Contact: John Nash

ANNUAL FACILITIES REPORT

Action Requested: Consider recommending that the Board: Page

1. Receive of the **Facilities Governance Report for 2017**. 2

2. Receive of the **Facilities Governance Report for 2018** and recommend to the Board that it reaffirm its support for continued: 22
   - Interinstitutional coordination on facility issues and
   - Institutional correction of identified fire safety and deferred maintenance deficiencies within the limits of available resources.

3. Approve and receive the following **Five-Year Capital Plans**: 42
   - Approve the "Five-Year Capital Plan for State Funds" which contains the Capital Request for FY 2020 – FY 2024 totaling $224.3 million including $54.3 million for FY 2020; all would be funded by state appropriations or Academic Building Revenue Bonds. 43
   - Receive the "Five-Year Capital Plan for University of Iowa Hospitals and Clinics" totaling $394.5 million that would be funded by Hospital Building Usage Funds. 51
   - Receive the "Five-Year Capital Plan for Other Funds" totaling $1.0 billion that would be funded by sources other than state and UIHC funds. 52

4. Approve the **Five-Year Institutional Roads Program** totaling $10.4 million for calendar years (CY) 2019 through 2023, including $2.09 million in capital projects for CY 2019. 56

FACILITIES GOVERNANCE REPORT FOR 2017

Executive Summary:

All Regent Facilities

- Average building age = 41 years
- Acres = 4,397 on campus + 839 off campus = 5,237 acres (eight square miles)
- Square footage = 41.0 million, which includes 18.8 million in General Education Fund (GEF) facilities

Fire Safety projects in GEF facilities:

- Completed = $ 85.1 million (FY 1993 to FY 2018)
- Outstanding* = $ 12.1 million

Deferred Maintenance in GEF facilities:

- Completed = $ 1.0 billion (FY 1993 to FY 2018)
- Outstanding* = $837.3 million

* To address some of the outstanding fire safety and deferred maintenance needs, $20 million in state funds were requested for FY 2019, followed by $20 million for the next four years for a total of $100 million over five years per the “Five-Year Capital Plan for FY 2019–FY 2023” on page 43.

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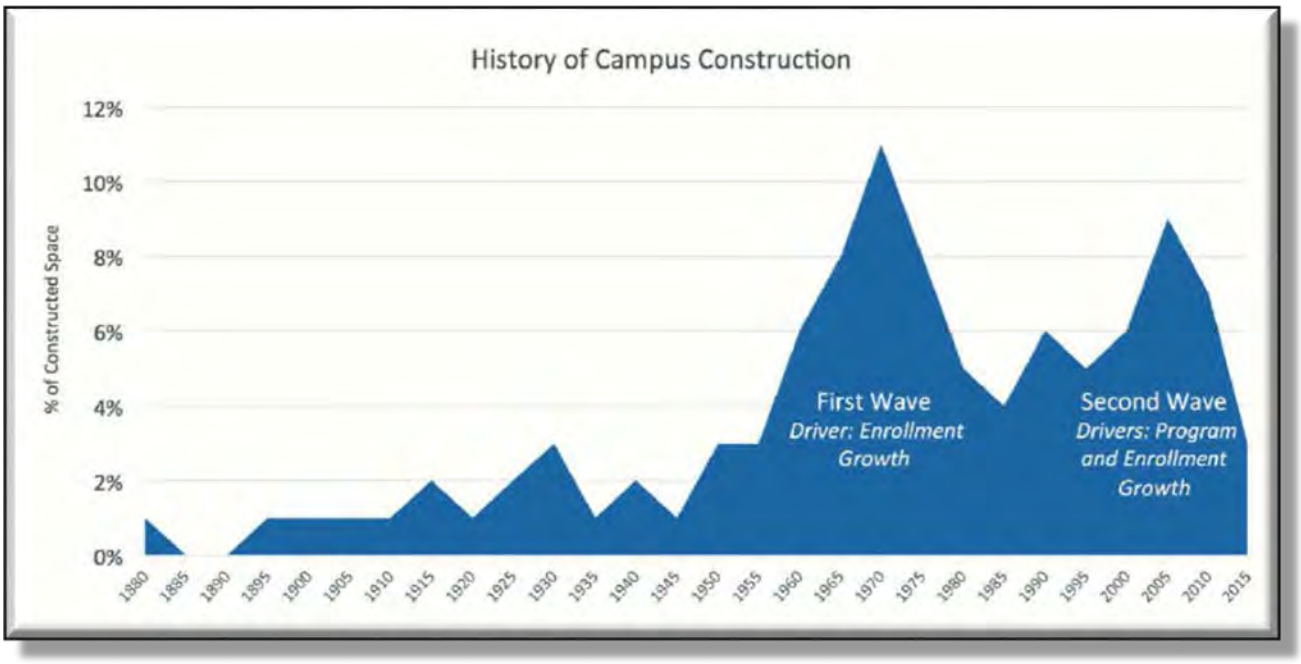
Part 1 of 5
BACKGROUND

The annual Facilities Governance Report, required by the Board's *Policy Manual*, is intended to provide the Board with a broad overview of the facilities at each of the Regent institutions and their condition. Along with its human resources and its intellectual, financial and equipment assets, facilities are a primary resource of a higher education institution. Quality facilities help ensure excellent academic programs and the ability to attract and retain faculty, staff and students.

a. Age and Quality: One of the biggest contributing factors to the amount of deferred maintenance and the presence of fire safety deficiencies is the age of a facility. Another big factor is the quality of the original construction itself.



Sightlines: *State of Facilities in Higher Education, 2017 Benchmark, Best Practices & Trends*

Sightlines is a nationally-known strategic planning and advisory firm specializing in higher educational facilities, consults directly with all three of our universities and tracks over 400 campuses. They report there were two waves of construction over the last 50 years that are placing stress on the Regent institution's ability to care for facilities.

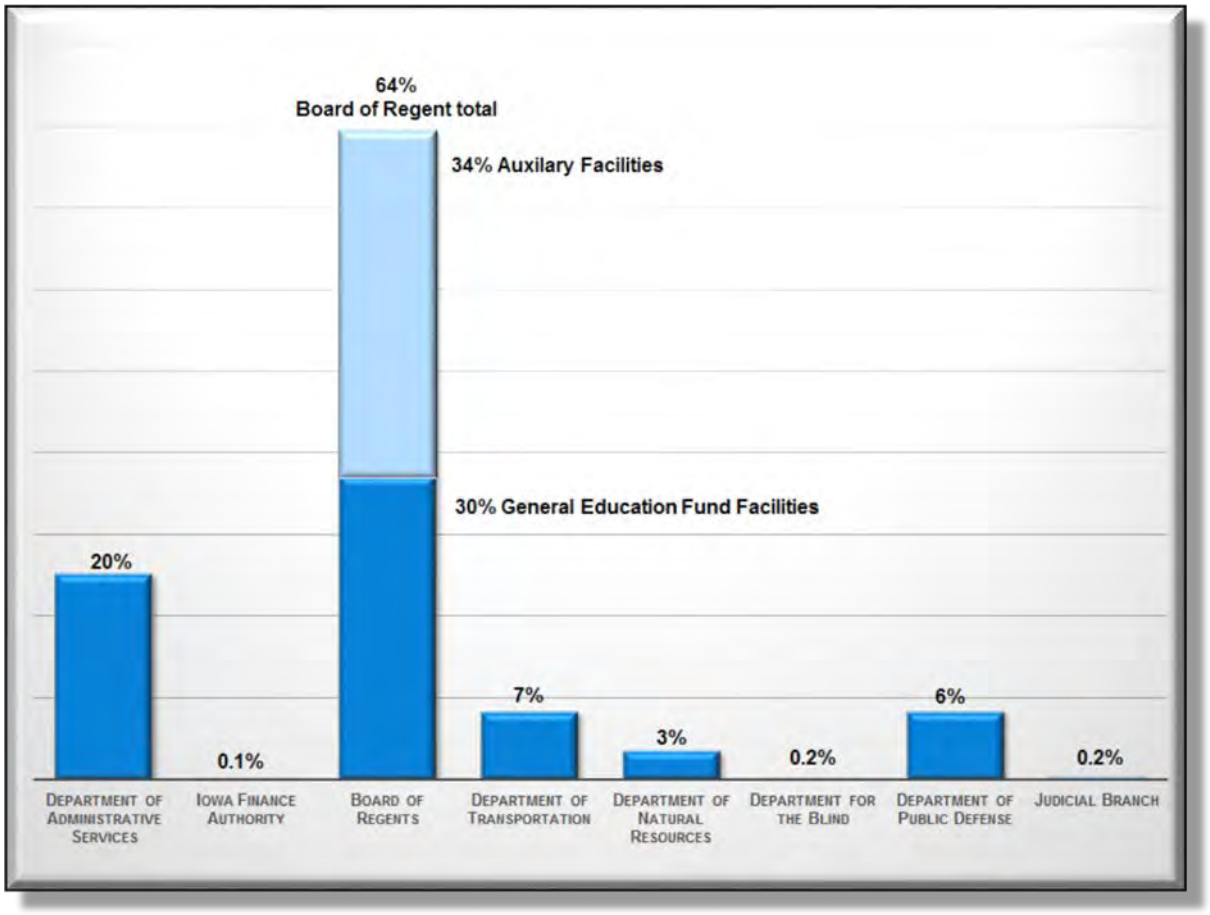
The "First Wave" (see chart above) of construction in the 1960s and 1970s represents 40 percent of all campus construction in the United States (32 percent for Regent General Education Fund (GEF) facilities) today and was generated by the G.I. Bill and the baby boomer generation. This construction wave is characterized by buildings that were built quickly, have poor construction and now represent the largest portion of the Regents' growing backlog of deferred maintenance. Now 39 to 58 years old, most of these facilities have reached or will soon reach the end of their useful lives. These buildings must be repaired, renovated, or replaced in order to maintain competitive programs on Regent campuses and represent our "catch up" needs.

The "Second Wave" (see chart on previous page) from 1995 to 2015 represents another 30 percent of all campus construction in the United States (25 percent for Regent GEF facilities) today and was generated by the increasing enrollment of millennials and their changing expectations, rooted in a higher demand for collaboration and new technology. Campuses also became more residential with added amenities. This construction wave contains buildings that are much more energy efficient, but require more routine maintenance to keep systems operating at peak performance and represent our "keep up" needs.

In summary, the catch-up needs (32 percent) and keep-up needs (25 percent) represent 57 percent of the fire safety deficiencies and deferred maintenance in Regent facilities, which are coming due simultaneously.

b. Square Footage: The Board of Regents own, operate and maintain 64 percent of all State of Iowa facilities. Of the Regent facilities, 30 percent are GEF facilities, which include academic, research and administration facilities. The other 34 percent are Auxiliary Facilities such as the University of Iowa Hospitals and Clinics, utilities, athletic facilities, residence halls, recreation facilities, parking, student unions and Iowa State University Agricultural Experiment Station.

Square Footage
Percentages of All State of Iowa Facilities*



***** Per these eight State of Iowa agencies in April 2017

That 64 percent of all State of Iowa facilities includes 41.0 million square feet with a replacement value of $18.4 billion. The General Education Fund facilities, representing 30 percent of all state facilities, includes 18.8 million square feet and a replacement value of $9.0 billion. The auxiliary facilities, representing 34 percent of all state facilities, includes 22.2 million square feet and a replacement value of $9.4 billion.

Square Footage
All Regent Facilities vs Regent GEF Facilities

Gross Square Footage (GSF)	**All Facilities**		**Academic/Research/ Administrative (GEF) only***	
Years	GSF of Intial Construction	Percent of Total	GSF of Intial Construction	Percent of Total
Pre-1930	5,227,876	13%	3,708,042	20%
1931-1950	1,550,119	4%	770,451	4%
1951-1960	2,167,237	5%	713,731	4%
1961-1970	7,099,480	17%	2,782,720	15%
1971-1980	5,607,067	14%	3,296,423	17%
1981-1990	3,584,451	9%	1,585,081	8%
1991-2000	4,933,644	12%	2,078,738	11%
2001–2010	5,783,542	14%	2,476,402	13%
2011 - present	5,123,404	12%	1,460,686	8%
Total	**41,076,820**	100%	**18,872,274** 46% of total	100%

*Includes Oakdale

First Wave of Construction

Second Wave of Construction

Replacement value of facilities is important, because it determines appropriate budgets for deferred maintenance. According to national standards, 1 percent is the minimum commitment to a budget that prevents future facilities deterioration. The Board of Regents *Policy Manual* states that institutions should budget approximately 1.5 percent of their replacement value for deferred maintenance to not only catch up, but also keep up. Lack of funds, enrollment increases and the age of Regent facilities (average age is 41 years), have created significant challenges in attaining such budgeting levels.

Square Footage
By Institution and Use

Gross Square Footage (GSF)	**SUI**	**ISU**	**UNI**	**ISD**	**IBSSS**	Total
Acad/Res/Admin (GEF) only	8,700,501	7,057,050	2,541,980	381,236	191,507	**18,872,274**
UIHC	4,172,242					4,172,242
All Other	8,264,655	7,471,708	2,295,941			18,032,304
					UIHC and All Other Subtotal =	**22,204,546**
Total	21,137,398	14,528,758	4,837,921	381,236	191,507	**41,076,820**

c. Acres: The Regent institutions have a total of 4,397 on-campus acres and 839 off-campus acres, excluding farm acreage, for a total of 5,237 acres. This is an increase of 15 acres over last year. These 5,237 acres equate to just over eight square miles.

d. Capital Expenditures on Facilities over the last 5 Years: For all capital projects over $250,000 over the last five years, Regent institutions spend an average of $472.5 per year.

The expenditures are from all sources of funds including capital appropriations; building renewal (repair) funds; institutional road funds; gifts and grants; income from treasurer's temporary investments; proceeds of academic building, dormitory, telecommunications and other revenue bond issues; and university hospitals building usage funds and revenue bonds.

Capital Expenditures on Facilities over the last Five Years
Project Costs over $250,000 – All Funds

	FY 2013		FY 2014		FY 2015		FY 2016		FY 2017	
	# of Projects	Cost	# of Projects	Cost	# of Projects	Cost	# of Projects	Cost	# of Projects	Cost
SUI	319	$239.4	348	$360.1	362	$408.8	364	$397.1	401	$ 302.1
ISU	94	125.1	109	84.0	107	105.8	115	115.2	182	107.7
UNI	37	35.0	29	13.0	23	6.0	23	25.0	24	38.0
Total	450	$399.5	486	$457.1	492	$520.6	502	$537.3	607	$ 447.8
									annual average	**$472.5**

Part 2 of 5
CLASSROOM UTILIZATION

In October 2015, Ad Astra, a classroom efficiency and class scheduling consultant specializing in higher educations, presented to the Board its analyses, findings, recommendations and implementation strategies to improve the utilization of classrooms and teaching laboratories at the Regent universities.

The analyses concluded, for all three universities, that there was no need for additional, traditional classroom space, but did not speak to the quality of existing space, the need to renovate or replace existing space, or the space's relevance to evolving pedagogy. Ad Astra did note that some space might need to be renovated and / or reconfigured, which would involve additional cost. Classroom utilization can be affected by a number of factors including capacity, seating type and location, as well as the quality and condition of the space.

University of Iowa

The University of Iowa reports that there were 39 more university classrooms and 20 more departmental labs over the last year.

In support of the Transparent, Inclusive Efficiency Review (TIER) Review and Ad Astra Study, the Office of the Registrar, Classroom Scheduling reviewed and reclassified instructional spaces within our campus space utilization reporting system. Departmental classrooms that were reclassified as General Assignment Classrooms (now referred to as University Classrooms) caused that category to increase. Conversely, the number of departmental classrooms, now referred to as University Programmed Classrooms, has reduced. Instructional spaces that had been categorized as departmental classrooms were realigned as either a University Classroom or Departmental Class Laboratories to represent the actual room use in 2017. This caused the number of departmental class laboratories to increase over the last reporting year.

Classroom environments that facilitate modern configurations offering audio/visual technology, lighting with scene controls, improved acoustics and functional furniture are in higher demand. These spaces are preferred by instructors and students alike, are believed to contribute to an enhanced teaching and learning experience and offer a positive impact on student success and recruitment. The less desirable classrooms are those that have classroom sizes and furniture that do not adequately meet current teaching or enrollment needs. These spaces are reported to be cramped, offer poor sight lines or limited writing surfaces to support instruction and/or do not provide adequate student spacing for collaborative work, just to mention a few hindrances. Additional issues with these less desirable classrooms include inadequate heating/cooling, lighting, acoustics and student/instructor furnishings. Currently, approximately 25 percent of the classrooms are inadequate due to poor conditions, poor locations, or capability to support today's teaching pedagogies. The use of less-desirable classrooms requires additional staff resources to support the consequences of maintenance and scheduling.

Iowa State University
Iowa State University reports that there were seven more university classrooms and four more departmental labs over the last year. ISU reports that it is analyzing classroom, teaching lab and seminar room utilization twice a year.

In response to increased enrollment, the university continues to schedule teaching labs either before 7:00 a.m., or into the evening hours. Classroom use for special events after normal business hours has increased significantly over the past several years with a shortage of larger rooms in the evenings. There is a focus to meet the needs of ISU's expanding undergraduate student enrollment by proactively forecasting demand and scheduling classrooms. Work is in progress to create more detailed reports and graphs, so departments can review their course offerings and match needs with available space.

The university plans to further implement data analytics to ensure that course enrollment and classroom capacity are closely matched. The university also plans to review how to systematically analyze one-day offerings to reduce utilization barriers.

For classroom improvements, the university reports that it prioritizes and funds classroom and instructional technology improvements on the basis of a Classroom Improvement Study, metrics and forecasting. Seating will be replaced in the 382-seat auditorium of Kildee Hall, which is used 40 hours per week Monday through Friday. Two classrooms of 40 seats and 48 seats in Heady Hall will be combined to provide one classroom of 60 to 70 seats. This size will better match the needs of the primary departmental users. These rooms will be ready for Fall 2018 classes. Also ready for Fall 2018, there will be one new 120-person classroom available when the Advanced Teaching and Research Building opens.

University of Northern Iowa
The University of Northern Iowa reports that there were 17 more university classrooms and four more departmental labs over the last year.

Facilities Management and the Office of the Registrar continue to evaluate classroom and lab space by touring the campus. Rooms have been re-classified as a result. Beginning Spring 2018, the university intends to transition to a new campus-wide room scheduling system called Event Management System (EMS). In Fall 2017, 17 rooms were added with the opening of the Schindler Education Center. A large lecture space in the Center for Energy and Environmental Education building is closed until Spring 2018.

In response to Ad Astra recommendations, a newly designed scheduling process will be operational Fall 2018 to address standard teaching times. With this new approach, non-standard teaching, special requests, paperwork and administrative time are predicted to be reduced. Classroom occupation has increased approximately 2 percent. The Office of the Provost has continued to discuss proper class sizes and eliminating extra sections. Deans and department heads continue to monitor student enrollments in all courses each semester to ensure that courses are filled appropriately. If course enrollments are not met, faculty are re-assigned other courses to teach. Efficiency would be achieved by reducing the number of classrooms to be used, thus affecting the overall instructional cost.

Strategies and Policies for Optimal Utilization of Existing Campus Facilities
(Adopted by Board of Regents, May 2006)

1. Institutions should be as thorough and innovative as possible in their allocation and reallocation of space within their existing physical plants.

2. Each university should adopt general principles, consistent with the Board's and each university's strategic plan, regarding space assignment and scheduling of classes and should so inform the campus community. Each university should also ensure that its policies and procedures regarding space are consistent with these principles.

3. The universities should use their appropriate campus committees to stimulate discussions on improving the utilization of campus space and facilities, and to provide recommendations to the university administration.

4. Space planning should continue to be an institutional responsibility and be part of comprehensive long-range campus planning, which includes an analysis of the quality, quantity and location of the space.

5. Requests for new space should continue to be documented and justified on a functional need basis, with a demonstration that the identified program need cannot be met more economically through more efficient use of existing space or renovation.

6. Each university should review its existing utilization data when planning for new or renovated space; to the greatest extent possible, objective measures should be used to determine space needs. These objective measures could include benchmarking data or objective models, supplemented by further analyses and specialized studies.

7. Each university should consider development of policies regarding office space for part-time employees, including adjunct faculty, graduate students and emeritus faculty.

8. Each university should keep and utilize for each new construction or renovation project guidelines for the size of offices.

9. Each institution should submit with its request to lease space in the general vicinity of the main campus, an explanation of the spaces on campus examined and found unsuitable.

10. Classrooms, class laboratories and other facilities should be designed and scheduled for optimal utilization given program needs and student expectations.

11. The universities should strive to design efficient facilities, providing for as much usable (net) square footage as reasonably possible within the gross square footage and program goals of the building.

12. For those facilities thought to be obsolete, the institutions should assess their buildings' physical condition, contribution to the university's heritage, adaptability to being efficiently renovated and reused, and viability of reuse versus replacement; based upon this assessment, each university should determine whether it is prudent to retain each of its obsolete structures.

Part 3 of 5
INTERINSTITUTIONAL COLLABORATION

Iowa's public universities continue to work together and coordinate efforts on facilities. This collaboration allows the universities to share best practices and to pool resources to investigate and pursue innovative and cost saving approaches. As one example, Iowa State University is oversees the administration of capital projects and compliance of asbestos, lead, chemical management and safety policies for the special schools.

