
Deferred Maintenance Overview

ASU Facilities Management and Capital Programs

Deferred Maintenance Overview

- Arizona State University's campuses are in a serious state of disrepair because important maintenance needs have simply been deferred due to a lack of state funding.
- The four campuses currently face a maintenance backlog in excess of \$200 million dollars.



The cooling towers at the Community Services building are well beyond their useful service lives. The HVAC system is original to the building.

Deferred Maintenance Overview

Definitions:

- Deferred: To put something off until a later time.
- Maintenance: Work that is done regularly to keep a machine, building, or piece of equipment in good condition and working order.
- Deferred Maintenance: Maintenance and repair deficiencies that are unfunded at the end of the fiscal year on a planned or unplanned basis and are deferred to a future budget cycle or postponed until funds are available. *

* Source: APPA Center for Facilities Research (CFaR)



Deferred Maintenance Overview

Examples of Deferred Maintenance Found on ASU Campuses:

- Obsolete Air Conditioning and Heating Systems
- Aging Water, Steam, Sewer, and Electrical Infrastructure
- Worn, Cracked, Chipped, and Torn Flooring
- Obsolete and Unreliable High Voltage Systems
- Stone Masonry, Concrete, and Masonry Veneer Deterioration
- Shifting or Settling Foundations
- Roofing Systems Leaking or Beyond Service Life



Deferred Maintenance Overview

Roofing Systems protect the structure and interiors of buildings. Leakage and failures of roofing components leads to significant damage to classrooms, offices, and laboratories, resulting in lost time, equipment and research.



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HVAC Systems condition the air within structures, providing comfort for the occupants and protection for the building contents. Loss of cooling in the Arizona desert often results in serious disruptions to building operations.



Roof top air conditioners and cooling towers are especially difficult to maintain due to the harsh conditions found in the Arizona climate. These units are original to their respective buildings and need to be replaced.

Deferred Maintenance Overview

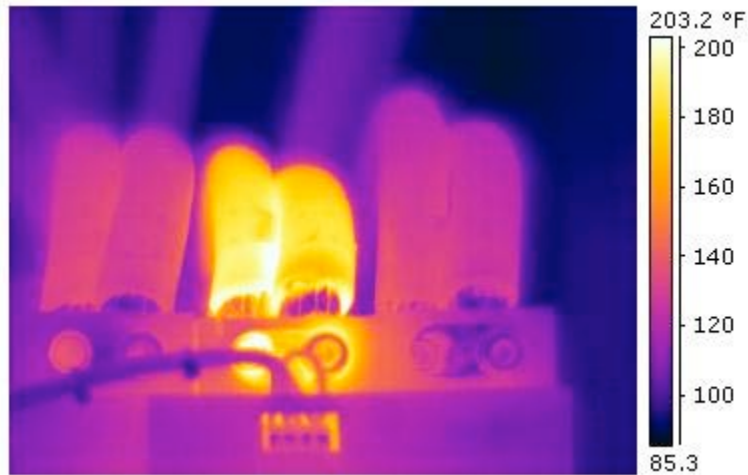
Mechanical Systems (ie. pumps, air compressors, ejectors) move chilled/hot water, provide control air, and remove sewage. Failures of these systems results in damage to building contents and operations.



Aged and leaking pumps and compressors. Many of ASU's mechanical systems are original to the buildings and are difficult to maintain due to the scarcity of parts.

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Electrical Systems (transformers, switches, wiring) provide power to building and departmental equipment. Electrical failures often result in significant loss of time, work, and research.



High voltage maintenance is critical to delivering safe, reliable power to University buildings. The thermographic image above shows a high voltage termination that is approaching a dangerous 200 °F. The result of an overheated connection can be seen at right.

