

Contact: Sheila Doyle

REGISTER OF IOWA STATE UNIVERSITY CAPITAL IMPROVEMENT BUSINESS TRANSACTIONS

Actions Requested: Consider recommending to the Board approval of:

1. The following actions for the **Chemistry Facilities** project, a major capital project as defined by Board policy.
 - 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 architectural selection process.
2. A revised project budget (\$10,075,000) for the **Hixson-Lied Student Success Center** project.

Executive Summary: The proposed **Chemistry Facilities** project would construct a 100,000 net square foot chemical sciences building, as an addition or directly adjacent to Gilman Hall, which houses the Department of Chemistry. The additional space would provide state-of-the-art teaching and computer laboratories, classrooms, and other areas to support modern instruction and research. Following construction of the new space, the project would upgrade and expand the existing research and computer laboratories, classrooms, and office areas in Gilman Hall.

The estimated project cost of \$87 million would be funded by the University's capital request of \$69.5 million (\$53 million for new construction and \$16.5 million for renovation), and private giving. The University presented a report on its capital request for the project at the November 2005 Board meeting.

The revised budget of \$10,075,000 for the **Hixson-Lied Student Success Center** project, an increase of \$75,000, would enhance the project, as appropriate within the approved project scope, in response to a \$75,000 donation that has been offered to the University and designated for the project. The facility, which will house the Christina Hixson Opportunity Awards Program, the Athletic Center for Educational Services, and the Academic Success Center, is currently under construction near Maple Residence Hall.

Details of Projects:

Chemistry Facilities

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Report on University's Capital Request		Nov. 2005	Received Report
Initial Review and Consideration of Capital Capital Project Evaluation Criteria		May 2006	Receive Report
Permission to Proceed		May 2006	Requested

The evaluation criteria for the project are included as Attachment A to this Agenda Item.

Hixson-Lied Student Success Center

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Aug. 2004	Approved
Initial Review and Consideration of Capital Project Evaluation Criteria		Aug. 2004	Received Report
Site Selection		Nov. 2004	Approved
Authorization to Demolish Wallace Road Office Building at Proposed Site		Nov. 2004	Approved
Architectural Selection (OPN Architects, Cedar Rapids, IA)		Nov. 2004	Approved
Authorization for Executive Director to Approve Negotiated Design Agreement		Nov. 2004	Approved
Program Statement		Nov. 2004	Not Required
Negotiated Architectural Agreement (OPN Architects, Cedar Rapids, IA)	\$ 768,500	Nov. 2004	Not Required
Final Review and Consideration of Capital Project Evaluation Criteria		Dec. 2004	Received Report
Schematic Design		Dec. 2004	Approved
Project Description and Total Budget	10,000,000	Dec. 2004	Approved
Construction Contract Award—Site Demolition* (M.E.D.A.)	98,780	Jan. 2005	Not Required
Construction Contract Award—Site Demolition (Con-Struct)	94,672	April 2005	Not Required
Construction Contract Award—General Construction (Woodruff Construction)	6,062,700	June 2005	Not Required
Construction Change Orders (Woodruff) Change Order #1	49,569		Not Required**
Change Order #2	170,973		Not Required
Revised Project Budget	10,075,000	May 2006	Requested

* Notice of Award withdrawn by ISU due to failure of M.E.D.A. to provide necessary insurance coverage

** Approved by University in accordance with Board procedures

Chemistry Facilities
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 Department of Chemistry plays an important part in helping the university achieve its mission and strategic plan. This nationally and internationally recognized department supports the university's goals of learning, discovery and engagement. Nearly every student at Iowa State University has experiences in chemistry laboratories in support of the Learning goal of the strategic plan. These students participate in the "Science with Practice" that is an important part of the university's land-grant heritage. The department also excels in the Discovery goal by supporting visionary faculty and graduate students with programs in basic and applied science. The Engagement goal strategy is illustrated by the department's long-time association with the Ames Laboratory of the Department of Energy, as well as interactions with community colleges and high schools in the state of Iowa.

The Department of Chemistry is one of the strongest departments on campus, has a national and international reputation. It is currently ranked 26th by the National Research Council. The current state of the space that houses this renowned department (including one member of the National Academy of Sciences) has undergone a series of renovations to improve the infrastructure and the functionality of the space. But much remains to be done in order to meet health and safety codes and to allow the department to continue to attract the highest caliber faculty and graduate students. In addition, the quantity of space is insufficient to support the department's teaching and research initiatives.

The vision of the Chemistry Department is to: Be among the top 5 departments nationally at public universities (the short-term goal is to be in the top 10); raise the stature of Iowa State University through interdisciplinary efforts; and achieve the rank of #1 in analytical chemistry for graduate schools in the United States.