For all three universities, here are some of this year's collaboration efforts:

- Utilizing one electronic on-line bidding system for all three universities.
- Implementing electronic signatures on all design and construction contracts.
- Developing one electronic payment system for design professionals and contractors who work at all three universities.
- Sharing service contracts for water treatment, environmental emissions testing, hazardous waste disposal, electronic waste recycling, boiler water treatment and cleaning chemicals.
- Meeting annually with building maintenance, grounds and custodial staff to share planning strategies, information and best practices.
- SUI and an ISU associate professor of agronomy are promoting the economic development of Miscanthus, a dedicated energy crop used a biofuel in SUI's Power Plant. In 2016, 175 acres of Miscanthus were planted for a total to 900 acres under contract with local farmers.
- Meeting bi-annually with Master Builders of Iowa and various Iowa contractors to discuss project delivery methods, construction market conditions and upcoming projects.
- Adapting/creating job classifications to keep pace with the increasing technological complexity of facilities systems, with adoption of tier responsibility levels for electricians, environmental system mechanics and sheet-metal mechanics.
- Monitoring state licensure requirements electricians, plumbers, HVAC technicians, fire alarm systems installers and elevator mechanics to ensure compliance for all three universities.
- Teaming with the Board Office to revise the Property and Facilities section of the Board's *Policy Manual* to simplify contract approvals and correct any inconsistencies.
- Developing a potential transfer of the Iowa Braille and Sight Saving School to the City of Vinton.
- Iowa's public universities and special schools also continue to expand cooperation and sharing arrangements with the public entities (cities, counties, school districts, conservation boards) in the municipalities in which they are located.

Part 4 of 5
FIRE AND ENVIRONMENTAL SAFETY

Fire and environmental safety standards are established by the State Fire Marshal's Office with the Iowa Department of Public Safety, the Iowa Occupational and Safety Act (IOSHA) with Iowa Workforce Development, Environmental Health and Safety agencies on campus and other federal and state governmental regulatory entities. Fire and environmental safety deficiencies are normally identified during scheduled site visits with one or more of these agencies.

Fire Safety: Potentially life-threatening deficiencies are promptly addressed and corrected, or the facilities are closed until they can be made safe. Lesser risks are prioritized using multiple factors, including hazard assessments and regulatory requirements. Corrective work is undertaken as funds are available, or the fire safety improvements may be accomplished as part of a renovation project. Each year, there are subtractions to the list as work is completed. Additions to the list can result from the altered use of a space, which changes the applicable building code requirements, or the new identification of a deficiency due to different interpretations of the code. Thus, the amount needed to correct the deficiencies does not necessarily decline by the amount that institutions have expended since the previous inspection.

The Regent institutions cooperate with the State Fire Marshal's Office in establishing fire safety priorities; 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: housekeeping or procedural items such as use of a doorstop to prop open a door,
2. Maintenance: items requiring no design and minimal expense, such as door repairs, or
3. Other deficiencies: items for which the correction requires an outlay of funds beyond facility management maintenance funds; these items are documented and prioritized.

Environmental Safety: Environmental safety issues include asbestos, lead, underground storage tanks, spill prevention, storm water pollution protection plans, PCBs (chemical banned in 1979 and found in fluorescent light ballasts, floor mastic and caulking from 1950-1970s buildings), mercury, the Clean Air Act and radioactive sites. Campus personnel and regulatory entities identify environmental safety deficiencies.

On asbestos abatement alone, for example, Iowa State University completed 205 asbestos abatement projects in FY 2017 at a cost of $1 million with plans to spend an additional $1.4 million in FY 2018 for the same.

Completed Fire Safety Projects

General Education Fund Facilities and UIHC
($ Thousands)

Regent institutions completed over $85.1 million in fire safety projects from FY 1993 through FY 2018 (25 years) in General Education Fund facilities and UIHC. That is an average of $3.25 million per year. For FY 2018, $3.9 million are planned to correct fire safety deficiencies.

	SUI**	UIHC	ISU	UNI	ISD	IBSSS		Total
FY 1993	$ 1,476.5	$ 507.3	$ 1,135.6	$ 551.3		$ 11.0		$ 3,681.7
FY 1994	721.2	619.2	365.6	447.3	$ 111.5	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
FY 2004	1,554.5	915.9	295.5	25.0	6.0			2,796.9
FY 2005	1,502.0	2,103.0	177.0	25.0	25.0			3,832.0
FY 2006	1,637.0	2,058.6	215.9	30.0		1.7		3,943.2
FY 2007	978.3	650.0	928.6	36.0	75.0	4.7		2,672.6
FY 2008	1,128.2	676.4	470.0	80.2	700.0	343.3	***	3,398.1
FY 2009	1,373.0	1,760.1	700.5	80.2	30.0	507.3		4,451.1
FY 2010	1,705.1	-	392.0	52.7	405.0	872.6		3,427.4
FY 2011	3,944.5	350.0	265.6	88.0	300.0	20.6		4,968.7
FY 2012	2,588.8	1,145.2	172.3	204.3	50.0	24.4		4,185.0
FY 2013	987.4	1,040.0	363.4	121.5		64.5		2,576.8
FY 2014	1,030.7	1,040.0	365.6	186.1	22.4			2,644.8
FY 2015	1,019.7	750.0	108.4	113.9	21.4			2,013.4
FY 2016	1,072.7	650.0	253.8	90.0	16.1	53.5		2,136.1
FY 2017	588.2	850.0	117.6	190.6	16.1	-		1,762.5
Subtotal	$35,486.4	$26,709.6	$11,541.4	$2,846.8	$2,590.0	$2,049.1		$81,223.3
Deferred Maintenance Projects Planned for or Continued through FY 2018	2,317.5	400.0	578.0	593.5	20.0	1.0		3,910.0
Total	**$37,803.9**	**$27,109.6**	**$12,119.4**	**$3,440.3**	**$2,610.0**	**$2,050.1**		**$85,133.3**
By Source of Funds:								
Building Renewal / General University	$20,508.9		$ 6,749.4	$2,263.5	$ 882.0	$1,626.8		32,030.6
Treasurer's Temporary Investment (TTI) Income	11,820.8		542.8	174.8				12,538.4
Academic Building Revenue Bonds	3,150.2		2,994.3	826.0				6,970.5
Special and Capital Appropriations	1,760.0		1,436.9	174.7	935.0	362.3		4,668.9
University Hospital Building Usage Funds		$27,109.6						27,109.6
Other	564.0		396.0	1.3	793.0	61.0		1,815.3
Total	**$37,803.9**	**$27,109.6**	**$12,119.4**	**$3,440.3**	**$2,610.0**	**$2,050.1**		**$85,133.3**

*Does not include fire safety components of major renovation projects.

**SUI - Excludes UIHC; includes projects approved and funded for FY 93 - FY 03; for FY 1993 also includes projects completed with Academic Building Revenue Bonds, 1991. Includes fire safety improvements in Old Capitol - Fire Restoration and Buildings Improvements and Chemistry Renovation projects.

***Includes fire safety components of renovation projects.

Outstanding Fire Safety Projects
General Education Fund Facilities and UIHC
($ Thousands)

	Fall 2017 (FY 2018)
SUI (includes Oakdale)	$ 2,903.6
UIHC	400.0
ISU	5,647.0
UNI	2,991.8
ISD	125.9
IBSSS	60.0
Total[1]	**$ 12,128.3**

[1]Includes items identified by State Fire Marshal's Office and other external entities; excludes work in buildings to be demolished, and for which waivers from the State Fire Marshal are to be requested.

The $12.1 million is a 26% increase over the $9.6 million reported in Fall 2016, which exceeds the local construction cost inflation rate of five percent.

In addition to the $85.1 million in corrected fire safety (see previous page) over the last 25 years, the following describes progress made by the institutions in FY 2017.

University of Iowa
Under the UI fire safety program, 98 buildings are continually inspected and evaluated on a bi-annual basis by inspectors from the State Fire Marshal's Office with assistance from the UI Fire Safety Coordinator. In addition to bi-annual inspections, pre-occupancy inspections are being conducted by the State Fire Marshal's Office and State Building Code Bureau with the assistance of the UI Fire Safety Coordinator. These inspections evaluate newly constructed or renovated buildings prior to its occupancy and will likely mitigate the possibility of finding major deficiencies during future inspections.

- As part of renovation projects in Bowen Science Building, Dental Science Building and various other buildings, sprinkler systems were replaced completely or partially.

- The 2017 State Fire Marshal's Inspection Report was completed.

- "Hot work" is defined as cutting and welding operations for construction activities that involve the use of portable gas, welding equipment, soldering, or grinding that produces a spark, flame, or heat. A committee of representatives from Risk Management, Public Safety, Facilities Management and Environmental Health and Safety, re-designed the university's hot work policy. The new hot work policy addresses requirements of current fire codes and the university's property loss insurance provider, Factory Mutual Global.

- Facilities Management is continuing with a comprehensive inspection program of the existing fire sprinkler system, which is more in-depth than typical inspections to identify system shortcomings.

- Facilities Management now has 101 (up from 67 last year) buildings connected to their 5-loop fire alarm network. The network provides building floor plans including all fire alarm devices and will provide the UI Police communications center real time information on each building. If needed, the network can allow the UI Police to activate the building's severe weather alert and perform live voice announcements for other types of campus emergencies.

- Residence Assistant (RA) Fire Academy – The university conducted its tenth annual Residence Assistants (RA) safety-training academy this past August. With the aid of the University Housing & Dining's Office of Residence's Life and Facilities & Operations, the UI Department of Public Safety and the Iowa City Fire Department, some 140+ RAs and professional staff completed this three-hour hour training program in residence hall fire safety. This program continues to be listed by several collegiate fire safety associations as one of the nation's premier RA fire academies.

- Higher Education Opportunity Act (HEOA) Annual Fire Safety Report – The university has completed the 2016 fire safety report, as required by the Federal Department of Education. This report provides a log of all fire incidents that occurred in on-campus student housing facilities during the past three academic years.

Iowa State University
Iowa State University's Department of Environmental Health and Safety (EH&S) works to ensure compliance with fire safety codes in GEF facilities. All plans and designs for new buildings and renovation projects are reviewed for code compliance and checked for outstanding fire safety deficiencies. Fire safety deficiencies needing to be incorporated into a project are formally communicated to the project designers and engineers. Project designers and engineers routinely consult with EH&S to resolve challenging fire safety deficiencies early in the planning stages.

- As part of renovation projects in Durham Hall, Food Science, Music Hall, Parks Library, Physics Hall, Science II, Town Engineering, Schilletter/University Village Community Center and Fredriksen Court Building 52, all fire panels were replaced with new.

- The 2017 State Fire Marshal's Inspection report completed.

- The estimated cost to remove the deficiencies at the university includes the cost of adding sprinkler systems to seven buildings to address fire corridor deficiencies cited in the 2017 State Fire Marshal's Inspection report. In the report, the State Fire Marshal's Office stated that self-closing devices on all doors leading to exits could be installed or the building could be sprinkled. In previous reports, the university noted that based upon current funds, it is likely that sprinklers would be installed, only when a building undergoes significant renovation. In buildings not scheduled for renovations, the university would install self-closing devices as funding is identified.

- In August 2017, 100 percent sprinkler coverage of residence halls was achieved with the Friley Residence Hall Windows/Dining project.

University of Northern Iowa
In 2012, a team comprised of the University Fire and Safety Specialist, Facilities Management administrators and skilled staff in various trades was assembled to prioritize fire alarm upgrades/replacement. The team considered condition of the system, availability of replacement components and exposure to risk.

Correcting fire safety deficiencies is a high priority for the university. The university's Environmental Health and Safety Office's Fire and Safety Specialist continues to conduct fire safety inspections, the goal of which is inspecting each campus building at least once each year.

- In August 2017, the Lawther Residence Hall Renovation was completed and included an automatic sprinkler, a fire detection system and additional fire barriers.

- UNI's Department of Residence has made significant financial commitments to upgrading fire safety equipment and testing in the residence halls. Currently, Campbell Hall is the only occupied residence hall that is not equipped with a fire sprinkler system.

- A fire panel upgrade was completed at Rod Library.

- The university's Environmental Health and Safety Office's Fire and Safety Specialist continues to conduct fire safety inspections, the goal of which is inspecting each campus building at least once a year. The last State Fire Marshal Inspection was September 19, 2017 of the Nielsen Field House and the Child Development Center.

Iowa School for the Deaf
The State Fire Marshal's Office conducted its most recent inspection of the Iowa School for the Deaf in December 2017. All of the deficiencies noted in that report have been corrected. Iowa State University Environmental Health and Safety (ISU EH&S) staff conduct inspections every three years.

Iowa Braille and Sight Saving School
The State Fire Marshal's Office has discontinued regular inspections of the Iowa Braille and Sight Saving School due to the closure of the residential program and its shift away from a typical school environment where children are regularly present. As an alternative safety measure, bi-annual fire and environmental safety inspections are conducted by ISU EH&S. The last inspection in September 2016 cited eighteen deficiencies. Sixteen of those have now been corrected.

Part 5 of 5
Deferred Maintenance

Regent institutions completed over $1.0 billion in deferred maintenance projects from FY 1993 through FY 2018 (25 years) in General Education Fund facilities. That is an average of $40.0 million per year. For FY 2018, $63.1 million are planned to correct deferred maintenance.

Completed Deferred Maintenance

General Education Fund Facilities and Utilities
Fall 2017, ($ in Thousands)

	SUI		ISU		UNI	ISD	IBSSS	Total
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	7,377.6		4,194.8		439.4	165.0	69.3	12,246.1
FY 2004	7,154.0		4,187.5		761.5	596.3	56.0	12,755.3
FY 2005	9,695.8	**	5,253.1		1,400.0	625.0	53.0	17,026.9
FY 2006	12,434.8	**	2,764.8		964.8	1,040.0	223.8	17,428.2
FY 2007	12,464.0	**	4,966.3		1,710.0	160.0	320.5	19,620.8
FY 2008	15,780.6	**	3,498.9		910.2	195.0	967.9	21,352.6
FY 2009	9,847.2	**	3,936.0		3,022.6	217.5	335.9	17,359.2
FY 2010	19,046.3		10,521.7		2,757.9	250.0	605.3	33,181.2
FY 2011	17,805.1		2,422.3		2,798.2	250.0	171.1	23,446.7
FY 2012	6,648.2		5,105.9		1,891.3	900.0	799.7	15,345.1
FY 2013	17,766.3		4,905.5		1,524.5	104.6	13.4	24,314.3
FY 2014	11,930.5		6,521.6		2,177.5	128.5	581.6	21,339.7
FY 2015	9,213.9		9,980.9		1,656.3	311.5	83.2	21,245.8
FY 2016	30,794.3		11,579.4		856.7	425.8	243.0	43,899.2
FY 2017	14,447.9		5,202.0		3,912.7	497.1	93.0	24,152.7
Subtotal	$ 245,390.3		$ 126,673.3		$ 49,651.0	$ 9,564.4	$ 7,050.2	$ 438,329.2
Projects Planned for or Continued in FY 2018	$ 48,857.0	**	$ 6,370.8		$ 6,991.9	$ 910.0		$ 63,129.7
Subtotal	$ 294,247.3		$ 133,044.1		$ 56,642.9	$ 10,474.4	$ 7,050.2	$ 501,458.9
FY 1993 - FY 2017 Renovation Projects Which Include Correction of Significant Amounts of Deferred Maintenance***	$ 164,439.7		$ 149,553.1		$ 163,834.1	$ 2,800.0	$ 1,100.0	$ 481,726.9
FY 2018 Renovation Projects Planned or Continued with Correction of Significant Amounts of Deferred Maintenance****	$ 24,208.7		$ 17,744.0		$ 806.0	$ 1,200.0		$ 43,958.7
Total	**$ 482,895.7**		**$ 300,341.2**		**$ 221,283.0**	**$ 14,474.4**	**$ 8,150.2**	**$ 1,027,144.5**
Total - By Source of Funds								
Building Renewal/Building Maintenance/General University	$ 99,361.9		$ 126,922.2		$ 35,216.9	$ 4,907.5	$ 3,076.0	$ 269,484.5
Building Renewal/Academic Building Revenue Bonds	52,728.3				83.5			52,811.8
Treasurer's Temporary Investment (TTI) Income	20,780.1		11,353.7		1,618.6			33,752.4
Gifts, Grants	9,381.7		32,946.7		12,105.5			54,433.9
Utility Renewal and Replacement and Revenue Bonds	152,845.2		20,009.0		2,253.2	236.0		175,343.4
Acad. Bldg Rev. Bonds; Pre 1991 and 1991; and Project Notes			5,218.5		1,863.5			7,082.0
Academic Building Revenue Bonds; 1992	3,100.5		6,024.8		8,071.3		610.3	17,806.9
Academic Building Revenue Bonds; 1994, 1995, 2008	20,536.1		9,793.1		40,985.7			71,314.9
Capital and Special Appropriations	55,275.4		43,404.6		103,511.6	6,510.0	2,551.3	211,252.9
TTI, FY 96 Capital Appropriation, Utility Enterprise R & R	1,000.0							1,000.0
FY 96 Capital Appropriation, Utility Enterprise R & R	450.0							450.0
Agriculture Experiment Station & Cooperative Extension			1,175.2					1,175.2
Facilities Overhead Use Allowance	1,679.0		10,678.2					12,357.2
Building Repair / Treasurer's Temporary Investments	2,737.8		12,564.8					15,302.6
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. Investme	4,114.3							4,114.3
Other (includes unspecified combination of above fund sources)	54,791.1		20,250.4		15,573.2	2,820.9	1,912.6	95,348.2
Total	**$ 482,895.7**		**$ 300,341.2**		**$ 221,283.0**	**$ 14,474.4**	**$ 8,150.2**	**$ 1,027,144.5**

Deferred maintenance in higher education is a national problem. For a number of years, the institutions and the Board Office have defined deferred maintenance as:

"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."

For Fall 2017, the Regent institutions report a total of $837.3 million in outstanding deferred maintenance in General Education Fund facilities and utilities. This does not include FY 2018 planned deferred maintenance projects and renovation projects, which have deferred maintenance in them.

Outstanding Deferred Maintenance
General Education Fund Facilities and Utilities
Fall 2017, ($ in Thousands)

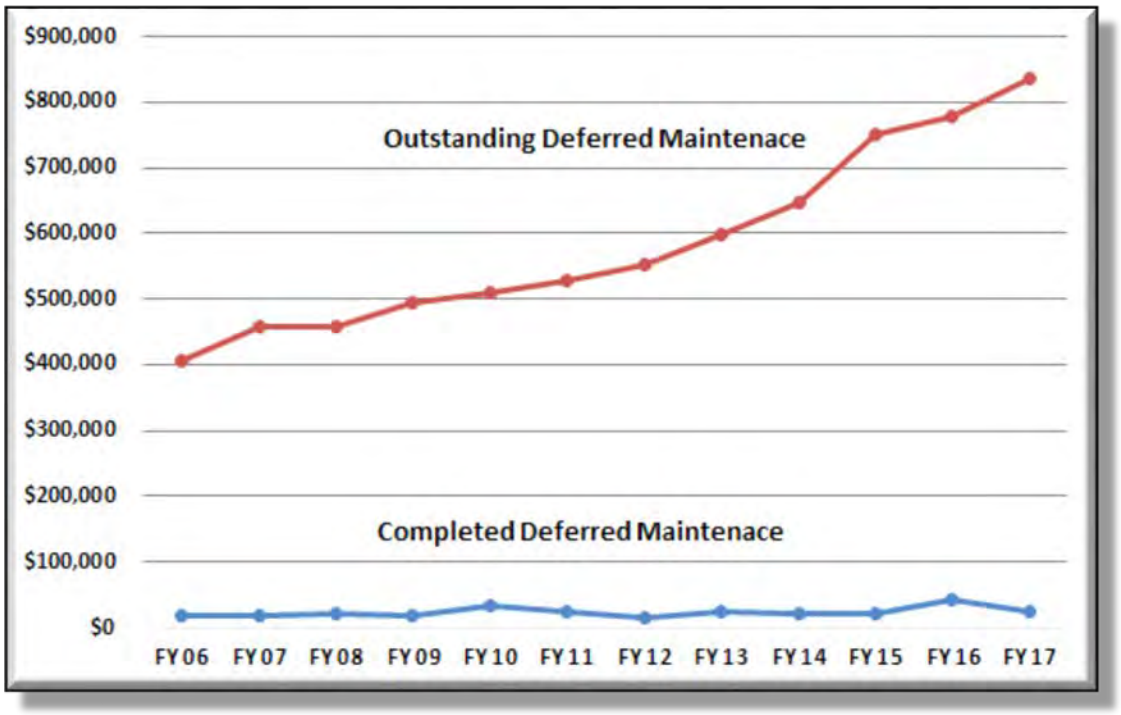
	SUI	ISU	UNI	ISD	IBSSS	Total
Individual Projects						
Buildings[2]	$129,065.1	$380,260.5	$ 96,964.0	$ 757.0	$1,246.0	$608,292.6
Utilities	9,644.9	17,748.0	23,299.0	236.0	176.0	51,103.9
Subtotal	$138,710.0	$398,008.5	$120,263.0	$ 993.0	$1,422.0	$659,396.5
Included within Five Year Capital Plan (FY 2019 - FY 2023)						
Buildings[2]	$ 57,983.5	$ 7,744.0	$ 32,948.0	$ 8,799.0		$107,474.5
Utilities	63,060.0	7,200.0		236		70,496.0
Subtotal	$121,043.5	$ 14,944.0	$ 32,948.0	$ 9,035.0		$177,970.5
Grand Total						
Buildings	$187,048.6	$388,004.5	$129,912.0	$ 9,556.0	$1,246.0	$715,767.1
Utilities	72,704.9	24,948.0	23,299.0	472.0	176.0	121,599.9
Total	$259,753.4	$412,952.5	$153,211.0	$10,028.0	$1,422.0	**$837,366.9**

[1]Excludes dollar amounts for projects to be undertaken in FY 2018, those to be funded through previously authorized academic building revenue bonds and capital appropriations; and the deferred maintenance components of ongoing renovation projects.

