

Contact: Joan Racki

**REGISTER OF UNIVERSITY OF IOWA**  
**CAPITAL IMPROVEMENT BUSINESS TRANSACTIONS**

**Actions Requested:** Consider:

1. Permission to proceed with project planning, including the design consultant selection process, for the **Power Plant – Replace Boiler Fans and Erect New Stack** and **Power Plant – Install Back Up Power and Auxiliaries** projects.
2. Approval of the following actions for the **Central Pharmacy Drug Storage, Processing and Dispensing Service Relocation and IV Admixture Facility Expansion** project:
  - a. Acknowledge receipt of the University's initial submission of information to address the Board's capital project evaluation criteria (see Attachment A);
  - b. Accept the Board Office recommendation that the project meets the necessary criteria for Board consideration; and
  - c. Authorize permission to proceed with project planning, including the design professional selection process.
3. Approval of the following actions for the **Dental Science Building – Phase 2 – Renovate South Wing** project.
  - a. Acknowledge receipt of the University's final submission of information to address the Board's capital project evaluation criteria (see Attachment B);
  - b. Accept the Board Office recommendation that the project meets the necessary criteria for Board consideration; and
  - c. Approve the schematic design, project description and budget (\$48,000,000), with the understanding that approval will constitute final Board approval and authorization to proceed with construction.
4. Ratification of Executive Director action revising the **College of Public Health Building – Install Furniture** project budget to \$3,500,000, an increase of \$1,367,000.

**Executive Summary:** The University requests permission to proceed with project planning, including the design consultant selection process, for the **Power Plant – Replace Boiler Fans and Erect New Stack** project, which would install larger air draft fans for Boilers 7 and 8 at the Power Plant (see Attachment C for map), thereby increasing steam capacity by up to 100,000 pounds per hour. It would also add one 200-foot stack, to accommodate the upgrade of the two boilers, near the existing main power plant stacks. The \$6.5 million estimated cost of the project would be funded by utility system renewal and improvement funds, and utility system bond proceeds.

The **Power Plant – Install Back Up Power and Auxiliaries** project, for which the University requests permission to proceed with project planning including the design consultant selection process, would provide four 2-megawatt natural gas / electric generators that would be positioned within the Power Plant above the 500-year flood level. The generators would provide black start power (process of restoring a power station to

operation without relying on the external electric power transmission network) for the Plant, backup generation for critical research facilities, and backup power for other key utility / information technology communication loads. The \$12.5 million estimated cost of the project would be funded by utility system renewal and improvement funds and utility system bond proceeds.

The University requests permission to proceed with project planning, including the design consultant selection process, for the **Central Pharmacy Drug Storage, Processing and Dispensing Service Relocation and IV Admixture Facility Expansion** project, which would develop a replacement central drug processing, dispensing and storage facility on the seventh floor of Boyd Tower adjacent to the Department of Pharmaceutical Care's IV Admixture facilities. The estimated project budget of \$2.49 million (exclusive of furniture and equipment) would be funded by UIHC Building Usage Funds.

At the October 2007 Board meeting, the University presented the College of Dentistry Master Plan, which identified the need for substantial renovation and expansion of the Dental Science Building (Building) to more efficiently respond to the requirements of modern dental patient care (including patient accessibility and changing patient populations); medical technology and research; and the need for additional instructional space. The dental curriculum for approximately 320 pre-doctoral and 90 graduate students, with the exception of the basic sciences courses and community outreach clinical activities, is delivered within the Building.

Phase 1 of the project (final approval by the Board in September 2009) is constructing a 33,754 gross square foot addition to the west end of the south wing of the Building. Construction is scheduled to be completed in late 2011. (A map showing the location of the Dental Science Building is included as Attachment D.)

At its April 2010 meeting, the Board granted permission to proceed with project planning for the **Dental Science Building, Phase 2 – Renovate South Wing** project, which includes the renovation of existing clinic and research areas in the south wing, constructed in 1973. The renovation and reconfiguration of existing operatories and auxiliary spaces would allow for more effective use of the space and expansion of high demand specialties to maximize utilization. The project would also address the building system deferred maintenance needs. The Board is requested to approve the schematic design and project description and budget for the project. The schematic design booklet is included with the Board's agenda materials. The project budget of \$48 million includes \$29 million in state funds (appropriated by the 2011 General Assembly); College of Dentistry earnings, including indirect cost recoveries, clinical charges, and gifts; building renewal funds, and University allocations from Treasurer's Temporary Investment Income.

