

**MEMORANDUM**

**To:** Board of Regents  
**From:** Board Office  
**Subject:** Register of Iowa State University Capital Improvement Business Transactions for Period of May 18, 2001 through June 13, 2001  
**Date:** June 1, 2001

**Recommended Action:**

Approve the Register of Capital Improvement Business Transactions for Iowa State University.

**Executive Summary:**

The University requests approval of a project description and budget for the **Heady Hall – Elevator Modernization** project (\$275,000) which completely refurbish elevators 1 and 2 in Heady Hall, which houses the Department of Economics and general classrooms.

The University requests approval of revised budgets for:

**Reiman Gardens – Conservatory** project (\$9,901,300, an increase of \$277,000) to allow for the construction of the growing greenhouses, which are essential to the mission and operation of the Reiman Gardens;

**Beardshear Hall Remodeling** project (\$7,996,807, an increase of \$1,920,100) to include window replacement and additional interior work to preserve one of the University's most significant and historic structures;

**Fire Safety Improvements FY 2000** project (\$582,900, an increase of \$82,900) to include improvements for the Entomology Department in the new structure which replaced the north wing of the Insectary Building, which was demolished;

**Telecommunications – Inside Plant Systems Upgrade** project (\$1,640,750, an increase of \$140,750) to include additional funding from the using entities to cover a portion of the costs for upgrades in the College of Design building and Applied Science Center II; and

**College of Veterinary Medicine – Rooms 2146 and 2148, BL3 Lab Renovation** project (\$283,000, an increase of \$146,460) to include specialized ventilation and isolation equipment required to meet National Institutes of Health requirements.

The University requests approval of the following architectural/engineering agreements and amendments:

Agreement with Stanley Consultants (\$182,000) for the Utilities - Power Plant - Ash Silo Replacement project;

Amendment #3 (\$10,220) with Zimmer Gunsul Frasca Partnership for the College of Business Building project for the preparation of display boards for promotion and fund raising; and

Amendment #1 (\$264,000) with Brooks Borg and Skiles for the Roy J. Carver Co-Laboratory project for design services for the additional building level approved by the Board at its May 2001 meeting.

**Background and Analysis:**

Heady Hall—Elevator Modernization

Source of Funds: General University Funds

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$275,000	June 2001	Requested

Passenger elevators #1 and #2 in Heady Hall require extensive modernization to meet current safety and code standards. The proposed scope of work includes replacing the outdated and worn horizontal cable drive selector system, which controls the elevator's acceleration, deceleration, and leveling at the floor. In addition, the work will install elevator controls with new microprocessor control systems. Other electrical components that will be replaced include motor-generator sets, door operators, signal fixtures and related wiring.

Additional work is needed for code compliance. Motorized smoke dampers will be installed in the elevator hoist way pits, and heating, ventilating and air conditioning equipment installed in the machine room for temperature control. New smoke detectors will be installed in the elevator lobbies and electrical work will be undertaken in the elevator pit room.

Permission to proceed with planning was not required for this project since the estimated cost does not exceed \$1 million.

Project Budget

Construction Costs	\$233,900
Professional Fees	34,950
Contingency	<u>6,150</u>
TOTAL	<u>\$275,000</u>

Reiman Gardens - Conservatory

<u>Project Summary</u>			
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		March 1999	Approved
Project Description and Total Budget	\$ 7,835,300	July 1999	Approved
Architectural Agreement through Schematic Design (Architects Smith Metzger)	739,740	July 1999	Approved
Program Statement		Nov. 1999	Approved
Schematic Design		June 2000	Approved
Revised Project Budget	9,624,300	June 2000	Approved
Architectural Amendment #1 (Architects Smith Metzger)	97,790	June 2000	Approved
Construction Contract Award (Story Construction Company)	7,778,000	June 2001	Ratification
Revised Project Budget	9,901,300	June 2001	Requested

This project will construct a conservatory facility at the Reiman Gardens to support the University's multi-disciplinary academic programs and extension activities at the Gardens, particularly those activities of the Department of Horticulture. The primary features of the facility will include a glass structure garden conservatory area which will be used for permanent and rotating plant displays, growing greenhouses for plant production, a head house for preparation of plants for production and display, and a butterfly flight house and laboratory. The facility will also include an auditorium and multi-purpose room for educational and outreach activities consisting of demonstrations, classes and seminars, and a café/kitchen area and gift shop to serve visitors.