[2]Includes site work.

The $837.3 million is a 7.5% increase over the $779.2 million reported in Fall 2016, which exceeds the local construction cost inflation rate of five percent. It is important to note that the universities undertake complete building assessments for deferred maintenance and continue to refine that analysis, which can lead to the reporting of increased amounts. As previously mentioned, 32 percent of Regent GEF facilities are reaching or have reached the end of their useful lives, due to their age dating back to the First Wave of construction in the 1960s and 1970s.

Outstanding vs Completed
Deferred Maintenance
General Education Fund Facilities and Utilities
Fall 2017, ($ in Thousands)



So, why the $837.3 million in outstanding deferred maintenance? According to Sightlines' "*State of Facilities in Higher Education, 2016 Benchmarks, Best Practices & Trends*," there are three key conditions affecting higher education facilities and their deferred maintenance backlog as illustrated in the previous two charts.

- Lack of funds: Current capital investment is simply not enough to "catch up" and "keep up."
- Building age: 31 percent of all Regent facilities were built in during the First Wave of campus construction in 1960s and 1970s and are reaching or have reached the end of their useful lives.
- Enrollment growth: More enrollment often requires new or renovated facilities. Regent enrollment has increase 14 percent over the last ten years. During that time, Iowa State University alone had an enrollment increase of 34 percent.

Institutional Comments on Deferred Maintenance

University of Iowa

According to Sightlines, the university has done an exemplary job in leveraging its assets strategically to manage the critical deferred maintenance and accumulated repair. The university is working closely with Sightlines to develop a five-year strategy to address all deferred maintenance issues. However, economic and budgetary issues are affecting the availability of deferred maintenance funding, which comes from operating funds and capital appropriations, among other funding sources.

The university's Facilities Management team uses four basic facilities stewardship strategies to manage deferred maintenance and the condition of existing GEF facilities: (1) ongoing maintenance and operational care of existing facilities, (2) reinvestment in the renewal of long-term physical assets, (3) reduction of the backlog of deferred maintenance and (4) decommissioning of obsolescent facilities or those with substantial deferred maintenance. The university uses a total cost of ownership, when weighing the various alternatives that may include renovation, improvement, or demolition. The total cost of ownership includes all initial project cost, on-going care and utilities over the facility's useful life. When the investment of funds in a facility will not result in useful space or prolong the use of land, a building may be considered for removal. In situations where building removal is considered, historical value and heritage are carefully weighed.

Since 2004, the university has contracted with Intelligent Systems & Engineering Services (ISES) Corporation, who works with other universities such as Penn State, University of Missouri and Vanderbilt University, to provide consistent inspections and detailed analyses for existing facilities. Recently, ISES adopted a new methodology based on the renewal of each component of a building, rather than the building system as a whole. This information provides more detail for developing the scopes for renovation and repair projects.

University of Iowa Hospitals and Clinics

The University of Iowa Hospitals and Clinics has not reported any deferred maintenance and indicates that it does not have any maintenance needs that meet the definition of deferred maintenance.

Iowa State University

For FY 2017, there was a 15 percent increase in deferred maintenance. This increase was due to a renewed emphasis on roof and elevator building systems and a more accurate reflection on their costs. Incomplete elevator cost information was corrected. Roofing costs and scopes of work were adjusted to align with current market values. More specifically, elevator deferred maintenance changed from $22 million to $43 million, while roof deferred maintenance changed from $20 million to $37 million. The remainder of the 15 percent increase in deferred maintenance is attributed to inflation and aging of building systems.

As enrollment has grown over 40 percent over the past 10 years, general university facility space has grown only 4 percent, resulting in more intense use of current facilities. The demand for custodial services and maintenance and repairs of campus buildings and grounds have grown due to increased wear and tear. Although the budget for facilities services has had modest increases, funding remains constrained and only affordable levels of service continue to be provided in the areas of building maintenance, custodial services and grounds maintenances.

The deferred maintenance backlog is based upon a comprehensive, systematic process for identifying the maintenance and repair requirements for our general university buildings. The methodology involves assessing General Education Fund buildings in nine different system categories (Envelope, HVAC, Roof, Window, Site, Electric, Plumbing, Interior and Elevators). The assessment takes into account the replacement value of the building, age of the building, value of the systems within the building, age of the systems and condition of those systems. The area maintenance team assigned to each building also provides a condition assessment of each building system.

University of Northern Iowa
The University of Northern Iowa continues to update its deferred maintenance information through building assessments. Information is obtained from users of the buildings, along with the maintenance personnel for the respective areas. When planning renovations, Facilities Planning design and construction staff review the deferred maintenance deficiencies and addresses those as part of the project.

Future deferred maintenance projects are selected from their top 25 Deferred Maintenance list.

The University reports that an increase in annual budgeted funds will be required to sustain an adequate maintenance schedule for campus buildings. University operations and maintenance personnel currently focus their resources based on a priority system that addresses safety issues, educational support and repair of facilities equipment to lengthen the life of the assets.

Iowa School for the Deaf
Deferred maintenance items are identified through inspection and reporting from facility staff and Council Bluffs site users. Projected estimates have been developed in conjunction with ISU and through an independent study performed by Nielsen/Mayne Architectural firm.

Due to the age of the buildings, tuckpointing is necessary on Long Hall (high school) and the Giangreco Hall (Administration Building). Long and Giangreco are in need of foundation waterproofing. Interior renovations are needed in Long Hall's classrooms, as well as the bedrooms and common areas of the boys' and girls' dormitories. These projects have been incorporated into ISD's Five Year Capital Plan and will be completed as funds become available. ISD keeps a deferred maintenance list which aids in their decision making process.

Iowa Braille and Sight Saving School
Deferred maintenance items are identified through inspection and reporting from facility staff and Vinton site users. Projects include needs in Old Main, Palmer Hall, Rice Hall, Recreation Building and Superintendent's Residence. Deferred maintenance projects also include utilities. As funds are available, many areas have been addressed. IBSSS keeps a deferred maintenance list which aids in their decision making process.

ANALYSIS

The sheer aging of facilities and budget challenges over the years have led to an increase in fire and environmental safety deficiencies and deferred maintenance issues and have hindered the institution's capabilities to correct them. Maintenance cycles and preventative maintenance activities have been delayed or eliminated, placing buildings and occupants more at-risk for unanticipated building system outages. Maintenance and repairs to roofs, exterior building envelopes, windows, plumbing and electrical systems can cause further damage to the facilities, thus increasing the costs of future repairs.

In spite of the reasons for deferred maintenance including lack of funds, building age and enrollment growth, the universities are moving forward and developing strategies to fund both "keep up" and "catch up" needs. In doing so, they set priorities based on a number of factors, including building condition and utilization, operational demands and program growth. From there, the universities track the performance of its mission critical buildings that currently face the highest risk of failure to determine the best course of action.

FACILITIES GOVERNANCE REPORT FOR 2018

Executive Summary:

All Regent Facilities

- Average building age = 44 years
- Acres = 4,398 on campus + 839 off campus = 5,238 acres (eight square miles)
- Square footage = 41.1 million, which includes 19.1 million in General Education Fund (GEF) facilities

Fire Safety projects in GEF facilities:

- Completed = $ 86.7 million (FY 1993 through FY 2019)
- Outstanding* = $ 11.9 million

Deferred Maintenance in GEF facilities:

- Completed = $ 1.0 billion (FY 1993 through FY 2019)
- Outstanding* = $938.9 million

* To address some of the outstanding fire safety and deferred maintenance needs, $20 million in state funds are requested for FY 2020, followed by $20 million for the next four years for a total of $100 million over five years per the “Five-Year Capital Plan for FY 2020–FY 2024” on page 43.

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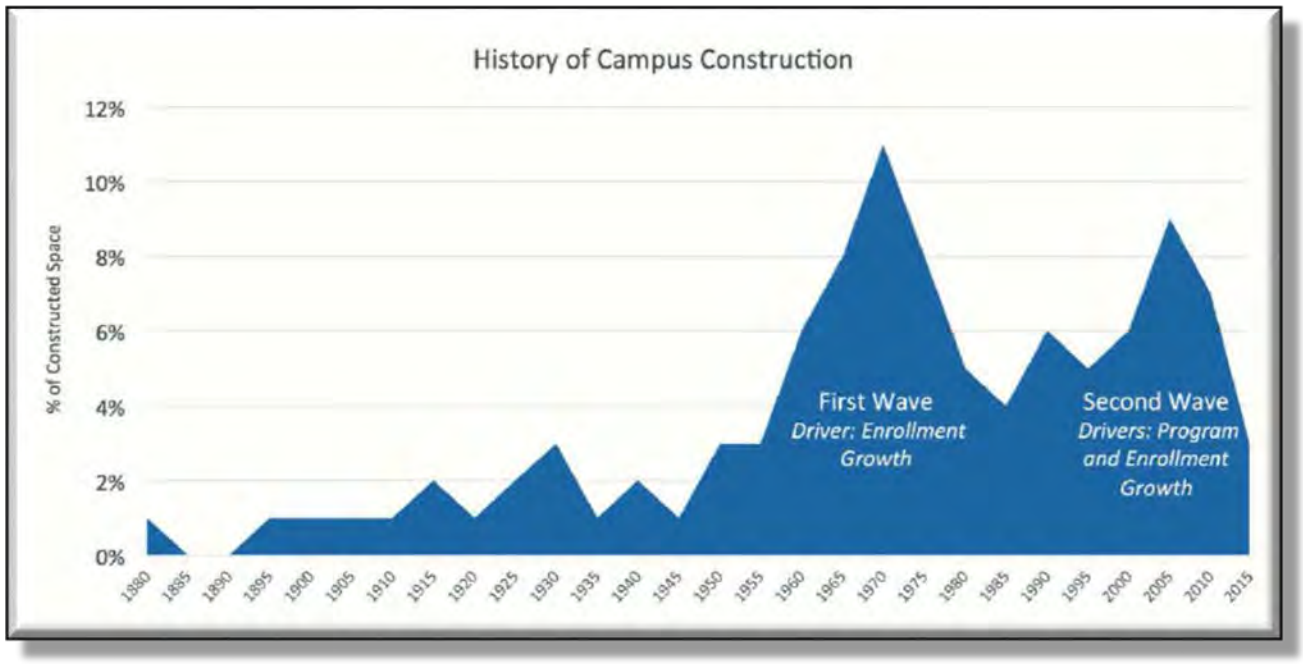
Part 1 of 5
BACKGROUND

The annual Facilities Governance Report, required by the Board's *Policy Manual*, is intended to provide the Board with a broad overview of the facilities at each of the Regent institutions and their condition. Along with its human resources and its intellectual, financial and equipment assets, facilities are a primary resource of a higher education institution. Quality facilities help ensure excellent academic programs and the ability to attract and retain faculty, staff and students.

a. Age and Quality: One of the biggest contributing factors to the amount of deferred maintenance and the presence of fire safety deficiencies is the age of a facility. Another big factor is the quality of the original construction itself.



Sightlines: *State of Facilities in Higher Education, 2017 Benchmark, Best Practices & Trends*

Sightlines is a nationally-known strategic planning and advisory firm specializing in higher educational facilities, consults directly with all three of our universities and tracks over 400 campuses. They report there were two waves of construction over the last 50 years that are placing stress on the Regent institution's ability to care for facilities.

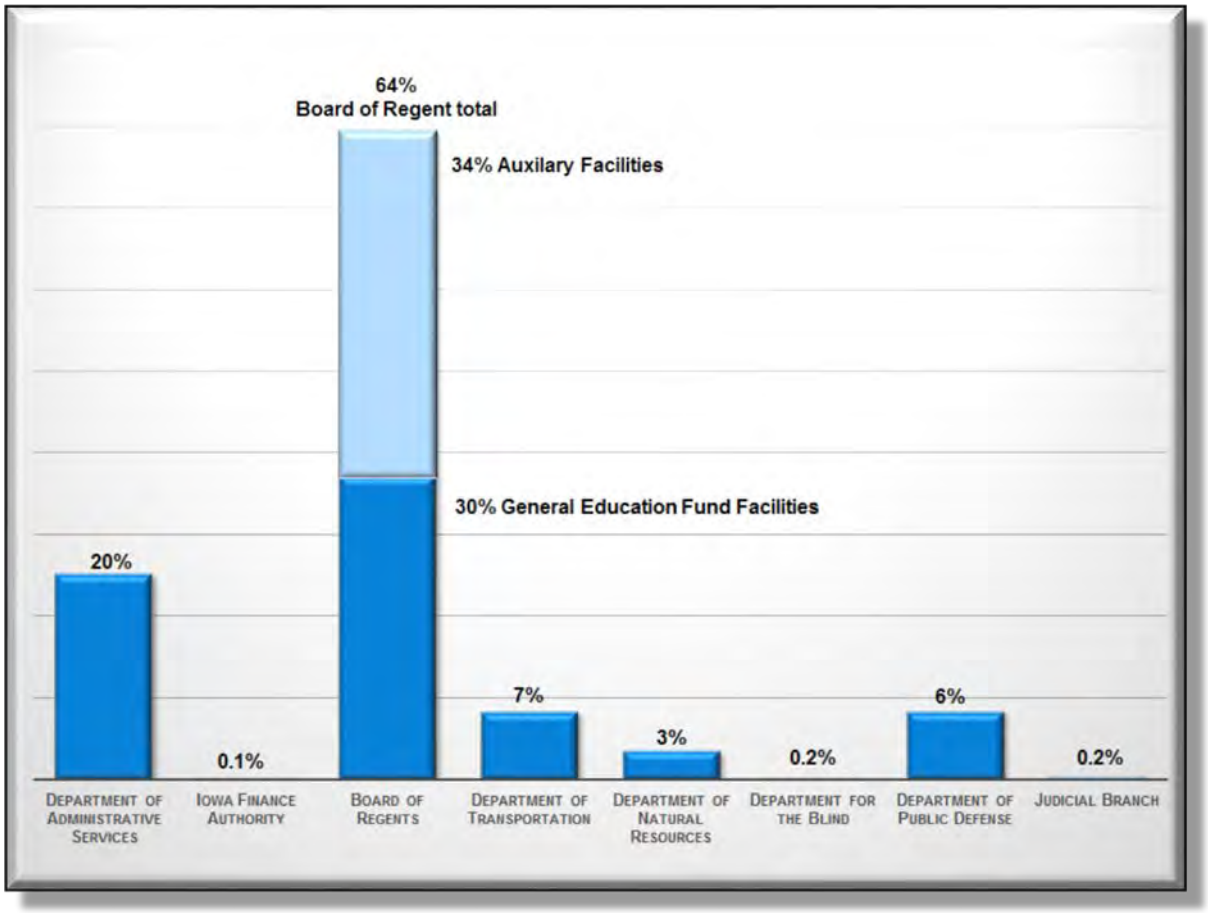
The "First Wave" (see above) of construction in the 1960s and 1970s represents 40 percent of all campus construction in the United States (31 percent for Regent General Education Fund (GEF) facilities) today and was generated by the G.I. Bill and the baby boomer generation. This construction wave is characterized by buildings that were built quickly, have poor construction and now represent the largest portion of the Regents' growing backlog of deferred maintenance. Now 39 to 58 years old, most of these facilities have reached or will soon reach the end of their useful lives. These buildings must be repaired, renovated, or replaced in order to maintain competitive programs on Regent campuses and represent our "catch up" needs.

The “Second Wave” (see above) from 1995 to 2015 represents another 30 percent of all campus construction in the United States (25 percent for Regent GEF facilities) today and was generated by the increasing enrollment of millennials and their changing expectations, rooted in a higher demand for collaboration and new technology. Campuses also became more residential with added amenities. This construction wave contains buildings that are much more energy efficient, but require more routine maintenance to keep systems operating at peak performance and represent our “keep up” needs.

In summary, the catch-up needs (31 percent) and keep-up needs (25 percent) represent 56 percent of the fire safety deficiencies and deferred maintenance in Regent facilities, which are coming due simultaneously.

b. Square Footage: The Board of Regents own, operate and maintain 64 percent of all State of Iowa facilities. Of the Regent facilities, 30 percent are GEF facilities, which include academic, research and administration facilities. The other 34 percent are auxiliary facilities such as the University of Iowa Hospitals and Clinics, utilities, athletic facilities, residence halls, recreation facilities, parking, student unions and Iowa State University Agricultural Experiment Station.

Square Footage
Percentages of All State of Iowa Facilities



***** Per these eight State of Iowa agencies in April 2017

That 64 percent of all State of Iowa facilities includes 41.1 million square feet with a replacement value of $19.3 billion. The General Education Fund facilities, representing 30 percent of all state facilities, includes 19.1 million square feet and a replacement value of $9.6 billion. The auxiliary facilities, representing 34 percent of all state facilities, includes 22.0 million square feet and a replacement value of $9.7 billion.

Square Footage
All Regent Facilities vs Regent GEF Facilities

Gross Square Footage (GSF)	All Facilities		Academic/Research/ Administrative (GEF) only*	
Years	GSF of Intial Construction	Percent of Total	GSF of Intial Construction	Percent of Total
Pre-1930	5,214,673	13%	3,696,435	19%
1931-1950	1,551,014	4%	770,451	4%
1951-1960	1,985,657	5%	713,731	4%
1961-1970	7,060,384	17%	2,773,575	14%
1971-1980	5,610,182	14%	3,299,538	17%
1981-1990	3,575,540	9%	1,586,452	8%
1991-2000	4,962,970	12%	2,095,717	11%
2001–2010	5,786,344	14%	2,484,215	13%
2011 - present	5,401,712	13%	1,731,763	9%
Total	**41,148,476**	100%	**19,151,877** 47% of total	100%

*Includes Oakdale

First Wave of Construction

Second Wave of Construction

Replacement value of facilities is important, because it determines appropriate budgets for deferred maintenance. According to national standards, 1 percent is the minimum commitment to a budget that prevents future facilities deterioration. The Board of Regents *Policy Manual* states that institutions should budget approximately 1.5 percent of their replacement value for deferred maintenance to not only catch up, but also keep up. Lack of funds, enrollment increases and the age of Regent facilities (average age is 44 years), have created significant challenges in attaining such budgeting levels.

Square Footage
By Institution and Use

Gross Square Footage (GSF)	SUI	ISU	UNI	ISD	IBSSS	Total
Acad/Res/Admin (GEF) only	8,769,118	7,267,177	2,542,839	381,236	191,507	**19,151,877**
UIHC	4,172,242					4,172,242
All Other	8,027,275	7,458,585	2,338,497			17,824,357
					UIHC and All Other Subtotal =	**21,996,599**
Total	20,968,635	14,725,762	4,881,336	381,236	191,507	**41,148,476**

c. Acres: The Regent institutions have a total of 4,398 on-campus acres and 839 off-campus acres, excluding farm acreage, for a total of 5,238 acres. This is an increase of just under one acre over last year. These 5,238 acres equate to just over eight square miles.

d. Capital Expenditures on Facilities over the last 5 Years: For all capital projects over $250,000 over the last five years, Regent institutions spend an average of $463.9 per year.

The expenditures are from all sources of funds including capital appropriations; building renewal (repair) funds; institutional road funds; gifts and grants; income from treasurer's temporary investments; proceeds of academic building, dormitory, telecommunications and other revenue bond issues; and university hospitals building usage funds and revenue bonds.

Capital Expenditures on Facilities over the last Five Years
Project Costs over $250,000 – All Funds

	FY 2014		FY 2015		FY 2016		FY 2017		FY 2018	
	# of Projects	Cost	# of Projects	Cost	# of Projects	Cost	# of Projects	Cost	# of Projects	Cost
SUI	348	$360.1	362	$408.8	364	$397.1	401	$302.1	380	$212.1
ISU	109	84.1	107	105.8	115	155.1	162	107.7	131	93.9
UNI	29	13.0	23	6.0	23	25.0	24	38.0	31	11.0
Total	486	$457.2	492	$520.6	502	$577.2	587	$447.8	542	$317.0
									annual average	**$463.9**

Part 2 of 5
CLASSROOM UTILIZATION

In October 2015, Ad Astra, a classroom efficiency and scheduling consultant specializing in higher education, presented to the Board its analyses, recommendations and implementation strategies to improve the utilization of classrooms and teaching laboratories at the Regent universities.

The analyses concluded, for all three universities, that there was no need for additional, traditional classroom space, but did not speak to the quality of existing space, the need to renovate or replace existing space, or the space's relevance to evolving pedagogy. Ad Astra did note that some space might need to be renovated, which would involve additional cost. Classroom utilization can be affected by a number of factors including capacity, seating type and location, as well as the quality and condition of the space.

University of Iowa
The University of Iowa reports no change in the number of university classrooms or departmental labs over the last year due to this year's change in the report submission timing.

The Office of the Registrar, Classroom Scheduling, continued work to support the Transparent, Inclusive Efficiency Review (TIER) Review recommendations from the Ad Astra Study. Two milestones were met in early to mid-2018 to address the final steps of the reclassification of instructional spaces through the configuration of departmental schedulers in Ad Astra for shared event management of 43 university classrooms. The schedulers were introduced and taught scheduling practices and policy in Ad Astra for the soft roll out date of Monday, May 14, 2018 (target date met by the University of Iowa staff). Ongoing support for the new schedulers will continue as needed by the Classroom Scheduling staff. Astra Ed has been purchased by the Office of the Registrar to facilitate a reference repository of training materials to support the campus in learning and adapting to the software.