Presented for Board ratification is a revised budget (\$3,500,000, an increase of \$1,367,000) for the **College of Public Health Building – Install Furniture** project. With this revised budget all funds awarded for furniture and equipment by the federal Health Resources and Services Administration (HRSA) will be included in one project budget, rather than the funds being split between this project and the College of Public Health Academic Building project. The revised project budget includes HRSA's funds and College of Public Health gifts and earnings.

The University has reduced the project budget for the Academic Building project by the amount of the increase in the furniture project budget.

**Details of the Projects:**

**Power Plant – Replace Boiler Fans and Erect New Stack**

<u>Project Summary</u>			
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Aug. 2011	Requested

In addition to installation of larger forced air draft fans for boilers 7 and 8 to increase steam capacity, the University reports that it will meet new requirements for emissions and dust recovery at the main plant by adding an additional stack. The new stack would accommodate the upgrade of the two boilers and include two additional “flues” or “sleeves” inside for four new natural gas driven electric generators and a future boiler.

**Power Plant – Install Back Up Power and Auxiliaries**

<u>Project Summary</u>			
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Aug. 2011	Requested

The University is served by two electrical sub-stations: Substation L on the east campus and Substation U on the west campus. The proposed generators would be connected to Substation L and would be capable of feeding the Across Campus Tie to Substation U. They will thus become the main backup generators for two electric distribution loops serving critical research facilities, including the Pappajohn Biomedical Discovery Building, which is under construction. In addition, these generators will supply black start capability for the Main Power Plant, the University Water Plant and the Information Technology Services communication hub located in the South Lindquist Building.

**Central Pharmacy Drug Storage, Processing and Dispensing Service Relocation and IV Admixture Facility Expansion**

<u>Project Summary</u>			
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Aug. 2011	Requested
Initial Review and Consideration of Capital Project Evaluation Criteria		Aug. 2011	Receive Report

The project, which would include relocation of drug storage, processing and dispensing facilities from the lower level of General Hospital to approximately 5,000 gross square feet of renovated space on the seventh floor of Boyd Tower, would address deficiencies with the Department of Pharmaceutical Care's current facilities. It will permit operational efficiencies resulting from consolidation with the IV Admixture service currently on the seventh floor of Boyd Tower and will provide for facilities designed to accommodate increased use of automated dispensing systems to support safer medication delivery. The project will also expand the cleanrooms to accommodate increased use of sterile hazardous drugs, and facilitate a more efficient use of staff to improve the quality and safety of services.

**Dental Science Building – Phase 2 – Renovate South Wing**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
College of Dentistry Master Plan Report		Oct. 2007	Received
Permission to Proceed		April 2010	Approved
Selection of Design Professional			
Invision Architecture Ltd. (Des Moines, IA)		April 2010	Approved
Initial Review and Consideration of Capital			Received
Project Evaluation Criteria		April 2010	Report
Design Professional Agreement	\$ 3,805,850	Aug. 2010	Not Required*
Program Statement		May 2011	Not Required*
Schematic Design		Aug. 2011	Requested
Project Description and Budget	48,000,000	Aug. 2011	Requested
Final Review and Consideration of Capital			Receive
Project Evaluation Criteria		Aug. 2011	Report

\*Approved by Executive Director, consistent with Board policies

The first floor includes mechanical rooms and support spaces, as well as a small number of offices and restrooms. The second through fourth floors of the renovated facility will house ten primary clinic areas. The following are the clinics to be housed on each floor:

- Second Floor    Preventive Dentistry, Operative Dentistry, Orthodontics & Pediatric Dentistry
- Third Floor     Oral Pathology, Radiology and Medicine, Admissions & Family Dentistry
- Fourth Floor    Oral Surgery, Periodontic Dentistry & Prosthodontic Dentistry. Also includes the clinical support spaces of Pharmacy, Central Sterilization and Dispensaries

There have been no changes in the square footages of the functions since approval of the program. The following summarizes the net assignable square footage on each floor by function:

<u>Function</u>	<u>Second Floor</u>	<u>Third Floor</u>	<u>Fourth Floor</u>
Reception / Clinic Clerk	2,089	1,863	1,513
Operatories	9,500	7,943	6,489
Office	3,379	3,420	5,457
Laboratory / Work Room	2,288	3,371	2,410
Dispensary	431	582	1,621
Administration	<u>822</u>	<u>1,794</u>	<u>891</u>
TOTAL	18,509	18,973	18,381

The existing building is four stories high with grade level access on the third floor to the patient parking lot west of the building and grade level access to pedestrian traffic from the east on second floor. The building consists of two wings joined by a below grade auditorium space. The north wing houses administrative offices, student support spaces, and research facilities. The south wing houses the public clinic with patient areas and support spaces.

