

MEMORANDUM

To: Board of Regents
From: Board Office
Subject: Governance Report on Fire and Environmental Safety and Deferred Maintenance
Date: December 4, 2003

Recommended Actions:

1. Receive the governance report on fire and environmental safety and deferred maintenance.
 2. Encourage the institutions to continue to correct identified fire safety and deferred maintenance deficiencies within the limits of available resources.
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Executive Summary:

The Regent Policy Manual requires annual governance reports on fire and environmental safety and deferred maintenance to be submitted to the Board each year. The reports are being combined this year to facilitate the discussion regarding Regent facilities. With the new schedule of governance reports, a report on Regent facilities will be presented beginning in December 2004.

Current operating budget resources available to correct fire and environmental safety and deferred maintenance items have become very limited due to reductions in building repair funds and the demand for these funds among fire safety, deferred maintenance, and building renewal projects.

In this year's report, the institutions have indicated that the budget reductions of recent years and the resultant decreases in building repair funds are negatively impacting their ability to correct fire safety deficiencies and deferred maintenance items.

**Building Repair
Budgets**

Adequate funding in the operating budgets for building renewal (repair) is a critical factor in reducing fire and environmental safety deficiencies and current deferred maintenance, and minimizing future facility needs.

- Due to significant budget reductions, Regent general education, operating budget building repair expenditures declined, in total, from a high of \$20.3 million in FY 2000 to \$11.5 million in FY 2002, with \$17.7 million being expended in FY 2003. (See Table 1, page 18.)

- FY 2004 general education building repair budgets, prior to appropriations reductions, total \$14.1 million and range from .13% to .58% of the replacement value of the institution's general fund, general education facilities.
- According to national facilities experts, at a minimum, building repair budgets should equal 1% of the facilities' replacement value; building repair budgets would need to increase by \$15.0 million to meet this 1% level.
- Operating budget building repair, general university funds provided approximately one-half of the total dollars expended for fire safety improvements and individual deferred maintenance projects completed from FY 1993 – FY 2003.

Fire and
Environmental
Safety

Potentially life-threatening fire safety deficiencies identified in inspections by the State Fire Marshal's Office or institutional personnel are promptly addressed and corrected, or facilities are closed until they can be made safe.

From FY 1993 (the first year in which data were collected) through FY 2003, fire safety projects (excluding components of major renovations projects) totaled \$36.4 million in general fund facilities as summarized below:

	<u>Total</u>	<u>Annual Average</u>
University of Iowa	\$14.4 million	\$1.3 million
University of Iowa Hospital and Clinics	12.7 million	1.2 million
Iowa State University	6.7 million	0.6 million
University of Northern Iowa	1.5 million	0.1 million
Iowa School for the Deaf	0.9 million	0.1 million
Iowa Braille and Sight Saving School	<u>0.2 million</u>	<u>0.0 million</u>
Total	\$36.4 million	\$3.3 million

Projects planned for or continued in FY 2004 total \$8.2 million including \$6.0 million at UIHC. (See Table 2, page 19.)

Institutions indicate that \$4.9 million are needed to correct fire safety deficiencies in general fund facilities identified in past inspections by the State Fire Marshal. (This amount excludes FY 2004 planned work and work to be accomplished as part of major renovations.)

Progress in correcting fire safety deficiencies will continue to be challenged by new safety standards, aging buildings, limited budgets, and changes in building usage.

Deferred
Maintenance

From FY 1993 through FY 2003, deferred maintenance projects totaling \$125.9 million were completed by the Regent institutions in general fund buildings and utilities as outlined in the following table:

	<u>Total</u>	<u>Annual Average</u>
University of Iowa	\$ 50.4 million	\$ 4.6 million
Iowa State University	45.8 million	4.2 million
University of Northern Iowa	23.3 million	2.1 million
Iowa School for the Deaf	3.9 million	0.4 million
Iowa Braille and Sight Saving School	<u>2.5 million</u>	<u>0.2 million</u>
Total	\$125.9 million	\$11.5 million

Projects planned for or continued in FY 2004 total \$13.7 million. (See Table 3, page 20.) (FY 2004 planned projects were reported prior to the appropriations reduction; consequently, the number and dollar value of the projects to be undertaken may be less than reported.)

From FY 1993 through FY 2003, Regent university renovation projects totaling \$83.0 million corrected significant amounts of deferred maintenance; planned or ongoing renovation projects which are correcting significant amounts of deferred maintenance total \$75.5 million.

While the above mentioned work has been completed or is in process, deferred maintenance continues.

The estimated amount of deferred maintenance in general fund facilities and utilities, as identified by the institutions but not through a complete facilities audit, is \$147.5 million. This amount:

- Includes individual projects (\$109.5 million) and deferred maintenance components of major projects on the Board's Five-Year Capital Plan for state funding (\$38.0 million).
 - Does not include deferred maintenance to be corrected by FY 2004 projects or the deferred maintenance components of ongoing renovation projects.
 - Compares with \$153.6 million reported in Fall 2000, \$145.9 million reported in Fall 2001, and \$145.7 million reported in Fall 2002.
 - Represents less than 5% of the \$3.5 billion estimated, current replacement value of general education, general fund facilities and utility systems at the Regent institutions.
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Strategic Plan:

One of the priorities of the Board's 2004 – 2009 Strategic Plan is the demonstration of public accountability and effective stewardship of resources. With the estimated replacement value of general fund buildings and utilities exceeding \$3.5 billion, effective stewardship of this resource is critical to the future of the Regent enterprise.