Classroom environments that facilitate modern configurations offering audio/visual technology, lighting with scene controls, improved acoustics and functional furniture are in higher demand. These spaces are preferred by instructors and students alike, are believed to contribute to an enhanced teaching and learning experience and offer a positive impact on student success and recruitment. The less desirable classrooms are those that have classroom sizes and furniture that do not meet current teaching or enrollment needs. These spaces are reported to be cramped, offer poor sight lines or limited writing surfaces to support instruction and/or do not provide adequate student spacing for collaborative work, just to mention a few hindrances. Additional issues with these less desirable classrooms include inadequate heating/cooling, lighting, acoustics and student/instructor furnishings. Currently, approximately 25 percent of the classrooms are inadequate due to poor conditions, poor locations, or capability to support today's teaching pedagogies. The use of less-desirable classrooms requires additional staff resources to support the consequences of maintenance and scheduling.

Iowa State University
Iowa State University reports no change in the number of university classrooms or departmental labs over the last year due to this year's change in the report submission timing.

With regard to instructional space utilization, the university analyzes classroom, teaching lab and seminar room utilization twice per year. In response to increased enrollment, the university continues to schedule teaching labs either before 7:00 a.m., or into the evening hours. Classroom

use for special events after normal business hours has increased significantly over the past several years with a shortage of larger rooms in the evenings. There is a focus to meet the needs of ISU's expanding undergraduate student enrollment by proactively forecasting demand and scheduling classrooms. Work is in progress to create more detailed reports and graphs, so departments can review their course offerings and match needs with available space.

For long-term actions, the university plans to further implement data analytics to ensure that course enrollment and classroom capacity are closely matched. The university also plans to review how to systematically analyze one-day offerings to reduce utilization barriers.

For classroom improvements, the university reports that it prioritizes and funds classroom and instructional technology improvements on the basis of a Classroom Improvement Study, metrics and forecasting. Renovation is planned in selected classrooms in Gilman Hall, based condition and overall utilization. There will be one new 120-person classroom available when the Advanced Teaching and Research Building opens.

University of Northern Iowa
The University of Northern Iowa reports no change in the number of university classrooms or departmental labs over the last year due to this year's change in the report submission timing.

Facilities Management, in conjunction with the Office of the Registrar, continues to evaluate classroom and laboratory space by way of a scheduled tour of campus each academic year. Rooms have been re-classified as a result. During Spring 2018, the university started the transition to EMS (event management system) as a campus-wide room scheduling system, with full implementation for fall of 2018. This system will allow efficient academic room scheduling and single-source room utilization for the campus. To prepare for this change, room data is being revisited and updated.

The Provost's Office and the Office of the Registrar has expanded the work based on the Ad Astra recommendations. To address issues of scheduling courses at non-standard teaching times (i.e. off-grid), more research was completed. It was found that the method for administering standard teaching times needed to be updated. A newly designed scheduling process in identifying standard teaching times was developed and was used in the scheduling of rooms for the Fall 2018 semester, resulting in a reduction in the number of sections scheduled outside of the standard teaching times from 318 to two requests. Besides the significant reduction in non-standard instruction times, efficiencies were gained through the reduction of special requests for variance and the subsequent reduction of paperwork and overall administrative time.

Iowa School for the Deaf
In FY 2018, ISD leased facility space with seven agencies including the Iowa Educational Services for the Blind and Visually Impaired, Children's Choice Country, FAMILY Inc., Green Hills AEA, IESBVI, Promise Partners and State of Iowa Library.

Iowa Braille and Sight Saving School
AmeriCorps NCCC established its North Central Regional site in Vinton in June 2008 and is IBSSS's primary tenant. IBSSS accommodates 500 AmeriCorps NCCC/FEMA Corps members and 24 administrative staff. For the last two years, the Board Office is been working on a proposal to transfer ownership of IBSSS to the City of Vinton.

Strategies and Policies for Optimal Utilization of Existing Campus Facilities
(Adopted by Board of Regents, May 2006)

1. Institutions should be as thorough and innovative as possible in their allocation and reallocation of space within their existing physical plants.

2. Each university should adopt general principles, consistent with the Board's and each university's strategic plan, regarding space assignment and scheduling of classes and should so inform the campus community. Each university should also ensure that its policies and procedures regarding space are consistent with these principles.

3. The universities should use their appropriate campus committees to stimulate discussions on improving the utilization of campus space and facilities and to provide recommendations to the university administration.

4. Space planning should continue to be an institutional responsibility and be part of comprehensive long-range campus planning, which includes an analysis of the quality, quantity and location of the space.

5. Requests for new space should continue to be documented and justified on a functional need basis with a demonstration that the identified program need cannot be met more economically through more efficient use of existing space or renovation, consistent with the Board's previous adoption of the capital project evaluation criteria.

6. Each university should review its existing utilization data when planning for new or renovated space; to the greatest extent possible, objective measures should be used to determine space needs. These objective measures could include benchmarking data or objective models, supplemented by further analyses and specialized studies.

7. Each university should consider development of policies regarding office space for part-time employees, including adjunct faculty, graduate students and emeritus faculty.

8. Each university should keep and utilize for each new construction or renovation project guidelines for the size of offices.

9. Each institution should submit with its request to lease space in the general vicinity of the main campus, an explanation of the spaces on campus examined and found unsuitable.

10. Classrooms, class laboratories and other facilities should be designed and scheduled for optimal utilization given program needs and student expectations.

11. The universities should strive to design efficient facilities, providing for as much usable (net) square footage as reasonably possible within the gross square footage and program goals of the building.

12. For those facilities thought to be obsolete, the institutions should assess their buildings' physical condition, contribution to the university's heritage, adaptability to being efficiently renovated and reused, and viability of reuse versus replacement; based upon this assessment, each university should determine whether it is prudent to retain each of its obsolete structures.

Part 3 of 5
INTERINSTITUTIONAL COLLABORATION

Iowa's public universities continue to work together and coordinate efforts on facilities. This collaboration allows the universities to share best practices and to pool resources to investigate and pursue innovative and cost saving approaches. As one example, Iowa State University is oversees the administration of capital projects and compliance of asbestos, lead, chemical management and safety policies for the special schools.

For all three universities, here are some of this year's collaboration efforts:

- Utilizing one electronic on-line bidding system for all three universities.
- Implementing electronic signatures on all design and construction contracts.
- Developing one electronic payment system for design professionals and contractors who work at all three universities.
- Replacing quarterly face-to-face Interinstitutional meetings with ZOOM meetings to save $3,000 per meeting.
- Sharing service contracts for water treatment, environmental emissions testing, hazardous waste disposal, electronic waste recycling, boiler water treatment and cleaning chemicals.
- Meeting annually with building maintenance, grounds and custodial staff to share planning strategies, information and best practices.
- SUI and an ISU associate professor of agronomy are promoting the economic development of Miscanthus, a dedicated energy crop used a biofuel in SUI's Power Plant. In 2016, 175 acres of Miscanthus were planted for a total to 900 acres under contract with local farmers.
- Meeting bi-annually with Master Builders of Iowa and various Iowa contractors to discuss project delivery methods, construction market conditions and upcoming projects.
- Adapting/creating job classifications to keep pace with the increasing technological complexity of facilities systems, with adoption of tier responsibility levels for electricians, environmental system mechanics and sheet-metal mechanics.
- Monitoring state licensure requirements electricians, plumbers, HVAC technicians, fire alarm systems installers and elevator mechanics to ensure compliance for all three universities.
- Teaming with the Board Office to revise the Property and Facilities section of the Board's *Policy Manual* to simplify contract approvals and correct any inconsistencies.
- Developing a potential transfer of the Iowa Braille and Sight Saving School to the City of Vinton.
- Iowa's public universities and special schools also continue to expand cooperation and sharing arrangements with the public entities (cities, counties, school districts, conservation boards) in the municipalities in which they are located.

Part 4 of 5
FIRE AND ENVIRONMENTAL SAFETY

Fire and environmental safety standards are established by the State Fire Marshal's Office with the Iowa Department of Public Safety, the Iowa Occupational and Safety Act (IOSHA) with Iowa Workforce Development, Environmental Health and Safety agencies on campus and other federal and state governmental regulatory entities. Fire and environmental safety deficiencies are normally identified during scheduled site visits with one or more of these agencies.

Fire Safety: Potentially life-threatening deficiencies are promptly addressed and corrected, or the facilities are closed until they can be made safe. Lesser risks are prioritized using multiple factors, including hazard assessments and regulatory requirements. Corrective work is undertaken as funds are available, or the fire safety improvements may be accomplished as part of a renovation project. Each year, there are subtractions to the list as work is completed. Additions to the list can result from the altered use of a space, which changes the applicable building code requirements, or the new identification of a deficiency due to different interpretations of the code. Thus, the amount needed to correct the deficiencies does not necessarily decline by the amount that institutions have expended since the previous inspection.

The Regent institutions cooperate with the State Fire Marshal's Office in establishing fire safety priorities; 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: housekeeping or procedural items such as use of a doorstop to prop open a door,
2. Maintenance: items requiring no design and minimal expense, such as door repairs, or
3. Other deficiencies: items for which the correction requires an outlay of funds beyond facility management maintenance funds; these items are documented and prioritized.

Environmental Safety: Environmental safety issues include asbestos, lead, underground storage tanks, spill prevention, storm water pollution protection plans, PCBs (chemical banned in 1979 and found in fluorescent light ballasts, floor mastic and caulking from 1950-1970s buildings), mercury, the Clean Air Act and radioactive sites. Environmental safety deficiencies are identified by campus personnel and regulatory entities and corrected by the institutions as required.

On asbestos abatement alone, for example, Iowa State University expended $937,000 on asbestos abatement in General Education Fund facilities. They plan to spend $895,000 in FY 2019 for the same.

Completed Fire Safety Projects

General Education Fund Facilities and UIHC
($ Thousands)

Regent institutions completed over $86.7 million in fire safety projects from FY 1993 through FY 2019 (26 years) in General Education Fund facilities and UIHC. That is an average of $3.33 million per year. For FY 2019, $3.6 million are planned to correct fire safety deficiencies.

	SUI**	UIHC	ISU	UNI	ISD	IBSSS		Total
FY 1993	$ 1,476.5	$ 507.3	$ 1,135.6	$ 551.3		$ 11.0		$ 3,681.7
FY 1994	721.2	619.2	365.6	447.3	$ 111.5	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
FY 2004	1,554.5	915.9	295.5	25.0	6.0			2,796.9
FY 2005	1,502.0	2,103.0	177.0	25.0	25.0			3,832.0
FY 2006	1,637.0	2,058.6	215.9	30.0		1.7		3,943.2
FY 2007	978.3	650.0	928.6	36.0	75.0	4.7		2,672.6
FY 2008	1,128.2	676.4	470.0	80.2	700.0	343.3	***	3,398.1
FY 2009	1,373.0	1,760.1	700.5	80.2	30.0	507.3		4,451.1
FY 2010	1,705.1	-	392.0	52.7	405.0	872.6		3,427.4
FY 2011	3,944.5	350.0	265.6	88.0	300.0	20.6		4,968.7
FY 2012	2,588.8	1,145.2	172.3	204.3	50.0	24.4		4,185.0
FY 2013	987.4	1,040.0	363.4	121.5		64.5		2,576.8
FY 2014	1,030.7	1,040.0	365.6	186.1	22.4			2,644.8
FY 2015	1,019.7	750.0	108.4	113.9	21.4			2,013.4
FY 2016	1,072.7	650.0	253.8	90.0	16.1	53.5		2,136.1
FY 2017	588.2	850.0	117.6	190.6	16.1			1,762.5
FY 2018	372.1	850.0	131.9	479.3	15.8	1.0		1,850.1
Subtotal	$35,858.5	$27,559.6	$11,673.3	$3,326.1	$2,605.8	$2,050.1		$83,073.4
Deferred Maintenance Projects Planned for or Continued through **FY 2019**	2,317.5	400.0	649.0	177.8	125.9			3,670.2
Total	**$38,176.0**	**$27,959.6**	**$12,322.3**	**$3,503.9**	**$2,731.7**	**$2,050.1**		**$86,743.6**
By Source of Funds:								
Building Renewal / General University	$20,381.0		$ 6,952.3	$2,164.2	$1,003.7	$1,626.8		32,128.0
Treasurer's Temporary Investment (TTI) Incc	12,320.8		542.8	174.8				13,038.4
Academic Building Revenue Bonds	3,150.2		2,994.3	826.0				6,970.5
Special and Capital Appropriations	1,760.0		1,436.9	337.6	935.0	362.3		4,831.8
University Hospital Building Usage Funds		$27,959.6						27,959.6
Other	564.0		396.0	1.3	793.0	61.0		1,815.3
Total	**$38,176.0**	**$27,959.6**	**$12,322.3**	**$3,503.9**	**$2,731.7**	**$2,050.1**		**$86,743.6**

*Does not include fire safety components of major renovation projects.

**SUI - Excludes UIHC, includes projects approved and funded for FY 93 - FY 03; for FY 1993 also includes projects completed with Academic Building Revenue Bonds, 1991. Includes fire safety improvements in Old Capitol - Fire Restoration and Buildings Improvements and Chemistry Renovation projects.

***Includes fire safety components of renovation projects.

Outstanding Fire Safety Projects
General Education Fund Facilities and UIHC
($ Thousands)

	Fall 2018 (FY 2019)
SUI (includes Oakdale)	$ 2,903.6
UIHC	400.0
ISU	4,015.0
UNI	3,141.4
ISD	125.9
IBSSS	60.0
Total[1]	**$ 10,645.9**

[1]Includes items identified by State Fire Marshal's Office and other external entities; excludes work in buildings to be demolished, and for which waivers from the State Fire Marshal are to be requested.

The $10.6 million is a 12% decrease from the $12.1 million reported in Fall 2017, which exceeds the local construction cost inflation rate of five percent.

In addition to the $86.7 million (see previous page) in corrected fire safety over the last 26 years, the following describes progress made by the institutions in FY 2018.

University of Iowa
Under the UI fire safety program, 98 buildings are continually inspected and evaluated on a bi-annual basis by inspectors from the State Fire Marshal's Office with assistance from the UI Fire Safety Coordinator. In addition to bi-annual inspections, pre-occupancy inspections are being conducted by the State Fire Marshal's Office and State Building Code Bureau with the assistance of the UI Fire Safety Coordinator. These inspections evaluate newly constructed or renovated buildings prior to its occupancy and will likely mitigate the possibility of finding major deficiencies during future inspections.

- As part of renovation projects in Van Allen Hall, the Medical Research Facility and the Blanks Honors Center, fire detection systems were replaced completely or partially. Fire pump controllers were replaced in the Pappajohn Business Building and the Boyd Law Building.

- In 2018, various inspections were performed by the State Fire Marshal's Office working with the university.

- Facilities Management is continuing with a comprehensive inspection program of the existing fire sprinkler system, which is more in-depth than typical inspections to identify system shortcomings.

- Facilities Management now has 101 (up from 67 last year) buildings connected to their 5-loop fire alarm network. The network provides building floor plans including all fire alarm devices and

will provide the UI Police communications center real time information on each building. If needed, the network can allow the UI Police to activate the building's severe weather alert and perform live voice announcements for other types of campus emergencies.

- Residence Assistant (RA) Fire Academy – The university conducted its eleventh annual Residence Assistants (RA) safety-training academy this past August. With the aid of the University Housing & Dining's Office of Residence's Life and Facilities & Operations, the UI Department of Public Safety and the Iowa City Fire Department, some 140+ RAs and professional staff completed this three-hour hour training program in residence hall fire safety. This program continues to be listed by several collegiate fire safety associations as one of the nation's premier RA fire academies.

- Higher Education Opportunity Act (HEOA) Annual Fire Safety Report – The university has completed the 2016 fire safety report, as required by the Federal Department of Education. This report provides a log of all fire incidents that occurred in on-campus student housing facilities during the past three academic years.

Iowa State University

Iowa State University's Department of Environmental Health and Safety (EH&S) works to ensure compliance with fire safety codes in GEF facilities. All plans and designs for new buildings and renovation projects are reviewed for code compliance and checked for outstanding fire safety deficiencies. Fire safety deficiencies needing to be incorporated into a project are formally communicated to the project designers and engineers. Project designers and engineers routinely consult with EH&S to resolve challenging fire safety deficiencies early in the planning stages.

- As part of renovation projects in Applied Science II, Atanasoff Hall, Catt Hall, Food Science, Gilman Hall, Horse Barn, Meats Lab, Music Hall, Science II, Town Engineering and VMRI 1, upgrades were made to fire detection systems. Corridor rating improvements were made in Carver Hall, Gilman Hall, Music Hall and Science 1.

- Starting in 2017, the ISU's Environmental Health & Safety's Fire Safety (EH&S) group began conducting ISU's Fire Safety inspections as authorized by the State Fire Marshal's Office.

- EH&S works to ensure compliance with fire safety codes in GEF facilities. All plans and designs for new buildings and renovation projects are reviewed for code compliance and checked for outstanding fire safety deficiencies. Fire safety deficiencies needing to be incorporated into a project are formally communicated to the project designers and engineers. Project designers and engineers routinely consult with EH&S to resolve challenging fire safety deficiencies early in the planning stages.

- The most current estimate for outstanding fire safety deficiencies identified by the State Fire Marshal and EH&S in GEF facilities is $4,015,000. This estimate includes the cost of adding sprinkler systems to seven buildings to address fire corridor deficiencies cited in the 2017 inspection. Funding for correcting fire safety deficiencies comes from the overhead use fund and the capital renewal fund and are specifically identified as the Health and Life Safety Project accounts.

University of Northern Iowa
In 2012, a team comprised of the University Fire and Safety Specialist, Facilities Management administrators and skilled staff in various trades was assembled to prioritize fire alarm upgrades/replacement. The team considered condition of the system, availability of replacement components and exposure to risk.

Correcting fire safety deficiencies is a high priority for the university. The university's Environmental Health and Safety Office's Fire and Safety Specialist continues to conduct fire safety inspections, the goal of which is inspecting each campus building at least once each year.

- Fire detection systems were either completely or partially replaced in the Industrial Technology Center, Facilities Management, Strayer Wood Theatre and at 3219 Hudson Road. Fire suppression repairs and fire safety testing was carried out in multiple buildings.

- The latest State Fire Marshal inspections occurred January 18-26, 2018.

- To ensure fire safety deficiencies are included in various renovation projects, the Office of Risk Management and Environmental Health & Safety (EHS) collaborate with Facilities Management to confirm that fire safety deficiencies are included within the project. During the renovation process, EHS collaborates with Facilities Management, contractors and the State Fire Marshal's Office to make sure that fire safety deficiencies are addressed. At the conclusion of a renovation project, EHS participates in the final walk through to ensure all identified fire safety deficiencies have been addressed.

Iowa School for the Deaf
The State Fire Marshal's Office conducts fire and environmental safety inspections at ISD, while ISU's EH&S is authorized by the State Fire Marshal's Office to conduct the same inspections at IBSSS. The State Fire Marshal's most recent inspection of ISD was in December 28, 2017. The next inspection is scheduled for December 2020.

- In FY 2018, ISD installed smoke detectors/alarms at various locations throughout campus.

Iowa Braille and Sight Saving School
The State Fire Marshal's Office has discontinued regular inspections of the Iowa Braille and Sight Saving School due to the closure of the residential program in 2011 and its shift away from a typical school environment where children are regularly present. As an alternative safety measure, bi-annual fire and environmental safety inspections are conducted by ISU EH&S. The last inspection was July 6, 2018.

Part 5 of 5
Deferred Maintenance

Regent institutions completed over $1.0 billion in deferred maintenance projects from FY 1993 through FY 2019 (26 years) in General Education Fund facilities. That is an average of $40.0 million per year. For FY 2019, $44.1 million are planned to correct deferred maintenance.

