

**PRESENTATIONS OF THE MASTER PLAN FOR THE IOWA MEMORIAL UNION RENOVATION PROJECT, AND THE SCHEMATIC DESIGN FOR THE UIHC EMERGENCY TREATMENT CENTER EXPANSION/RENOVATION PROJECT WILL TAKE PLACE AT THE NOVEMBER MEETING**

AGENDA ITEM 14a

**MEMORANDUM**

**To:** Board of Regents

**From:** Board Office

**Subject:** Register of University of Iowa Capital Improvement Business Transactions for Period of August 5, 2004, Through September 15, 2004

**Date:** October 20, 2004

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**Recommended Actions:**

1. Take the following actions for the major capital projects, as defined by Board policy adopted in June 2003.
  - a. **Iowa Memorial Union Renovation** project (see pages 5 through 10).
    1. Acknowledge receipt of the University's submission of interim information to address the Board's capital project evaluation criteria (pages 9 and 10);
    2. Accept the Board Office recommendation that the project meets the necessary criteria for Board consideration;
    3. Receive the Master Plan report; and
    4. Approve the Phase 1 program statement.
  - b. **University Hospitals and Clinics—Emergency Treatment Center Expansion and Renovation** project (see pages 11 through 17).
    1. Acknowledge receipt of the University's final submission of information to address the Board's capital project evaluation criteria (pages 15 through 17);
    2. Accept the Board Office recommendation that the project meets the necessary criteria for Board consideration; and
    3. Approve the schematic design, project description and budget (\$30,000,000), and Amendment #1 with Shiffler Associates Architects, Des Moines, Iowa (\$813,500) with the understanding that this approval will constitute final Board approval and authorization to proceed with construction.

c. **University Hospitals and Clinics—Intermediate Pulmonary Care Unit Development** project (see pages 18 through 21).

1. Acknowledge receipt of the University's final submission of information to address the Board's capital project evaluation criteria (pages 20 and 21);
  2. Accept the Board Office recommendation that the project meets the necessary criteria for Board consideration; and
  3. Approve the schematic design and project description and budget (\$4,700,000) with the understanding that this approval will constitute final Board approval and authorization to proceed with construction.
2. Approve the remainder of the items on the Register of Capital Improvement Business Transactions for the University of Iowa.

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**Executive Summary:**

Requested  
Actions

Permission to proceed with project planning and engineering agreement with Stanley Consultants, Muscatine, Iowa (\$403,900) for the **Power Plant—Replace Cooling Water Pump House Facility** project which would relocate the functions of the cooling water pump house facility and upgrade the pumping equipment to improve the reliability of the Power Plant, increase cooling water production capacity, and improve accessibility and security for the equipment (see page 4).

- The selection of Stanley Consultants requires waiving the provisions of the Board's Policy Manual which require the selection of an engineering firm for projects of \$1 million or more by an institutional selection committee.

Receipt of the Master Plan report and approval of the Phase 1 program statement for the **Iowa Memorial Union Renovation** (IMU) project (see page 5).

- The proposed Phase 1 project would construct a three-story addition at the existing east terrace entrance area, renovate existing book store space below the east terrace to support the addition, construct a river terrace area immediately west of the IMU, and address deferred maintenance deficiencies.
- Work to be considered for the Phase 2 project includes circulation improvements; further renovation of the book store; improvements to food service, dining, and lounge areas; upgrade of office space; and correction of additional deferred maintenance deficiencies.
- The Master Plan booklet is included with the Board's materials.

Schematic design, project description and budget (\$30,000,000), and architectural amendment to provide construction documents through construction administration services with Shiffler Associates Architects, Des Moines, Iowa (\$813,500) for the **University Hospitals and Clinics—Emergency Treatment Center Expansion and Renovation** project which would construct an addition to expand the Emergency Treatment Center in the Carver Pavilion and renovate the Center's existing space to correct design and space deficiencies (see page 11).

- The schematic design booklet is included with the Board's materials.

Project description and budget (\$1,882,000) for the **University Hospitals and Clinics—Emergency Treatment Center Expansion and Renovation—Utility Relocation and Replacement** project which would relocate and extend utility lines to support the expansion of the Center and reconstruct and expand the Center's parking area (see page 17).

Schematic design and project description and budget (\$4,700,000) for the **University Hospitals and Clinics—Intermediate Pulmonary Care Unit Development** project which would renovate space adjacent to the existing Medical Intensive Care Unit in the Carver Pavilion to consolidate the services of the two units (see page 18).

- The schematic drawing is included as Attachment A to this memorandum.

Change order with Knutson Construction Services (\$178,784) for the **University Hospitals and Clinics—Center of Excellence in Image Guided Radiation Therapy, and Three-Story Building Shell Above the Center of Excellence** project for the installation of steam piping within the Center of Excellence for connection with the campus steam distribution lines south of Kinnick Stadium (see page 22).

Project descriptions and budgets:

**Burge Residence Hall—Renovate Restrooms—Phase 2** project (\$998,500) which would renovate four restroom areas in one wing of Burge Hall to meet accessibility and building code requirements (see page 24).

**Power Plant—Boiler 10 Ash System Improvements** project (\$546,500) which would replace portions of the ash removal system that serves Boiler 10 (see page 25).

Project descriptions and budgets and engineering agreements with Shive-Hattery, Iowa City, Iowa:

**West Campus Chilled Water Distribution Extension—South Grand Avenue** project (\$994,500 project budget and \$76,800 engineering agreement) for the installation of chilled water piping along South Grand Avenue to address the University’s future west campus chilled water demand (see page 26).

**Oakdale Steam and Condensate Replacement—Phase 2—North/South Portion** project (\$990,100 project budget and \$70,400 engineering agreement) for the replacement of deteriorating steam and condensate lines on the Oakdale Campus (see page 27).