Correction of fire and environmental safety and deferred maintenance is also addressed directly or indirectly in each institution's strategic plan.

Background:

Annual Reports

Annual fire and environmental safety and deferred maintenance reports have been presented to the Board since 1988. For the first time, these are being combined into one report.

Focus of Report

This report focuses on the correction of fire and environmental safety and deferred maintenance items in general fund facilities, which total 15.7 million gross square feet, and utility systems. The estimated replacement value of the facilities is more than \$2.9 billion. (The replacement value does not normally include the replacement costs of the buildings' foundations.)

The report also includes information for the University of Iowa Hospitals and Clinics which total approximately 3.4 million gross square feet with a replacement value of more than \$940 million as reported by the University.

The University of Iowa Hospitals and Clinics reports fire and environmental safety deficiencies but continues to report no deferred maintenance in its facilities.

The residence systems, which total approximately seven million gross square feet, with an estimated replacement value of \$1.3 billion, are the next largest component of university total space after the general education facilities. Fire and environmental safety and deferred maintenance in the systems are addressed in the Residence System governance reports.

Fire Safety Fire and environmental safety standards are established by several agencies, including the State Fire Marshal, and federal and state governmental regulatory entities.

Deficiencies The State Fire Marshal's Office identifies deficiencies during biennial campus inspections, or campus personnel note the deficiencies. Potentially life-threatening deficiencies are promptly addressed and corrected, or facilities are closed until they can be made safe.

Lesser risks are prioritized using multiple factors including hazard assessments and regulatory requirements.

Renovation projects and new construction must meet current building codes.

Deferred Maintenance For a number of years, the institutions and Board Office have used the following common definition:

Common Definition Deferred maintenance is the repair or replacement of all, or a part of, an existing capital asset that was not repaired or replaced at the appropriate time because of a lack of funds.

- Deferred maintenance is dependent upon time. Replacement of a building or infrastructure system or component when it should be replaced is building renewal, not deferred maintenance.
- Deferred maintenance is sometimes referred to as "capital renewal backlog."

Causes Deferred maintenance results from inaction on:

- Normal maintenance, including planned and preventive maintenance, and
- Renewal and replacement projects.

Adequate funding of regular maintenance can significantly extend the useful lives of facilities and their components. Adequate funding of building renewal is also needed to replace building components.

Deferred Maintenance as National Problem The largest percentage of higher education infrastructure (buildings, utility systems, roads, sidewalks etc.) in the United States, as well as Iowa, was built during the 1960s and 1970s.

- These facilities are aging and many of their component systems have reached the end of their design life or have become obsolete.

Deferred maintenance in higher education is a national problem and is partially the result of the 1960's and 1970's building boom.

A 1995 study by the Association of Higher Education Facilities Officers, the National Association of College and University Business Officers, and Sallie Mae, which was reported in A Foundation to Uphold, estimated \$26 billion in total costs to eliminate accumulated deferred maintenance in American higher education.

- Urgent needs (conditions which, if not attended to in the next year, will further deteriorate and become more costly to remedy in the future) were estimated at \$5.7 billion.
- At the time the study was completed, the average public research university spent \$2.3 million annually on deferred maintenance against a deferred maintenance backlog of approximately \$64 million.

Funding Sources

The Regent institutions have made major efforts to correct fire and environmental safety issues and deferred maintenance over the last several years and have received significant state assistance as noted below.

The major funding sources for fire safety and deferred maintenance projects completed from FY 1993 through FY 2003 at the universities (excluding UIHC) and special schools are detailed below:

**Sources of Funding
FY 1993 – FY 2003**

<u>Fund Sources</u>	<u>Fire & Environ. Safety</u>	<u>Deferred Maintenance*</u>	<u>Total</u>
General Fund Operating Budget Building Renewal (Repair Funds)	\$11.7 million	\$ 64.8 million	\$76.5 million
Utility Renewal and Replacement Funds (restricted funds)	-----	24.8 million	24.8 million
Proceeds from Academic Building Revenue Bonds and Capital Appropriations, as detailed below (restricted funds)	7.0 million	14.6 million	21.6 million
Income from Treasurer's Temporary Investments (restricted funds)	4.9 million	8.5 million	13.4 million
* Includes only individual deferred maintenance items and not those corrected as part of major renovations.			

Prior State Support The history of prior state support in correcting deferred maintenance is summarized below:

1990 General Assembly — \$6 million in Academic Building Revenue Bonds for the Regent universities for fire and environmental safety projects.

1991 General Assembly — \$20 million in Academic Building Revenue Bonds for deferred maintenance, fire and environmental safety, equipment and utility projects at the universities.

1994 General Assembly — \$2 million in Academic Building Revenue Bonds for fire and environmental safety and deferred maintenance at the universities.

1995 General Assembly — \$5 million capital appropriation from the Rebuild Iowa Infrastructure Fund for fire and environmental safety, renovation and deferred maintenance at the universities.

1995, 1997 and 1998 General Assemblies – Appropriated Rebuild Iowa Infrastructure Funds for fire safety improvements and installation of the visual alert system at the Iowa School for the Deaf.