Completed Deferred Maintenance
General Education Fund Facilities and Utilities
Fall 2018, ($ in Thousands)

	SUI	ISU	UNI	ISD	IBSSS	Total
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	7,377.6	4,194.8	439.4	165.0	69.3	12,246.1
FY 2004	7,154.0	4,187.5	761.5	596.3	56.0	12,755.3
FY 2005	9,695.8 **	5,253.1	1,400.0	625.0	53.0	17,026.9
FY 2006	12,434.8 **	2,764.8	964.8	1,040.0	223.8	17,428.2
FY 2007	12,464.0 **	4,966.3	1,710.0	160.0	320.5	19,620.8
FY 2008	15,780.6 **	3,498.9	910.2	195.0	967.9	21,352.6
FY 2009	9,847.2 **	3,936.0	3,022.6	217.5	335.9	17,359.2
FY 2010	19,046.3	10,521.7	2,757.9	250.0	605.3	33,181.2
FY 2011	17,805.1	2,422.3	2,798.2	250.0	171.1	23,446.7
FY 2012	6,648.2	5,105.9	1,891.3	900.0	799.7	15,345.1
FY 2013	17,766.3	4,905.5	1,524.5	104.6	13.4	24,314.3
FY 2014	11,930.5	6,521.6	2,177.5	128.5	581.6	21,339.7
FY 2015	9,213.9	9,980.9	1,656.3	311.5	83.2	21,245.8
FY 2016	30,794.3	11,579.4	856.7	425.8	243.0	43,899.2
FY 2017	14,447.9	5,202.0	3,912.7	497.1	93.0	24,152.7
FY 2018	34,572.0	7,130.5	6,467.9	386.3		48,556.7
Subtotal	$ 279,962.3	$ 133,803.8	$ 56,118.9	$ 9,950.7	$ 7,050.2	$ 438,329.2
Projects Planned for or Continued in FY 2019	$ 21,576.0 **	$ 12,780.9	$ 8,932.4	$ 820.0		$ 44,109.3
Subtotal	$ 301,538.3	$ 146,584.7	$ 65,051.3	$ 10,770.7	$ 7,050.2	$ 530,995.2
FY 1993 - FY 2018 Renovation Projects Which Include Correction of Significant Amounts of Deferred Maintenance***	$ 188,648.4	$ 167,297.1	$ 163,834.1	$ 4,000.0	$ 1,100.0	$ 524,879.6
FY 2019 Renovation Projects Planned or Continued with Correction of Significant Amounts of Deferred Maintenance****	$ 20,040.0	$ 3,845.3	$ 806.0	$ 1,897.4		$ 26,588.7
Total	**$ 510,226.7**	**$ 317,727.1**	**$ 229,691.4**	**$ 16,668.1**	**$ 8,150.2**	**$ 1,082,463.5**
Total - By Source of Funds						
Building Renewal/Building Maintenance/General University	$ 102,664.9	$ 136,740.9	$ 38,514.3	$ 7,012.1	$ 3,076.0	$ 288,008.2
Building Renewal/Academic Building Revenue Bonds	52,728.3		83.5			52,811.8
Treasurer's Temporary Investment (TTI) Income	20,280.1	11,353.7	1,634.3			33,268.1
Gifts, Grants	9,381.7	33,146.7	12,264.1			54,792.5
Utility Renewal and Replacement and Revenue Bonds	157,433.2	20,009.0	4,753.3	236.0		182,431.5
Acad. Bldg Rev. Bonds; Pre 1991 and 1991; and Project Notes		5,218.5	1,863.5			7,082.0
Academic Building Revenue Bonds; 1992	3,100.5	6,024.8	8,071.3		610.3	17,806.9
Academic Building Revenue Bonds; 1994, 1995, 2008	20,536.1	9,793.1	40,985.7			71,314.9
Capital and Special Appropriations	55,275.4	43,404.6	104,007.7	6,510.0	2,551.3	211,749.0
TTI, FY 96 Capital Appropriation, Utility Enterprise R & R	1,000.0					1,000.0
FY 96 Capital Appropriation, Utility Enterprise R & R	450.0					450.0
Agriculture Experiment Station & Cooperative Extension		1,175.2				1,175.2
Facilities Overhead Use Allowance	1,679.0	10,723.0				12,402.0
Building Repair / Treasurer's Temporary Investments	2,737.8	12,564.8				15,302.6
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
Other (includes unspecified combination of above fund sources)	78,845.4	27,572.8	17,513.7	2,910.0	1,912.6	128,754.5
Total	**$ 510,226.7**	**$ 317,727.1**	**$ 229,691.4**	**$ 16,668.1**	**$ 8,150.2**	**$ 1,082,463.5**

Deferred maintenance in higher education is a national problem. For a number of years, the institutions and the Board Office have defined deferred maintenance as:

"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."

For Fall 2018, the Regent institutions report a total of $836.3 million in outstanding deferred maintenance in General Education Fund facilities and utilities. This does not include FY 2018 planned deferred maintenance projects and renovation projects, which have deferred maintenance in them.

Outstanding Deferred Maintenance
General Education Fund Facilities and Utilities
Fall 2018, ($ in Thousands)

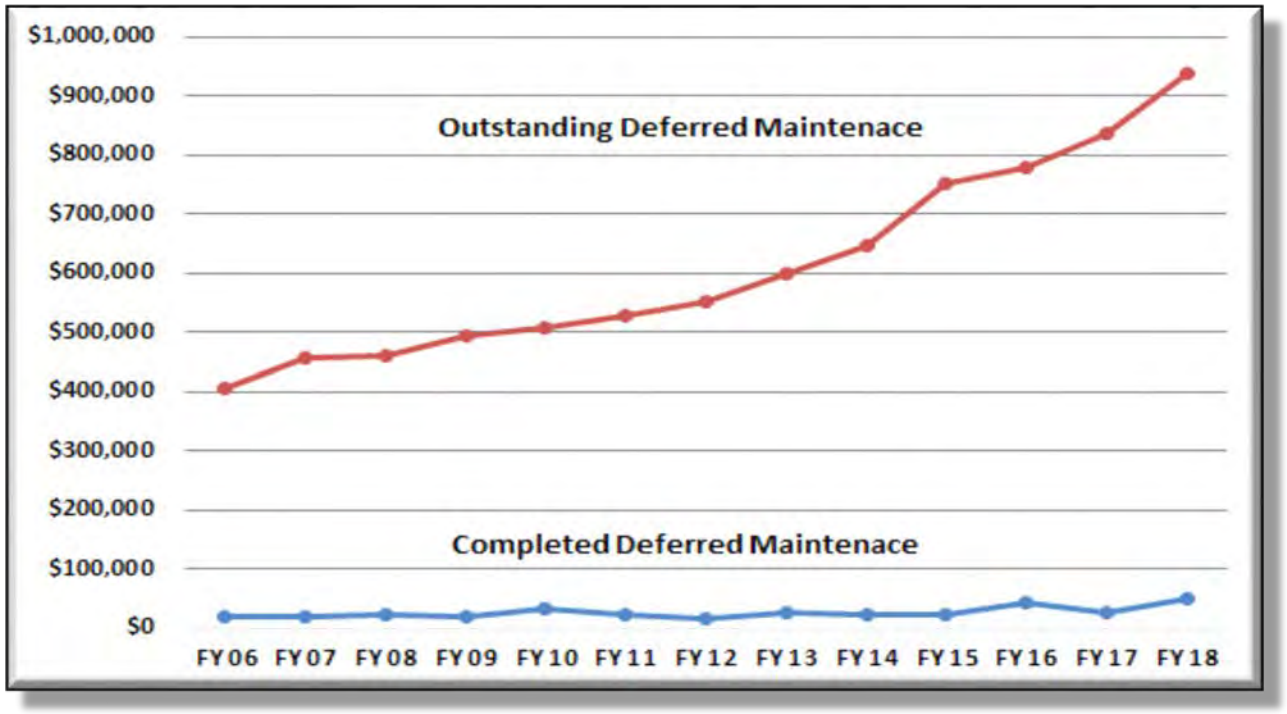
	SUI	ISU	UNI	ISD	IBSSS	Total
Individual Projects						
Buildings[2]	$135,518.4	$ 426,092.0	$101,154.0	$ 784.0	$1,313.0	$664,861.4
Utilities	10,127.1	23,945.0	24,464.0	248.0	185.0	58,969.1
Subtotal	$145,645.5	$ 450,037.0	$125,618.0	$ 1,032.0	$1,498.0	$723,830.5
Included within Five Year Capital Plan (FY 2020 - FY 2024)						
Buildings[2]	$ 60,882.6	$ 7,744.0	$ 34,595.0	$ 9,239.0		$112,460.6
Utilities	100,200.0	7,200.0	-	248		107,648.0
Subtotal	$161,082.6	$ 14,944.0	$ 34,595.0	$ 9,487.0		$220,108.6
Grand Total						
Buildings	$191,401.0	$ 433,836.0	$135,749.0	$10,023.0	$1,313.0	$772,322.0
Utilities	110,327.0	31,145.0	24,464.0	496.0	185.0	166,617.0
Total	$301,728.0	$ 464,981.0	$160,213.0	$10,519.0	$1,498.0	**$938,939.0**

[1]Excludes dollar amounts for projects to be undertaken in FY 2019, those to be funded through previously authorized academic building revenue bonds and capital appropriations; and the deferred maintenance components of ongoing renovation projects.

[2]Includes site work.

The $938.9 million is a 12% increase over the $837.3 million reported in Fall 2017, which exceeds the local construction cost inflation rate of five percent. It is important to note that the universities undertake complete building assessments for deferred maintenance and continue to refine that analysis, which can lead to the reporting of increased amounts. As previously mentioned, 31 percent of Regent GEF facilities are reaching or have reached the end of their useful lives, due to their age dating back to the First Wave of construction in the 1960s and 1970s.

Outstanding vs Completed Deferred Maintenance
General Education Fund Facilities and Utilities
Fall 2018, ($ in Thousands)



So, why the $938.9 million in outstanding deferred maintenance? According to Sightlines' "*State of Facilities in Higher Education, 2016 Benchmarks, Best Practices & Trends*," there are three key conditions affecting higher education facilities and their deferred maintenance backlog as illustrated in the previous two charts.

- Lack of funds: Current capital investment is simply not enough to "catch up" and "keep up."
- Building age: 31 percent of all Regent facilities were built in during the First Wave of campus construction in 1960s and 1970s and are reaching or have reached the end of their useful lives.
- Enrollment growth: More enrollment often requires new or renovated facilities. Regent enrollment has increase 14 percent over the last ten years. During that time, Iowa State University alone had an enrollment increase of 34 percent.

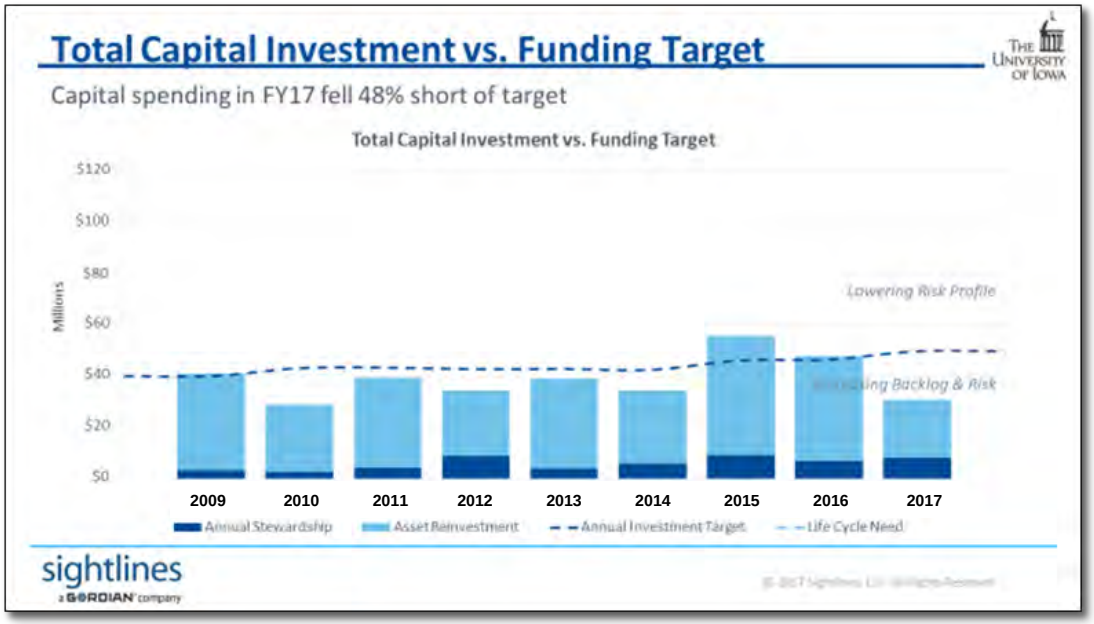
Institutional Comments on Deferred Maintenance

University of Iowa

The University of Iowa also uses a *total cost of ownership* evaluative framework when weighing the various alternatives that may include renovation, improvement, or demolition of existing facilities. The *total cost of ownership* framework includes all stewardship costs, including the initial project cost and on-going care, utilities and energy costs over the useful life of a facility. When renewal will not result in useful space configurations or will prolong the inefficient use of existing land, the University of Iowa may consider removing a building. In situations where building removal is considered, historical value and heritage are carefully weighed.

Beginning in 2004, the university has contracted with third parties for periodic facilities condition assessments. Currently, the university is transitioning from using ISES, a consulting firm that provides facilities condition assessments, to Sightlines.

With regard to "keep up" versus "catch up," the university of Iowa uses a combination of annual stewardship and asset reinvestment to have an impact on the condition of the campus. Annual stewardship or "keep up" is for the necessary repairs that keep the facilities functioning and ensure they reach their useful life expectancy. Asset reinvestment or "catch up" is to address the deferred maintenance backlog of repair and modernization of facilities. At the university, the interrelationship between the annual stewardship and asset reinvestment is strong. When annual stewardship declines, facilities organizations tend to become more reactive, buildings become more expensive to operate and care for, and capital needs increase. To put it another way, according to Sightlines, $1 spent now in "keep up" avoids $3 in "catch up."



***** Sightlines, March 2018

From FY09 through FY15, the university maintained the generally good condition of its facilities at a consistent equilibrium, with rate of renewal in balance with the rate of deterioration. This changed in FY16, when the annual funding for these efforts was cut approximately in half. As evidenced in the chart, above, expenditures were buoyed by commitments made prior to FY16,

but show the drop in FY17. Investments initiated after FY16 were closer to $15 million annually, and funding has continued to decline with each passing year.

With the current level of funding, the UI no longer is positioned to "keep up" with the rate of building deterioration nor to "catch up" to the demands for program-related modernization. The gap between the available funding and need is significant, and not quickly resolvable. Consequently, the UI now is working closely with Sightlines and the UI Central Services Building and Grounds Advisory Committee to develop a strategy to address near-term funding decreases by offsetting higher funding levels in the back end of the plan.

University of Iowa Hospitals and Clinics
The University of Iowa Hospitals and Clinics has not reported any deferred maintenance and indicates that it does not have any maintenance needs that meet the definition of deferred maintenance.

Iowa State University
For FY 2017, there was a 15 percent increase in deferred maintenance. This increase was due to a renewed emphasis on roof and elevator building systems and a more accurate reflection on their costs. Incomplete elevator cost information was corrected. Roofing costs and scopes of work were adjusted to align with current market values. More specifically, elevator deferred maintenance changed from $22 million to $43 million, while roof deferred maintenance changed from $20 million to $37 million. The remainder of the 15 percent increase in deferred maintenance is attributed to inflation and aging of building systems.

As enrollment has grown over 40 percent over the past 10 years, general university facility space has grown only 4 percent, resulting in more intense use of current facilities. The demand for custodial services and maintenance and repairs of campus buildings and grounds have grown due to increased wear and tear. Although the budget for facilities services has had modest increases, funding remains constrained and only affordable levels of service continue to be provided in the areas of building maintenance, custodial services and grounds maintenances.

The deferred maintenance backlog is based upon a comprehensive, systematic process for identifying the maintenance and repair requirements for our general university buildings. The methodology involves assessing General Education Fund buildings in nine different system categories (Envelope, HVAC, Roof, Window, Site, Electric, Plumbing, Interior and Elevators). The assessment takes into account the replacement value of the building, age of the building, value of the systems within the building, age of the systems and condition of those systems. The area maintenance team assigned to each building also provides a condition assessment of each building system.

University of Northern Iowa
The University of Northern Iowa continues to update its deferred maintenance information through building assessments. Information is obtained from users of the buildings, along with the maintenance personnel for the respective areas. When planning renovations, Facilities Planning design and construction staff review the deferred maintenance deficiencies and addresses those as part of the project.

Future deferred maintenance projects are selected from their top 25 Deferred Maintenance list.

The university reports that an increase in annual budgeted funds will be required to sustain an adequate maintenance schedule for campus buildings. University operations and maintenance personnel currently focus their resources based on a priority system that addresses safety issues, educational support and repair of facilities equipment to lengthen the life of the assets.

Iowa School for the Deaf
Deferred maintenance items are identified through inspection and reporting from facility staff and Council Bluffs site users. Projected estimates have been developed in conjunction with ISU and through an independent study performed by Nielsen/Mayne Architectural firm.

Due to the age of the buildings, tuckpointing is necessary on Long Hall (high school) and the Giangreco Hall (Administration Building). Long and Giangreco are in need of foundation waterproofing. Interior renovations are needed in Long Hall's classrooms, as well as the bedrooms and common areas of the boys' and girls' dormitories. These projects have been incorporated into ISD's Five Year Capital Plan and will be completed as funds become available. ISD keeps a deferred maintenance list which aids in their decision making process.

Iowa Braille and Sight Saving School
Deferred maintenance items are identified through inspection and reporting from facility staff and Vinton site users. Projects include needs in Old Main, Palmer Hall, Rice Hall, Recreation Building and Superintendent's Residence. Deferred maintenance projects also include utilities. As funds are available, many areas have been addressed. IBSSS keeps a deferred maintenance list which aids in their decision making process.

Analysis

The sheer aging of facilities and budget challenges over the years have led to an increase in fire and environmental safety deficiencies and deferred maintenance issues and have hindered the institution's capabilities to correct them. Maintenance cycles and preventative maintenance activities have been delayed or eliminated, placing buildings and occupants more at-risk for unanticipated building system outages. Maintenance and repairs to roofs, exterior building envelopes, windows, plumbing and electrical systems can cause further damage to the facilities, thus increasing the costs of future repairs.

In spite of the reasons for deferred maintenance including lack of funds, building age and enrollment growth, the universities are moving forward and developing strategies to fund both "keep up" and "catch up" needs. In doing so, they set priorities based on a number of factors, including building condition and utilization, operational demands and program growth. From there, the universities track the performance of its mission critical buildings that currently face the highest risk of failure to determine the best course of action.

FIVE-YEAR CAPITAL PLANS
INCLUDING CAPITAL REQUEST FOR FY 2020- FY 2024

Executive Summary: Quality facilities are an integral part of the academic enterprise. They help ensure quality academic programs and the ability to attract and retain students, faculty and staff. They also improve the research productivity of the faculty.

Table of Contents

Part 1 of 3
Five-Year Capital Plan for State Funds
Including the Capital Request for FY 2020 – FY 2024 ($ in Thousands)

Institution	Project	FY 2020 Amount	FY 2021 Amount	FY 2022 Amount	FY 2023 Amount	FY 2024 Amount	Total State Request	Private, Other Funds	Total
All Regent Institutions	Deferred maintenance, fire & environmental safety, campus security, regulatory compliance, energy conservation	20,000	20,000	20,000	20,000	20,000	100,000	-	$100,000
University of Iowa	Main Library Modernization	16,380	27,300	10,920	-	-	54,600	-	54,600
Iowa State University	Parks Library Student Learning Hub	10,000	16,000	-	-	-	26,000	2,000	28,000
Univ. of Northern Iowa	Industrial Technology Center Modernization	2,205	13,965	21,840	-	-	38,010	4,000	42,010
Iowa School for the Deaf	Long Hall Renovation	4,325	-	-	-	-	4,325	-	4,325
Iowa Public Radio	Equipment for ISU and SUI licensed properties	1,430					1,430	-	1,430
	FY 2020 Capital Request, Total =	**$54,340**	**$ 77,265**	**$ 52,760**	**$20,000**	**$20,000**	**$224,365**	$ 6,000	$230,365
University of Iowa	Pentacrest Renewal & HVAC Modernization	-	10,920	27,300	24,520	10,920	73,660	-	73,660
Iowa State University	Biosciences Backfill Project		10,500	-	-	-	10,500	-	10,500
IA School for the Deaf	Girls Dormitory HVAC / Electrical	-	4,615	-	-	-	4,615	-	4,615
Iowa Public Radio	Equipment for ISU, UNI & SUI licensed properties	-	304	185	250	200	939	-	939
Iowa State University	Science Building Capital Renewal Phases 1, 2 & 3			20,000	20,000	20,000	60,000	-	60,000
Univ. of Northern Iowa	University Center	-	-	3,331	13,650	47,775	64,756	60,716	125,472
IA School for the Deaf	Giangreco Hall - Exterior Rehabilitation	-	-	6091	-	-	6,091	-	6,091
IA School for the Deaf	Giangreco Hall - Boys Dorm HVAC	-	-	-	3,152	-	3,152	-	3,152
	Total =	$54,340	$103,604	$109,667	$81,572	$98,895	$448,078	$ 66,716	$514,794

This proposed Five-Year Capital Plan for State Funds totals $448.0 million in state funds, funded by state appropriations and/or Academic Building Revenue Bonds, and $66.7 million in private or other funds for a total of $514.7 million.

Of the $448.0 million that would be funded by state appropriations and/or Academic Building Revenue Bonds, $348.0 million are major renovation projects and $100 million are fire safety, environmental safety, deferred maintenance, campus security, regulatory compliance and energy conservation projects at Regent institutions.

Additional Information

Authorization to issue Academic Building Revenue Bonds: During the 2004 and 2007 legislative sessions, the Board received authorization for the sale of Academic Building Revenue Bonds for more than $250 million in project costs. Tuition and fees are used to pay the debt service payments on these bonds. Tuition replacement appropriations from the State, then replace that tuition and those fees. This funding mechanism used by the Regent universities is unique among state entities and is authorized under *Iowa Code* §262A.

Board Approval: The Board is required by the *Iowa Code* to submit its upcoming fiscal year's capital funding request (Capital Request for FY 2020) by October 1. Because of legislation enacted during

the 2005 session, the Board is no longer required to submit the entire Five-Year Capital Plan for State Funds. However, consistent with the Board's focus on planning, a Five-Year Capital Plan for State Funds is submitted for consideration. It is understood that it may be modified each year as the Board reviews individual capital requests.

Board action on any Five-Year Capital Plan (for State Funds, UIHC, or Other Funds) does not constitute Board approval of the specific projects within the "Plans" as it is an estimate of future capital needs. All projects listed within any Five-Year Capital Plans would be brought forward for specific Board approval as required by Board's *Policy Manual*. They would need to meet the evaluation criteria adopted by the Board in June 2003, which include a section on alignment with an institution's mission and strategic plan.

