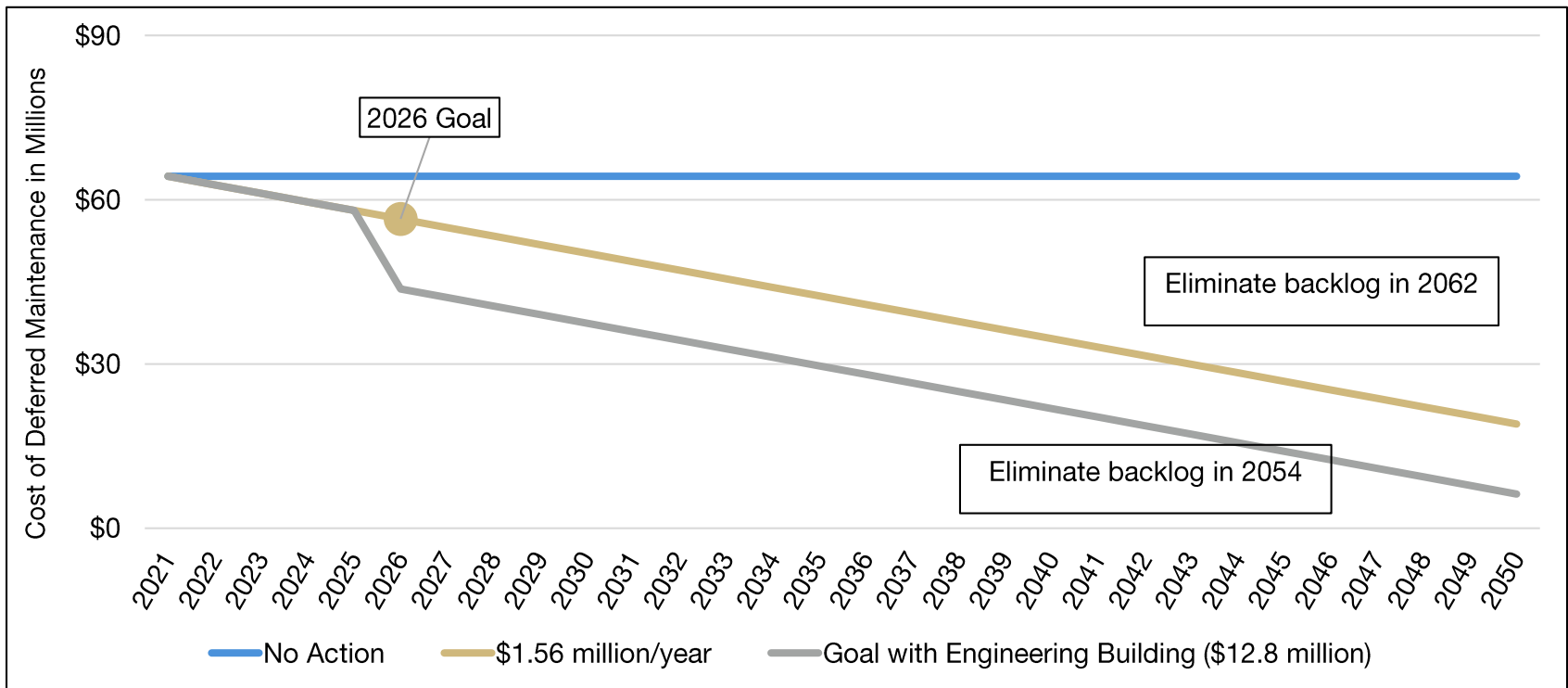
<b>Cost of 2026 Goal*</b>	<b>\$7,800,000</b>
Campus Funding Contribution	\$7,800,000

\*The campus may issue debt to support its goal in FY 2022-23.



# State-Funded Capital Budget Request UCCS Engineering Renovation

The project addresses \$12.8 million in deferred maintenance. Paired with the 2026 goal, this accelerates the timeline to achieve an average FCI of 85% by a decade.



# Sustainability



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# Deferred Maintenance and Sustainability

- Sustainability goals were established separately from deferred maintenance goals.
- A number of projects move campuses toward both their deferred maintenance and sustainability goals. For example:
  - Replacing outdated equipment and controls
    - e.g. converting steam to a heating hot water system at Williams Village
    - e.g. lighting retrofit and HVAC replacement projects at UCCS
  - Improving building envelopes (structural repairs, new windows)
    - e.g. ongoing window restoration project at the Anschutz Building