1996, 1997, 2000 and 2002 General Assemblies – Appropriated capital funds for major renovations; fire safety issues and deferred maintenance were and are being addressed as part of the following renovations:

- SUI – Biological Sciences Phases I and 2, Seaman Centers for the Engineering Arts projects;
 - ISU – Gilman Hall Systems Upgrade; and
 - UNI – Lang Hall Renovation, and Integrated Teaching and Technology Center (East Gym Renovation).
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Analysis:

Fire Safety

The following table provides a comparison between Fall 2002 and Fall 2003 of the institutional estimates of costs needed to correct the fire safety deficiencies in general fund buildings as identified by the State Fire Marshal's Office.

Estimated Needed
Funds

FIRE SAFETY DEFICIENCIES		
Additional Funding Needed to Correct Fire Safety Deficiencies Identified by the State Fire Marshal¹ General Fund Facilities		
(\$ Thousands)		
	Fall 2002 (FY 2003)²	Fall 2003 (FY 2004)³
SUI	\$3,263.0 ⁴	\$3,261.3 ⁴
ISU	1,733.9 ⁵	1,541.7 ⁵
UNI	0.0	0.0
ISD	60.0	54.0
IBSSS	0.0	0.0
Total	\$5,056.9	\$4,857.0

¹Excludes work to be included as part of major renovations in the Board's Five-Year Capital Plan, in buildings to be demolished, and for which waivers from the State Fire Marshal are to be requested.

²As reported November 2002, excludes work to be undertaken during FY 2003.

³As reported November 2003, excludes work to be undertaken during FY 2004.

⁴Estimated cost for the University of Iowa to complete the fire safety program for all general fund and Oakdale buildings. No costs associated with work at UIHC are included as the corrective action has not been identified by the State Fire Marshal.

⁵Does not include additional \$5.6 million in fire and building safety items identified by institutional personnel or improvements needed to address deficiencies at the Chemical Waste Handling Facility. The estimated cost of a new hazardous waste materials storage facility is \$10 million. Bonds to finance construction of a new hazardous waste materials storage facility were sold at the October 2003 Board meeting. Fall 2003 dollar amounts do not include costs for work to be undertaken as part of the major renovation of Pearson Hall as previously approved by the Board.

The University of Iowa, Iowa State University and the Iowa School for the Deaf each reported a small decline in funds needed to correct deficiencies identified by the State Fire Marshal's Office.

- Since new deficiencies may be identified in a subsequent inspection, the amount needed to correct the deficiencies identified by the State Fire Marshal's Office does not necessarily decline by the amount that the institutions have expended since the previous inspection.

Prioritization

Each Regent institution cooperates with the State Fire Marshal in establishing fire safety priorities, and each institution has a systematic method for determining the priority of fire safety improvements to be undertaken.

Citations from the State Fire Marshal can be classified as (1) user, (2) maintenance, or (3) other deficiencies.

1. User deficiencies are housekeeping or procedural items such as the use of a doorstop to prop open a door or storage of an item in a hall.
2. Maintenance items usually require no design and minimal expenses per item, such as door repairs. These are corrected utilizing physical plant / facility management personnel and funds.
3. Other deficiencies, the correction of which requires an outlay of funds beyond the capability of physical plant (facility management) maintenance funds, are prioritized.

Institutional summary information on the latest inspection from the State Fire Marshal's Office, project prioritization, and procedures for including the correction of fire safety deficiencies in renovation projects is included in the Regent Exhibit Book and is available from the Board Office.

Other Environmental Safety Issues

In addition to fire safety deficiencies identified by the State Fire Marshal, funding is needed for environmental safety deficiencies identified by campus personnel and regulatory entities.

Environmental safety issues include asbestos, lead, underground storage tanks, spill prevention control and countermeasure plans, storm water pollution protection plans, polychlorinated biphenyl's (PCB's), mercury, the clean air act, and radioactive sites.

The institutions report that they are dealing appropriately with the issues, and have developed the necessary plans to address them.

Asbestos In August 1994, the Occupational Safety and Health Administration (OSHA) promulgated new regulations covering asbestos abatement activities. The new standard took effect October 1, 1995, and increased the restrictions on construction activities and abatement actions. The standard also requires identification signage on asbestos-containing building materials.

Lead In May 1993, OSHA issued new lead safety standards addressing workplace activities and practices that involve potential employee exposure to lead. Many renovation projects of older buildings may involve lead paint removal; these require compliance with OSHA lead abatement regulations.

EPA Region VII Enforcement Initiative Region VII of the U.S. Environmental Protection Agency (EPA) has resumed inspecting Iowa colleges and universities for compliance with all environmental items under the agency's purview. These inspections follow the grace period that ended April 1, 2002.

Deferred Maintenance

Deferred Maintenance - Reporting Mechanism For the fourth consecutive year, the institutions have used a consistent format to present deferred maintenance. This reporting mechanism provides a systematic method for reporting deferred maintenance projects and permits progress to be tracked from year to year.

The reporting mechanism is designed to take the prior year listing of projects, deduct those accomplished during the prior year, and add newly identified ones; the adjusted list forms the base for the current fiscal year.