Regent square footage and replacement value: Academic/research/administrative or GEF facilities have 19.1 million gross square feet and a replacement value of $9.6 billion. All Regent facilities (64% of all state facilities) have 41.1 million square feet and a replacement value of $19.3 billion.

Capital Requests for FY 2020
Project Descriptions

Library Modernization FY 2020 State Request
University of Iowa $16.38 million

Except for the Library Learning Commons, which opened in Fall 2013 on the lower level, the Main Library remains essentially, as it was built in 1951. It has received over 1 million visitors in a year, contains 427,000 gross square feet of space and has the highest deferred maintenance need of University of Iowa building.

In October 2003, Shepley, Bulfinch, Richardson & Abbott of Boston, MA, evaluated current and future volume storage for the Main Library and the (then) 12 departmental libraries. The study evaluated these university libraries with respect to condition and developing library-learning environments in peer institutions. Through this study, the need to modernize the university library system was made clear. Coupled with the expansion and improvement of library volume storage, the re-use of existing space and updated building systems would much more effectively serve the core needs of the university and its student population.

As the first phase of the long-range modernization plan, the University invested $21.5 million in non-state appropriated funds for a new off-site warehouse with the capacity to house 5 million of the Main Library's volumes.

As the second phase, this project would repurpose the space vacated by those five million volumes to meet ever-evolving student needs. This project would also expand and complement the Library Learning Commons, support the library as the new home for the "academic neighborhood" and student success, and allow for promising collaboration opportunities between the Main Library and the new Museum of Art to be located south of the Library.

Mechanical and electrical systems would also be upgraded and spaces would be reconfigured to support modern student learning methods. Accessibility would be improved and the functionality of the University library system would be advanced to be well positioned for future generations of university students.

The FY 2020 requested funds of $16.38 million would get the project designed and construction underway. The additional $27.3 million (FY 2021) and $10.92 million (FY 2022) in state funds would finish the project for a total of $54.6 million. <u>This project would correct $29.6 million in deferred maintenance.</u>

Proposed Project Schedule

Planning	9 months
Bidding	2 months
Construction	18 months
Opening	2 months
Total	31 months

Parks Library Student Learning Hub FY 2020 State Request
Iowa State University $10.0 million

This project would transform approximately 44,000 square feet on the second and third floors of Parks Library from book stacks with limited study space into a vibrant hub for student learning and discovery, with individual study and collaborative spaces reinforcing the Board of Regents, State of Iowa's priority for student success and access to education. Approximately 600 additional seats for students would be added with this project, greatly improving the seats-to-student ratio from 1:16 to 1:12. Group/collaboration spaces would more than triple, from the currently inadequate eight rooms to thirty technology-enhanced spaces that would help build a strong and vibrant learning community. Level 2 would become an active learning commons space, with collaborative group spaces, additional seating and open lab/classroom space. Level 3 would include space for graduate students, additional open seating and technology-equipped group study rooms.

These significant student-focused improvements would be accomplished by replacing and relocating the more than 50 year old, energy-inefficient, HVAC equipment from a mechanical room on the fourth floor of the library to a newly constructed rooftop mechanical penthouse. The nearly 8,000 square feet that the former mechanical room occupied on fourth floor would be recaptured for future expansion of the Special Collections and University Archives group. In conjunction, the print collection on second, third and fourth floors would be compressed and relocated to high-density storage shelves in the basement, freeing up critical space for learning and student engagement.

Many of the building infrastructure systems are at or beyond their useful life. The capacity of the existing systems is not adequate for space in its current configuration; plans to transition stack space to study and collaboration space would further exacerbate the ability of the mechanical systems to meet the additional load. Poor ventilation is especially concerning in a library facility.

The $2.3 million "Parks Library Restroom Renovations" project, approved by the Board of Regents in December 2017 and funded by Iowa State University, is now underway and is a first critical step in the revitalization of Parks Library. The project will increase restroom capacity, address accessibility, add gender-neutral restrooms and a lactation facility and correct a section of deferred maintenance on all five floors of the Parks Library's 1960 addition.

The FY 2020 requested funds of $10.0 million would get the project designed and construction underway. The additional $16.0 million in state funds and $2.0 million in private or other funds would finish the project for a total of $28.0 million. This project would correct $20.0 million in deferred maintenance.

Proposed Project Schedule

Planning	14 months
Bidding	2 months
Construction	18 months
Opening	2 months
Total	36 months

Industrial Technology Center FY 2020 State Request
University of Northern Iowa $2.205 million

$10.1 million in deferred maintenance would be corrected by this project.

Built in 1974, the Industrial Technology Center is programmatically obsolete and is undersized for the program demands of the 21st century. The proposed project would expand the facility by 45,000 square feet and renovate an additional 64,438 square feet. The Department of Technology proposes to renovate and expand this facility to meet the needs of Iowa industry and to better prepare teachers to teach STEM disciplines. The project aligns with the Iowa Department of Education's Initiative Career and Technical Education program by preparing the teachers who will prepare secondary school students, and to educate the workforce in industrial and construction fields

These programs have become increasingly important to the economic development of the state. The Iowa Department of Education has created the Career and Technical Education program to offer a sequence of courses, which are directly related to the preparation of individuals in employment for current or emerging occupations. The purpose of this program is to align secondary education with postsecondary education, so that Iowa's students are prepared to enter the workforce with the skills they need. This in turn would make Iowa businesses more competitive and successful.

The Department of Technology is uniquely positioned in support of two areas of the program; Information Solutions and Applied Sciences, Technology, Engineering and Mathematics. The Department of Technology programs offer the advantages of four-year education in these fields, while focusing on production skills that industries need. Thus, the graduates fill an important workforce gap between the technical skills of the community college graduate and the design and engineering graduate.

The $2.2 million for FY 2020 would be funds to get the design well underway. That would be followed by $13.9 million in FY 2021 and $21.8 million in FY 2022 for a total of $42.0 million. This project would correct $10.1 million in deferred maintenance.

Proposed Project Schedule

Planning	5 months
Bidding	2 months
Construction	10 months
Opening	1 months
Total	18 months

Long Hall Renovation FY 2020 State Request
Iowa School for the Deaf $4.325 million

J. Schuyler Long Hall, built in 1930, serves as the high school and middle school building. This 88-year-old building has had an inefficient building envelope, mechanical and electrical systems for a number of years. Ventilation and air circulation is also inadequate. The project would replace the heating and air conditioning systems (window units), upgrade the electrical system including new lighting and power, install a new fire suppression system, address issues with tuck pointing of the brick and mortar, replace the leaky windows and renovate classrooms to accommodate the needs of deaf and blind students. There are environmental issues such as water seeping into the walls and around windows, creating water damage and mold within the building.

Having a renovated building is key to the development of a regional program at ISD for students who are blind, visually impaired, deaf, hard of hearing or deaf/blind. The project would provide an efficient, safe and contemporary setting to support appropriate educational services that add to the continuum of educational services.

The $4.325 million is a one-time request for FY 2020. This project would correct $2.2 million in deferred maintenance.

Proposed Project Schedule

Planning	12 months
Bidding	3 months
Construction	20 months
Opening	2 months
Total	37 months

Replace Transmission Equipment at FY 2020 State Request
WOI-FM, KSUI-FM and KICP-FM $1.43 million
Iowa Public Radio

- $830,000 of the $1,430,000 request to replace WOI-FM's antenna, transmission line, transmitter and studio-to-transmitter link

WOI-FM's main transmitter system has portions over 20 years old and an analog back-up transmitter 40 years old. Its transmission line and antenna are also over 20 years old with 20 foot segments connected with obsolete clamps. A failure in any of the segments would likely necessitate replacement of the entire transmission line. The usual life of transmission systems is 15-20 years, so we are at the end of its useful life.

Under this project, the 40-year-old analog back-up system would be replaced and the current transmitter would be moved into the backup role. This move would also ensure that both the main transmission system and back-up system are HD (digital) radio-capable. HD signals serve HD radio listeners and also provide an effective system for delivering programming to other stations in the 25-station IPR network. We have developed an audience of listeners to our HD radio

service, so redundancy is needed to maintain HD radio coverage.

WOI-FM is the main signal for the Iowa Public Radio network in the Des Moines/Ames area and is an essential hub for our statewide network. Originating in Ames, the signal serves 60,600 listeners in 15 counties in central Iowa with news, information and cultural programming. WOI-FM is owned and licensed to Iowa State University.

- $350,000 of the $1,430,000 request to replace KSUI-FM's transmission line and studio-to-transmitter link

The transmission line, which connects the transmitter on the ground to the antenna on the tower, failed catastrophically in late 2015. Although many hours were spent to repair the failure, the line is old and compromised, subjecting it to potential failure again without warning.

IPR's Classical service – with 10 stations statewide – is the only classical music radio service in the state. In addition to providing listeners with the very best in classical programming from around the world, IPR Classical also extends the reach of Iowa's most respected cultural institutions, bringing performances from Iowa's symphonies and opera companies to audiences far beyond the symphony hall.

KSUI is IPR's largest classical signal, serving 48,000 listeners each week in 13 counties including Iowa City, Cedar Rapids and the Quad Cities making this a high priority project. KSUI is owned and licensed to the University of Iowa.

- $250,000 of the $1,430,000 request to replace KICP-FM's antenna and transmitter

On several occasions, power demand has exceeded service availability, resulting in a loss of service for the entire site. The project includes replacing the broadcast antenna with a higher gain model and acquiring a new transmitter. A higher gain antenna allows us to use a lower power transmitter, resulting in identical coverage with significantly less electrical costs. A newer, solid-state transmitter is safer, more reliable and more efficient than the existing vacuum tube counterpart, further reducing electrical costs. The design of the new transmitter would automatically adjust power in relation to antenna icing, significantly enhancing station reliability.

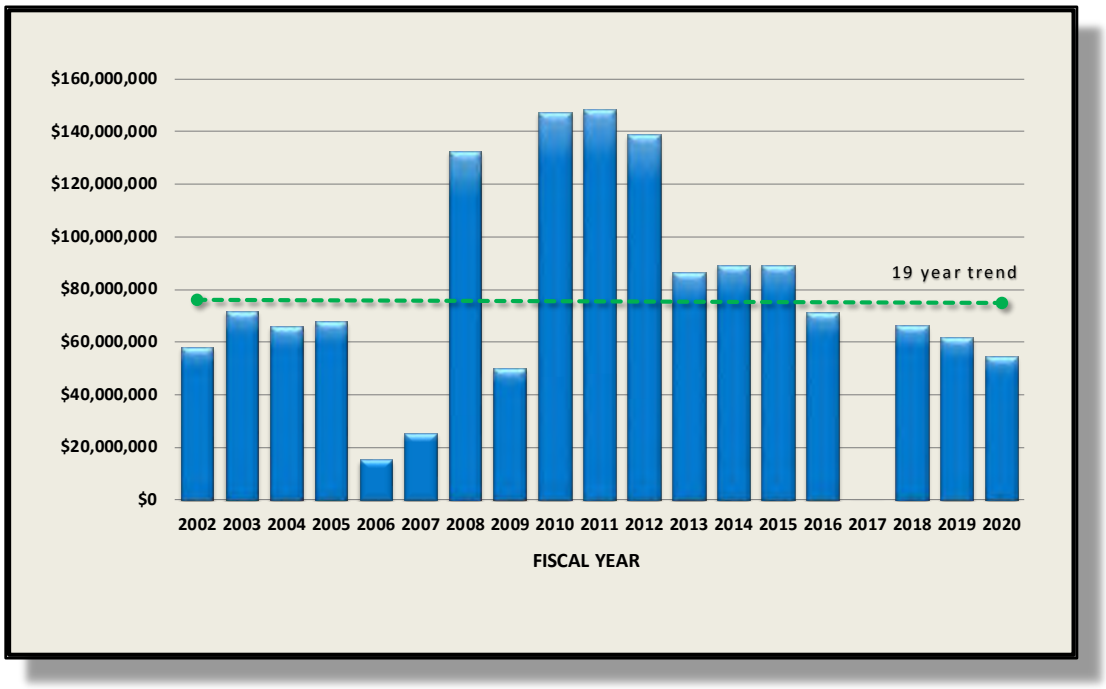
KICP is the largest classical signal in central Iowa, serves 12,000 listeners per week and is owned and licensed to Iowa State University.

The $1.43 million is a one-time request for FY 2020. This project would correct $1.43 million in deferred maintenance.

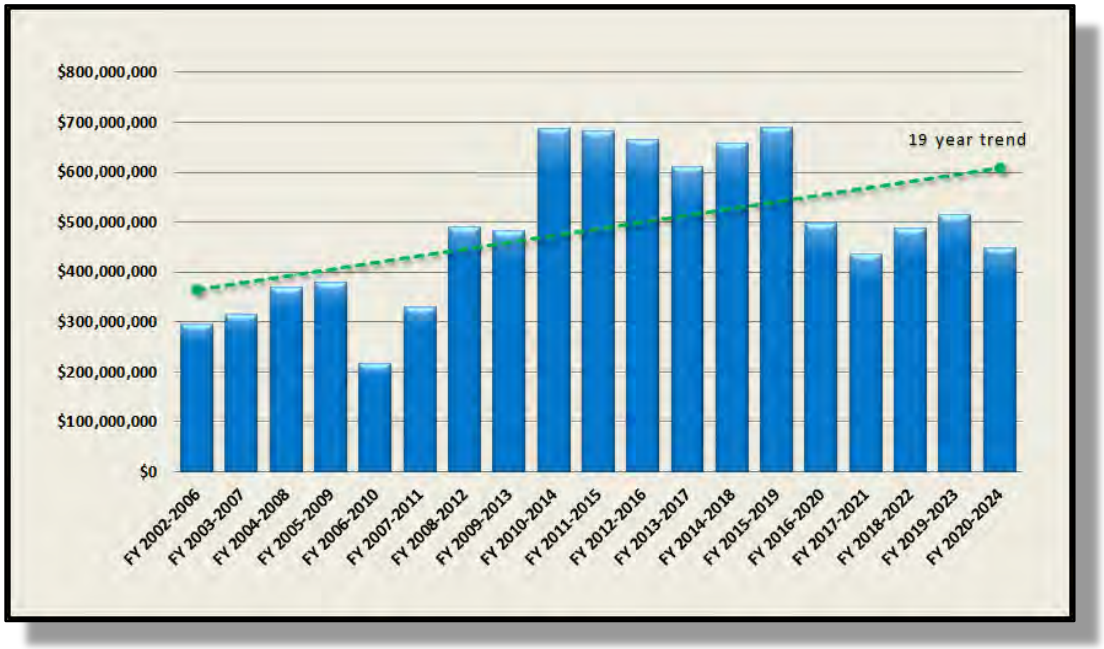
Proposed Project Schedule

Planning	3 months
Bidding	1 months
Construction	8 months
Total	12 months

First Year Only
History of Five-Year Capital Plans for State Funds



All Five Years
History of Five-Year Capital Plans for State Funds



Part 2 of 3
Five-Year Capital Plan for University of Iowa Hospital and Clinic Funds

This Five-Year Capital Plan for University of Iowa Hospitals and Clinics projects is for $394.5 million and would be financed by patient-generated funding (building usage funds), gifts and UIHC bonds.

The plan focuses on remodeling/renovation/rehabilitation and includes multiple projects to invest in the infrastructure and electrical power, as well as make facilities enhancements, renovate laboratories to accommodate new technology and convert inpatient rooms to single-beds.
The projects for which approvals would be requested during the FY 2020 – FY 2024 period can be summarized by type, as follows:

UNIVERSITY OF IOWA HOSPITALS & CLINICS

FIVE-YEAR CAPITAL PLAN for UIHC
FY 2020 - FY 2024 *
($ in Thousands)

University of Iowa Hospitals and Clinics	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total	Source of Funds
Fire and Environmental Safety							
Facility Wide Improvements to Meet Accreditation/Regulatory Requirements (Multiple Projects)	$ 650	$ 750	$ 750	$ 750	$ 750	$ 3,650	9
Fire Protection Systems Replacement / Enhancements (Multiple Projects)	400	400	400	400	500	$ 2,100	9
Fire & Environmental Safety Total =	**$ 1,050**	**$ 1,150**	**$ 1,150**	**$ 1,150**	**$ 1,250**	**$ 5,750**	
NEW BUILDING							
Iowa River Landing - Medical Office Building Extension Development	30,000	45,000	45,000	-	-	$ 120,000	9,11,4
New Building Total =	**$ 30,000**	**$ 45,000**	**$ 45,000**	-	-	**$ 120,000**	
RENOVATION							
UIHC Facility Infrastructure Investment (Multiple Projects)	$ 17,000	$ 17,000	$ 17,000	$ 20,000	$ 20,000	$ 91,000	9
UIHC Electrical Power Enhancements (Multiple Projects)	5,800	5,800	6,300	6,300	6,300	30,500	9
UIHC Facilities Enhancement Program (Multiple Projects)	5,000	10,000	10,000	10,000	10,000	45,000	9
Renovation of Diagnostic and Therapeutic Imaging Laboratories to Accommodate New Technology (Multiple Projects)	350	350	350	350	350	1,750	9, 11
L4 RCP - Cath Lab 3 Renovation	-	-	300	3,000	-	3,300	9
Single Bed Inpatient Room Conversion (Multiple Projects)		15,150	20,850	30,000	30,000	96,000	9, 11
Pneumatic Tube System Supplementation (Multiple Projects)	-	-	250	500	500	1,250	9
Renovation Total =	**$ 28,150**	**$ 48,300**	**$ 55,050**	**$ 70,150**	**$ 67,150**	**$ 268,800**	
UIHC TOTAL =	**$ 59,200**	**$ 94,450**	**$ 101,200**	**$ 71,300**	**$ 68,400**	**$ 394,550**	

Source of Funds Key:

1 (not used: report State Funds in Table 1)
2 Building Renewal Funds
3 Income from Treasurer's Temporary Investments
4 Gifts and Grants
5 Departmental Renewal and Replacement Funds
6 Auxiliary Service or Enterprise Revenue Bonds
7 Iowa DOT (Road Use Tax Funds)
8 Student Health Fees
9 University Hospitals Building Usage Funds
10 Ctr for Disabilities & Dev Building Usage Funds
11 UIHC Bonds

*** All projects identified in UIHC's Five-Year Capital Plan are contingent upon the availability of self-generated UI Hospitals and Clinics funding, UIHC bond revenue and/or gifts, approval through UIHC's annual capital budget process, finalizing specific renovation projects associated with UIHC's "Strategic Facility Master Plan" for FY 2006-2035, and approval of each project by the Board of Regents, State of Iowa. In addition, the "cutting edge" responsibility of the UIHC constantly brings about some revisions in planning. While this list includes all projects now envisioned for the FY 2020-2024 period, the dynamics of clinical service-educational demands, corollary societal forces, accreditation, and regulatory requirements may mandate other projects over time. In accord with long-standing practice, any such changes which arise will be fully documented for consideration and approval by the Board of Regents, State of Iowa.**

The UIHC Five-Year Capital Plan includes only those projects that are anticipated to be initiated during fiscal years 2020-2024. It does not include projects with previously approved budgets that will have expenditures during the FY 2020-2024 period.

Part 3 of 3
Five-Year Capital Plan for Other Funds

The following Five-Year Capital Plan for Other Funds is for a total of $1.0 billion for all three universities and is financed from sources other than state and UIHC funds.

Other Funds include operating budget building repair funds, income from treasurer's temporary investments, auxiliary service or enterprise bond funds (utility, telecommunications and residence systems), Iowa Department of Transportation institutional roads program, some gifts and grants and departmental renewal and replacement funds.