# Sustainability Goals

## 1. Reduce Energy Use Intensity (EUI) (kBtu/GSF)

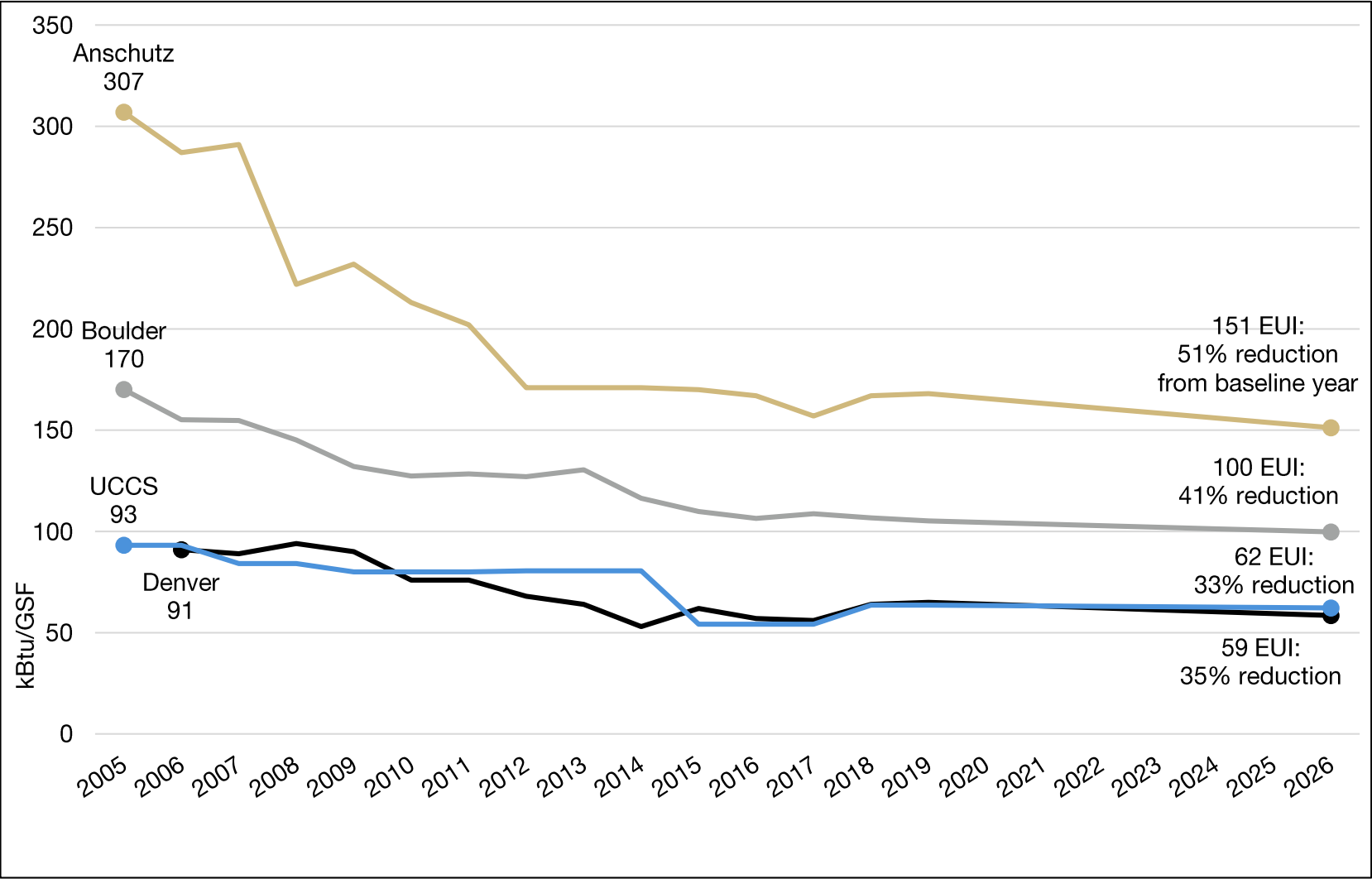
Campus	2019 Actual EUI	2026 Campus Goal: Reduction from 2019
<b>CU Boulder</b>	105	5% reduction (100)
<b>CU Denver</b>	64	10% reduction (62)
<b>CU Anschutz</b>	167	10% reduction (151)
<b>UCCS</b>	64	6% reduction in General Fund buildings (59)
<b>System</b>	70	5% reduction at 1800 Grant (67)