The deferred maintenance base for the current fiscal year is categorized into:

- Work to be accomplished in the current year;
- Work included in ongoing renovation projects, and
- Projects which would be incorporated into the major renovation projects in the Board-approved Five-Year Capital Plan (FY 2005 – FY 2009) for state funding.

The remaining deferred maintenance items become the individual projects which will require future funding.

Identification and Prioritization The institutions have in place processes for identifying and prioritizing deferred maintenance items. A summary of the information provided on the processes is included in the Regent Exhibit Book and is available from the Board Office.

Total Deferred
Maintenance

The following table summarizes the deferred maintenance reported by the institutions. Individual projects and components of major projects on the Board's Five-Year Capital Plan (FY 2005 – FY 2009) are shown separately. (Dollar amounts for projects to be undertaken in FY 2004 and the deferred maintenance components of ongoing renovation projects are not included.)

These dollar amounts are institutional estimates and were not developed through a detailed, comprehensive facilities audit. Accordingly, caution is advised in making comparisons from one institution to another regarding the amount of deferred maintenance.

Total Deferred Maintenance
Fall 2003*
(\$ Thousands)

	<u>SUI</u>	<u>ISU***</u>	<u>UNI</u>	<u>ISD</u>	<u>IBSSS</u>	<u>Total</u>
<u>Individual Projects:</u>						
Buildings**	\$18,185.1	\$45,001.0	\$ 9,596.0	\$1,110.0	\$669.0	\$ 74,561.1
Utilities	<u>2,577.7</u>	<u>11,228.0</u>	<u>21,035.0</u>	<u>125.0</u>	<u>30.4</u>	<u>34,996.1</u>
Total	\$20,762.8	\$56,229.0	\$30,631.0	\$1,235.0	\$699.4	\$109,557.2
<u>Incorporated into Major Renovation Projects, Board's Five-Year Plan:</u>						
Buildings**	\$12,111.3	\$4,040.4	\$14,841.0	\$0.0	\$0.0	\$30,992.7
Utilities	<u>0.0</u>	<u>0.0</u>	<u>6,962.0</u>	<u>0.0</u>	<u>0.0</u>	<u>6,962.0</u>
Total	\$12,111.3	\$4,040.4	\$21,803.0	\$0.0	\$0.0	\$37,954.7
<u>Grand Total:</u>						
Buildings**	\$30,296.4	\$49,041.4	\$24,437.0	\$1,110.0	\$669.0	\$105,553.8
Utilities	<u>2,577.7</u>	<u>11,228.0</u>	<u>27,997.0</u>	<u>125.0</u>	<u>30.4</u>	<u>41,958.1</u>
Total	\$32,874.1	\$60,269.4	\$52,434.0	\$1,235.0	\$699.4	\$147,511.9
*Does not include dollar amounts for projects to be undertaken in FY 2004 and the deferred maintenance components of ongoing renovation projects.						
** Includes site work.						
*** ISU has excluded Morrill Hall from its report due to its unique situation. The building, which has never had any major remodeling or upgrading, has been unoccupied since 1998 and its condition has deteriorated substantially. The University announced in August 2002 a fund raising campaign to renovate the building. In September 2003, the Board approved the program statement for the renovation.						

Renovations

Some of the renovation projects on the Board's Five-Year Plan (FY 2005 – FY 2009) for state capital funding that include correction of significant amounts of deferred maintenance are:

<u>Institution</u>	<u>Project</u>
SUI	Chemistry Building Renovation
SUI	Seashore Hall Wing Replacement & Renovation
ISU	Veterinary Teaching Hospital / Diagnostic Lab
ISU	Coover Hall, Information Science
UNI	Electrical Distribution Loop System / Load Break
UNI	Science Buildings Renovations

The Chemistry Building Renovation, Veterinary Teaching Hospital / Diagnostic Lab and Electrical Distribution Loop System are the top projects in the Board's FY 2005 capital budget request.

- The three universities have estimated that, conservatively, these three projects would correct approximately \$18 million in deferred maintenance.

Comparisons

The following table compares the total deferred maintenance reported from Fall 2000 (FY 2001) through Fall 2003 (FY 2004). Items to be undertaken during the current year and ongoing renovation (major) projects are excluded.

