

MEMORANDUM

To: Board of Regents
From: Board Office
Subject: Register of University of Iowa Capital Improvement Business Transactions for Period of May 20, 2004, Through June 16, 2004
Date: July 23, 2004

Recommended Actions:

1. Take the following actions for the major capital projects, as defined by Board policy adopted in June 2003.

- a. **West Campus Chilled Water Plant Development/Expansion** project (see pages 3 through 9).

Authorize permission to proceed with the Phase 2 project and approve the Phase 2 engineering agreement with Stanley Consultants, Muscatine, Iowa (\$185,000).

- The Board received the capital project evaluation criteria with approval of the Phase 1 project description and budget in October 2003.

- b. **University Hospitals and Clinics—Emergency Treatment Center Expansion and Renovation** project (see pages 10 through 12) and **University Hospitals and Clinics—Nursing Clinical Education Center** project (see pages 13 and 14).

Approve the program statement for each project.

- The Board received the initial capital project evaluation criteria for each project in July 2003 and February 2004, respectively.

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

For the **West Campus Chilled Water Plant Development/Expansion** project, permission to proceed with the Phase 2 project, and approval of the Phase 2 engineering agreement with Stanley Consultants, Muscatine, Iowa (\$185,000), to renovate and modernize the existing plant equipment (see page 3).

- Subsequent to approval of the Phase 1 project description and budget in October 2003, the University proceeded with the Phase 1 work to construct an addition to the existing plant to increase its chilled water capacity; however, the University now wishes to proceed with the Phase 2 project rather than continue at this time with the Phase 1 project.

Approval of a Comprehensive Planning Study agreement with Stanley Consultants, Muscatine, Iowa (\$155,000) for a **Campus Chilled Water System Review** to further evaluate alternatives for expansion of the campus chilled water systems (see page 9).

Program statement 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 10).

Program statement for the **University Hospitals and Clinics—Nursing Clinical Education Center** project which would renovate space in the General Hospital to consolidate the College of Nursing Learning Resource Center and the UIHC Nursing Education Center (see page 13).

Project descriptions and budgets for the **Clinton and Davenport Streets—Utility Tunnel Reconstruction** projects (\$901,000 and \$660,000, respectively), and engineering agreements with Shive-Hattery, Iowa City, Iowa (\$66,490 and \$48,600, respectively), to replace deteriorated portions of the east campus utility tunnels (see page 15).

Project description and budget (\$850,000) and architectural agreement with Herbert Lewis Kruse Blunck, Des Moines, Iowa (\$82,660) for the **Blank Honors Center—Build Out Fifth Floor** project which would finish the fifth floor shell space to consolidate existing clinic functions of the Belin-Blank Center (see page 16).

Project description and budget for the **Van Allen Hall—Replace Domestic Water Piping** project (\$285,000) which would replace domestic water lines and plumbing fixtures in the west wing of Van Allen Hall (see page 17).

Campus Chilled Water System Improvements

Introduction

The University is requesting permission to proceed with project planning and approval of an engineering agreement for Phase 2 of the **West Campus Chilled Water Plant Development/Expansion** project, which would upgrade the existing equipment in the chilled water plant. The University wishes to proceed with the Phase 2 project rather than continue at this time with the Phase 1 project, which would construct an addition to the plant to expand its chilled water capacity. The Phase 1 project would be on hold and subject to further review in the Comprehensive Planning Study, which is presented for Board approval in the **Campus Chilled Water System Review** project.

The University has been proceeding with Phase 1 of the **West Campus Chilled Water Plant Development/Expansion** project to construct an addition to expand the plant's capacity to meet the growing chilled water needs for the west campus facilities. Following construction of the addition, the University was planning to upgrade the existing chilled water plant equipment, which is beyond or nearing the end of its useful life, as the second phase of the project.

The University has received bids for two Phase 1 construction contracts.

- The utility relocation contract in the amount of \$1,593,000 was awarded in December 2003 and is now complete.
- The bids for the cooling tower equipment installation were rejected due to the inability of the two bidders to satisfactorily meet the specified noise requirements for the towers.

The University reports total Phase 1 expenditures of approximately \$3 million, which includes approximately \$2.3 million for planning and design activities and \$750,000 for construction.