## 2. Reduce Greenhouse Gas (GHG) Emissions (MTCO<sub>2</sub>e)

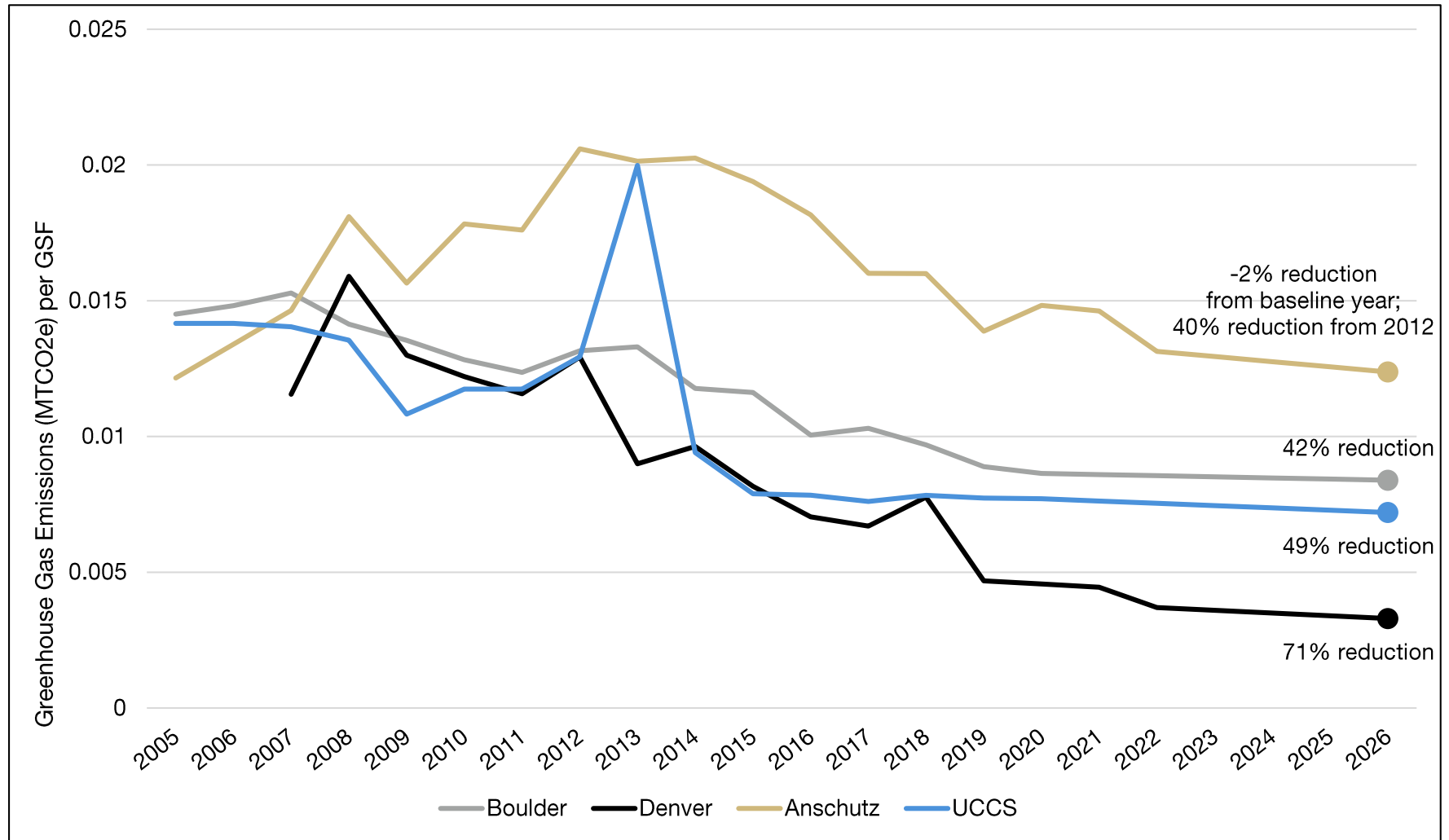
Campus	2019 Actual GHG Emissions	2026 Campus Goal: 15% Reduction from 2019
<b>CU Boulder</b>	125,948	107,056
<b>CU Denver</b>	4,835	4,110
<b>CU Anschutz</b>	64,081	54,469
<b>UCCS</b>	23,787	20,219
<b>System</b>	1,270	1,079



# EUI Reduction from Baseline Year to 2026 Goal



# Change in Greenhouse Gas Emissions from Baseline Year through 2026 Goal



# Sustainability Action Steps

## 1. Increase the efficiency of the vehicle fleet

Campus	2026 Commitment	Cost
<b>CU Boulder</b>	Convert 17% of bus fleet to battery electric buses by 2026 (4 of 24 buses).	\$3,200,000
<b>CU Denver</b>	Transition all vehicles to electric at next replacement cycle or by 2026.	\$175,000
<b>CU Anschutz</b>	Transition 20% of fleet vehicles to electric by 2026. Doesn't include busses.	\$1,700,000
<b>UCCS</b>	Replace one diesel bus with electric bus every 5 years.	\$1,000,000

## 2. Increase renewable energy use

Campus	Current Percent Renewable	2026 Commitment	Cost
<b>CU Boulder</b>	2.0% on-site and 0% off-site	2.5% on-site and 14.2% off-site	\$300,000/year (\$1,000,000 total)
<b>CU Denver</b>	1.5% on-site	3% on-site	\$1,800,000 one-time
<b>CU Anschutz</b>	0% on-site	5% on-site	\$5,000,000 one-time
<b>UCCS</b>	0.015% on-site and 34% through Renewable Energy Credits (RECs)	2% on-site and 40% through RECs	\$280,272/year over four years (\$1,121,088 total)
<b>CU System</b>	0%	10% through RECs	\$18,000 over five years (\$300/month)