**East Campus Tunnel Ventilation Improvements** project (\$887,200 project budget and \$58,670 engineering agreement) for installation of a high efficiency replacement exhaust fan to serve portions of the east campus steam tunnels (see page 28).

**Background and Analysis:**

**Power Plant—Replace Cooling Water Pump House Facility**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed with Project Planning Engineering Agreement		Nov. 2004	Requested
(Stanley Consultants, Muscatine, IA)	\$ 403,900	Nov. 2004	Requested

Background

The University utilizes water from the Iowa River to cool steam turbine condensers and associated equipment located within the University’s Power Plant. The pumps that draw the water are located in the pump house facility near the northwest corner of the Power Plant along the bank of the Iowa River.

The existing pump house and equipment have served the Power Plant for a number of years. Recent inspections have indicated significant deterioration of the facility’s steel structure. In addition, the pumping equipment has outlived its service life and is in serious need of replacement.

In its current location, divers must be used for inspection and maintenance of the equipment.

Project Scope

The project would relocate functions of the existing cooling water pump house facility to within the Power Plant, and upgrade the basic pumping components; these actions would improve the reliability of the Power Plant, increase cooling water production capacity to meet power plant operational demands, improve accessibility for maintenance of the pumping equipment, and improve security.

Design Services     The University requests approval to waive provisions of the Board's Policy Manual which require the selection of an engineering firm for projects of \$1 million or more by an institutional selection committee.

The University requests approval of the engineering agreement with Stanley Consultants which would provide project design through construction administration services for the project.

- The firm is recommended by the University based on its experience and technical qualifications, its understanding of the project, and its work on similar Power Plant projects.

The agreement provides for a fee of \$403,900, including reimbursables.

Anticipated Cost/Funding     \$4,500,000 to \$5,500,000 to be funded by Utility System Revenue Bonds.

**Iowa Memorial Union Renovation**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed Architectural Selection (OPN Architects, Cedar Rapids, IA)		Jan. 2003	Approved
Initial Review and Consideration of Capital Project Evaluation Criteria, Subject to Further Review with Master Plan Architectural Agreement—Master Planning and Programming Services (OPN Architects, Cedar Rapids, IA)		April 2003 July 2003	Approved Received Report
Master Plan for Student Services	\$ 279,610	July 2003 Sept. 2004	Approved Received Report
Iowa Memorial Union Master Plan Presentation		Nov. 2004	Receive Report
Interim Review and Consideration of Capital Project Evaluation Criteria Phase 1 Program Statement		Nov. 2004 Nov. 2004	Receive Report Requested

Background     The Iowa Memorial Union (IMU) was constructed in 1925; additions to and renovations of the facility were completed in 1927, 1955, 1965, and 1988.

The IMU is the heart of campus life and offers a wide variety of services under one roof; thousands of students, faculty and staff visit the IMU daily.

- The IMU houses several food outlets, the Campus Information Center, the Offices of Student Life, Student Government, and other student organizations, and the student book store. The IMU is also home to over 25 meeting rooms, three large ballrooms, and the Iowa House Hotel.

The University wishes to undertake a major renovation of the IMU to upgrade the facility consistent with student expectations. The University has completed the Master Plan for the renovation project and the Phase 1 program.

In September 2004, the Board received the University's report on the Master Plan for Student Services which outlined the University's plan for improved student service facilities. One of the components of the Plan is the renovation of the IMU.

As presented to the Board in September 2004, the **Iowa Memorial Union Renovation—Phases 1 and 2** projects would provide additional study/dining space for students; address deferred maintenance items throughout the structure; construct a new River Terrace facing the Iowa River to provide a commons area for students to gather and a small venue for concerts and plays; provide circulation improvements throughout the facility; and improve food service areas.

The total estimated cost of the IMU renovation project is \$30 million to be funded by the sale of revenue bonds.

- In November 2002, the Board approved a new \$29 mandatory building fee per student per academic year to support debt service payments for a future bond issue of approximately \$10 million for the Phase 1 renovation of the IMU.
- The Master Plan for Student Services noted that an additional student building fee of approximately \$66 per student per academic year would be needed to support debt service payments for the Phase 2 renovation of the IMU.
  - The University plans to begin implementing one-half of the additional fee in academic year 2006-2007 and the remainder of the fee in academic year 2007-2008, subject to Board approval.

Master Plan  
Overview

The Master Plan booklet is included with the Board's materials.

The Master Plan was developed based on information received through a series of focus groups with students, faculty and staff, which were conducted in the summer/fall of 2003.

The results from the focus groups indicated that the greatest needs for the IMU are improvements in food service, building circulation and lounge space; development of a stronger relationship between the IMU and the Iowa River; and correction of building infrastructure deferred maintenance.

The Master Plan includes a comprehensive space program which identifies space needs, and goals and objectives for the entire facility, and outlines priorities for improvements.

The Master Plan for renovation of the IMU consists of two phases. (The Master Plan booklet includes diagrams which indicate the areas to be addressed in each phase of the project.)

### Phase 1

Phase 1 would construct a three-story infill of the east terrace area at the Madison Street entrance. This addition would consist of 11,025 net square feet (13,400 gross square feet) and would house student lounge and study space on the first floor, consolidated student office areas on the second floor (student government, student activities, and other student organizations), and shell space on the third floor. The shell space would provide swing space during the renovation project and future office space; the specific occupants have yet to be determined.

The proposed infill would require renovation, which would include the reconstruction of walls and floors, of approximately 9,100 square feet of the existing book store space on the ground floor to strengthen the footings and foundation to support the addition.