**Deferred Maintenance
Buildings and Utilities***
Fall 2000 - Fall 2003
(\$ Thousands)

	<u>Fall 2000</u> <u>(FY 2001)</u>	<u>Fall 2001</u> <u>(FY 2002)</u>	<u>Fall 2002</u> <u>(FY 2003)</u>	<u>Fall 2003</u> <u>(FY 2004)</u>
SUI				
Buildings	\$ 28,136.0	\$ 29,236.1	\$ 30,879.9	\$ 30,296.4
Utilities	<u>8,104.0</u>	<u>4,284.1</u>	<u>3,040.0</u>	<u>2,577.7</u>
SUI Total	\$ 36,240.0	\$ 33,520.2	\$ 33,919.9	\$ 32,874.1
ISU				
Buildings	\$ 45,777.3	\$ 47,275.2	\$ 46,039.3	\$ 49,041.4
Utilities	<u>12,168.0</u>	<u>11,990.0</u>	<u>11,552.0</u>	<u>11,228.0</u>
ISU Total	\$ 57,945.3	\$ 59,265.2	\$ 57,591.3	\$ 60,269.4
UNI				
Buildings	\$ 23,829.0	\$ 24,871.0	\$ 24,724.0	\$ 24,437.0
Utilities	<u>32,605.0</u>	<u>26,099.0</u>	<u>27,483.0</u>	<u>27,997.0</u>
UNI Total	\$ 56,434.0	\$ 50,970.0	\$ 52,207.0	\$ 52,434.0
ISD				
Buildings	\$ 1,485.0	\$ 1,195.0	\$ 1,180.0	\$ 1,110.0
Utilities	<u>340.0</u>	<u>145.0</u>	<u>125.0</u>	<u>125.0</u>
ISD Total	\$ 1,825.0	\$ 1,340.0	\$ 1,305.0	\$ 1,235.0
IBSSS				
Buildings	\$ 1,085.0	\$ 800.0	\$ 670.0	\$ 669.0
Utilities	<u>50.0</u>	<u>30.0</u>	<u>20.0</u>	<u>30.4</u>
IBSSS Total	\$ 1,135.0	\$ 820.0	\$ 690.0	\$ 699.4
Totals				
Buildings	\$100,312.3	\$103,377.3	\$103,493.2	\$105,553.8
Utilities	<u>53,267.0</u>	<u>42,548.1</u>	<u>42,220.0</u>	<u>41,958.1</u>
Grand Total	\$153,579.3	\$145,925.4	\$145,713.2	\$147,511.9
*Excludes work planned to be undertaken during identified year and work in ongoing renovation (major) projects.				

Totals

While the total amount of deferred maintenance reported in Fall 2003 is less than the amount reported in Fall 2000, it has, in the aggregate, increased slightly from the amounts reported in Fall 2001 and Fall 2002.

However, the University of Northern Iowa noted in its report that some deferred items have not been defined and included because the existing priority items have not yet been addressed.

Buildings

The total amount of building deferred maintenance for the Regent enterprise has increased slightly each year since Fall 2000.

Changes in the amount of building deferred maintenance from Fall 2002 to Fall 2003 include the following:

- The University of Iowa has shown a slight decrease (\$-0.6 million) in building deferred maintenance from Fall 2002 to Fall 2003. While work has been completed and is ongoing, \$3 million in newly identified problems were added to the backlog during FY 2003.
 - Significant items added include Bowen Science Building HVAC (\$1.85 million), Library South Entrance Repairs (\$0.3 million), Museum of Art HVAC Improvements (\$0.3 million), and Hardin Library Building Envelope (\$0.2 million, scheduled to be accomplished during FY 2004).
- Iowa State University attributes its \$3 million increase from Fall 2002 to Fall 2003 to one or more of the following factors:
 - Age of the building and its systems
 - Condition of the systems
 - Inflationary increases
- The University of Northern Iowa reports a slight decline (-\$0.3 million) from Fall 2002 to Fall 2003; however, no new items were added to the listing in Fall 2003 since some deferred items have not been defined and included.
- Iowa School for the Deaf reports a slight decrease in the amount of deferred maintenance.

A number of projects on prior lists have been accomplished or are in the process of being undertaken, including the Curtain Wall Replacement in the Girls' Dormitory and Elementary School and the continuation of the Utility System upgrade; these projects were funded by FY 2003 and FY 2004 capital appropriations.

For the Iowa Braille and Sight Saving School, the amount of building deferred maintenance is basically the same as reported last fall.

Comparisons of dollar amounts sometimes obscure progress that is being made in addressing deferred maintenance on the campuses.

- The University of Iowa Health Sciences Campus Master Plan will provide new research and teaching facilities and will eliminate or remove substantial deferred maintenance problems in the Steindler Building, Bowen Science Building, Medical Education Building and Westlawn. The University estimates these benefits at \$940,000.
- The University of Iowa also reports that construction of the Art Building, Blank Honors Center, Pomerantz Center and the Adler Journalism and Mass Communications Building will permit the University to more directly address existing problems in the Communications Center, Seashore Hall and International Center.

Type of Deferred
Maintenance

Table 4 (page 21) summarizes Fall 2003 deferred maintenance by type of project.

As reported by institutional officials, heating, ventilating and air conditioning (HVAC) work is the largest single need.

- Excluding work to be undertaken in FY 2004, the institutions have estimated that HVAC modifications should be undertaken in 151 buildings (Iowa State University counts each building addition as a separate building) at an estimated cost of \$23.3 million.
- This amount has changed little from the amounts reported in the Fall 2000 – Fall 2002 reports.
- This reporting of needed expenditures for HVAC work is consistent with expectations since the systems included in buildings constructed in the late 1960's and early 1970's have or are reaching the end of their useful lives.

Corrective action to building roofs and envelopes helps ensure the integrity of the buildings and helps minimize damage to the interiors.

- The number of buildings with building envelopes needing work is estimated at 141 at a cost of \$16.6 million (slightly less than Fall 2002).
 - The estimated cost of roof work is \$6.9 million; this is a decline from the \$9.9 million reported in Fall 2001 and \$8.1 million reported in Fall 2002.
 - The amount needed for roofs is less than work needed for windows (\$15.1 million), electrical (\$15.5 million) and interior (\$16.3 million).
-

**Financing
Projects**

Fire safety deficiencies and the amount of deferred maintenance would have grown at a much more rapid rate if the institutions had not increased their building repair expenditures from the early 1990s.