The project includes the replacement of the building finishes and operatory equipment, and renovation of reception areas, student and faculty spaces, seminar rooms and laboratory work rooms in the south wing. The deferred maintenance scope includes replacement of the heating, ventilation, and air conditioning system, including construction of a penthouse on the roof, replacement of the existing un-insulated glazing, replacement of the roof membrane and insulation, upgrade of various mechanical and electrical systems, and renovation of the existing restroom facilities throughout the south building and south end of the link to make them accessible. The goal for this project is to obtain a LEED silver certification.

The scope of work for the exterior of the building is limited to the replacement of the curtain wall glazing described above, and construction of a new rooftop mechanical equipment penthouse, to house new mechanical air handling units and associated equipment. The penthouse will be clad in a prefinished aluminum metal wall panel selected to match the aesthetics of the existing service tower louvers. Educational and patient care commitments require that clinical operations continue to function during the renovation project. Construction will be accomplished in multiple phases to allow the clinics to remain in operation. It is scheduled to commence in December 2011, with an anticipated completion date of August 2015.

Project Budget

Construction	\$38,400,000
Planning and Design	5,760,000
Project Contingencies	<u>3,840,000</u>
TOTAL	\$48,000,000

Source of Funds: Funding for Phase Two includes a State appropriation (\$29 million appropriated by the 2011 General Assembly); College of Dentistry earnings including indirect cost recoveries, clinical charges, and gifts; building renewal funds; and University allocations from Treasurer's Temporary Investment income.

**College of Public Health Building – Install Furniture**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Budget	\$2,133,000	Dec. 2010	Approved
Revised Project Description and Budget	3,500,000	Aug. 2011	Ratification*

\*Ratification of Executive Director Approval requested

Project Budget

	Initial Budget <u>(Dec 2010)</u>	Revised Budget <u>(Aug. 2011)</u>
Construction	\$1,901,350	\$3,222,694
Planning and Design	136,650	175,000
Contingency	<u>95,000</u>	<u>102,306</u>
TOTAL	\$2,133,000	\$3,500,000

Sources of Funds: Health Resources and Service Administration Grant; College of Public Health Gifts and Earnings

Central Pharmacy Drug Storage, Processing and Dispensing Relocation and  
IV Admixture Facility Expansion  
Evaluation Criteria

Since the project meets the Board's definition of a major capital project, the University has provided the following information in response to the Board's evaluation criteria.

Institutional Mission / Strategic Plan: The project is supportive of five of the six major goals that have been established in UI Health Care's Strategic Plan for FY 2010-2012 by providing the facilities that are required to assist UIHC's efforts to:

- 1) Provide world class healthcare services to optimize health for everyone. The Department of Pharmaceutical Care's current facility for automated drug dispensing systems is inadequate to allow full use of the technology. Issues include workflow challenges, limited access to distribution systems (pneumatic tube capacity) and distance from patient care units. In addition there are significant risks due to flooding.
- 2) Advance world class discovery through excellence and innovation in biomedical and health services research. Pharmaceutical Care staff has published articles on the application of technology in enhancing the safe use of medications. To help ensure further enhancements in patient safety requires continued investment and use of proven new technology and in the facilities that are required to support this technology.
- 3) Develop world class health professionals and scientists through excellent, innovative and humanistic educational curricula for learners at every stage. Automation has permitted the shift of pharmacists to greater levels of participation in educating patients in the safe and appropriate use of medication. It has enabled the department to recruit more residency trained pharmacists and to further develop UIHC's educational programs for Doctor of Pharmacy students and pharmacy residents.
- 4) Foster a culture of excellence that values, engages and enables our workforce. A culture of excellence in pharmacy is facilitated by automated dispensing systems, pharmacists in patient care roles and facilities that can support these systems. UIHC's existing facilities are in conflict with efforts to further automate or expand the number of pharmacists providing direct patient services.
- 5) Optimize a performance-driven business model that assures financial success. The project integrates central pharmacy services into one service location to optimize the use of staff and increase the number of doses dispensed via automated technology.