The addition would improve the building's vertical circulation with open stairways to each level, and also create a stronger sense of entry on the east side of the building.

The existing first floor entrance area from the east terrace would be renovated to provide a new central lobby area.

Phase 1 would also construct a river terrace immediately west of the IMU to provide a stronger connection between the building and the Iowa River. This terrace area would provide a student gathering space and a venue for small concerts and plays.

Phase 1 would also address the most critical deferred maintenance items including roof and fire alarm replacements, and plumbing, electrical and mechanical system upgrades.

### Phase 2

Possible improvements to be evaluated for the Phase 2 project include:

- On the ground floor, further renovation of the student book store, expansion of the food storage and preparation areas, creation of a new food court, improved dining seating and lounge space in the Wheelroom, relocation of the convenience store, and development of additional office space.

- On the first floor, circulation improvements consisting of the development of two corridors from the east terrace entrance area that would connect with the River Room and new outdoor river terrace to the west, and the East Lobby of the Main Lounge to the north. Additional work on the first floor would include development of a new food venue, and improvements to dining/lounge space, staff and student office areas, the Campus Information Center and theatre.
- On the second floor, the renovation of office space for the IMU Human Resources office.

Schedule The University anticipates that Phase 1 construction would commence in the fall of 2005 and would require approximately two years to complete.

The schedule for Phase 2 construction is contingent upon Board approval of the additional building fee to support the Phase 2 project; however, the University plans to proceed with Phase 2 programming simultaneously with the Phase 1 schematic design.

Additional Information The work in each phase of the project would be coordinated to minimize disruption to the building's use. The student book store operations on the ground floor would be temporarily relocated within the IMU during the renovation of this space.

Anticipated Cost/Source of Funds The Phase 1 cost is estimated at \$9.9 million; the Phase 2 cost is estimated at \$20.1 million. (Individual budgets would be developed for each phase.)

The University plans to fund the projects with proceeds from the sale of revenue bonds, with debt service payments from current and future student building fees.

Phase 1 Building Program The following table provides the detailed square footages for the Phase 1 project.

Detailed Building Program

East Terrace Addition

First Floor (Student Gathering Space)	3,325	
Second Floor (Student Offices)	3,850	
Third Floor (Shell Space)	<u>3,850</u>	
		11,025 nsf
Bookstore Renovation (Ground Floor)		9,100 nsf
Central Lobby Renovation (First Floor)		<u>5,700</u> nsf
Total Net Assignable Space		25,825 nsf

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Evaluation Criteria	<p>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.</p> <p>In July 2003, the Board received the initial submission of the evaluation criteria for the project, subject to further Board review and consideration in greater detail, upon completion of the master planning phase.</p>
Institutional Mission/Strategic Plan	<p>The Iowa Memorial Union is a vital facility on the UI campus. It is often the place where the University makes its first impression on potential students, faculty and staff. It is also the place where current students come to plan and participate in experiential learning opportunities, meet with classmates, grab a bite to eat, and listen to lecturers and concerts. To bring the IMU up to the standard students, parents and other visitors expect, a major renovation is required.</p> <p>As part of the Student Services Master Plan (1999-2000), Brailsford &amp; Dunlavey conducted a study of what students desired in a student union. Among its findings are:</p> <ul style="list-style-type: none"> <li>• The focus groups interviews revealed that a significant portion of students, faculty, and staff consider improvements to the IMU a high university priority.</li> <li>• All categories of students were willing to finance improvements through student fees, because students strongly felt that the improvements would build a sense of community, improve the quality of the out-of-class experience, and make the campus more user friendly.</li> <li>• The survey revealed that weekly student usage of the IMU would increase from approximately 53% to 79% with a facility renovation.</li> <li>• Although students would like to see more retail services on campus, students showed an even greater interest in more convenient hours, better service and space dedicated to students (i.e., lounge spaces, quiet study areas, computer labs, etc.).</li> <li>• Food service quality, variety, and cost were consistently the most frequently mentioned negative aspects of the building.</li> </ul> <p>Each of UI's top cross applicant schools and a majority of the Big Ten comparables have completed a substantial renovation of their student union facilities within the last few years or have plans to do so.</p>
Other Alternatives Explored	<p>The IMU is located in the heart of campus. In the summer/fall of 2003, a series of focus groups with students, faculty and staff were conducted. The information from these focus groups indicated the need for deferred maintenance, improved food services, way-finding within the building, increased lounge space and a stronger relationship between the IMU and the Iowa River. The renovation is required to meet these needs and enhance the IMU's ability to serve University of Iowa students, faculty, staff and visitors, serve as a recruitment tool for prospective students, faculty and staff and remain the keystone connecting alumni and the community to the campus.</p>

Impact on Other Facilities and Square Footage	<p>The IMU renovation project will proceed in two phases. Phase 1 will include deferred maintenance work, the construction of the infill at the east terrace on levels 1, 2 and 3, the renovation of approximately 9,100 NSF of the existing student book store's ground floor space in order to strengthen the footings/foundation that will support the terrace infill, and the construction of an exterior terrace on the west side of the building. The total new space in the building is 11,025 NSF for the east terrace infill.</p> <p>Phase 2 will include the remaining portion of the deferred maintenance work, improve retail and food service operations, increase and improve student gathering space, and create a clear, defined circulation path throughout the IMU.</p>
Financial Resources for Construction Project	<p>In November 2002 the Board approved an increase in student fees related to the support of the IMU. These funds have been programmed to support the sale of revenue bonds that would accomplish the basic infrastructure improvements envisioned for Phase I. A request for a student fee increase to fund Phase 2 will be made at a future date.</p>
Financial Resources for Operations and Maintenance	<p>The only additional operating costs would be for the 11,025 NSF east terrace infill. This represents a very small percentage increase of the total gross square footage for the entire building (312,000 total GSF). Additional revenues as a result of the remodeling are anticipated to cover these small incremental costs. It is also anticipated that savings will be realized with improvements to the HVAC and other mechanical systems serving the building.</p>
External Forces	<p>The project supports the following goals of the Iowa Memorial Union:</p> <ol style="list-style-type: none"> <li>1). Develop the "one stop shop" for students.</li> <li>2). Increase and improve social and activity spaces.</li> <li>3). Improve retail and food services to increase the amount of traffic and daily use.</li> <li>4). Provide clear navigation and accessibility throughout the building.</li> <li>5). Improve the relationship of the IMU to the adjacent Iowa River.</li> <li>6). Create an inspiring and clear focal point that enhances the University's identity.</li> </ol>