- General education, general fund building repair expenditures increased from \$7.1 million in FY 1990 to \$20.3 million in FY 2000. (See Table 1, page 18).
- Internal reallocations provided a significant portion of the increased funds and appropriations added \$1.2 million between FY 1995 and FY 2000.

Expenditures were slightly lower in FY 2001 (\$19.3 million) and dropped to \$11.5 million in FY 2002 before increasing to \$17.7 million in FY 2003.

The significant reductions in state operating appropriations have led to the reductions identified above.

The mid-year FY 2004 appropriations reductions are likely to reduce FY 2004 building repair expenditures, which were originally budgeted for the total Regent enterprise at \$14.1 million. There will thus be an increased demand for the limited resources among fire safety, deferred maintenance, and building renewal projects.

**Building Repairs
and Routine
Maintenance**

Adequate annual funding of building repair and routine maintenance is needed to address fire safety issues, to avoid further deterioration of buildings, and to continue the reduction in the backlog of identified projects.

According to studies published by the Society for College and University Planning, the National Association of College and University Business Officers and the Association of Higher Education Facilities Officers, building repair funds should equal, at a minimum, 1% of the replacement value of campus facilities.

The FY 2004 Regent general fund, general education building repair operating budgets range from .13% to .58% of the replacement value of the campus' general education facilities (prior to any reductions from the appropriations rescission).

As noted in prior deferred maintenance governance reports, capital asset renewal is one of the greatest challenges facing American higher education because facilities help ensure quality academic programs and the ability to attract and retain faculty and students.

Capital Funding

Capital appropriations are also requested from the State to fund improvements that are beyond the capability of institutional operating budgets.

Capital funding for correction of deferred maintenance and fire safety has not been specifically appropriated since FY 1996.

Funding in the amount of \$2.0 million for correction of fire and environmental safety deficiencies is the number one priority in the Board's FY 2005 capital budget request.

In addition, major remodeling projects included in the Board's Five-Year Capital Plan (FY 2005 – FY 2009) will correct certain fire safety deficiencies.

- This includes the following projects in the Board's FY 2005 Capital Budget Request: SUI Chemistry Building Renovation and the UNI Science Buildings Renovation, Phase 1 projects; the latter includes the renovation of the Physics Building.

The Board's FY 2005 capital request also includes \$10.0 million to correct individual deferred maintenance items.

As detailed earlier in this report, the correction of deferred maintenance items totaling approximately \$38.0 million will be incorporated into major renovation and utility projects included in the Regent approved Five-Year Plan (FY 2005 – FY 2009) if state funding is received.

- This includes the following projects in the Board's FY 2005 Capital Budget Request: SUI Chemistry Building Renovation, ISU Veterinary Teaching Hospital / Diagnostic Lab, and the UNI Science Buildings Renovation, Phase 1 projects, among others.

While the focus of the above discussion has been on building repair (renewal funds) which are used to replace building components as well as deferred maintenance and fire safety projects, adequate funding of regular maintenance is also needed as it can significantly extend the useful lives of facilities and their components.

If routine maintenance is not properly funded, the useful life of a component is shortened and the need for capital renewal funding is even greater. If capital renewal funding is not available, the lack of replacement can cause further damage; i.e. a leaking, beyond-repair roof can cause damage to the interior. However, no level of maintenance can indefinitely extend the life of roofs, windows, mechanical systems and other building and utility systems.


Joan Racki

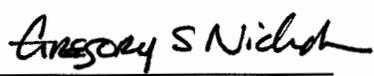
Approved: 
Gregory S. Nichols

TABLE 1
BOARD OF REGENTS, STATE OF IOWA

OPERATING BUDGET GENERAL FUND BUILDING REPAIR EXPENDITURES

General University	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
SUI	\$ 2,609,724	\$ 1,765,221	\$ 2,296,461	\$ 3,356,426	\$ 3,902,015	\$ 4,579,894	\$ 5,200,910
ISU	2,060,158	2,614,546	3,206,425	5,458,582	4,991,869	6,159,403	6,120,634
UNI	2,030,674	1,592,040	1,473,058	1,315,056	3,473,110	2,473,399	2,563,818
ISD	311,657	318,759	343,125	286,814	332,161	307,219	412,919
IBSSS	93,124	55,409	28,093	34,682	72,001	71,707	104,880
Total	\$ 7,105,337	\$ 6,345,975	\$ 7,347,162	\$ 10,451,560	\$ 12,771,156	\$ 13,591,622	\$ 14,403,161

General University	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004*
SUI	\$ 5,302,914	\$ 6,467,637	\$ 7,646,032	\$ 8,369,604	\$ 6,527,988	\$ 5,063,564	\$ 6,791,133	\$ 6,261,871
ISU	6,762,871	6,923,336	6,690,286	9,328,081	9,420,081	5,141,960	9,878,728	6,644,432
UNI	2,249,963	3,432,210	2,282,012	1,819,021	2,236,707	529,790	508,489	1,000,000
ISD	415,959	450,899	362,190	639,727	741,221	572,136	368,246	98,000
IBSSS	82,404	45,712	227,818	154,926	417,608	170,575	106,856	110,257
Total	\$ 14,814,111	\$ 17,319,794	\$ 17,208,338	\$ 20,311,359	\$ 19,343,605	\$ 11,478,025	\$ 17,653,452	\$ 14,114,560

* FY 2004 budgeted amount as approved in July 2003 and do not include reductions which may be due to the 2.5% appropriations reduction.