Five bids for the project were opened on April 24, 2001. All exceeded the engineering estimate; however, based on the close range of the bids the University believed that the bids were a fair representation of the work. While the bidding documents included deduct alternates, which would have deleted from the project up to four of the five growing greenhouses, the University determined that all the greenhouses were needed to support the operation and academic mission of the Gardens.

The University thus recommended award of the construction contract, which was approved by the Executive Director since funds were available in the project budget. It was, however, understood that a revised project budget would be presented to the Board for approval at the June meeting.

The revised project budget presented below includes additional funds for construction contingency in the construction line.

Project Budget

	<u>Revised Budget June 2000</u>	<u>Revised Budget June 2001</u>
Construction Costs	\$ 7,624,500	\$8,338,600
Professional Fees	1,479,800	1,503,200
Movable Equipment	315,000	20,000
Project Contingency	<u>205,000</u>	<u>39,500</u>
TOTAL	\$ 9,624,300	\$9,901,300
Source of Funds:		
ISU Foundation	\$9,624,300	\$9,849,300
Income from Treasurer's Temporary Investments	<u>0</u>	<u>52,000</u>
TOTAL	<u>\$9,624,300</u>	<u>\$9,901,300</u>

Beardshear Hall Remodeling

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		July 1998	Approved
Project Description and Total Budget	\$ 5,750,507	July 1998	Approved
Architectural Agreement through Schematic Design (Brooks Borg and Skiles)	80,390	Oct. 1998	Approved
Construction Contract—Replace Roofs A, E and F (Wood Roofing Company)	200,650	March 1999	Ratified
Program Statement		June 1999	Approved
Schematic Design		July 1999	Approved
Architectural Agreement through Construction Services (Brooks Borg and Skiles)	621,720	July 1999	Approved
Construction Contract—General Construction (HPC, L.L.C.)	3,552,000	July 2000	Ratified
Revised Project Budget	6,076,707	Oct. 2000	Approved
Construction Contract— Telecommunications (Wiring by Design)	266,000	Feb. 2001	Ratified
Revised Project Budget	7,996,807	June 2001	Requested
Change Orders (Estimated Amount)	777,200	June 2001	Requested

This project will remodel space in Beardshear Hall to consolidate various student-related functions in one central campus location. The focus of the project is development of the Student Answer Center, which will consolidate various student service units on the ground level of the facility. The project will also relocate and consolidate other administrative offices within the building, and address building code, accessibility, and life safety deficiencies.

The University requests approval of a revised project budget, which is an increase of \$1,920,100, to expand the project scope to include window replacement, repair and repainting of atrium spaces and the domed rotunda, replacement of stair treads on the atrium stairs, placement of additional lighting on the first floor, and additional telecommunications work.

Since the Board granted the University permission to proceed with this project in 1998, Beardshear Hall has continued to show signs of its age. The University reports that as construction has progressed, it has become apparent that additional work should be undertaken at the present time to prevent further deterioration of the building and preserve what is one of the University's most significant structures.

The 300 plus existing, single pane windows are, for the most part, as old as the 95 year old building. Several windows have been repaired and repainted over the years, but a growing number are showing signs of significant deterioration. The window sashes are generally warped, rotted, loose fitting, and in need of re-glazing. There is significant air infiltration and the insulation value of single pane glass is very low. New insulated glass in new sashes will improve environmental conditions within the building and reduce energy costs. The proposed replacement will pay close attention to the historic profiles of the window moldings and frames.

Painting of the atrium area (with the exception of the ground floor) was not included in the original scope of work, but is necessary to preserve and restore the interior. Plaster ceilings have deteriorated in several spots on the third floor and need repair. Paint on the upper three floors is generally worn and chipped. The University has also indicated that the color schemes on the 2nd and 3rd floors, believed last painted in the 1960's, are inappropriate within the historical context of the building.

The University reports that stair treads on the north and south atrium stairs have raised safety concerns. A previous remodeling project capped with terrazzo topping the original marble treads that had wore unevenly. Over the years, this terrazzo topping has also worn and chipped, creating a safety hazard and maintenance problems. Nearly every step has been patched or repaired, with new broken areas surfacing regularly. This additional scope of work would remove the existing stair treads and replace them with new stone pieces.