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**University Hospitals and Clinics—Emergency Treatment Center Expansion and Renovation**

Project Summary

	<u>Amount</u>		<u>Date</u>	<u>Board Action</u>
Feasibility Study (Design Professionals Collaborative, Cedar Rapids, IA)	\$ 49,900	est.	Jan. 2003	Ratification*
Initial Review and Consideration of Capital Project Evaluation Criteria			July 2003	Received Report
Permission to Proceed with Project Planning Phase 1 (Utility Relocation and Replacement) Engineering Agreement (Shive-Hattery, Iowa City, IA)	314,960		July 2003	Approved
Phase 2 (Building Construction/Renovation) Architectural Agreement—Pre-Design Through Design Development (Shiffler Associates Architects, Des Moines, IA)	738,000		Nov. 2003	Approved
Program Statement			Aug. 2004	Approved
Final Review and Consideration of Capital Project Evaluation Criteria			Nov. 2004	Receive Report
Schematic Design			Nov. 2004	Requested
Project Description and Total Budget	30,000,000		Nov. 2004	Requested
Architectural Amendment #1 (Shiffler Associates Architects, Des Moines, IA)	813,500		Nov. 2004	Requested

\* Approved by the Executive Director in accordance with Board procedures.

**Background**

The Emergency Treatment and Level 1 Trauma Center (ETC), located in 19,000 gross square feet of space on the first floor of the Carver Pavilion, has been in operation since 1978.

Currently, the ETC's annual patient visits total approximately 31,000, which is an increase of more than 100 percent since the Center became operational. The ETC's patient volume is projected to increase to 44,000 annual patient visits by the year 2012, an increase of 42 percent over the current level.

The University wishes to renovate and expand the ETC to accommodate current and future patient volume and the lengthier patient visit times associated with high level emergency needs. The renovation and expansion would also support the introduction of new emergency medicine services and upgrade the ETC to correct existing design and space deficiencies as cited by review and regulatory agencies.

The renovation and expansion would also provide office space and conference/teaching facilities for the Emergency Medicine Program, Emergency Medicine Residency Training Program, and Department of Surgery Trauma Service.

Project Scope	<p>The Phase 1 project would relocate or replace mechanical, electrical and utility services, and construct transformer and emergency generator vaults and utility tunnels to support the future expansion of the ETC.</p> <p>The Phase 2 project would construct a two-level addition (approximately 43,000 gross square feet) adjacent to the ETC to provide expansion space for the Center on the first floor, and staff and building support space on the lower level.</p> <p>In addition, the Phase 2 project would renovate the existing ETC space (19,000 gross square feet); the renovation work would be phased to allow the ETC to remain operational during the construction project.</p>
Schematic Design	<p>The schematic design booklet is included with the Board's materials. The booklet includes a map showing the Carver Pavilion and the proposed expansion area.</p> <p>The following are highlights of the interior design.</p> <p><u>First Floor</u></p> <p>The ambulance entrance area would be constructed east of the Carver Pavilion.</p> <p>The patient examination and treatment areas would be located in the southern portion of this level and would house a total of 34 patient treatment rooms, including three trauma rooms.</p> <p>The physician and nurse work stations would be centrally located within this area, and the emergency entrance and waiting area would be located to the east.</p> <p>The laboratory and imaging areas would be located in the northwest portion of the space and would house MRI and CT scanners, and two x-ray rooms.</p> <p>The administrative offices of the ETC would be located in the north area of this level.</p> <p><u>Lower Level</u></p> <p>The lower level would house office areas for the Emergency Medicine Residency Training Program, trauma physician office areas, and a large conference room.</p>

The following are highlights of the exterior design.

The entrance area to the ETC would feature limestone panels with a glass curtain wall; a curved roof form and entrance canopy extending over the patient vehicle drive would serve to identify the entrance area. The remainder of the addition would be constructed of concrete panels, consistent with the existing Carver Pavilion exterior.

A circular drive, with a small central parking area, would provide access to both the ambulance and main entrances to the Center.

Square Footage  
Table

The following table shows the square footage for the project area.

Detailed Building Program and Schematic Design

Lower Level

Trauma Service

Office Areas	1,490	
Conference/Teaching Rooms	300	
On-Call Room/Restroom	<u>200</u>	1,990

Emergency Medicine Program

Office Areas	1,880	
On-Call Rooms	<u>420</u>	2,300

Emergency Medicine Residency Training Program

Office Areas	1,682	
Conference/Teaching Rooms	1,150	
Staff Lounge/Restroom	260	
On-Call Room	<u>100</u>	<u>3,192</u>

Lower Level Total 7,482 nsf

Level One

Reception/Waiting/Triage

Reception/Waiting/Consultation	2,025	
Triage	120	
Restrooms/Support Areas	<u>345</u>	2,490

Clinical

Examination/Treatment Rooms	4,580	
Support Areas	2,510	
Ambulance Bay	1,920	
Trauma Rooms	1,100	
Nurse Stations	800	
Restrooms	785	
Conference/Work Rooms	480	
Hazardous Materials Handling	240	
Laboratory	<u>140</u>	12,555

Radiology Suite

General Radiology	800	
MRI System	840	
CT Scanner	690	
Reception/Waiting/Restrooms	<u>230</u>	2,560

Service Laboratory 802

Emergency Medicine

Office Areas	1,910	
Record Storage/Support	1,110	
Staff Lockers/Lounge/Restroom	990	
Conference/Teaching Rooms	<u>550</u>	<u>4,560</u>

Level One Total 22,967 nsf

Total Net Assignable Space 30,449 nsf

Program/  
Schematic  
Comparison      The square footage in the schematic design is unchanged from the building program approved by the Board in August 2004.