TABLE 2
BOARD OF REGENTS, STATE OF IOWA
FIRE SAFETY PROJECTS*
GENERAL FUND FACILITIES
(\$ Thousands)

Projects:	SUI**	UIHC	ISU	UNI	ISD	IBSSS	Total
Completed Projects:							
FY 1993	\$ 1,476.5	\$ 507.3	\$ 1,135.6	\$ 551.3	\$ 111.5	\$ 11.0	\$ 3,681.7
FY 1994	721.2	619.2	365.6	447.3	6.9	6.9	2,271.7
FY 1995	1,664.2	619.4	153.6	62.5	97.5	10.9	2,608.1
FY 1996	2,233.4	55.0	2,163.7	83.6	211.5	4.0	4,751.2
FY 1997	1,320.0	380.0	235.8	63.8	91.5	41.2	2,132.3
FY 1998	1,401.0	1,552.3	735.9	126.3	125.0	8.1	3,948.6
FY 1999	1,696.0	1,880.8	288.0	12.2	225.0	8.4	4,110.4
FY 2000	1,272.0	2,335.0	219.0	64.3	12.0	1.0	3,903.3
FY 2001	944.0	2,071.7	538.3	77.5	1.0	-	3,632.5
FY 2002	718.0	1,322.7	542.8	8.2	25.0	-	2,616.7
FY 2003	930.0	1,377.0	336.9	26.3	23.0	65.0	2,758.2
Subtotal	\$ 14,376.3	\$ 12,720.4	\$ 6,715.2	\$ 1,523.3	\$ 923.0	\$ 156.5	\$ 36,414.7
Projects Planned for or Continued in FY 2004	\$ 1,574.5	\$ 6,005.0	\$ 565.8	\$ 25.0	\$ 6.0	\$ 2.0	\$ 8,178.3
Total	\$ 15,950.8	\$ 18,725.4	\$ 7,281.0	\$ 1,548.3	\$ 929.0	\$ 158.5	\$ 44,593.0
By Source of Funds:							
Building Renewal / General University	\$ 8,093.2		\$ 3,480.5	\$ 546.2	\$ 516.0	\$ 158.5	\$ 12,794.4
Income from Treasurer's Temporary Investments	4,706.0		542.8	174.8	-	-	5,423.6
Academic Building Revenue Bonds	1,587.6		2,206.7	826.0	-	-	4,620.3
Special and Capital Appropriations	1,000.0		1,000.0		385.0	-	2,385.0
University Hospital Building Usage Funds		\$ 18,725.4					18,725.4
Other	564.0		51.0	1.3	28.0	-	644.3
Total	\$ 15,950.8	\$ 18,725.4	\$ 7,281.0	\$ 1,548.3	\$ 929.0	\$ 158.5	\$ 44,593.0

* Does not include fire safety components of major renovation projects but does include fire safety improvements in Old Capitol - Fire Restoration and Building Improvements project.

**SUI - Excludes UIHC; includes projects approved and funded for FY 93 - FY 03; for FY 1993 also includes projects completed with Academic Building Building Revenue Bonds, 1991.

TABLE 3
BOARD OF REGENTS, STATE OF IOWA FY 1993 - FY 2004
GENERAL FUND BUILDING AND UTILITY DEFERRED MAINTENANCE PROJECTS AND
RENOVATION PROJECTS WHICH INCLUDE CORRECTION OF DEFERRED MAINTENANCE
(\$ thousands)