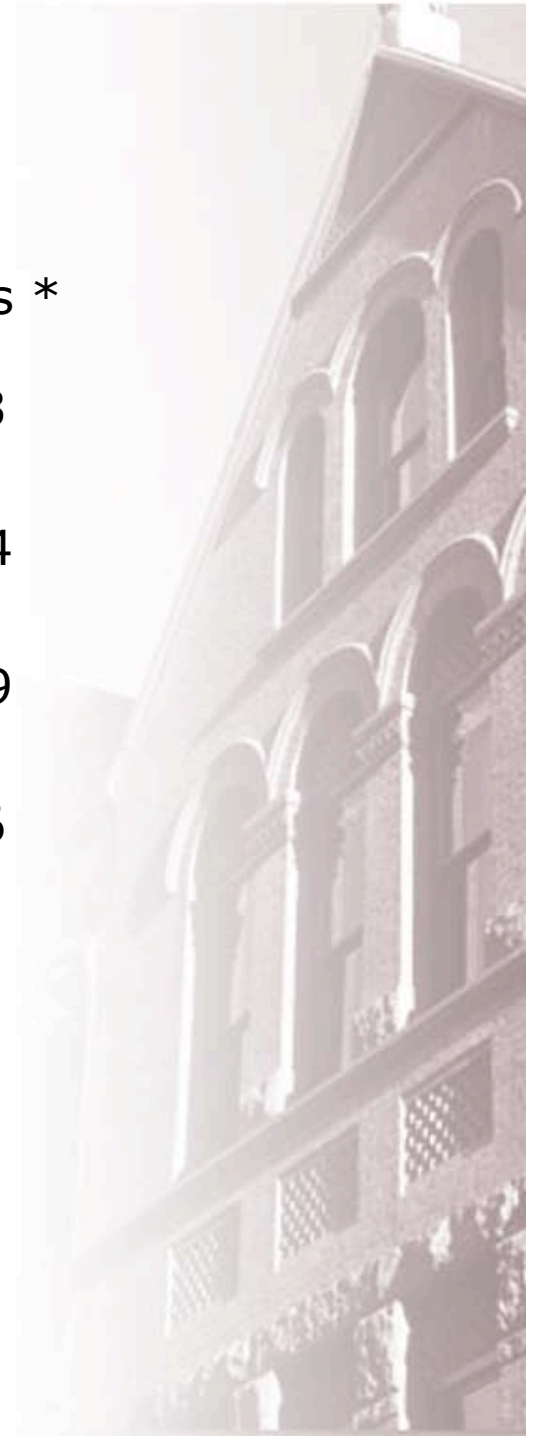


Deferred Maintenance Overview

Total Estimated Deficiencies on the Four ASU Campuses *

- Tempe Campus Buildings \$ 202,504,453
- West Campus Buildings \$ 3,342,304
- Polytechnic Campus Buildings \$ 9,453,759
- Total All ASU Campus Buildings \$ 215,300,516