Schedule      The University plans to begin construction on the Phase 1 project (utilities and parking) in February 2005 with an anticipated completion date of June 2005.

The University plans to begin construction on the Phase 2 building addition in July 2005 with an anticipated occupancy date of December 2006. With completion of the addition and the relocation of occupants from the existing space, the Phase 2 renovation work would then commence in a phased manner with an anticipated completion date of April 2008.

Architectural  
Amendment      Amendment #1 to the agreement with Shiffler Associates Architects in the amount of \$813,500 would provide construction documents through construction administration services. (The initial agreement provided pre-design through design development services only.)

Funding      University Hospitals Building Usage Funds and UIHC bond proceeds.

Project Budget

Construction	\$ 24,000,000
Professional Fees	2,400,000
Planning and Supervision	1,200,000
Contingencies	<u>2,400,000</u>
TOTAL	<u>\$ 30,000,000</u>

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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 Emergency Treatment and Level 1 Trauma Center (ETC) at the UI Hospitals and Clinics became operational in its first floor Carver Pavilion facilities in 1978. Since that time the ETC has experienced an increase of over 100% in annual patient visits. It is projected that the current ETC patient visit volume will increase from its present level of approximately 31,000 annual visits to 44,000 visits by the year 2012. This represents an increase of over 40%. This project is required to accommodate the historical and projected future growth in ETC patient visits as well as to accommodate the lengthier patient visit times resulting from the high levels of patient acuity characteristic of an emergency medicine service in an academic medical center. It is also needed to provide space for the planned implementation of a graduate medical education program in emergency medicine. Finally, the project is required to support the introduction of new emergency medicine services and to correct current design and space deficiencies as cited by various review and regulatory agencies, such as those received over the past three years from the

American College of Surgeons and the Joint Commission on Accreditation of Healthcare Organizations. Completion of this project will provide the ETC with the facilities required for it to meet its patient care mission of providing services for treating the full spectrum of illness and injury from the most minor to the most severe and complicated, to provide these services 24 hours per day and 7 days per week, and to effectively integrate and coordinate the resources of the ETC with the full spectrum of diagnostic and therapeutic capabilities of the UIHC. The UIHC's educational and research missions will also be enhanced through development of the necessary space to more effectively undertake a residency training program in emergency medicine and by providing the type of facilities required to conduct innovative clinical research directed toward more clinically efficacious diagnosis and treatment of patients with emergent or traumatic injury or illness. The project also supports several of the UIHC's current Strategic Plan goals and objectives, most notably by differentiating the UIHC clinically, by enabling the UIHC to excel in all aspects of service to our patients and their families and referring providers, by facilitating opportunities for operational and clinical efficiencies, and by making possible incremental growth in service volume and revenue.

Other Alternatives Explored	Due to the aforementioned need to provide an adequate level of patient treatment and support space to meet the historical and projected increases in ETC patient visit volume, as well as for the other reasons cited above, there are no other alternatives available than to expand the ETC's patient care and support facilities. A total of eight alternative sites were evaluated prior to determining the most practical and clinically judicious option is to expand and renovate the existing ETC rather than attempt to develop a new facility at some other location within the hospital. This decision was determined based on each site's accessibility by ambulance, private automobile and emergency helicopter, proximity to key inpatient units and diagnostic and therapeutic support services (intensive care and burn units, operating room, lab and x-ray services), availability and proximity of parking, and proximity of essential physician consultants.
Impact on Other Facilities and Square Footage	As presently planned, the ETC's ambulance bay will be relocated to the east end of the Carver Pavilion during the initial construction phase. During this phase occupants currently utilizing this space will be temporarily relocated. The subsequent phase will result in the total build-out of the new first floor and lower level expansion space to the south. On completion of this phase functions now located within the existing ETC will be relocated to the new space while the existing ETC is being renovated. Several of these functions will be relocated into the renovated space after its completion.
Financial Resources for Construction Project	The estimated internal rate of return over the life of this project is 17%. This project will be funded through UIHC bonds and 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

The source of funds to cover the additional operating costs associated with the incremental increase in building space will be hospital operating revenues.

External Forces

This project will resolve ETC design deficiencies that resulted in a supplemental recommendation from the Joint Commission on Accreditation of Healthcare Organizations during their survey of the UIHC in October 2001. The project will also resolve spatial deficiencies cited by the American College of Surgeons during their trauma center designation survey in January 2002. Furthermore, the project will correct deficiencies in the mechanical and ventilation systems supporting the ETC which will enable the facility to more safely and effectively respond to potential biological, chemical or radioactive incidents, and it will provide for isolation of the mechanical systems serving the ETC and develop expanded hazardous material decontamination facilities and isolation rooms. The project is in concert with the Department of Homeland Security's efforts to provide greater security and safety for all Americans and its mandate to improve capabilities in treating mass casualties.