To accomplish this vision, the Chemistry Department plans to recruit the best young faculty in the field, make key hires in senior-level positions, retain established faculty, and provide exceptional training for students. The other issue that needs to be considered is providing space for new research initiatives and collaborative efforts. New or increased research initiatives are expected in the areas of polymers and new materials, combinatorial chemistry, forensics, biorenewable and green chemistry. These areas represent directions for growth and development of the Chemistry Department that build on current strengths.

Chemistry facility needs as they relate to program goals:

- Research in chemical synthesis: State-of-the-art air/gas handling facilities, chemical storage, electrical and plumbing systems that are required for equipment for combinatorial chemistry and chemical analysis.
- Analytical instrumentation: Electron microscopes and laser spectroscopic instrumentation demand rigid environmental standards.
- Electronic modernization: On-line libraries and computer-based resource areas for graduate and undergraduate students for data analysis, literature accessibility and contemporary course design are needed to support educational activities.
- Education: Electronically connected classrooms and student help areas are a critical need; the opportunity to connect lab and lecture spaces is important.
- Networking and outreach activities: The Chemistry Department would like to be able to host workshops and conferences for industrial concerns, regional and small national meetings in the chemical sciences, as well as forensic workshops close to the Keck labs.

Other Alternatives Explored: The amount of additional space needed to support the Chemistry Department is so large that there are no real options other than the addition of new space to supplement the existing space in Gilman Hall.

One early alternative was to relocate all groups but Chemistry from the building to make additional space available. If all of the other occupants, including general classrooms and support groups directly linked to Chemistry were relocated from the building, the available space would only meet about 40% of the total need. In addition to being very short of the total need, many of the current problems of inadequate infrastructure to support research laboratories would still need to be addressed. Some of the needs are impossible to meet because the building's systems and architectural modules are not workable for some of the new spaces. The other important reason to reject this option was the loss of association with many of the groups that are very important to the department, especially Chemistry Stores. Moving all of these units to remote locations would cause irreparable harm to Chemistry.

An option to build a completely new Chemistry building was also considered. The scope and budget for such a building would exceed \$150 million without accommodating the associated support centers and departments. As a consequence, this approach was quickly abandoned as an unrealistic alternative.

Impact on Other Facilities and Square Footage: To meet future program needs, the department needs an additional 100,000 net assignable square feet. Significant additional space is being proposed to support research activities, additional research labs and associated support space, and instructional activities with teaching labs, computer labs, and classrooms, as well as additional space for common instrumentation and shop functions are all critical needs to supporting the department and its vision. The new space will be an addition to Gilman Hall, or directly adjacent, to allow frequent circulation of faculty/staff/students and equipment between new space and existing research laboratories and instrumentation centers in Gilman Hall.

Nearly all of the existing space will be retained by the department at the conclusion of the project. Teaching laboratories in Gilman Hall will be expanded to use vacated research laboratories that move to the new space. Other vacated space will be used to supplement the currently crowded conditions of the chemistry related support centers now located in the building.

Gilman Hall has been through a number of major and minor remodeling projects since a masterplan for improvements was developed in 1981. There is still a section of the building that has not been remodeled and the relocation of other parts of the building when the department expands into additional space will allow completion of the original masterplan and conversion of some of the vacated space to other users. The Gilman Hall Phase IV project will combine the unfinished part of the masterplan with new project scope that converts old Chemistry department space for use by other departments. The conversion goal is to remodel wet chemistry laboratories into spaces that don't require the utility infrastructure that is no longer sufficient in Gilman to support these high demand spaces.

Financial Resources for Construction Project: Project funding of \$87.15 million will be provided by state appropriations of \$69,500,000 and private funds \$17,650,000.

Financial Resources for Operations and Maintenance: The estimated operations and maintenance costs of the additional space are: Operations and Maintenance, \$420,000; Utilities, \$695,000; Repair and Replacement, \$872,000; Other (Grounds/Mail/EHS/DPS), \$182,000. Methods used to determine the costs: Estimates of the Operating Budget Impact are based on actual costs and metered utilities for existing space and correlation with similar building types. Proposed source of funds: General Fund. Project funding of \$87.15 million will be provided by state appropriations of \$69,500,000 and private funds \$17,650,000.

External Forces: The vision of the Chemistry Department is to: be among the top 5 departments nationally at public universities (the short-term goal is to be in the top 10); raise the stature of Iowa State University through interdisciplinary efforts; and achieve the rank of #1 in analytical chemistry for graduate schools in the United States.

To achieve these goals the department will need to retain and recruit the very best faculty and graduate students. The interdisciplinary association that the department has with other university and federal programs is a critical part of the university's goals and aspirations to "Become the Best".