Deferred Maintenance Projects:	SUI	ISU	UNI	ISD	IBSSS	Total
Completed Projects:**						
FY 1993	\$ 6,591.9	\$ 970.2	\$ 1,593.4	\$ 45.0	\$ 16.1	\$ 9,216.6
FY 1994	2,881.6	1,881.1	1,459.6	543.5	75.9	6,841.7
FY 1995	4,922.1	7,805.3	1,703.1	148.0	24.8	14,603.3
FY 1996	6,571.3	6,944.4	2,581.3	173.0	207.8	16,477.8
FY 1997	3,262.6	2,953.8	2,256.7	133.1	95.6	8,701.8
FY 1998	3,053.0	3,495.3	1,677.7	282.5	172.5	8,681.0
FY 1999	2,928.8	3,492.2	3,435.2	470.0	36.8	10,363.0
FY 2000	6,375.4	5,522.2	3,859.1	758.0	595.1	17,109.8
FY 2001	3,798.2	6,104.2	858.7	485.0	49.1	11,295.2
FY 2002	2,598.9	2,463.9	3,442.6	660.0	1,159.8	10,325.2
FY 2003	<u>7,377.6</u>	<u>4,194.8</u>	<u>439.4</u>	<u>165.0</u>	<u>69.3</u>	<u>12,246.1</u>
Subtotal	\$ 50,361.4	\$ 45,827.4	\$ 23,306.8	\$ 3,863.1	\$ 2,502.8	\$ 125,861.5
Projects Planned for or Continued in FY 2004	\$ 3,602.5	\$ 7,316.2	\$ 1,139.0	\$ 685.0	\$ 952.7	\$ 13,695.4
Total	\$ 53,963.9	\$ 53,143.6	\$ 24,445.8	\$ 4,548.1	\$ 3,455.5	\$ 139,556.9
FY 1993 - FY 2003 Renovation Projects Which Include Correction of Significant Amounts of Deferred Maintenance**	\$ 38,041.6	\$ 22,845.1	\$ 22,151.0			\$ 83,037.7
Renovation Projects Planned or Continued for FY 2004 with Correction of Significant Amounts of Deferred Maintenance**	\$ 18,196.0	\$ 26,513.4	\$ 30,800.0			\$ 75,509.4
GRAND TOTAL	\$ 110,201.5	\$ 102,502.1	\$ 77,396.8	\$ 4,548.1	\$ 3,455.5	\$ 298,104.0
Total - By Source of Funds						
Building Renewal/Building Maintenance/General University	\$ 27,390.4	\$ 31,920.1	\$ 18,439.0	\$ 1,708.1	\$ 1,345.0	\$ 80,802.6
Building Renewal/Academic Building Revenue Bonds	340.0		83.5			423.5
Income from Treasurer's Temporary Investments (TTI)	10,294.3	11,521.6	805.7			22,621.6
Gifts, Grants	2,580.7	9,124.9				11,705.6
Utility Renewal and Replacement	17,100.6	9,326.0				26,426.6
Academic Building Revenue Bonds; Project Notes	11,346.3	11,862.2	9,998.6			33,207.1
Capital and Special Appropriations	25,640.0	13,005.5	45,602.7	2,070.0	1,845.8	88,164.0
Agriculture Experiment Station & Cooperative Extension		895.2				895.2
Facilities Overhead Use Allowance	1,679.0	982.5				2,661.5
College of Medicine Gifts / Treasurer's Temporary Investments	2,468.4					2,468.4
College of Medicine Earnings and Gifts	1,645.9					1,645.9
College of Medicine Earnings, Gifts / Treasurer's Temp. Investment	4,114.3					4,114.3
Other (includes unspecified combination of above fund sources)	<u>9,715.9</u>	<u>13,864.1</u>	<u>2,467.3</u>	<u>770.0</u>	<u>264.7</u>	<u>27,082.0</u>
GRAND TOTAL - INDIVIDUAL DEFERRED MAINTENANCE ITEMS AND RENOVATION COSTS	\$ 110,201.5	\$ 102,502.1	\$ 77,396.8	\$ 4,548.1	\$ 3,455.5	\$ 298,104.0

Notes:

*SUI - includes projects approved and funded for FY 93 - FY 96; for FY 1993 also includes projects completed with Academic Building Revenue Bonds.

**Renovation projects include SUI - Gilmore Hall, Schaeffer Hall, Phillips Hall, Bowen Science Building Microbiology, Medical Education Building, Hancher Auditorium, Engineering Building, Biological Sciences - Phase 2, Hydraulics Laboratory Modernization; ISU - Catt Hall, Laboratory of Mechanics, Gilman Hall and Gilman Hall Systems Upgrade, State Gym, Beardshear Hall, Hamilton Hall and Pearson Hall. UNI - Seerley, Wright and Lang Halls, Commons, Steam Distribution System Replacement - Phase 1, and Innovative Teaching and Technology Center (East Gym Renovation).

TABLE 4
BOARD OF REGENTS, STATE OF IOWA
CATEGORIZATION OF GENERAL FUND BUILDING DEFERRED MAINTENANCE BY TYPE OF PROJECT*
As of Fall, 2003
(\$ thousands)

Category	SUI		ISU		UNI		ISD		IBSSS		Total	
	# Blds	\$	# Blds**	\$	# Blds	\$	# Blds	\$	# Blds	\$	# Blds	\$
Building Envelope	11	\$ 4,290.8	105	\$ 9,088.3	14	\$ 2,912.0	4	\$ 145.0	7	\$ 137.6	141	\$ 16,573.7
HVAC	16	7,242.1	100	6,812.3	25	8,335.0	6	750.0	4	117.5	151	23,256.9
Roofs	8	782.9	88	4,667.2	5	1,390.0	1	45.0	3	51.1	105	6,936.2
Site Work				709.7		1,379.0		30.0		10.2		2,128.9
Windows	13	5,066.9	100	9,244.4	1	740.0			1	15.3	115	15,066.6
Plumbing	18	2,570.7	91	3,323.4	3	138.0			3	46.0	115	6,078.1
Electrical	16	3,075.8	103	7,182.4	10	5,026.0		80.0	5	92.0	134	15,456.2
Interior	16	4,094.6	102	8,013.7	19	3,936.0	1	60.0	5	199.3	143	16,303.6
Elevator	11	1,591.3									11	1,591.3
Exterior Accessories	6	321.6									6	321.6
Controls & Safety	13	1,259.7			6	581.0					19	1,840.7
Total		\$ 30,296.4		\$ 49,041.4		\$ 24,437.0		\$ 1,110.0		\$ 669.0		\$ 105,553.8

* Excludes projects in process or projects scheduled to begin during FY 2004, including major renovations.
Includes deferred maintenance to be incorporated into major renovations included in the Board's Five-Year Capital Program, FY 2005 - FY 2009.
** Each building addition listed as a separate building.