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**University Hospitals and Clinics—Emergency Treatment Center Expansion and Renovation—Utility Relocation and Replacement**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 1,882,000	Nov. 2004	Requested

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Background

The proposed expansion of the Emergency Treatment Center requires the relocation of existing utility lines at the site and the extension of new utilities to serve the expanded Center.

Project Scope

The project would relocate and/or replace the following utilities at the project site: water and gas mains; sanitary and storm sewer lines; steam, chilled water and condensate lines; high voltage electrical link; telecommunications lines; and the jet fuel tank pump.

The project would require reconstruction of the existing parking area that serves the Emergency Treatment Center, which would also be expanded as a component of this project.

- The project would increase the capacity of the parking area from 37 to 57 spaces.

Funding University Hospitals Building Usage Funds and UIHC bond proceeds.

Project Budget

Construction	\$ 1,400,000
Design, Inspection, and Administration Consultants	247,000
Design and Construction Services	95,000
Contingencies	<u>140,000</u>
TOTAL	<u>\$ 1,882,000</u>

**University Hospitals and Clinics—Intermediate Pulmonary Care Unit Development**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Initial Review and Consideration of Capital Project Evaluation Criteria		Sept. 2003	Received Report
Permission to Proceed with Project Planning Architectural Agreement		Sept. 2003	Approved
(HLM Design USA, Iowa City, IA)	\$ 255,200	Dec. 2003	Approved
Program Statement		June 2004	Approved
Final Review and Consideration of Capital Project Evaluation Criteria		Nov. 2004	Receive Report
Schematic Design		Nov. 2004	Requested
Project Description and Total Budget	4,700,000	Nov. 2004	Requested

**Background** The UIHC Intermediate Pulmonary Care Unit (IPCU), which is located within the Surgical Intensive Care Unit on the fifth level of the Pappajohn Pavilion, serves as the acute care “step-down” unit for the Medical Intensive Care Unit (MICU), which is located on the fifth level of the Carver Pavilion.

The physical separation of the units’ facilities and health care providers results in operational inefficiencies and hinders the continuity of patient care.

UIHC has a need to provide additional Medical Intensive Care/ Intermediate Pulmonary Care beds to meet the anticipated increase in clinical demand.

**Project Scope** The project would renovate a total of 12,400 gross square feet of space on the fifth level of the Carver Pavilion (former Pediatric Intensive Care Unit space), adjacent to the existing MICU, for the Intermediate Pulmonary Care “step-down” unit. The project also includes the renovation of a portion of the adjoining MICU space.

The project would provide 12 beds ICU beds and two MICU beds, renovated support facilities, and family/visitor waiting and conference areas.

The project would also construct a mechanical penthouse on the Carver Pavilion roof and install a new air handling unit and distribution system for the Carver Pavilion fifth floor inpatient wing.

Schematic Design

The schematic drawing is included as Attachment A to this memorandum.

The 12 ICU patient rooms would be located along the north and south walls of the Unit; the two MICU patient rooms would be immediately adjacent to the ICU to the east.

The nurse station would be located near the west entrance to the Unit, and the office, on-call and other Unit support areas would be located along the south wall.

A large family/visitor waiting room, and adjoining education/conference room, would be located adjacent to the north-south corridor that serves the ICU.

Square Footage Table

The square footage in the schematic design is unchanged from the building program approved by the Board in June 2004.

Detailed Building Program and Schematic Design

Intermediate Pulmonary Care Patient Rooms (12)	3,628
Family/Visitor Waiting Rooms (2) and Restroom	1,220
Physician/Staff Office and Support Areas	1,080
Medical Intensive Care Patient Rooms (2)	682
Storage	480
Clean Utility/Medicine Preparation	320
Charting/Patient Nourishment Alcoves (8)	270
Education/Conference Room	250
Soiled Utility/Housekeeping	210
Nurse Station	160
Communications/Electrical Closets	140
Sleep Study Control Room	120
Patient Tub Room	90
Consultation Room	<u>60</u>

Total Net Assignable Space 8,710 nsf

Schedule

The University plans to begin construction in March 2005, with occupancy in March 2006.

Funding University Hospitals Building Usage Funds.

Project Budget

Construction	\$ 3,760,000
Professional Fees	376,000
Planning and Supervision	188,000
Contingencies	<u>376,000</u>
TOTAL	<u>\$ 4,700,000</u>

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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 Completion of this project will provide the facilities required to meet the UIHC's comprehensive patient care mission by providing services to patients with complex pulmonary problems. The Intermediate Pulmonary Care Unit provides state-of-the-art long-term ventilation management and expert weaning of patients from mechanical ventilation that differentiates this unit from any other in the state. The incidence of pulmonary disease is high in the elderly and in people involved in agriculture. This patient population will continue to grow in keeping with the demographics of the state of Iowa and the surrounding region. In addition, this unit will be located adjacent to the Medical Intensive Care Unit. This will enable the two units to expand services to more patients requiring ICU level or intermediate level care depending on overall patient needs and also enhance capabilities for coordinating care of patients as they move from one unit to the other. Having the necessary space available to more effectively undertake the training of nurse practitioners, residents and other health care professional students will enhance the UIHC's educational mission. Lung disease and patient ability to function fully in the face of complex pulmonary problems are major research programs with substantial NIH funding. Expansion of this unit will support the research mission by affording the capability to enroll more patients in these important studies. The project also supports several of the UIHC's Strategic Plan goals, most notably by differentiating the UIHC clinically, by enabling the UIHC to excel in all aspects of service to our patients and their families and referring providers, by facilitating opportunities for operational and clinical efficiencies, by making possible incremental growth in service volume and revenue, and by implementing or enhancing interdisciplinary interaction and collaboration to enrich the patient care, teaching and research missions of the UIHC.