The demands on the west campus chilled water distribution system are further hampered by an aging steam distribution system; the University recently experienced a serious failure in the steam distribution system near the UHC main entrance which resulted in the shut-down of one of the chillers in the Northwest Chilled Water Plant for several days.

- The University's east and west campus chilled water systems are not connected and operate independently; therefore, they cannot provide back-up service to each other in the event of a shut-down in either system.

Due to concerns with the noise level of the cooling towers and the reliability of the existing steam distribution system, the University wishes to proceed with the renovation and modernization of the existing equipment in the West Campus Chilled Water Plant (Phase 2), rather than continuing with construction of an addition to the Plant (Phase 1).

- Proceeding with the modernization of the existing plant components would allow the University to improve reliability and increase chilled water production capacity in a more timely manner to meet immediate demand requirements.

The University believes that much of the Phase 1 costs will be directly applicable to the Phase 2 project.

The University wishes to reevaluate options for the expansion of chilled water service, for both the east and west campuses, through a Comprehensive Planning Study agreement with Stanley Consultants (**Campus Chilled Water System Review**).

West Campus Chilled Water Plant Development/Expansion

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Oct. 2002	Approved
Engineer Selection (Stanley Consultants, Muscatine, IA)		Jan. 2003	Approved
Executive Director Authorization to Approve Schematic Design Agreement		Jan. 2003	Approved
Negotiated Pre-Design and Schematic Design Agreement (Stanley Consultants, Muscatine, IA)	\$ 316,900	April 2003	Ratified*
Program Statement		June 2003	Approved
Schematic Design		June 2003	Approved
Initial Review and Consideration of Capital Project Evaluation Criteria		July 2003	Received Report
Engineering Agreement—Design Development and Construction Phase Design Services (Stanley Consultants, Muscatine, IA)	2,159,900	July 2003	Approved
Final Review and Consideration of Capital Project Evaluation Criteria		Oct. 2003	Approved
Project Description and Total Budget—Phase 1	39,400,000	Oct. 2003	Approved
Engineering Agreement—Construction Inspection (Midwest Construction Services, Solon, IA)	205,000	Dec. 2003	Approved
Construction Contract Award— C-01 Utility Relocation (Carter-Kirkpatrick Services)	1,593,000	Dec. 2003	Ratification
Construction Contract—C-02 Cooling Towers	Reject Bids	Aug. 2004	Ratification
Permission to Proceed—Phase 2		Aug. 2004	Requested
Engineering Agreement—Phase 2 (Stanley Consultants, Muscatine, IA)	185,000	Aug. 2004	Requested

* Approved by Executive Director as authorized by Board in January 2003.

**Project
Background**

The West Campus Chilled Water Plant provides chilled water service for the academic and medical facilities on the west campus; the plant has a current capacity of 16,000 tons.

- The chilled water plant is located within Hospital Parking Ramp #3, which is north of Kinnick Stadium.

The plant was constructed in 1970 and the equipment was installed in phases, with the last 3,000 tons of cooling capacity installed in 1988.

In addition to the continuing expansion of the west campus and the growth of the Arts Campus which require an increase in cooling capacity, the existing chilled water equipment is beyond or nearing the end of its useful life, increasing the amount of required maintenance.

Phase 1 Approved
Project Scope

The first phase of the project, as approved by the Board in October 2003 with a budget of \$39,400,000, includes construction of an addition to the West Campus Chilled Water Plant to increase the plant's chilled water capacity by 12,000 tons, with future expansion by an additional 4,000 tons.

- The University's plans included construction of the addition on the site immediately north of the West Campus Chilled Water Plant; this is the former site of the outdoor Football Practice Facility (see Attachment A for location).

The University also indicated its plans to replace the existing chilled water plant equipment in a subsequent phase of the project following construction of the addition.

The evaluation criteria presented with the project description and budget further explained that the University had examined options for meeting the west campus cooling loads in three engineering studies beginning in August 2000. The recommended solution based on these studies was expansion of the existing plant followed by the upgrade of existing plant equipment.

The project was to be partially funded by \$25,000,000 in Utility System Revenue Bonds sold in March 2004.

Phase 1 Update

The University proceeded with the Phase 1 construction project with award of the utility relocation construction contract in December 2003; this work is now complete.

