BOARD OF REGENTS
STATE OF IOWA

AGENDA ITEM 20
AUGUST 5, 2009

Contact: Joan Racki

UNIVERSITY OF IOWA UPDATE OF FLOOD RECOVERY STATUS

Action Requested: Receive the attached report from the University of Iowa.

Executive Summary: The University of Iowa has provided the attached report regarding the flood recovery status of various campus facilities. The report updates information provided at the June 2009 Board meeting.

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UNIVERSITY OF IOWA REPORT

UPDATE OF FLOOD RECOVERY STATUS (August 2009)

The following updates the June 2009 status report to the Board.

The University of Iowa continues to work closely with FEMA and Iowa Homeland Security on plans for recovery and protection of the flood-impacted buildings along the Iowa River. Additionally, as detailed below, site selection studies for the replacement of the Hancher/Voxman/Clapp complex and the original Art Building complex are advancing. Flood mitigation strategies are using the recently completed computer river model in order to test potential solutions and worst case flood scenarios. The Corps of Engineers hydrology study establishing the new 100 and 500 year flood elevations has recently been completed. This new information is critical in establishing the most responsible siting and building protection strategies.

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BUILDING SUMMARY

Buildings eligible for FEMA "**Replacement**" or "**Restoration/Mitigation**" Financing

- Hancher/Voxman/Clapp
- Art Building East (including original Art Building)

Major facilities eligible for FEMA "**Restoration/Mitigation**" Financing include:

- Art Building West
- Iowa Advanced Technology Labs
- Theatre Building
- Iowa Memorial Union
- Museum of Art Building
- Power Plant/Energy Distribution Systems
- Hawkeye Court Apartments

Other facilities that were less impacted by the 2008 flood have been reoccupied and are also being studied, in tandem with FEMA, for permanent recovery and flood protection. The process for FEMA-supported recovery is treated similarly for all impacted facilities.

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Music and Performing Arts Center: Hancher/Voxman/Clapp

Based upon the Board's action at the April meeting, the University continues to review siting options for the Hancher/Voxman/Clapp complex. A site recommendation will be brought to the Board in conjunction with a formal request for permission to proceed with project planning. An open forum and information sharing session will be held on July 9 in MacBride Auditorium.

The University will lease space within the Old Capitol Town Center to provide additional interim use space for the School of Music. It will also fit-out the former theatre space within the Old Capitol Town Center (purchase and fit-out of the space was approved by the Board in September 2007). Fit-out of both locations will be done to meet acoustical requirements and to accommodate classroom, rehearsal, and recital areas. Substantial FEMA assistance is expected for both projects. Construction continues on these interim solutions with completion scheduled ahead of the fall 2009 semester. The School of Music continues to temporarily utilize a portion of the former Museum of Art Building (temporarily renamed "Music West – Interim Building" in order to provide clarity for students and visitors), and space within the University Athletic Club has been prepared to accommodate storage of band uniforms.

Art Building East – Including the Original Art Building

Based upon the Board's action at the April meeting, the University has investigated site selection options for a replacement facility. As detailed in this month's "Permission to Proceed with Project Planning" request, the University has identified a preferred general site for the future art studio building. The location of the proposed site is on River Street, adjacent to the Arts Campus and Art Building West (which is to be recovered and protected from future flooding). The specific site layout will be refined upon selection of a design consultant team and initiation of the design process.

The University continues to make improvements to the Studio Arts facility (former Menards) to meet the curricular and functional needs of the Arts programs displaced by the flood. Given the decision to replace the Art Building East complex, additional improvements to the Studio Arts facility to meet departmental needs for a period of several years are needed. These improvements will be completed by the August 20, 2009 FEMA deadline to complete temporary solutions. Reimbursement for these and all previous improvements will be sought from FEMA (90% of eligible cost). Projects to be undertaken include: installation of restrooms in the rear of the building, installation of sinks and plumbing fixtures in the painting classrooms, installation of windows in certain parts of the building to provide natural light, various acoustical and lighting improvements, and improvements to the HVAC system. When these projects are completed, the total cost of all building improvements will be approximately $6 million, or about $41 per square foot.

Art Building West

The original damage estimates for Art Building West (exclusive of clean-up, mitigation and temporary replacement costs) were $10M for the facility and $2M for contents. The University, under the extraordinary authority granted by the Board in July 2008, has underway a project to restore much of the facility to its pre-flood condition. The University is developing a mitigation plan using BNIM-Iowa Architects. FEMA funding support requires its preapproval of the recovery project and details of the flood mitigation elements. The University has been working in collaboration with FEMA for several months looking for the optimum flood protection plan for this building.

The current estimate of building recovery to a pre-flood state is approximately $7M. The estimated cost for the proposed mitigation strategy is also $7 M. The contents estimate remains unchanged.

The University has reviewed a complete recovery and mitigation plan with Iowa Homeland Security and FEMA. Iowa Homeland Security and FEMA are reviewing the proposed plans. After the review, the next step will be for the University to submit the detail required for FEMA to write the project worksheet. Following the approval of the project worksheet within FEMA, the University expects federal funds to be obligated. The obligation of project funds will allow work on the design and construction documents to move forward.