Other Alternatives Explored	The Intermediate Pulmonary Care Unit (IPCU) is currently located in the Surgical Intensive Care Unit (SICU) and will be relocated this fall to temporary facilities on the seventh level of the Colloton Pavilion (7 JCW) to permit expansion of its beds and to enable the SICU to utilize the present IPCU space for much needed expansion of its beds. While leaving the IPCU on 7 JCW is an option, current operational inefficiencies and difficulties will continue as the IPCU will still be remote from the MICU. In addition, there is a need to provide additional Medical Intensive Care/Intermediate Pulmonary Care beds to meet the anticipated increase in clinical demand. There are no reasonable alternatives available other than undertaking this project.
Impact on Other Facilities and Square Footage	On completion of this project approximately sixty-five hundred gross square feet of inpatient unit space on the seventh level of the Colloton Pavilion will be used for meeting other inpatient bed needs by serving as the site for temporarily accommodating patients in units that are being renovated.
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. The estimated internal rate of return over the life of this project is 13%.
Financial Resources for Operations and Maintenance	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	By providing additional beds this project will resolve difficulties now experienced by referring physicians and hospitals in transferring patients requiring the level of pulmonary care provided at the UIHC. The project will also enhance the faculty's ability to compete for extramural funding for clinical research on pulmonary diseases. The pulmonary program serves as a magnet to attract specialty nurses, therapists and medical researchers. Such recruits will strengthen the clinical, teaching and research missions of UIHC and the Carver College of Medicine.

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**University of Iowa Hospitals and Clinics—Center of Excellence in Image Guided Radiation Therapy, and Three-Story Building Shell Above the Center of Excellence**

<u>Project Summary</u>				
	<u>Amount</u>		<u>Date</u>	<u>Board Action</u>
<u>Center of Excellence</u>				
Permission to Proceed			Oct. 2000	Approved
Architectural Agreement—				
Architectural Services Only				
(HLM Design USA, Iowa City, IA)	\$ 1,175,000	est	Dec. 2000	Approved
Program Statement			Sept. 2001	Approved
Revised Architectural Agreement—				
Full Design Services				
(HLM Design USA)	2,104,575	est	March 2002	Approved
Architectural Amendment #1				
(HLM Design USA, Iowa City, IA)	62,365		June 2002	Approved
Architectural Amendment #2				
(HLM Design USA, Iowa City, IA)	730,650		July 2002	Approved
Architectural Amendment #3				
(HLM Design USA, Iowa City, IA)	35,000		Oct. 2002	Approved
<u>Three-Story Building Shell Above Center of Excellence</u>				
Permission to Proceed			July 2002	Approved
<u>Combined Projects</u>				
Schematic Design			Sept. 2002	Approved
Project Description and Total Budget	39,644,000		Sept. 2002	Approved
Construction Contract Award				
(Knutson Construction Services				
Midwest)	26,675,000		Nov. 2002	Ratification (Jan. 2003)
<u>Construction Change Orders</u>				
(Knutson Construction Services)				
Change Orders #1 - #6	86,449			Not Required*
Change Order #7	63,706		July 2003	Not Required
Change Orders #8 - #10	83,823			Not Required*
Change Orders #11 & #12	175,362		Sept. 2003	Not Required
Change Orders #13 - #22	125,021			Not Required*
Change Order #23	49,954			Not Required*
Change Orders #24 - #26	22,798			Not Required*
Change Order #27 (est. @ \$1,600,000)	1,434,630		March 2004	Approved
Change Order #28	-93,120		Sept. 2004	Not Required
Change Orders #29 - #31	35,458			Not Required*
Change Order #32	89,148		Sept. 2004	Not Required
Construction Change Order (# to be determined)				
(Knutson Construction Services)	178,784		Nov. 2004	Requested

\* Approved by University in accordance with Board procedures.

Background

The Center of Excellence in Image Guided Radiation Therapy will be developed in the lower level of a new wing under construction adjacent to the Pomerantz Family Pavilion.

- The Center will provide state-of-the-art radiation systems for use by the Department of Radiation Oncology, and will correct serious space deficiencies in the existing Radiation Oncology Center located in the General Hospital.

The wing will consist of six levels totaling 218,000 gross square feet, which will include the Center of Excellence in 40,400 gross square feet of space on the lower, mezzanine and basement levels, and three levels of shell space to be finished at future dates to provide expanded ambulatory patient care facilities.

The **Kinnick Stadium Renovation** project includes the extension of underground utility lines from the West Campus Chilled Water Plant along the west and south sides of the stadium; the work being undertaken south of the stadium is located immediately to the west of the Center of Excellence project site.

Construction  
Change Order

The change order with Knutson Construction Services in the amount of \$178,784 would provide for the installation of approximately 400 feet of steam piping within the UIHC Center of Excellence for connection with the steam distribution lines being extended south of Kinnick Stadium.

The University has determined that integrating this work with construction of the Center of Excellence is the most efficient method for completing the connection to the campus steam distribution system.

The cost of the change order would be paid from the project budget for the **Kinnick Stadium Renovation** project.

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**Burge Residence Hall—Renovate Restrooms—Phase 2**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Architectural/Engineering Agreement (Rohrbach Carlson, Iowa City, IA)	\$ 90,500	Sept. 2004	Approved
Project Description and Total Budget	998,500	Nov. 2004	Requested

**Background** The University is undertaking the renovation of the restrooms in Burge Residence Hall. The restrooms had not been renovated since the building's construction in 1956 and are in poor condition.

The restrooms are not accessible to persons with disabilities and do not provide a sufficient number of showers to meet current building codes for residence halls.

The University has proceeded with the Phase 1 project to renovate a total of four restrooms, one on each of four levels, in one wing of Burge Hall.