The University also proceeded with the design, equipment selection, and bidding for the new cooling towers. Prior to bidding the contract for the cooling towers, the University and the project engineers, Stanley Consultants, identified the need to adequately mitigate the noise levels of the proposed cooling towers; as a result, the University included noise level requirements for the cooling towers in the contract specifications.

The University received two bids for the cooling towers; however, neither tower manufacturer was able to provide a standard tower for the site that would meet the specified noise levels.

- Only one manufacturer indicated that it could meet the noise level specifications; however, this was through the use of a custom cooling tower with a special fan assembly that had not previously been installed in a tower of this size.

- The University and Stanley Consultants had concerns with the use of this unproven technology in the tower.
- Consequently, the University recommended to the Board Office that the bids for the cooling towers be rejected, and this was approved by the Executive Director on July 1, 2004.

West Campus
Steam
Distribution
System

Concurrent with the cooling tower evaluation, the University performed an analysis of the recent serious failure of an expansion joint in the steam distribution system near the UIHC main entrance.

- In March 2004, the Board ratified the project budget (\$1,386,000) and engineering agreement for the **Emergency Steam and Condensate Replacement—UIHC Main Entrance** project to replace the deteriorated steam and condensate lines to correct this failure.

The failure of the expansion joint resulted in the shut-down of a 5,000 ton chiller in the University's Northwest Chilled Water Plant for several days, and highlighted the added vulnerability of the aging campus steam distribution system.

Proposed
Phase 2 Project

Given the potential noise concerns of an expanded chiller plant at the previously selected West Campus location, and the reliability and cost issues associated with the existing steam distribution system, the University wishes to proceed with the renovation and modernization of the existing equipment in the West Campus Chilled Water Plant (Phase 2) at this time, rather than continuing with construction of an addition to expand the West Campus Chilled Water Plant.

The University plans to undertake the Phase 2 work in four separate phases with the following anticipated completion dates:

Phases 2a and 2b	Spring 2006
Phase 2c	Spring 2007
Phase 2d	Spring 2011

Anticipated
Cost/Funding

The anticipated Phase 2 project cost is \$23 million to \$25 million, to be funded by Utility System Revenue Bonds.

Phase 2
Consultant
Agreement

The Phase 2 engineering agreement with Stanley Consultants would provide design services through schematic design. The agreement provides for a fee of \$185,000, including reimbursables.

Study to Evaluate
Campus Chilled
Water Needs

The University wishes to further evaluate alternatives for expansion of the west campus chilled water system, while also focusing on meeting the needs of both the east and west campuses with a possible interconnection of the two chilled water systems.

This would be undertaken through a comprehensive planning study by Stanley Consultants (**Campus Chilled Water System Review**, page 9); following completion of this evaluation, the University would return to the Board with recommendations for proceeding with expansion of the campus chilled water systems.

Phase 1
Expenditures

The University reports total expenditures to date for the Phase 1 project of approximately \$3 million, which includes approximately \$2.3 million for planning and design activities and \$750,000 for construction.

- The design agreement with Stanley Consultants totals \$2,159,900. The University has encumbered approximately \$1.6 million for design fees under the agreement; the remaining \$600,000 is not due unless further services are performed.
- This agreement is currently on hold pending the results of the comprehensive planning study.
- The University reports that much of the planning and design work completed to date is directly applicable to the planning for the Phase 2 project and the development of additional chilled water capacity.
- Since the majority of the construction work to date for the Phase 1 project has included utility relocations, the University has provided the following:
 - Portions of the utility relocation work will directly benefit the Phase 2 project since the utilities are now configured to support the proposed equipment replacement.
 - All of the completed utility relocation work would be necessary for any future construction activity at the site.
 - The utility relocations now provide an organized utility corridor for the area; the previous configuration was less organized due to the evolutionary development of the area.
- The University is in the very early stages of the chiller procurement process for the Phase 1 project; the purchase order for the chillers totals approximately \$7 million.
- Of this amount, approximately \$700,000 will be due to the manufacturer for the chiller design; all other work has been put on hold.

- The University will be meeting with the chiller manufacturer to discuss options for delaying the order; one option is adjusting the order to allow for the manufacture of the replacement chillers for Phase 2.

**Bond Counsel
Review**

The Board Office has consulted with the Ahlers and Cooney law firm regarding the use of the utility bond proceeds from the March 2004 sale for both a redefined Phase 1 project and the Phase 2 project.