* Source: June 2007 Building Inventory Report, ASU Capital Programs

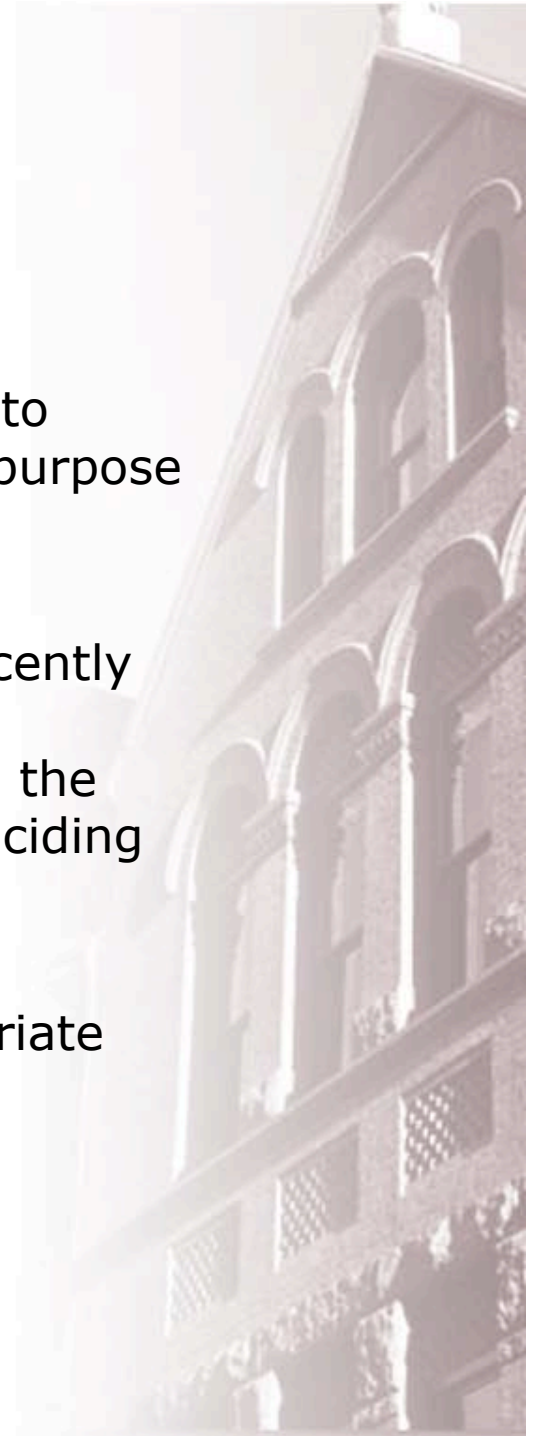


Deferred Maintenance Overview

Why Attend a Run-Down University?

- ASU facilities are integral to the university's ability to transform itself into a force for good, and fulfill its purpose as a community catalyst.
- A 1986 study by the Carnegie Foundation, most recently updated in 2006 by the APPA Center for Facilities Research, confirms that a majority of students rate the condition of buildings and grounds as one of the deciding factors when choosing a college or university.*
- Buildings and grounds present poorly when appropriate maintenance is not performed.

* Source: The Impact of Facilities on Recruitment and Retention of Students, 2006 APPA CFaR



Deferred Maintenance Overview

The Aging of ASU Campus Buildings

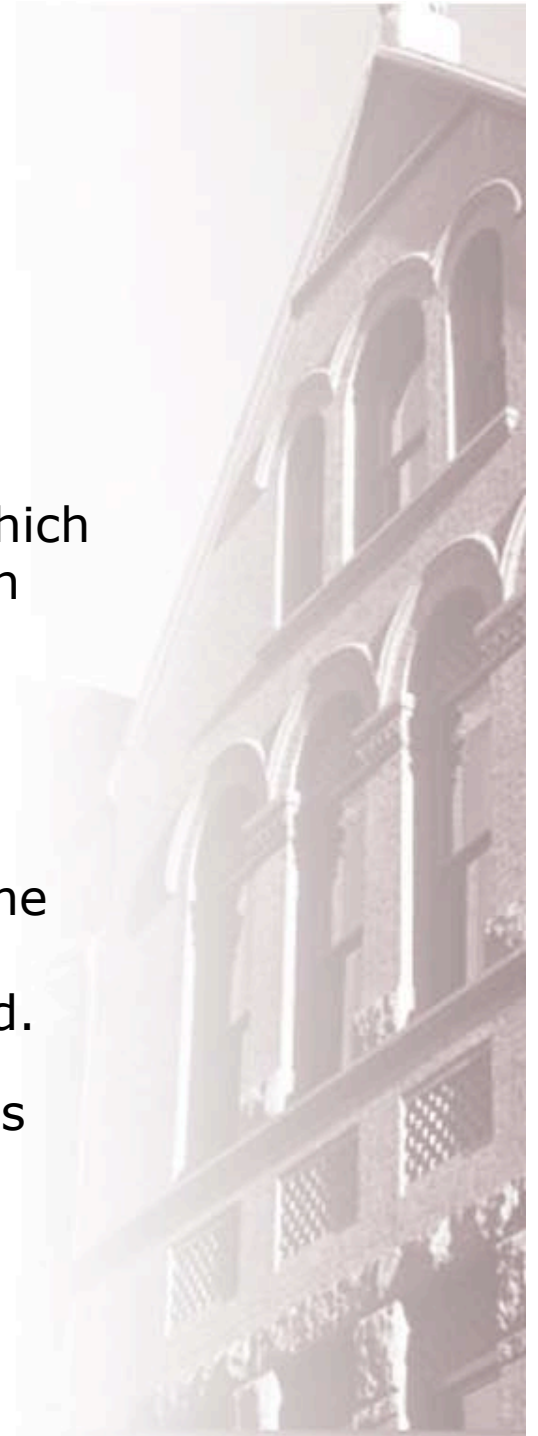
Campus	Oldest Building	Average Age
• Tempe	1894	31 Years
• West	1987	11 Years
• Polytechnic	1942	31 Years
• Downtown	1935	33 Years
• ASU Average		27 Years