Other Alternatives Explored: This relocation requires approximately five thousand gross square feet of space with reasonable proximity to patient care areas. The options that were explored but ruled out include:

- 1) Relocation of both the lower level General Hospital central drug processing and storage facility and the level seven Boyd Tower IV Admixture facilities to available space on the mezzanine level of Hospital Parking Ramp 4. This option was not pursued due to the high cost associated with relocating the IV Admixture clean rooms.
- 2) Relocation of solely the lower level General Hospital central drug processing and storage facility to the mezzanine level of Hospital Parking Ramp 4. This option was ruled out due to the significant distance between the Ramp 4 location and the IV Admixture facility which would increase staffing requirements and create difficulties and greater costs to transport medications to the patient care units.

Impact on Other Facilities and Square Footage: No space will be abandoned or demolished. The space vacated in lower level General Hospital (4500 sq ft) will be redeveloped with uses consistent with the location of the space.

Financial Resources for Construction Project: The project will be funded through University Hospitals Building Usage Funds acquired from depreciation allowances of third parties underwriting the cost of patient care plus hospital net earnings from paying patients. No state capital appropriated dollars will be involved.

Financial Resources for Operations and Maintenance: No significant change in operating expenses is expected. The source of funds to cover the associated operating and maintenance costs will be hospital operating revenues derived from providing patient care services.

External Forces Justifying Approval: This project is being undertaken in response to several external forces. One involves the increased use of sterile products that require compounding and the increased use of technology for medication dispensing. This project will increase clean room capacity and integrate the clean room facility with the Central Pharmacy facility creating greater efficiency for operating the clean rooms 24 hours per day. Given the increased emphasis on medication safety, the department is increasing the number of medications dispensed via the automated dispensing systems to be located in this facility. Increasing cost pressures will also be addressed by the consolidation of functions. This project will increase efficiency and allow greater capacity to shift staff from one function to another to meet increased workloads without increasing staff.

Dental Science Building – Phase Two – Renovate South Wing  
Evaluation Criteria

Since the project meets the Board's definition of a major capital project, the University has provided the following information in response to the Board's evaluation criteria.

Institutional Mission / Strategic Plan: This project, the second phase of an improvement to the existing Dental Science Building, addresses the University's strategic goal of "cultivation of excellent graduate and professional programs, and to advance the research and scholarly enterprise."

The College of Dentistry's mission and strategic plan are based on three components: 1) the education of students as dentists and dental specialists 2) conducting research into aspects of oral diseases and the delivery of oral health care and 3) service to the community, state and the profession.

Modern, convenient and up-to-date clinical education and treatment facilities are needed to attract both students and patients. The best students use facilities as a major criterion when considering which dental school to attend. Modern and convenient facilities are essential to attract sufficient patients to provide an adequate quantity of clinical experiences for the education of dental students. In addition, with the growing disparity between salaries of dental faculty and private practitioners, there is an increased reliance on clinical income as a funding source. Modern, attractive and efficient clinical facilities are necessary to attract patients to contribute to clinical revenue.

Cutting edge research requires contemporary facilities to compete for external funding. The addition and renovation of space will allow for some student functions to vacate existing spaces that can be reprogrammed to research space.

Other Alternatives Explored: A conceptual analysis, conducted by an outside consultant, determined that the current building footprint was insufficient to accommodate the educational, clinical treatment and research needs of the College. Additional space is required to provide dental operatories, research facilities and instructional spaces that meet current standards. Construction of new space and renovation of existing will assist the College in fulfilling its mission and meeting its strategic goals.

Impact on Other Facilities and Square Footage: This project will not result in the abandonment, transfer or demolition of existing facilities.