Ahlers and Cooney has indicated that the bond funds may be used for equipping and improving the Utility System, as defined by the bond documents.

Campus Chilled Water System Review

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Comprehensive Planning Study (Stanley Consultants, Muscatine, IA)	\$ 155,000	Aug. 2004	Requested

**Consultant
Agreement**

In association with the University's plans to further evaluate the campus chilled water system needs, the University requests approval of an agreement with Stanley Consultants, Muscatine, Iowa, for a comprehensive planning study of the chilled water systems.

The study would evaluate alternatives for the University's chilled water system including system improvements and expansion locations. The agreement provides for a fee of \$155,000, including reimbursables.

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	Ratified*
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	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/
Program
Statement

The Phase 1 project would relocate or replace mechanical, electrical and utility services, construct transformer and emergency generator vaults and utility tunnels to support the future expansion of the ETC, and expand the ETC existing patient parking lot.

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.

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.

Anticipated
Cost/Funding

Estimated at \$31 million, to be funded by University Hospitals Building Usage Funds and UIHC bond proceeds.

Square Footage
Table

The following table provides the detailed square footages for the project.

Detailed Building Program

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

University of Iowa Hospitals and Clinics—Nursing Clinical Education Center

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Sept. 2002	Approved
Initial Review and Consideration of Capital Project Evaluation Criteria Architectural Agreement		Feb. 2004	Received Report
(Brooks, Borg and Skiles, Des Moines, IA)	\$ 282,500	Feb. 2004	Approved
Program Statement		Aug. 2004	Requested

Background

The College of Nursing operates a nursing student Learning Resource Center in the College of Nursing Building on the Health Sciences Campus.

- The Center provides a central location where nursing students learn and practice physical and psychological assessment techniques and clinical procedures, and develop the necessary communication skills.

The UIHC's Department of Nursing Services and Patient Care operates a Nursing Education Center in scattered locations throughout University Hospitals.

- This Center provides orientation and in-service programs for all departmental staff, continuing education programs, and proficiency testing for hospital, community, and regional nursing staff.

The existence of two separate Centers, which provide similar services and have similar facility requirements, results in the duplication of services, and is inefficient and costly.

The development of a single Nursing Clinical Education Center would consolidate the functions of the two existing Centers and provide more efficient use of resources.

**Project Scope/
Program
Statement**

The project would renovate approximately 20,000 gross square feet (13,650 net square feet) of space on the fourth level of the General Hospital to house the new Center.

- This space previously housed patient care and support functions for the UIHC Labor and Delivery Suite and Neonatal Intensive and Intermediate Care Units, which have relocated to the Pappajohn Pavilion.

The Center would provide classrooms, clinical simulation laboratories, information technology training facilities, and office space for nursing staff associated with the Center's educational programs.

The relocation of the Learning Resource Center would vacate approximately 6,000 square feet of space in the College of Nursing Building, which would be renovated to meet other space needs of the College.

Anticipated Cost/
Funding \$3.8 million; construction would be financed by University Hospitals Building Usage Funds, UIHC Volunteer Program Gift Funds, and Income from Treasurer's Temporary Investments; the College of Nursing would fund the furniture and equipment.

Square Footage
Table The following table provides the detailed square footages for the project.

Detailed Building Program

Classrooms/Conference Rooms (6)	5,160	
Simulation Laboratories (14)	4,400	
Staff Offices/Workrooms (9)	1,210	
Support Areas	1,140	
Utility Rooms	560	
Lobby/Reception	300	
Small Group Discussion Area	250	
Library	160	
Restrooms	<u>470</u>	
Total Net Assignable Space		<u>13,650</u> nsf

Clinton and Davenport Streets—Utility Tunnel Reconstruction

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
<u>Clinton Street Tunnel Reconstruction</u>			
Project Description and Total Budget	\$ 901,000	Aug. 2004	Requested
Engineering Agreement (Shive-Hattery, Iowa City, IA)	66,490	Aug. 2004	Requested
<u>Davenport Street Tunnel Reconstruction</u>			
Project Description and Total Budget	660,000	Aug. 2004	Requested
Engineering Agreement (Shive-Hattery, Iowa City, IA)	48,600	Aug. 2004	Requested