Lighting in the first floor atrium area is low and has been provided by 1930's vintage schoolhouse pendant fixtures. Increasing the light levels will improve the overall safety and security of the occupants.

Restoring the central dome flanked by four symmetrical barrel vaults is also a portion of the work the University is requesting to include while the building is disrupted by other construction activities. The work would entail restoring plasterwork in the coffered areas of the dome, as well as repainting.

The telecommunications component of this budget increase would accommodate the additional costs associated with the telecommunications January 2001 bid package, which was undertaken to update the information technology needs of the building.

The University expects to bid the window replacement work as a separate project. However, the atrium painting and plaster repair, dome and barrel vault painting, atrium stair work, and the first floor lighting revisions will require coordination and integration with the construction work that is currently in progress to avoid extending the time period that building operations are disrupted for construction. The University requests approval to proceed with change orders to the construction contract with HPC, L.L.C. for this work. The University anticipates that the four change orders will total approximately \$777,200, based on the estimated amount of each change order as outlined below. The University requests that the Executive Director be authorized to approve the change orders when an agreement is reached with HPC, L.L.C.

	<u>Amount</u>
Plaster repair and painting in the atrium space (Floors 1-3)	\$ 248,700
Repair and repaint dome and barrel vaults at Floor 3	218,500
Removal and replacement of deteriorated stair treads on the atrium steps	185,400
Floor 1 Lighting Revisions	<u>124,600</u>
TOTAL	\$ 777,200

Project Budget

	<u>Revised Budget Oct. 2000</u>	<u>Revised Budget June 2001</u>
Construction Costs	\$ 4,746,200	\$6,487,900
Professional Fees	1,079,100	1,303,700
Movable Equipment	42,500	42,500
Relocation	70,000	80,000
Contingency	<u>138,907</u>	<u>82,707</u>
<b>TOTAL</b>	<b><u>\$ 6,076,707</u></b>	<b><u>\$7,996,807</u></b>
<b>Source of Funds:</b>		
Income from Treasurer's Temporary Investments	\$ 4,733,781	\$6,224,571
General University/Building Repair Funds	1,016,726	1,416,726
Business and Finance Endowment Administrative Reserve	180,000	180,000
Telecommunications Improvement And Extension Funds	69,000	98,310
General University Funds	52,200	52,200
ISU Foundation	15,000	15,000
Unrestricted Gifts	<u>10,000</u>	<u>10,000</u>
	<b><u>\$ 6,076,707</u></b>	<b><u>\$7,996,807</u></b>

Fire Safety Improvements—FY 2000

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 500,000	March 2000	Approved
Construction Contract Award (Koester Construction Company)	229,800	April 2001	Ratification
Revised Project Budget	582,900	June 2001	Requested

This project will include the installation of smoke detection, fire alarm, and sprinkler systems, fire doors and door hardware, and fire-rated materials in various campus buildings. The project will also address egress issues. The overall project consists of many individual components, each with a budget of less than \$250,000.

One of the components of the project was the demolition of the north wing of the Insectary Building, which had received citations from the State Fire Marshal's Office, and its replacement with a metal, pre-fabricated building. Additional funding has been provided by the Entomology Department to cover non-fire safety items, a walk-in cooler and an environmental room, that were included as part of this component of the overall project.

Project Budget

	<u>Initial Budget March 2000</u>	<u>Revised Budget June 2001</u>
Construction Costs	\$ 379,800	\$ 499,200
Professional Fees	74,000	75,300
Contingency	<u>46,200</u>	<u>8,400</u>
<b>TOTAL</b>	<b><u>\$ 500,000</u></b>	<b><u>\$ 582,900</u></b>
Source of Funds:		
Building Repair Funds	\$ 500,000	\$ 500,000
Agriculture Experiment Station	0	54,900
General University Funds	0	6,000
Entomology Department Funds	<u>0</u>	<u>22,000</u>
	<b><u>\$ 500,000</u></b>	<b><u>\$ 582,900</u></b>

Telecommunications—Inside Plant Systems Upgrade

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 1,500,000	July 1999	Approved
Engineering Agreement – College of Design and Applied Science II (Alvine and Associates, Iowa City, IA)	28,000	Dec. 2000	Approved
Construction Contract Award - College of Design and Applied Science II (ABC Electric)	403,730	June 2001	Ratification
Revised Project Budget	1,640,750	June 2001	Requested

This project will upgrade the communications infrastructure in a number of campus buildings. This work will address various deficiencies such as the location of equipment entrances into the buildings, system security issues, outdated wiring that will not support current technology, and the lack of video and backup power systems. The University has identified and prioritized the various deficiencies associated with the communications infrastructure for each campus building.