Deferred Maintenance Overview

State Support for ASU Building Renewal

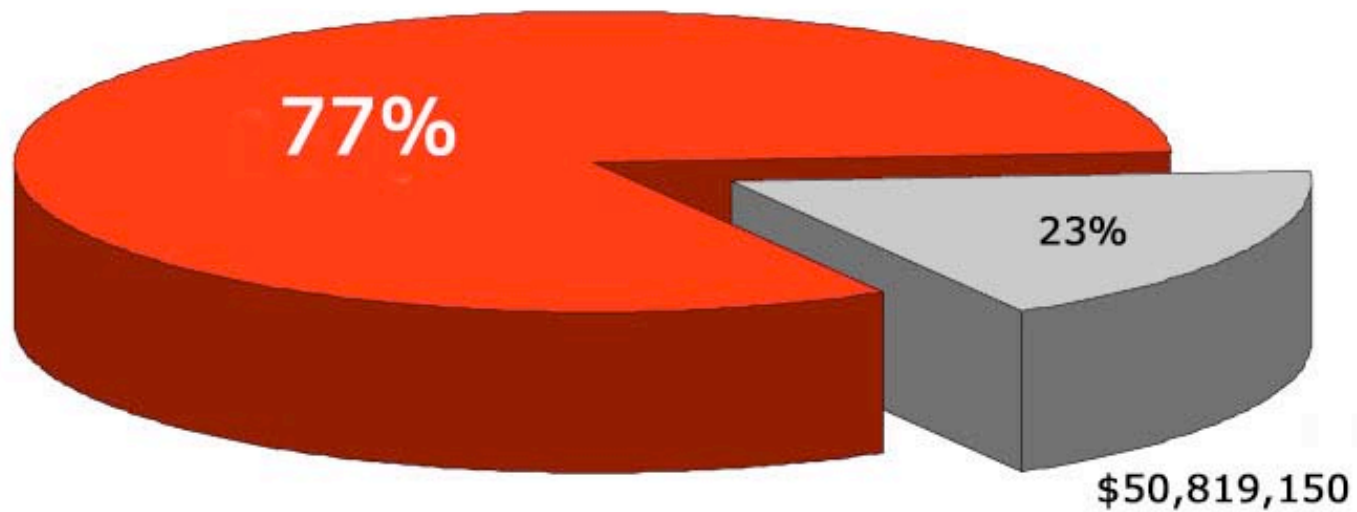
- ARS 41-793 requires that ASU submit a building renewal request to the Arizona Legislature. The request has its roots in the Arizona Constitution, which states that the legislature is responsible to maintain state educational buildings.
- Since 1987, ASU has submitted building renewal requests totaling \$221,980,213.
- Funding provided by the legislature during that same period has totaled \$50,819,150. There were five consecutive years in which no funding was provided.
- To date, only 23% of ASU building renewal requests have been funded by the Arizona Legislature.



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State Support for Building Renewal Requests Fiscal 1987 Through Fiscal 2007

\$221,980,213



Unfunded Requests

Funded Requests

Deferred Maintenance Overview

Building Renewal and the Local Economy

If the entire \$215 million deferred maintenance backlog is addressed, the associated economic impact would be:

- \$456 million increase in the economic output of goods and services
- \$259 million increase in earnings in the Phoenix area economy
- 4,180 new jobs created in the Phoenix area

For every \$1 million spent on deferred maintenance projects, the associate economic impact would be:

- \$2.3 million increase in the economic output of goods and services
- \$940,000 increase in earnings in the Phoenix area economy
- 21 new jobs created in the Phoenix area

(source: Timothy D. Hogan, Seidman Research Institute)



Deferred Maintenance Overview

In Conclusion:

- Arizona State University campuses are in a serious state of disrepair, and duct tape can no longer fix this growing problem.
- Every homeowner knows that maintenance and repair only becomes more expensive and more dangerous the longer it is ignored. This problem only gets more expensive the longer it goes unaddressed.
- The State of Arizona, which owns the buildings on the state university campuses, must fulfill its responsibility as a landlord and preserve these valuable assets.