Background	Portions of the east campus utility tunnel below Clinton and Davenport Streets have deteriorated and suffer from severe corrosion within the structural concrete and steel framework.
Project Scope	<p>The projects would replace approximately 170 feet of utility tunnel located below Clinton Street west of Phillips Hall, and approximately 50 feet of steam tunnel and 20 feet of steam tunnel ceiling below Davenport Street north of Burge Hall. (A map indicating the project areas is included as Attachment B.)</p> <p>The projects would include the removal and replacement of asbestos insulation, steam anchors and guides, and expansion joints.</p> <p>The University anticipates undertaking the work in the spring of 2005. Traffic control would be required for the duration of the Clinton Street project (up to four months) to maintain two-way traffic at the construction site.</p>
Design Services	The agreements with Shive-Hattery would provide project design and construction administration services for a fee of \$66,490 (Clinton Street) and \$48,600 (Davenport Street), including reimbursables.
Funding	Utilities Enterprise Improvement and Replacement Funds.

Project Budgets

	<u>Clinton Street</u>	<u>Davenport Street</u>
Construction	\$ 704,000	\$ 518,000
Design, Inspection, and Administration	126,600	90,000
Contingencies	<u>70,400</u>	<u>52,000</u>
TOTAL	<u>\$ 901,000</u>	<u>\$ 660,000</u>

Blank Honors Center—Build Out Fifth Floor

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 850,000	Aug. 2004	Requested
Architectural Agreement (Herbert Lewis Kruse Blunck, Des Moines, IA)	82,660	Aug. 2004	Requested

Background

The Belin-Blank International Center for Gifted Education and Talent Development is housed on the sixth floor of the new Blank Honors Center.

During project planning for the building, the University identified a need for additional space for the Belin-Blank Center. However, since funding for additional space was not available, the fifth floor of the building (7,675 gross square feet) was constructed as open shell space to be completed at a future date.

The University recently received additional gift funds for the building which would allow completion of the fifth floor shell space to accommodate the needs of the Belin-Blank Center.

Project Scope

The project would finish the fifth floor area to create three clinic rooms to consolidate existing clinic functions currently located on the third and sixth floors of the building.

The project would provide the three clinic rooms with two adjacent observation rooms; a shared reception/waiting area; three classrooms, one each to accommodate 16, 24, and 25 students; eight office areas; one seminar/lounge area; and other support spaces.

The work would consist of the extension of heating, ventilating and air conditioning systems, and the installation of plumbing and electrical systems, partitions, doors and interior finishes.

The vacated third floor clinic rooms would be converted to shared study room use for the Belin-Blank Center and the Honors Center. The vacated sixth floor clinic room would be converted to a faculty work room for use in curriculum development.

- Minor renovation work would be required in only two of the clinic areas to convert the spaces for other use.

Design Services

The agreement with Herbert Lewis Kruse Blunck would provide full design services for a fee of \$82,660, including reimbursables.

Funding Private Gifts.

Project Budget

Construction	\$ 659,390
Design, Inspection, and Administration	
Consultants	84,160
Design and Construction Services	49,450
Contingencies	<u>57,000</u>
 TOTAL	 <u>\$ 850,000</u>

Van Allen Hall—Replace Domestic Water Piping

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 285,000	Aug. 2004	Requested

Background The existing domestic water piping in Van Allen Hall has reached the end of its useful life and is in need of replacement. The deficiencies in the system result in high maintenance costs and compromised water quality.

Project Scope The project would replace the domestic hot and cold and recirculating hot water lines, and plumbing fixtures, in the west wing of Van Allen Hall. The existing galvanized piping would be replaced with new copper lines.

The project would also replace all waste water lines, subject to the receipt of favorable construction bids. (This work would be bid as an add alternate.)

The project would be phased to minimize disruption to building occupants.

Funding Building Renewal Funds and/or Income from Treasurer's Temporary Investments.

Project Budget

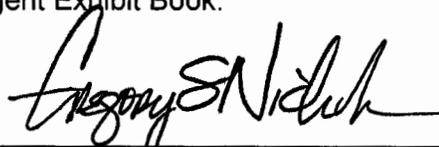
Construction	\$ 221,600
Design, Inspection, and Administration	
Consultants	22,350
Design and Construction Services	19,050
Contingencies	<u>22,000</u>
 TOTAL	 <u>\$ 285,000</u>

Also presented for Board ratification is one engineering agreement approved by the University, five construction contract awards, the rejection of bids for one construction contract, the acceptance of two completed construction contracts, and eight final reports. The register prepared by the University is included in the Regent Exhibit Book.