The project was delayed from July 1999 until December 2000 due to a number of factors. These included the need to complete the upgrade of the external telecommunications infrastructure, which serves the campus buildings prior to addressing the systems within the individual buildings, the evaluation and updating of the University's telecommunications standards, and development of criteria for determining the priority order for the building upgrades.



The University requests Board approval of a revised project budget that increases the initial project budget by \$140,750. Since the initial project was approved, the University has reprioritized the order in which buildings will receive infrastructure upgrades to the telecommunications systems, with the College of Design and Applied Science II being the top two priorities.

As part of agreements with the Telecommunications Office, the College of Design and departments located in Applied Science Center II will provide funding to cover a portion of the cost of the upgrade. The work for these two buildings has been bid and will be completed by late summer. Two fund sources have been added to the project budget to cover the agreed upon cost sharing.

Project Budget

	<u>Initial Budget July 1999</u>	<u>Revised Budget June 2001</u>
Construction Costs	\$ 1,205,000	\$ 1,333,000
Professional Fees	253,000	265,750
Project Contingency	42,000	42,000
<b>TOTAL</b>	<b><u>\$ 1,500,000</u></b>	<b><u>\$ 1,640,750</u></b>
Source of Funds:		
Telecommunications Facilities Revenue Bonds	\$ 1,000,000	\$ 1,000,000
Telecommunications Improvement and Extension Funds	500,000	500,000
ISU Foundation	0	130,000
Institute for Physical Research & Technology Funds	<u>0</u>	<u>10,750</u>
<b>TOTAL</b>	<b><u>\$ 1,500,000</u></b>	<b><u>\$ 1,640,750</u></b>

College of Veterinary Medicine—Rooms 2146 and 2148 BL3 Laboratory  
Renovation

Source of Funds: General University Funds

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$125,000	June 2000	Approved*
Revised Project Description and Total Budget	136,540	Feb. 2001	Approved*
Revised Project Budget	283,000	June 2001	Requested

\* Approved by the Board Office and University consistent with Board procedures.

Consistent with Board procedures, the project description (renovation of 500 square feet of laboratory space) and budget were initially approved by the Board Office in June 2000 and subsequently revised by the University. The University now wishes to increase the scope of the project to include specialized ventilation and isolation equipment required to meet the National Institutes of Health requirements for the establishment of a Biosafety Level 3 (BL3) facility. This additional effort will provide HEPA (high efficiency particle air) filter high filtration isolation, a shower in and shower out capability, and an autoclave to treat any waste from the laboratory.

Project Budget

	<u>Revised Budget Feb. 2001</u>	<u>Revised Budget June 2001</u>
Construction Costs	\$105,970	\$213,890
Professional Fees	30,570	49,750
Project Contingency	<u>0</u>	<u>19,360</u>
TOTAL	<u>\$136,540</u>	<u>\$283,000</u>

Utilities—Power Plant—Ash Silo Replacement  
Source of Funds: Utility Repair Funds

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Nov. 2000	Approved
Project Description and Total Budget	\$ 1,750,000	Nov. 2000	Approved
Engineer Selection (Black and Veatch)		Nov. 2000	Approved
Engineer Selection (Stanley Consultants; Muscatine, IA)	182,000	June 2001	Requested

The Power Plant stoker bottom ash silo contains equipment to load the ash, which is stored in the silo, into trucks for disposal or reuse. The existing silo, which was installed in 1948 and no longer has sufficient storage capacity, is constructed of clay tile, which is deteriorating and is beyond its useful life. This project will provide for replacement of the silo.

As the Power Plant has been expanded to accommodate the University load growth, truck access has become very limited, causing all ash to be handled twice. This has increased operational costs and created environmental problems since the additional handling results in an increase in ash dust. The new silo will be located in a more accessible location, allowing ash to be loaded directly into trucks for disposal or reuse, minimizing dust. Once the new silo is operational, the existing silo will be demolished.