## 3. Identify energy-savings opportunities in capital improvement projects, including deferred maintenance projects.

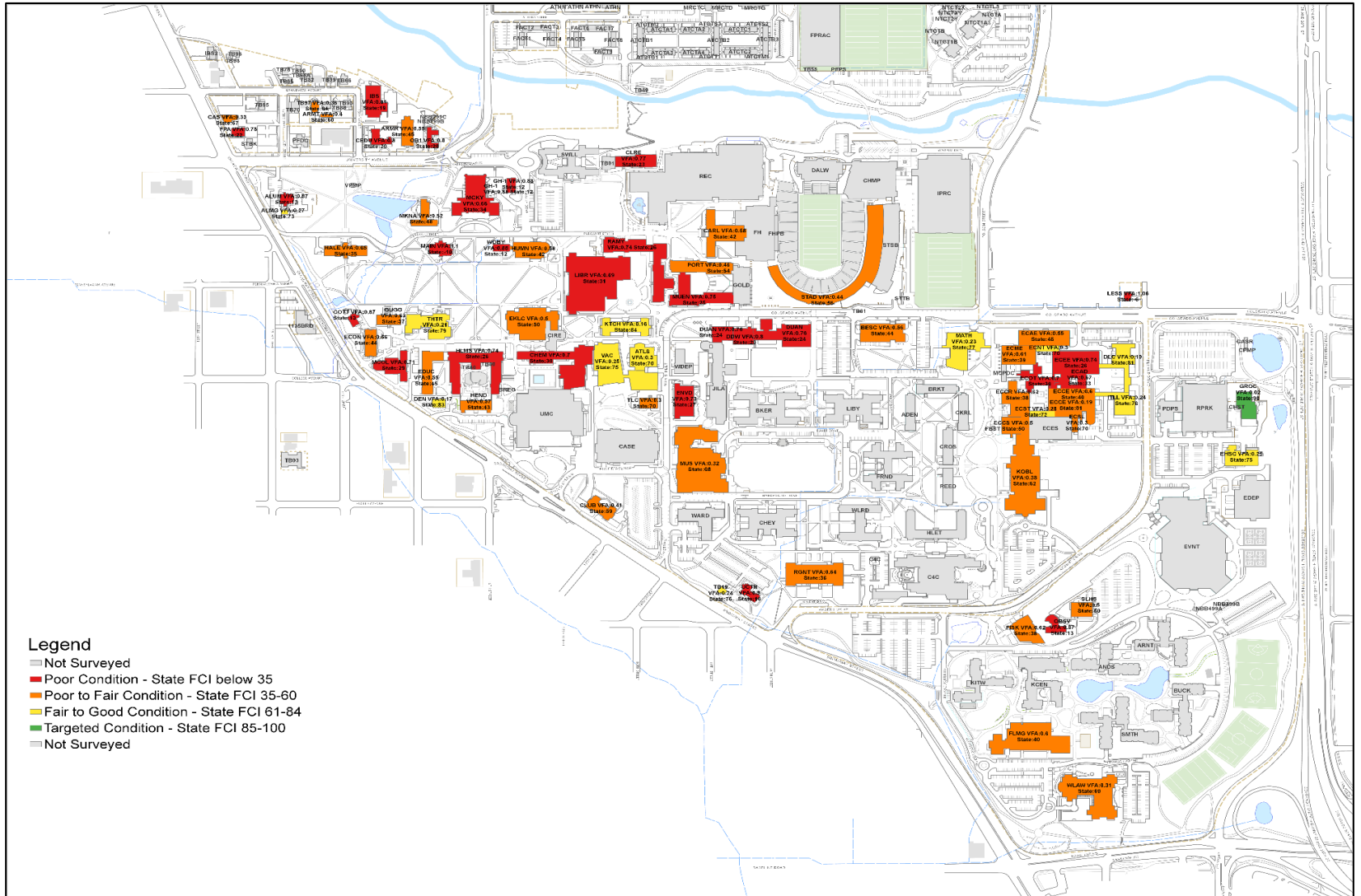
# Appendix



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# CU Boulder: Campus Buildings by FCI



## Legend

- Not Surveyed
- Poor Condition - State FCI below 35
- Poor to Fair Condition - State FCI 35-60
- Fair to Good Condition - State FCI 61-84
- Targeted Condition - State FCI 85-100
- Not Surveyed



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# Greenhouse Gas Emissions

## Change from Baseline Year to 2026 Goal