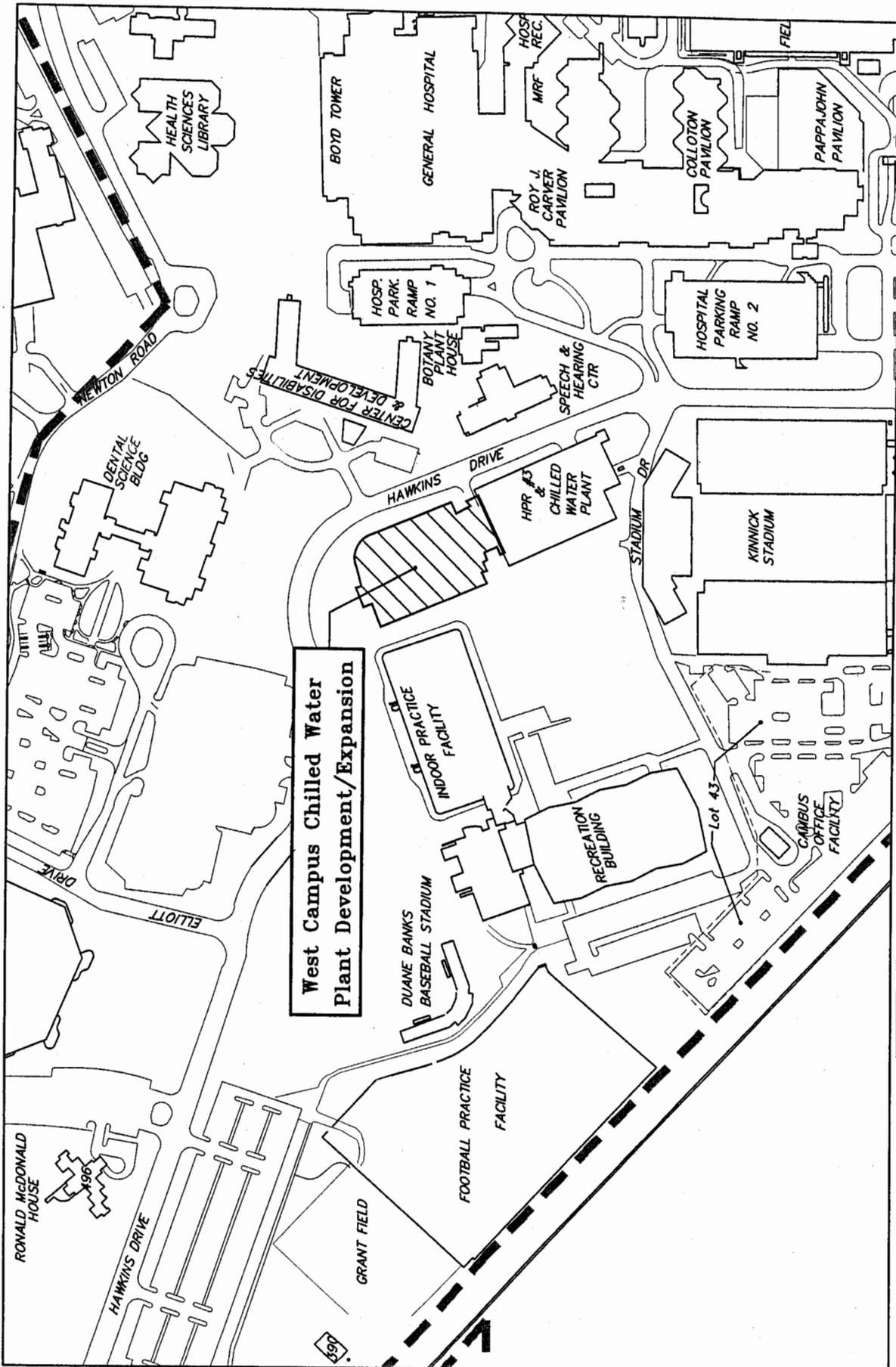
Sheila Doyle

Approved:



Gregory S. Nichols

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**West Campus Chilled Water
 Plant Development/Expansion**

THE UNIVERSITY OF IOWA



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THE UNIVERSITY OF IOWA - LOCATION MAP