Replacement of the silo was recommended in the 1999 Material Handling Master Plan for the Power Plant. The Master Plan was completed by the engineering firm of Black and Veatch, an international firm engaged in power plant design. This firm was selected for the Master Plan study based on proposals submitted from six engineering firms experienced in power plant and material handling system design. The recommendation to replace the ash silo is consistent with the goals of the Master Plan, which includes improving the operational efficiency, environmental impact, and the aesthetics of the material handling operations.

In November 2000, the Board approved negotiating with Black & Veatch for engineering services. However, the University was unsuccessful at obtaining an acceptable agreement with Black & Veatch.

The University then began negotiations with other firms for engineering services for this project. Stanley Consultants, Inc. of Muscatine, Iowa, has been selected. Stanley has extensive experience in the design of power plant systems. The University now requests approval of an agreement with Stanley Consultants, Inc. in the amount of \$182,000, including reimbursable expenses, for engineering services for the project.

College of Business Building

Source of Funds: ISU Foundation and Capital Appropriations

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed Architectural Agreement		July 1999	Approved
Pre-Design Through Construction (Zimmer Gunsul Frasca Partnership)	\$ 1,887,000	May 2000	Approved
Program Statement and Proposed Location		Oct. 2000	Approved
Schematic Design		Dec. 2000	Approved
Project Description and Total Budget	24,575,000	Dec. 2000	Approved
Architectural Amendment #1 and #2	97,600	May 2001	Approved
Architectural Amendment #3	10,220	June 2001	Requested

This project would construct a facility in the southeast corner of the central campus to consolidate the functions of the College of Business. The building would accommodate the University's newest and fastest-growing college by providing office, laboratory, and classroom spaces to meet the unique needs of modern business programs.

The University requests approval of Amendment #3 in the amount of \$10,220 to the architectural agreement with Zimmer Gunsul Frasca Partnership for additional design services to prepare display boards as requested by the College for promotional / fund raising purposes. The amendment will not result in an increase in the total project budget.

Roy J. Carver Co-Laboratory

Project Summary

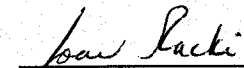
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Dec. 1999	Approved
Project Description and Total Budget	\$ 7,000,000	Dec. 1999	Approved
Architectural/Engineering Agreement— Schematic Design & Site Planning (Brooks Borg and Skiles)	150,000	March 2000	Approved
Revised Project Budget	9,200,000	June 2000	Approved
Architectural Amendment #1 (Brooks Borg and Skiles)	48,000	June 2000	Approved
Program Statement		July 2000	Approved
Schematic Design		Oct. 2000	Approved
Revised Project Budget	9,500,000	Oct. 2000	Approved
Architectural/Engineering Agreement— Design Development through Construction (Brooks Borg and Skiles)	519,000	Oct. 2000	Approved
Revised Project Budget	12,750,000	May 2001	Approved
Architectural Amendment #1 (Brooks Borg and Skiles)	264,000	June 2001	Requested


The Roy J. Carver Co-Laboratory would provide a facility where scientists from Iowa State University, private industry, and the world can meet in a collaborative and interactive environment to conduct state-of-the-art plant research and address critical issues in plant science. The co-laboratory would emphasize and promote interdisciplinary collaboration within the plant sciences and other core areas of the University. The building would consist of state-of-the-art laboratories, research space for visiting scientists, and small laboratories for industry incubators. The revised scope project for the building, as approved by the Board at its May 2001 meeting, totals 45,000 gross square feet. This revised scope included 15,000 gross square feet of basement space to provide additional laboratory and support space for interdisciplinary and industry collaboration in the many areas of plant sciences research.

The University now requests approval of Amendment #1 (\$264,000) to the architectural agreement with Brooks Borg Skiles Architecture Engineering, L.L.P. for full design services for the increased budget and scope for the additional level of the building and the built-out of approximately 70% of the space. The cost of this amendment was included in the revised project budget approved by the Board in May 2001.

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Included in the University's capital register for Board ratification are one project description and budget for a project under \$250,000, three amendments to architectural agreements, four construction contracts awarded by the Executive Director, the acceptance of one completed construction contract, and one final report. These items are listed in the register prepared by the University and are included in the Regent Exhibit Book.

  
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Joan Racki

Approved:   
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Frank J. Stork