Five-Year Capital Plan for Other Funds: Summary
($ in Thousands)

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total
SUI	$ 97,124	$129,079	$104,923	$113,344	$118,788	$561,058
ISU	121,028	104,728	57,328	25,948	24,863	333,895
UNI	5,064	33,010	36,455	34,681	66,091	175,301
Total	$ 223,216	$ 266,817	$ 198,706	$ 173,973	$209,742	**$1,070,254**

THE UNIVERSITY OF IOWA

FIVE-YEAR CAPITAL PLAN for OTHER FUNDS
($ in Thousands)

University of Iowa	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Five Year Total	Source of Funds
FIRE & ENVIRONMENTAL SAFETY	$ 2,903	$ 2,903	$ 2,903	$ 2,903	$ 2,903	$ 14,515	2, 3
DEFERRED MAINTENANCE	$ 5,600	$ 5,600	$ 5,600	$ 5,600	$ 5,600	$ 28,000	2, 3
CAMPUS SECURITY	$ 1,092	$ 1,092	$ 1,092	$ 1,092	$ 1,092	$ 5,460	2, 3
UTILITY IMPROVEMENTS							
Old Capitol Tunnel	$ 6,000	$ -	$ -	$ -	$ -	$ 6,000	5, 6
North Chiller Plant Improvements	$ 6,000	$ 5,000	$ -	$ -	$ -	$ 11,000	
Increase Chilled Water Capacity Main Campus (North Plant)	$ -	$ 7,000	$ -	$ -	$ -	$ 7,000	5, 6
Electrical Distribution Improvements	$ 2,200						
Currier Steam Tunnel Replacement	$ -	$ 10,000	$ -	$ -	$ -	$ 10,000	5, 6
Campus Infrastructure - Renewal & Improvements	$ 4,000	$ -	$ 20,000	$ 20,000	$ 20,000	$ 64,000	5, 6
Subtotal =	**$ 18,200**	**$ 22,000**	**$ 20,000**	**$ 20,000**	**$ 20,000**	**$ 98,000**	
NEW CONSTRUCTION	$ -	$ -	$ -	$ -	$ -	$ -	
College of Public Health Consolidation	$ -	$ -	$ 5,000	$ 20,000	$ 10,000	$ 35,000	4, 5
Sports Medicine Addition	$ 5,000	$ -	$ -	$ -	$ -	$ 5,000	4
IIHR Facility			$ 1,750	$ 10,000	$ 5,300	$ 17,050	4, 5
Subtotal =	**$ 5,000**	**$ -**	**$ 6,750**	**$ 30,000**	**$ 15,300**	**$ 57,050**	
RENOVATIONS, RENEWALS, & IMPROVEMENTS							
Lindquist Center Renovation	$ 4,000	$ 5,000	$ -	$ -	$ -	$ 9,000	4
Old Museum Revitalization	$ -	$ -	$ -	$ -	$ 8,160	$ 8,160	4, 5
Calvin Hall Modernization	$ -	$ 1,000	$ 4,500		$ -	$ 5,500	2, 3, 5
Gilmore Hall Modernization	$ -	$ 1,000	$ 3,500	$ -	$ -	$ 4,500	2, 3, 5
Art Building Revitalization	$ 10,000	$ 20,000	$ 5,000			$ 35,000	2, 3, 4
Old Capitol - Repair/Replace West Terrace	$ 2,500	$ -	$ -	$ -	$ -	$ 2,500	2
Raze Seashore Hall	$ 3,000	$ -	$ -	$ -	$ -	$ 3,000	2
Bowen Science Building Improvements	$ 3,032	$ 3,949	$ 2,500	$ 4,271	$ -	$ 13,752	2, 3, 5
College of Medicine Facilities - Renewal & Improvements	$ 1,250	$ 450	$ 475	$ 500	$ 525	$ 3,200	4, 5
Various Academic Buildings - Renewal & Improvements	$ -	$ 2,000	$ 4,000	$ 5,000	$ 6,000	$ 17,000	2, 3, 5
English-Philosophy Building - Building Upgrades	$ 3,125	$ 3,125	$ 3,125	$ 3,125	$ -	$ 12,500	2
Student Life - Renewal & Improvements	$ 9,750	$ 19,800	$ 17,600	$ 14,750	$ 16,150	$ 78,050	5, 6
Athletic Facilities - Renewal & Improvements	$ 5,000	$ 20,000	$ 2,600	$ 1,000	$ 10,000	$ 38,600	4, 6
Telecommunications Renewal & Improvements	$ 3,100	$ 3,100	$ 3,100	$ 3,100	$ 3,100	$ 15,500	5
Housing Facilities - Renewal & Improvements	$ 13,535	$ 10,550	$ 8,700	$ 6,485	$ 5,810	$ 45,080	5, 6
Subtotal =	**$ 58,292**	**$ 89,974**	**$ 55,100**	**$ 38,231**	**$ 49,745**	**$ 291,342**	
PARKING and INSTITUTIONAL ROADS							
Institutional Roads Program (IDOT support)	$ 828	$ 828	$ 828	$ 828	$ 828	$ 4,140	7
Parking System - Renewal & Improvements	$ 1,720	$ 4,050	$ 10,850	$ 14,690	$ 23,320	$ 54,630	5, 6
Reconstruct Hancher Parking Lot 55	$ 2,200	$ 1,700	$ 1,800	$ -	$ -	$ 5,700	5, 6
Upgrade CAMBUS Maintenance Facility	$ 1,289	$ 932	$ -	$ -	$ -	$ 2,221	4, 5
Subtotal =	**$ 6,037**	**$ 7,510**	**$ 13,478**	**$ 15,518**	**$ 24,148**	**$ 66,691**	
SUI Total =	**$ 97,124**	**$ 129,079**	**$ 104,923**	**$ 113,344**	**$ 118,788**	**$ 561,058**	

Source of Funds Key:

1 (not used: report State Funds in Table 1)
2 General Fund Building Renewal
3 Income from Treasurer's Temporary Investments
4 Gifts and Grants
5 Departmental Renewal and Replacement Funds
6 Auxiliary Service or Enterprise Revenue Bonds
7 Iowa DOT (Road Use Tax Funds)
8 Student Health Fee
9 University Hospital Building Usage Fund
10 Ctr for Disabilities & Dev. Bldg Usage Fund
11 University Hospital Revenue Bonds
12 Federal Appropriations

IOWA STATE UNIVERSITY

FIVE-YEAR CAPITAL PLAN for OTHER FUNDS
($ in Thousands)

Iowa State University	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Five Year Total	Source of Funds
FIRE & ENVIRONMENTAL SAFETY	$ -	$ -	$ -	$ -	$ -	$ -	
DEFERRED MAINTENANCE	$ -	$ -	$ -	$ -	$ -	$ -	
CAMPUS SECURITY	$ -	$ -	$ -	$ -	$ -	$ -	
UTILITY IMPROVEMENTS							
Power Plant Station Power Replacement	$ 2,000	$ 2,000	$ 2,000	$ -	$ -	$ 6,000	6
Iowa State Center Steam Supply Replacement	2,500	-	-	-	-	2,500	6
Turbine Generator No 5 Overhaul	600	-	-	-	-	600	
Oil Switch Replacement	200	200	200	200	200	1,000	6
High Voltage Cable Replacement	200	200	200	200	200	1,000	6
Steam Tunnel Repairs	200	200	200	200	200	1,000	6
Sanitary Sewer Repairs	200	200	200	200	200	1,000	6
Subtotal =	$ 5,900	$ 2,800	$ 2,800	$ 800	$ 800	$ 13,100	
NEW CONSTRUCTION							
Curtiss Farm- Feed Mill and Grain Science Complex	$5,000	$ 11,200	$ 5,000	-	-	$ 21,200	4
Iowa Seed Science Center Addition	1,000	-	-	-	-	1,000	4
Veterinary Medicine- Field Services Expansion	2,000	1,700	-	-	-	3,700	5
Complex for Advanced Packaging Research	5,000	5,000	-	-	-	10,000	4
Recreation Services- East of University Blvd Site Improvements	9,000	-	-	-	-	9,000	6
Sports Performance Center							
Private Funds	20,000	20,000	-	-	-	40,000	4
Auxiliary Funds	20,000	20,000	-	-	-	40,000	6
Challenge Course	1,200	-	-	-	-	1,200	6
Hilton Concourse Project							
Private Funds	-	3,000	3,000	-	-	6,000	4
Auxiliary Funds	-	7,000	7,000	-	-	14,000	6
Comprehensive Pet Cancer Center							
Private Funds	-	-	990	-	1,160	2,150	4
University Funds	-	-	990	-	1,165	2,155	5
Southwest Field Complex Lighting	-	-	-	1,000	-	1,000	6
Subtotal =	$ 63,200	$ 67,900	$ 16,980	$ 1,000	$ 2,325	$ 151,405	
RENOVATIONS							
Swine Teaching and Research	$ 1,500	$ 3,000	$ 3,000	$ -	$ -	$ 7,500	4
Scheman- Brunnier Museum Renovation	1,850	-	-	-	-	1,850	4
College of Veterinary Medicine Restroom and Lockers	1,200	-	-	-	-	1,200	5
Nanovaccine Institute							
Private Funds	4,500	-	-	-	-	4,500	4
University Funds	2,500	-	-	-	-	2,500	5
Memorial Union Remodeling	5,000	5,000	2,000	-	-	12,000	6
Agronomy Hall cold rooms & growth chamber rooms reno.	1,000	1,000	1,000	-	-	3,000	TBD
Food Science Building (Food Tech wing renovation)	3,000	10,000	10,000	-	-	23,000	TBD
Resurface Outdoor Basketball	-	350	-	-	-	350	6
Redesign Flood Protection	-	250	-	-	-	250	6
Cardio Equipment Replacement	-	-	750	-	-	750	6
Resurface Tracks: 2nd Floor Lied & State Gym	-	-	-	-	350	350	6
Memorial Union Parking Ramp Facade	4,500	-	-	-		4,500	5
Subtotal =	$ 25,050	$ 19,600	$ 16,750	$ -	$ 350	$ 61,750	
TELECOMMUNICATIONS	$ 4,650	$ 4,870	$ 4,460	$ 3,800	$ 3,770	$ 21,550	6
Subtotal =	$ 4,650	$ 4,870	$ 4,460	$ 3,800	$ 3,770	$ 21,550	
PARKING / INSTITUTIONAL ROADS							
Institutional Roads Program	$ 828	$ 828	$ 828	$ 828	$ 828	$ 4,140	6
Annual Parking Lot Pavement Preservation	2,060	485	250	2,080	2,000	6,875	6
Iowa State Center Parking and Drive Improvements	3,695	5,500	4,010	4,375	620	18,200	6
Subtotal =	$ 6,583	$ 6,813	$ 5,088	$ 7,283	$ 3,448	$ 29,215	
RESIDENCE SYSTEM							
Birch, Welch, Roberts Residence Halls- Window Replacement	$ 2,950	$ -	$ -	$ -	$ -	$ 2,950	6
Helser Residence Hall- Window Replacement	3,480	-	-	-	-	3,480	6
Oak- Elm Residence Hall- Window Replacement	2,100	-	-	-	-	2,100	6
Helser Residence Hall-Replace Student Room Furniture	1,750	-	-	-	-	1,750	6
Helser Residence Hall-Remove Built-in Furniture, Abate & Replace Flooring, Paint, LED Lighting	2,750	-	-	-	-	2,750	6
Friley Residence Hall-Roof Replacement Phase 1 & 2 of 2	1,200	1,200	-	-	-	2,400	6
Deferred Maintenance (Residence Halls only)	515	395	395	395	1,145	2,845	6
Frederiksen Court-Life Cycle Paint and Carpet	900	900	900	900	900	4,500	6
Various Fire Alarm Upgrades	-	250	75	-	-	325	6
Various Life Cycle Paint & Corridor Flooring	-	-	900	-	125	1,025	6
Maple Residence Hall-Life Cycle Flooring, Limited Plumbing, Paint & LED Lighting	-	-	2,750	-	-	2,750	6
Friley Residence Hall-Bathroom Improvements Phases 1 & 2 of 2	-	-	6,230	10,770	-	17,000	6
Helser Residence Hall-Bathroom Improvements Phases 1 & 2 of 2	-	-	-	1,000	9,000	10,000	6
Oak-Elm Residence Hall-Bathroom Improvements Phase 1 of 2	-	-	-	-	3,000	3,000	6
Subtotal =	$ 15,645	$ 2,745	$ 11,250	$ 13,065	$ 14,170	$ 56,875	
ISU Total =	**$ 121,028**	**$ 104,728**	**$ 57,328**	**$ 25,948**	**$ 24,863**	**$ 333,895**	

Source of Funds Key:

1 (not used: report State Funds in Table 1)
2 General Fund Building Renewal
3 Income from Treasurer's Temporary Investments
4 Gifts and Grants
5 Departmental Renewal and Replacement Funds
6 Auxiliary Service or Enterprise Revenue Bonds
7 Iowa DOT (Road Use Tax Funds)

University of Northern Iowa

FIVE-YEAR CAPITAL PLAN for OTHER FUNDS
($ in Thousands)

University of Northern Iowa	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Five Year Total	Source of Funds
FIRE & ENVIRONMENTAL SAFETY	$ -	$ -	$ -	$ -	$ -	$ -	
DEFERRED MAINTENANCE	$ -	$ -	$ -	$ -	$ -	$ -	
CAMPUS SECURITY	$ -	$ -	$ -	$ -	$ -	$ -	
UTILITY IMPROVEMENTS							
Steam Distribution System Replacement Phase 2A	$ -	$ 3,000	$ 7,500	$ 3,000	$ -	$ 13,500	6
Cooling Tower Replacement	-	2,500	-	-	-	2,500	6
Power Plant Boiler #3 Electrical Infrastructure	-	1,300	-	-	-	1,300	6
Steam Distribution System Replacement Phase 2B	-	-	-	3,000	5,500	8,500	6
Subtotal =	$ -	$ 6,800	$ 7,500	$ 6,000	$ 5,500	$ 25,800	
NEW CONSTRUCTION	$ -	$ -	$ -	$ -	$ -	$ -	
Subtotal =	$ -	$ -	$ -	$ -	$ -	$ -	
RENOVATIONS							
Industrial Technology Center Modernization	$ 500	$ 1,500	$ 2,000	$ -	$ -	$ 4,000	1, 4
Maucker Union, University Center	-	-	2,996	12,705	45,015	60,716	1, 4, 6
Basketball/Volleyball Practice Facility	-	13,421	13,420	-	-	26,841	4
Outdoor Turf - Football Practice Field	-	1,575	-	-	-	1,575	4
Outdoor Soccer Field	-	-	1,575	-	-	1,575	4
UNI-Dome Restroom and Club Boxes	-	-	-	12,012	12,012	24,024	4
Building Repair	1,400	1,400	1,400	1,400	1,400	7,000	2
Subtotal =	$ 1,900	$ 17,896	$ 21,391	$ 26,117	$ 58,427	$ 125,731	
PARKING / INSTITUTIONAL ROADS							
Institutional Roads	$ 414	$ 414	$ 414	$ 414	$ 414	$ 2,070	7
Parking Lot Rehabilitation	200	300	450	300	-	1,250	10
Subtotal =	$ 614	$ 714	$ 864	$ 714	$ 414	$ 3,320	
RESIDENCE SYSTEM							
Noehren Hall Restroom Remodels	$ 300	$ 2,300	$ 2,000	$ -	$ -	$ 4,600	6
Noehren Hall Student Room Updates	1,500	4,100	3,600	-	-	9,200	6
Residence Hall Roof Replacements	750	-	-	350	250	1,350	6
Residence System - ResNet Upgrades	-	1,200	1,100	-	-	2,300	6
Dormitory Vanity and Sanitary Piping Replacement	-	-	-	1,500	1,500	3,000	6
Subtotal =	$ 2,550	$ 7,600	$ 6,700	$ 1,850	$ 1,750	$ 20,450	
UNI Total =	**$ 5,064**	**$ 33,010**	**$ 36,455**	**$ 34,681**	**$ 66,091**	**$ 175,301**	

Source of Funds Key:

1 (not used: report State Funds in Table 1)
2 General Fund Building Renewal
3 Income from Treasurer's Temporary Investments
4 Gifts and Grants
5 Departmental Renewal and Replacement
6 Auxiliary Service or Enterprise Revenue
7 Iowa DOT (Road Use Tax Funds)
8 Student Health Fee
9 Multimodal Transportation Center Maintenance funds
10 Parking Operations

FIVE-YEAR INSTITUTIONAL ROADS PROGRAM

Executive Summary: Funds for improvements and maintenance of the roads and streets at the Regent institutions and other State agencies are provided annually by the State Parks and Institutional Roads Program, administered by the Iowa Department of Transportation (IDOT).

The Program provides funding (65/100 of one percent) of the State's Road Use Tax Fund for the construction, reconstruction, improvement and maintenance of roads and streets located on state land, where institutions or other state governmental agencies are located. The specific funding amount is adjusted annually based on actual road use tax receipts. The annual allocation to the Regents is 30 percent of this amount, as specified in the *Iowa Code*.

The *Iowa Code* authorizes the State Transportation Commission of the IDOT to fund Institutional Roads projects "upon the request of the state board, department, or commission which has jurisdiction over such roads." Accordingly, the Board is asked each year to approve the Regents' Institutional Roads Program to be forwarded to the IDOT by its deadline for review of the projects for funding.

Five-Year Institutional Roads Program: Summary
(details on next page)

University of Iowa	$ 4,414,600
Iowa State University	4,414,600
University of Northern Iowa	2,070,800
Special Schools / Iowa Lakeside Laboratory	100,000
Proposed Five-Year Institutional Roads Program for CY 2019- CY 2023	$ 10,454,000

Overview of Board of Regents Five-Year Institutional Roads Program

- The IDOT's estimate of available Institutional Roads funding for the Regent institutions for the next calendar year (which is the focus of the Five-Year Program); this amount is calculated for each of the five years to reach the total Five-Year Program amount. Institutional roads funding has risen due to the 2015 increase in the state's gas tax.

- Funds are allocated each year into two components: 1) capital reconstruction and improvement projects, 2) pavement maintenance and repairs. Funds for pavement maintenance and repairs are set aside first, and then funds are programmed for capital projects.

- A distribution of the capital project funding allocation among the institutions for each year, with first consideration of specific projects at the Special Schools and the Iowa Lakeside Laboratory, with the remainder distributed and programmed among the three universities; these projects represent the institutions' most urgent roadway needs.

- It is important to note that the annual Institutional Roads funding levels are not sufficient to address all roadway improvement needs at the institutions.

Five-Year Institutional Roads Program for CY 2019 – CY 2023

For calendar years CY 2019 through CY 2023, the IDOT's total annual estimated program funding available to the Regent institutions is $2,760,800 million. After an allocation of $670,000 for maintenance and repairs, the $2,090,800 million balance can be programmed for all Regent institutions per year.

Five-Year Institutional Roads Program Summary		Calendar Years 2019	2020	2021	2022	2023	Total
SUI Reconstruction and Improvements	Hawkeye Court Drive - Hawkeye Park Road to Mormon Cart Trail Entrance	$ 270,000					$ 270,000
	Hawkeye Park Road - Melrose Avenue to Hawkeye Drive	$ 138,320	$ 558,320				$ 696,640
	Hawkins Drive - Melrose Ave to Evashevski Drive		$ 100,000	$ 658,320	$ 345,000		$ 1,103,320
	Elliott Drive - Hawkins Dr to Newton Road				$ 313,320	$ 658,320	$ 971,640
	Reconstruction and Improvement Total	**$ 408,320**	**$ 658,320**	**$ 658,320**	**$ 658,320**	**$ 658,320**	**$ 3,041,600**
Repair	Pavement Management	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 180,000
	Annual Special Maintenance	$ 300,000	$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 675,000
	Repair Total	**$ 345,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 855,000**
Study Analysis	College of Public Health Pedestrian Bridge	$ 75,000					$ 75,000
	Repair Total	**$ 75,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 75,000**
	SUI Total	**$ 828,320**	**$ 828,320**	**$ 828,320**	**$ 828,320**	**$ 828,320**	**$ 4,141,600**
ISU Reconstruction	Union Drive - Bissell Road to Lincoln Way	$ 500,000	$ 228,600				$ 728,600
	Carrie Lane Court - Lot 74 to Lyon Hall		$ 200,000				$ 200,000
	Scholl Road - Ontario to just north of railroad tracks			$ 200,000	$ 350,000	$ 200,000	$ 750,000
	13th Street - Squaw Creek east to ISU property limit					$ 263,320	$ 263,320
	Improvement Total	**$ 500,000**	**$ 428,600**	**$ 200,000**	**$ 350,000**	**$ 463,320**	**$ 1,941,920**
Improvements	University Boulevard & Wallace Road - Signal Replacement	$ 250,000	$ 100,000				$ 350,000
	University Boulevard & Haber Road - Signal Replacement			$ 204,720	$ 145,280		$ 350,000
	South 16th Street (east of Jack Trice Stadium) - Widen Road		$ 200,000	$ 255,000	$ 165,000		$ 620,000
	Mortensen Road - Traffic Control					$ 250,000	$ 250,000
	Reconstruction Total	**$ 250,000**	**$ 300,000**	**$ 459,720**	**$ 310,280**	**$ 250,000**	**$ 1,570,000**
Repair	Pavement Management	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 75,000
	Annual Special Maintenance	$ 63,320	$ 84,720	$ 85,000	$ 85,000	$ 100,000	$ 418,040
	Pavement Preservation			$ 68,600	$ 68,040		$ 136,640
	Repair Total	**$ 78,320**	**$ 99,720**	**$ 168,600**	**$ 168,040**	**$ 115,000**	**$ 629,680**
	ISU Total	**$ 828,320**	**$ 828,320**	**$ 828,320**	**$ 828,320**	**$ 828,320**	**$ 4,141,600**
UNI Reconstruction	Panther Parkway (W. 31st Street to W. 27th Street) - Phase 1	$ 257,000					$ 257,000
	West 27th Street (East of Minnesota Street)	$ 132,160					$ 132,160
	Center for Energy Environmental Education Drive		$ 82,160				$ 82,160
	Wisconsin Street (North of W. 26th Street)		$ 307,000				$ 307,000
	Panther Parkway (W. 31st Street to W. 27th Street) - Phase 2			$ 389,160			$ 389,160
	Physical Plant Drive (East of Panther Parkway)				$ 194,600		$ 194,600
	Strayer-Wood Loop				$ 194,560		$ 194,560
	Campus Street (South of University Ave to Jennings Drive)					$ 331,000	$ 331,000
	West 31st Street Modifications (Illinois Street to Ohio Street)					$ 58,160	$ 58,160
	Reconstruction Total	**$ 389,160**	**$ 389,160**	**$ 389,160**	**$ 389,160**	**$ 389,160**	**$ 1,167,480**
Repair	Pavement Maintenance	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 125,000
	Repair Total	**$ 25,000**	**$ 25,000**	**$ 25,000**	**$ 25,000**	**$ 25,000**	**$ 125,000**
	UNI Total	**$ 414,160**	**$ 414,160**	**$ 414,160**	**$ 414,160**	**$ 414,160**	**$ 2,070,800**
	SUI, ISU & UNI subtotal	**$ 2,070,800**	**$ 2,070,800**	**$ 2,070,800**	**$ 2,070,800**	**$ 2,070,800**	**$ 10,354,000**
SpS* Repair	crack sealing, repairs	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 100,000
	Special Schools Total	**$ 20,000**	**$ 20,000**	**$ 20,000**	**$ 20,000**	**$ 20,000**	**$ 100,000**
	Grand Total	**$ 2,090,800**	**$ 2,090,800**	**$ 2,090,800**	**$ 2,090,800**	**$ 2,090,800**	**$ 10,454,000**

* SpS = Special Schools (ISD & IBSSS) and Iowa Lakeside Laboratory

From the $10,454,000 total, $2,090,800 is planned for the following projects in CY 2019 only.