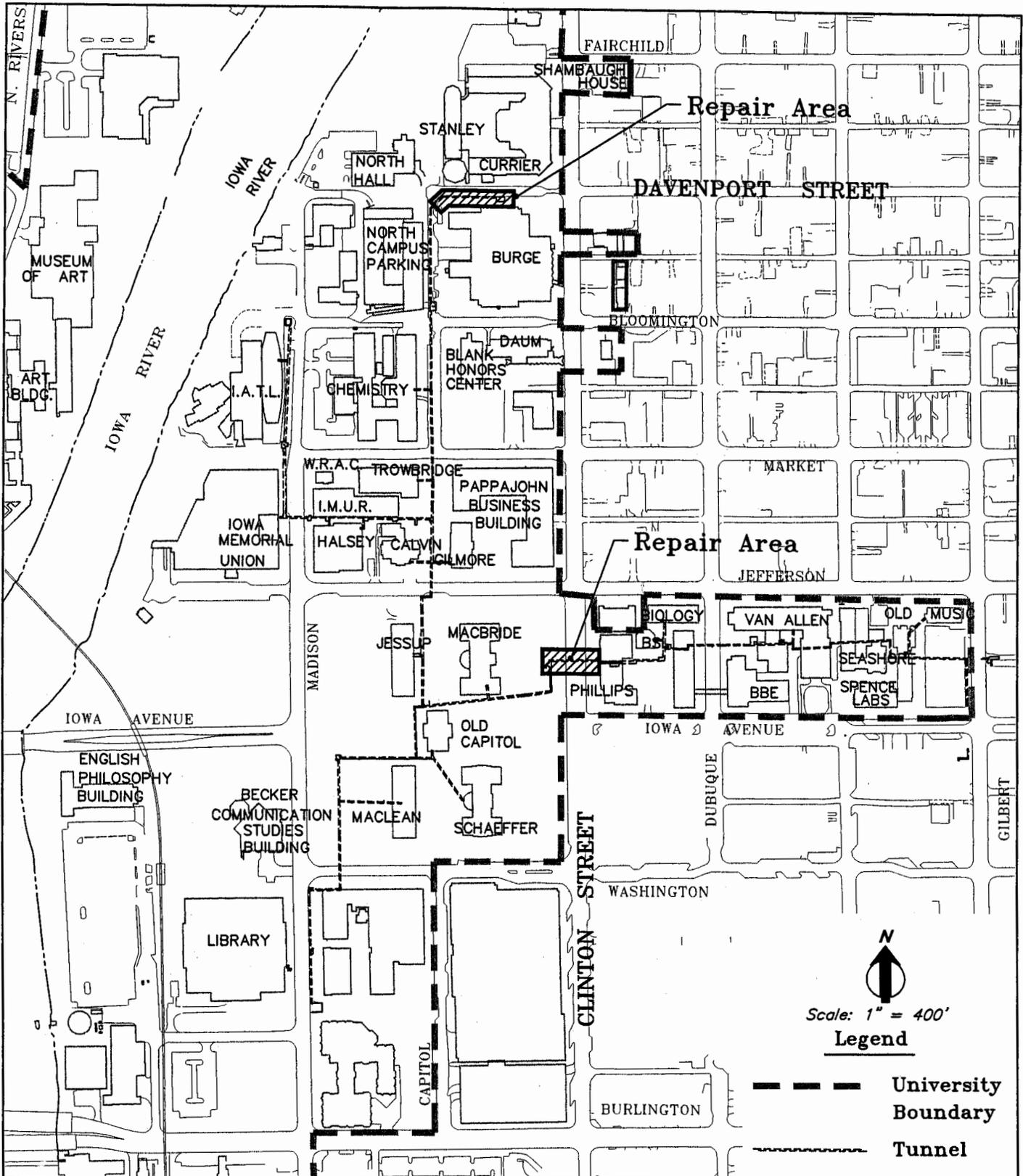
**West Campus Chilled Water Plant
 Development/Expansion**

Legend

- University Property Line

Scale: 1" = 300'





Location Map:

Clinton Street Utility Tunnel Reconstruction &
 Davenport Street Utility Tunnel Reconstruction



THE UNIVERSITY OF IOWA

SSH tunnel 04-800797.dwg
 Plotted: July 7, 2004