As indicated with Board approval of the Phase 1 project in February 2004, the University anticipates undertaking a total of four phases of restroom renovations for Burge Hall, with completion anticipated in 2007.

**Project Scope** The Phase 2 project would renovate a total of four restrooms, one on each of four levels, in the southernmost wing of Burge Hall.

The project would provide two unisex and two female restrooms totaling 7,156 square feet.

**Funding** Dormitory Improvement Funds.

Project Budget

Construction	\$ 793,500
Design, Inspection, and Administration	
Consultants	90,500
Design and Construction Services	35,000
Contingencies	<u>79,500</u>
<b>TOTAL</b>	<b><u>\$ 998,500</u></b>



**Power Plant—Boiler 10 Ash System Improvements**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 546,500	Nov. 2004	Requested

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Background      The major components of the existing ash removal system for Boiler 10, which were installed in 1973 with the original boiler, have reached the end of their useful life and are in need of replacement.

The existing ash handling components are located under the boiler in narrow, restricted space; the ash removal system requires manual operation approximately every three hours to ensure reliability.

Project Scope      The project would replace portions of the ash removal system with modern enclosed equipment that would improve personnel safety during the ash removal process.

Funding            Utility Enterprise Improvement and Replacement Funds.

Project Budget

Construction	\$ 455,000
Design, Inspection, and Administration	
Consultants	32,500
Design and Construction Services	15,000
Contingencies	<u>44,000</u>
 TOTAL	 <u>\$ 546,500</u>

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**West Campus Chilled Water Distribution Extension—South Grand Avenue**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 994,500	Nov. 2004	Requested
Engineering Agreement (Shive-Hattery, Iowa City, IA)	76,800	Nov. 2004	Requested

Background	The future chilled water demands of UIHC, Kinnick Stadium, west campus residence halls, and other west campus facilities will require additional distribution line capacity.
Project Scope	The project would install a total of 1,670 feet of chilled water piping along South Grand Avenue from the Pharmacy Building to Melrose Avenue to address the University's future west campus chilled water demand.  The University reports that proceeding with the project at this time, prior to the City of Iowa City's planned widening of South Grand Avenue in 2005, will result in cost savings to the University.
Design Services	The agreement with Shive-Hattery would provide design and construction administration services for a fee of \$76,800, including reimbursables.
Funding	Utility System Revenue Bonds.

Project Budget

Construction	\$ 774,000
Design, Inspection, and Administration	
Consultants	76,800
Design and Construction Services	66,300
Contingencies	<u>77,400</u>
TOTAL	<u>\$ 994,500</u>

**Oakdale Steam and Condensate Replacement—Phase 2—North/South Portion**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 990,100	Nov. 2004	Requested
Engineering Agreement (Shive-Hattery, Iowa City, IA)	70,400	Nov. 2004	Requested

Background	<p>The existing high pressure steam and condensate distribution system on the Oakdale Campus has surpassed its life expectancy and is leaking condensate.</p> <p>The University proposes three phases of steam and condensate line replacements which would remove leaking portions of the distribution system, increase capacity to meet future building steam loads, and increase operating efficiencies.</p> <p>The University has proceeded with the first phase of work to replace a portion of the steam and condensate lines (885 linear feet) and construct and expand concrete vaults to accommodate the new lines.</p>
Project Scope	<p>The Phase 2 project would replace additional portions of the main steam and condensate lines (550 linear feet) and the connection lines to the Biology Greenhouse, Geological Survey building, and Physiology Research Laboratory (335 linear feet). The project would also extend an existing concrete vault to accommodate the new lines.</p>
Design Services	<p>The agreement with Shive-Hattery would provide design and construction administration services for a fee of \$70,400, including reimbursables.</p>
Funding	<p>Utility Enterprise Improvement and Replacement Funds.</p>

Project Budget

Construction	\$ 727,000
Design, Inspection, and Administration	
Consultants	70,400
Design and Construction Services	65,000
Owner Furnished Materials	55,000
Contingencies	<u>72,700</u>
TOTAL	<u>\$ 990,100</u>

**East Campus Tunnel Ventilation Improvements**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget Engineering Agreement (Shive-Hattery, Iowa City, IA)	\$ 887,200	Nov. 2004	Requested
	58,670	Nov. 2004	Requested

**Background** The existing exhaust fan that ventilates portions of the east campus steam tunnels is nearly 50 years old and has exceeded its expected service life of 25 years. The fan requires weekly maintenance to ensure its continued operation.

**Project Scope** The project would install a high efficiency replacement exhaust fan which would reduce energy and maintenance costs, and improve the reliability of the exhaust system.

The project would also install approximately 600 linear feet of water main piping to facilitate the removal of existing water mains from within the steam tunnels.

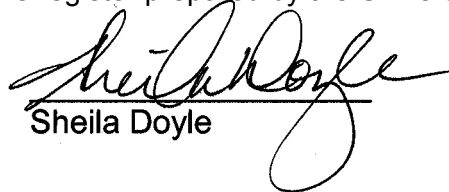
**Design Services** The agreement with Shive-Hattery would provide design and construction administration services for a fee of \$58,670, including reimbursables.

**Funding** Utility Enterprise Improvement and Replacement Funds.

Project Budget

Construction	\$ 703,200
Design, Inspection, and Administration	
Consultants	58,700
Design and Construction Services	54,800
Contingencies	<u>70,500</u>
<b>TOTAL</b>	<b><u>\$ 887,200</u></b>

Also presented for Board ratification are three project descriptions and budgets under \$250,000, one amendment to an architect/engineer agreement, and six construction contract awards. The register prepared by the University is included in the Regent Exhibit Book.

  
 Sheila Doyle

Approved:   
 Gregory S. Nichols