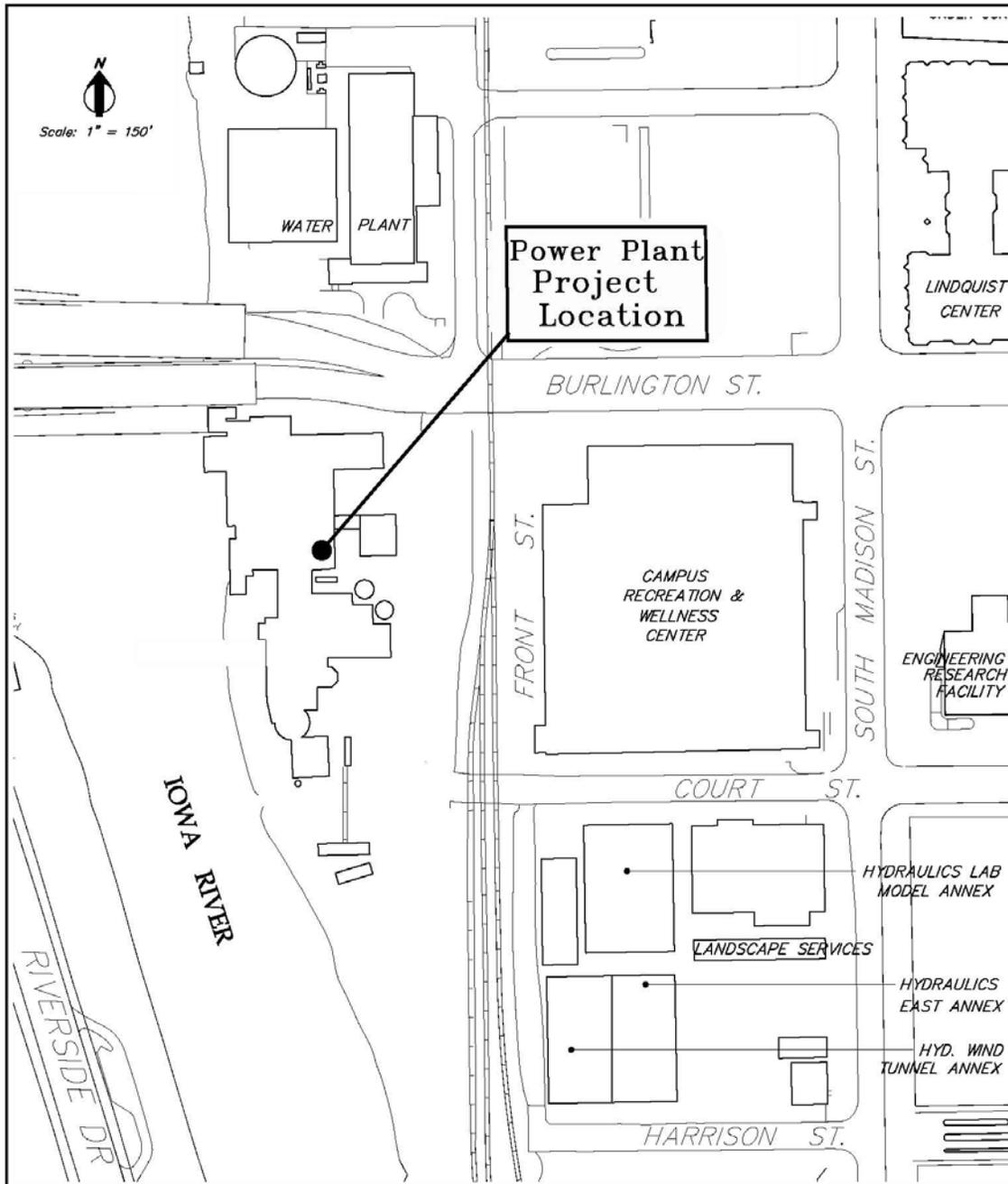
Financial Resources for Construction Project: Funding for Phase Two includes a State appropriation (\$29 million was approved by the 2011 General Assembly); College of Dentistry earnings including indirect cost recoveries, clinical and tuition charges, and gifts; Building Renewal Funds; and University allocations from Treasurer's Temporary Investment income.

Financial Resources for Operations and Maintenance: The source of funds to cover the operating and maintenance requirements will be existing O&M funds and indirect cost recoveries.

External Forces Justifying Approval: In order to attract outstanding students to meet the growing needs for dentists in Iowa and the nation, the College needs modern, up-to-date and efficient facilities.

The College's increased reliance on clinical revenue for the College operational expense requires facilities that are modern, accessible, attractive, and convenient to patients in order for the College to compete with other sources of oral health care.

Additionally, this project will address considerable deferred maintenance needs within the 39 year old facility.



THE UNIVERSITY OF IOWA

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Plotted: June 10, 2011

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Location Map:

Power Plant—Replace Boiler Fans  
And Erect New Stack