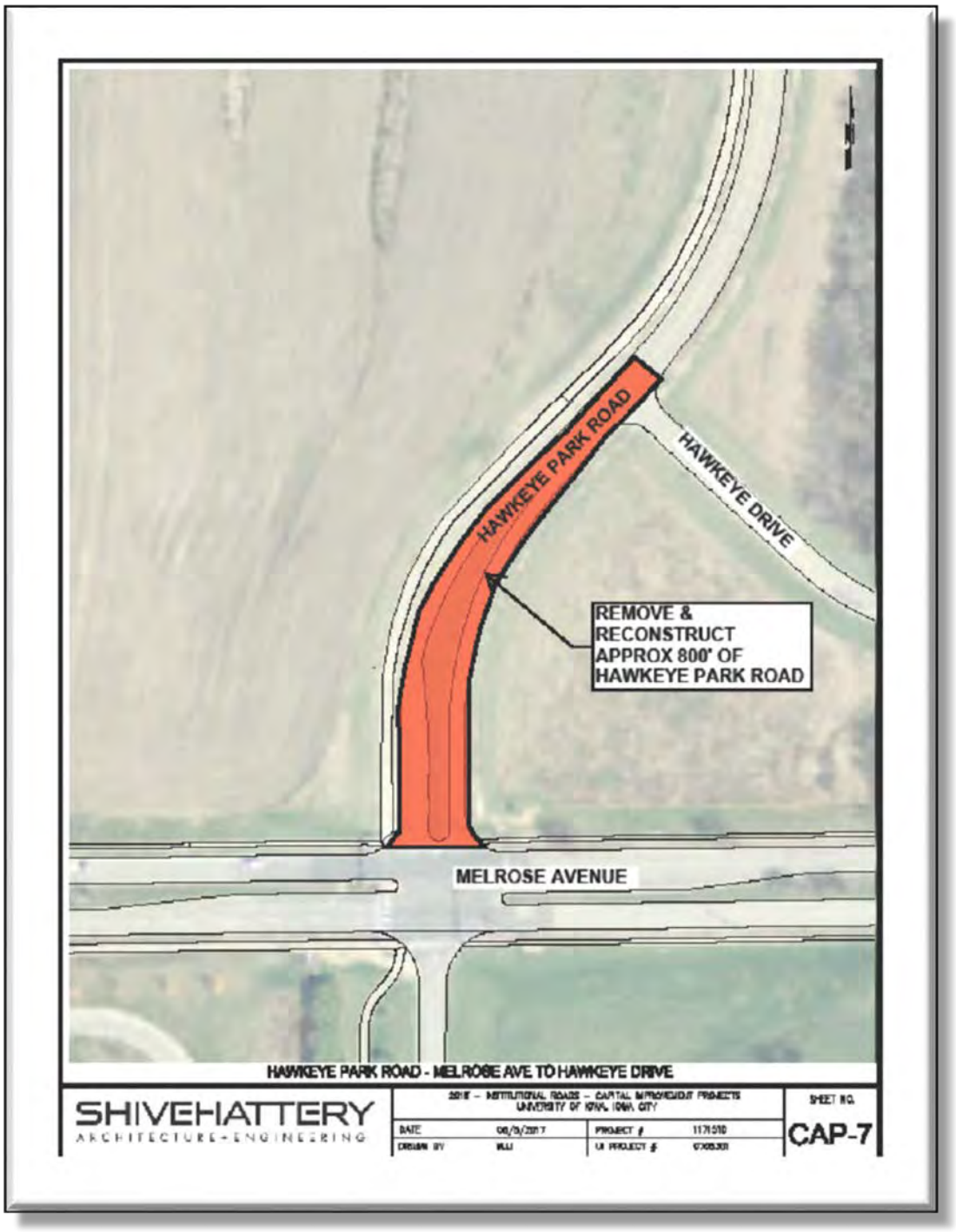
Proposed Institutional Roads Projects for CY 2019

SUI	Hawkeye Court Drive -		
See page 60.	Hawkeye Park Road to Mormon Cart Trail Entrance	$ 270,000	
See page 61.	Hawkeye Park Road - Melrose Avenue to Hawkeye Drive	138,320	
	Pavement Management (ongoing)	45,000	
	Annual Special Maintenance (ongoing)	300,000	
	College of Public Health Pedestrian Bridge	75,000	$ 828,320
ISU	Union Drive – Bissell Road to Lincoln Way	$ 500,000	
See page 64.	University Boulevard & Wallace Road – Signal Replacement	250,000	
	Pavement Management (ongoing)	15,000	
	Annual Special Maintenance (ongoing)	63,320	$ 828,320
UNI	Panther Parkway -		
See page 65.	West 31st Street to West 27th Street (Phase 1)	$ 257,000	
	West 27th Street (east of Minnesota Street)	132,160	
	Pavement Maintenance (ongoing)	25,000	$ 414,160
Special Schools, Iowa Lakeside Laboratory	Crack Sealing/Repairs	$ 20,000	$ 20,000
	Proposed Institutional Roads projects for CY 2019		**$ 2,090,800**

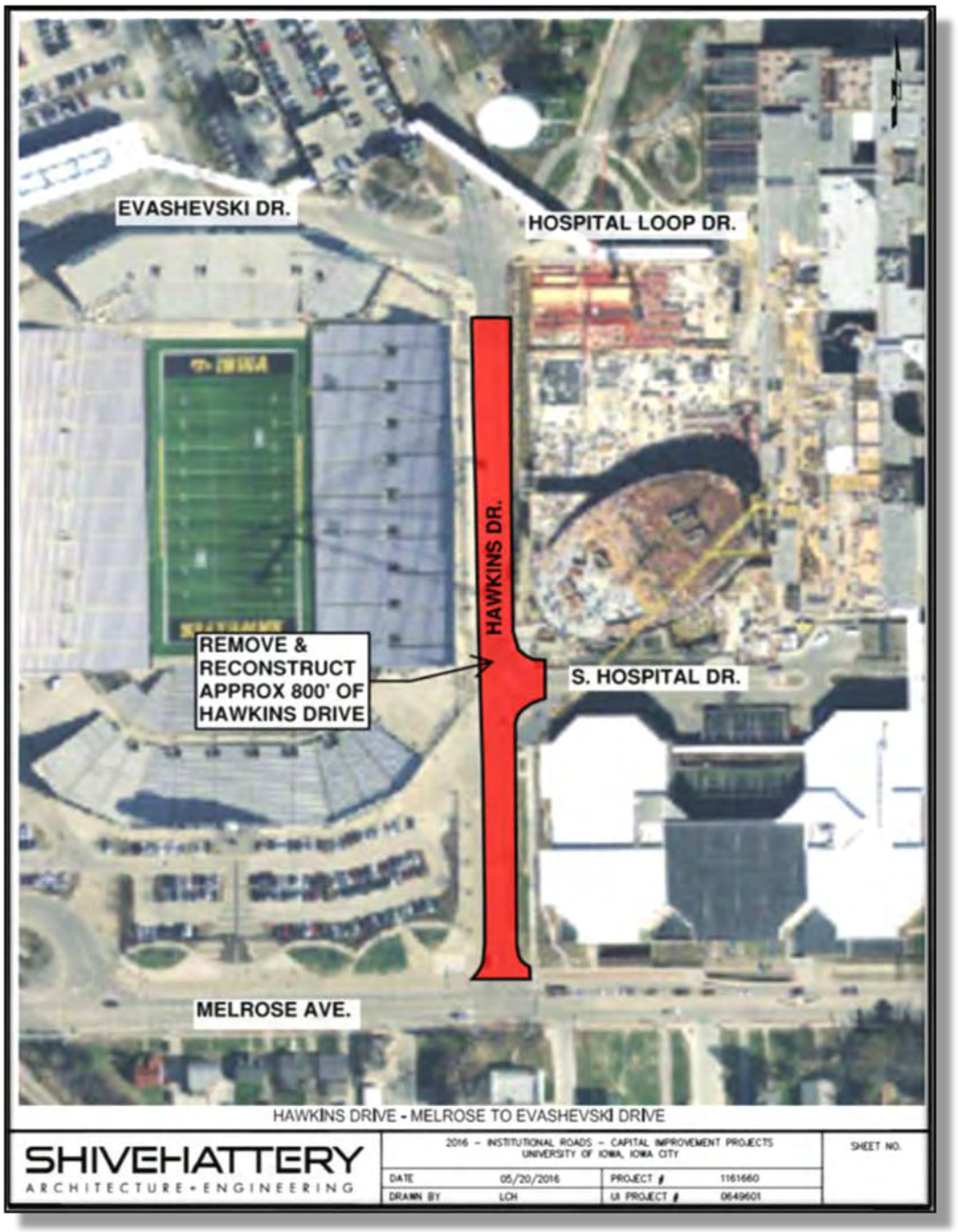
These projects are also subject to the Board's capital project approval process, consistent with the Board's *Policy Manual*, Chapter 2.3.

UNIVERSITY OF IOWA
Hawkeye Court Drive – Hawkeye Park Road to Mormon Cart Trail Entrance
Scheduled for CY 2019

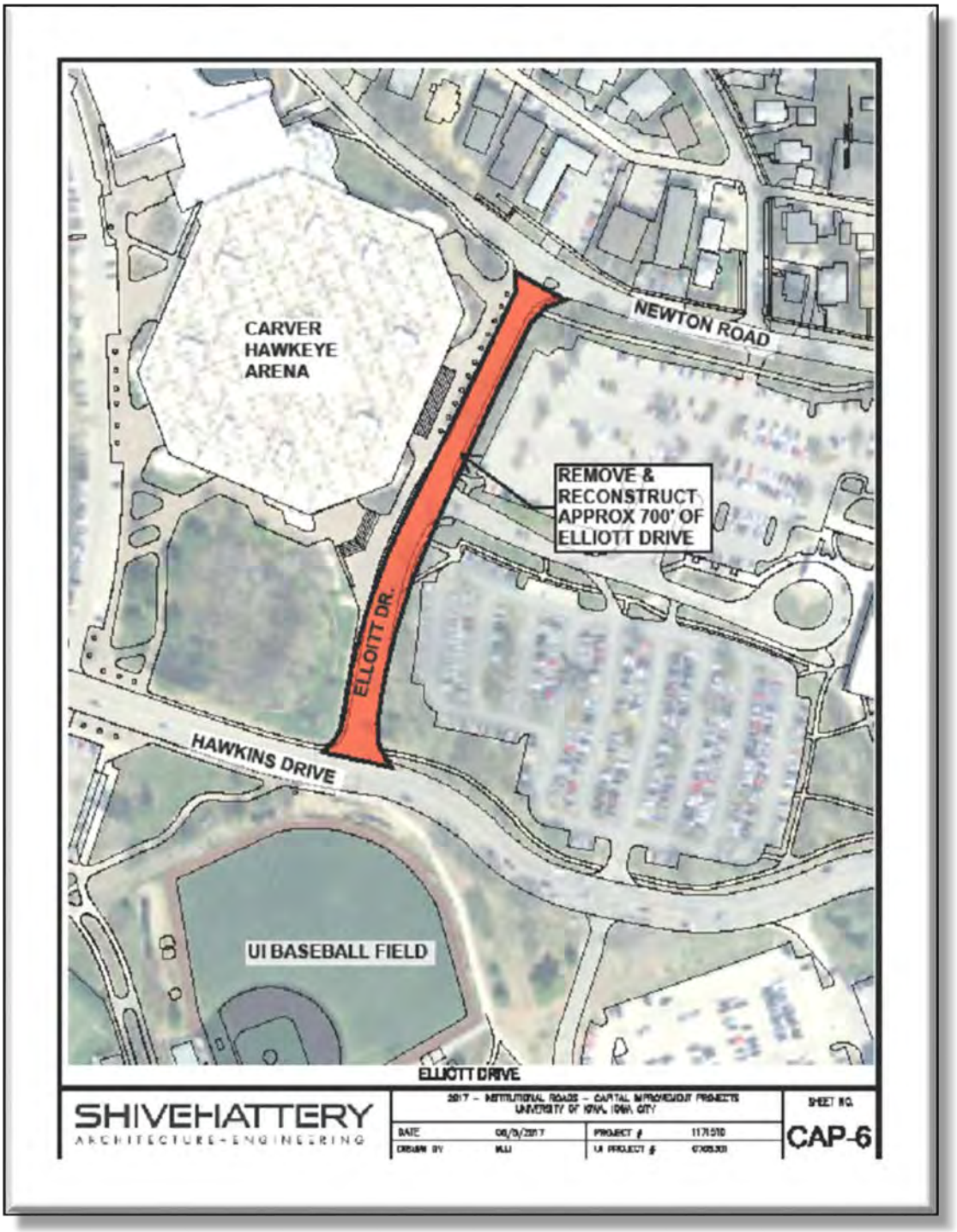
UNIVERSITY OF IOWA
Hawkeye Park Road – Melrose Avenue to Hawkeye Drive
Scheduled for CY 2019



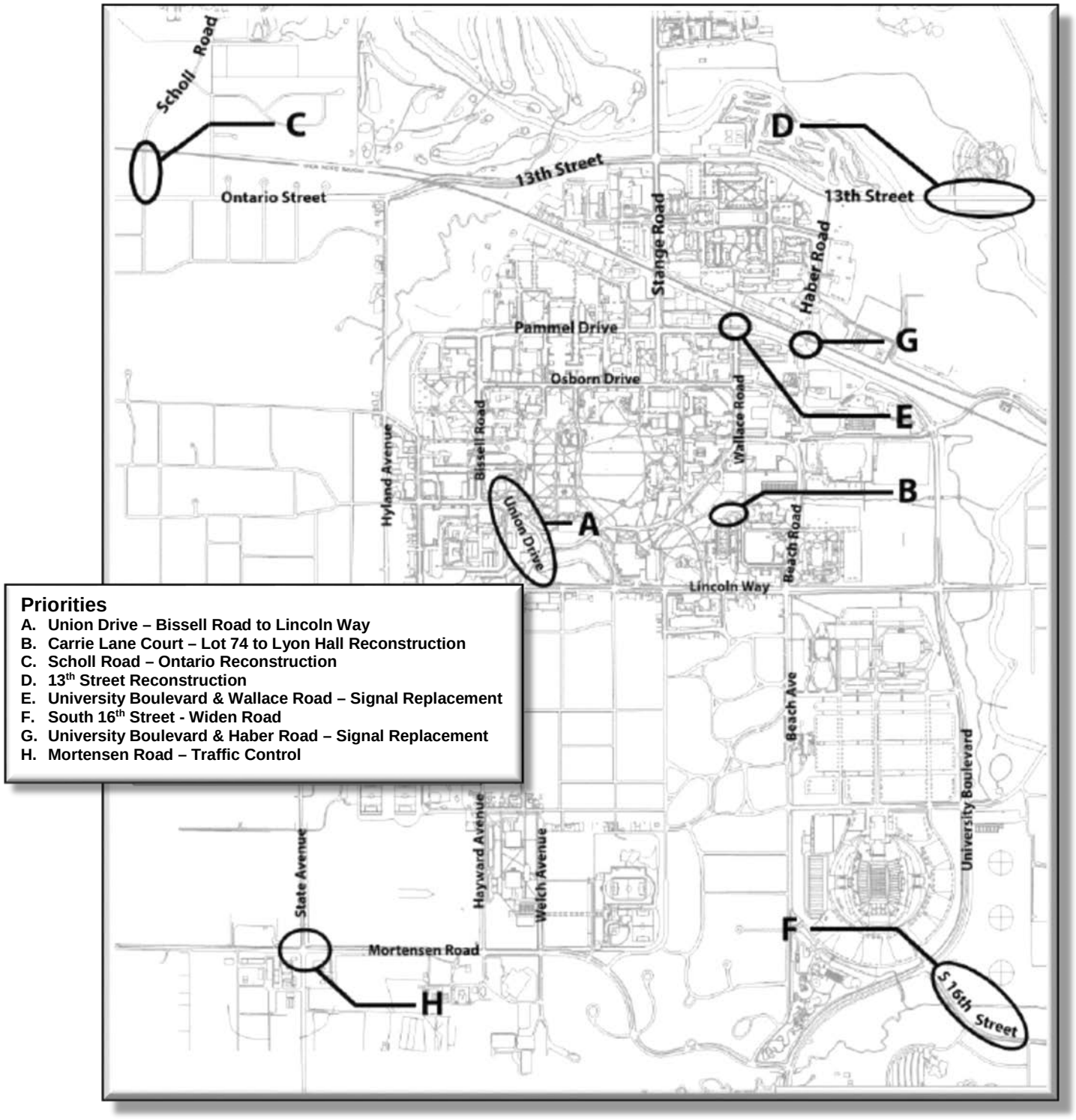
UNIVERSITY OF IOWA
Hawkins Drive - Melrose Ave to Evashevski Drive
Scheduled for CY 2020



UNIVERSITY OF IOWA
Elliott Drive – Hawkins Drive to Newton Road
Scheduled for CY 2022



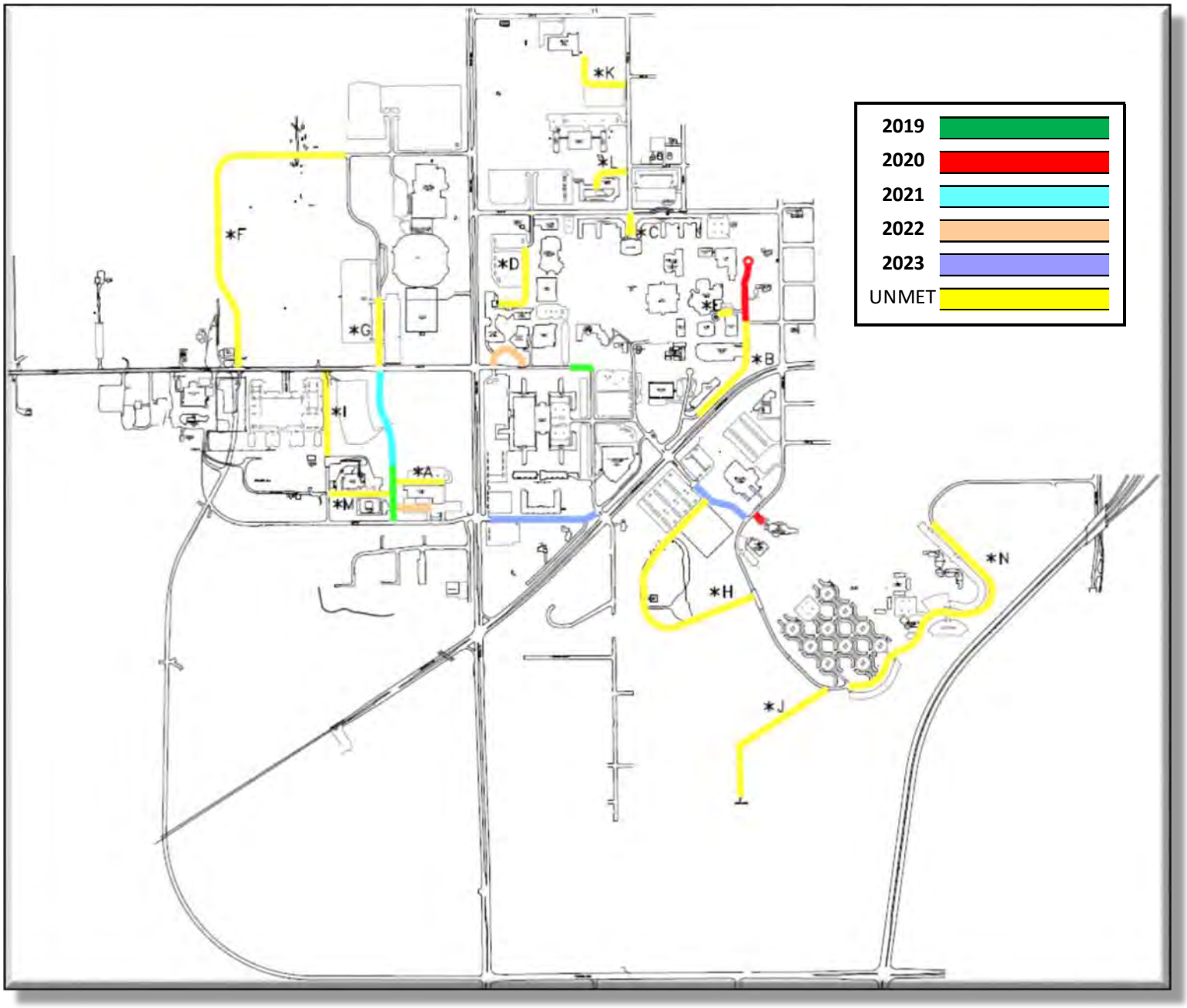
IOWA STATE UNIVERSITY
Scheduled for CY 2019-2023



Priorities

A. Union Drive – Bissell Road to Lincoln Way
B. Carrie Lane Court – Lot 74 to Lyon Hall Reconstruction
C. Scholl Road – Ontario Reconstruction
D. 13th Street Reconstruction
E. University Boulevard & Wallace Road – Signal Replacement
F. South 16th Street - Widen Road
G. University Boulevard & Haber Road – Signal Replacement
H. Mortensen Road – Traffic Control

UNIVERSITY OF NORTHERN IOWA
Scheduled for CY 2019-2023



END OF
ANNUAL FACILITIES REPORT