Iowa Advanced Technology Labs

The Iowa Advanced Technology Labs (IATL) has been partially restored and reoccupied to accommodate some of the research teams whose specialized work cannot be accommodated in other existing facilities. Architects Smith-Metzger is working on permanent recovery and mitigation plans for IATL. The original estimate of damages (exclusive of clean-up, mitigation and temporary replacement costs) was $8M for the facility and $34M for contents. The contents are mostly scientific equipment that takes longer to assess for damage. That assessment continues under the supervision of the Office of the Vice President for Research and Economic Development and the Risk Management department.

The current estimate of building recovery is $10M (exclusive of mitigation components.) Mitigation will be complex and must be integrated with the IMU and surrounding area. The current project estimate for mitigation is $13M. The contents estimate remains unchanged.

The University has reviewed a complete recovery and mitigation plan with Iowa Homeland Security and FEMA. Iowa Homeland Security and FEMA are reviewing the proposed plans. After the review, the next step will be for the University to submit the detail required for FEMA to write the project worksheet. Following the approval of the project worksheet within FEMA, the University expects federal funds to be obligated. Obligation of project funds will allow work on the design and construction documents to move forward.

Theatre Building

The upper floors of the Theatre Building have been restored and reoccupied by the Theatre Department. Flood water filled the lower level only. Neumann-Monson Architects has been hired to develop a comprehensive recovery and mitigation plan. Original estimates of damage (exclusive of clean-up, mitigation and temporary replacement costs) were $3.5M for the facility and $1M for contents. The current preliminary estimate for building recovery is $8.5M; the flood mitigation estimate is $17M. Content costs are unchanged.

The Theatre Department is currently using adjacent temporary mobile units and space within the Studio Arts temporary facility (former Menards) to house functions previously located in the lower level of the building. The Department will also utilize leased space this fall at 108 River Street following fit-out for temporary offices and classrooms. With a few exceptions, the 22 FEMA mobile units will be returned to FEMA. More acceptable interim solutions have been established in lieu of the mobile units.

The University has reviewed a complete recovery and mitigation plan with Iowa Homeland Security and FEMA. Iowa Homeland Security and FEMA are reviewing the proposed plans. After the review, the next step will be for the University to submit the detail required for FEMA to write the project worksheet. Following the approval of the project worksheet within FEMA, the University expects federal funds to be obligated. Obligation of project funds will allow work on the design and construction documents to move forward.

Iowa Memorial Union

The upper floors of the Iowa Memorial Union have been reoccupied. The original damage estimates for the Iowa Memorial Union (exclusive of clean-up, mitigation and temporary replacement costs) were $15M for the facility and $5M for the contents.

A project is being developed by architects Rohrbach Associates to relocate and protect all mechanical and electrical systems as well as additional other mitigation components.

The current estimate of building recovery is approximately $13M. The proposed mitigation strategy is also estimated at $13M. The mitigation strategy calls for relocating mechanical and electrical systems and creating a protective barrier that will permit re-occupation of the lower level. The contents estimate has not changed.

A determination of the type of restoration and occupancy of the ground level is in progress. The bookstore, credit union, food service and convenience store venues were previously located on the ground level. The Richey Ballroom is being converted into an arts education facility using portions of the Museum of Art collection. Functions that had been accommodated by the Richey Ballroom will be relocated to the University Athletic Club facility.

The University is moving forward with restoration and mitigation planning to enable reopening of the ground level. In the interim, special accommodations have been installed on Hubbard Park to help with summer orientation in 2009, and again in 2010.

The University has reviewed a complete recovery and mitigation plan with Iowa Homeland Security and FEMA. Iowa Homeland Security and FEMA are reviewing the proposed plans. After the review, the next step will be for the University to submit the detail required for FEMA to write the project worksheet. Following the approval of the project worksheet within FEMA, the University expects federal funds to be obligated. Obligation of project funds will allow work on the design and construction documents to move forward.

Museum of Art Building

FEMA has determined that it will support 90% of the cost of restoration and mitigation of the Museum of Art Building, but not replacement of the facility. The restoration of the facility must accommodate programs that are of like nature to those housed prior to the flood.

The original damage estimates for the Museum (exclusive of clean-up, mitigation and temporary replacement costs) were $3.5M for the facility and $500K for the contents. The most valuable contents are insured by Lloyds of London and were almost entirely removed before the flood water entered the building. Current estimate of building recovery is $5.5M (exclusive of mitigation components).

The north end of the Museum Building – formerly called the Alumni Center – has been temporarily renovated for use by the School of Music (~18,400 square feet). The remaining 54,733 square feet will require permanent restoration and flood mitigation prior to re-use. Discussions with FEMA must occur regarding allowed uses.

The University is working with Lloyds of London to determine best options for housing the Museum collection. Simultaneously, the Museum staff is working to exhibit the collection at a number of locations other than the former Museum Building. In January, the University announced that the Figge Art Museum (Figge) in Davenport had offered the UIMA significant space for display and storage of its permanent collection. The transfer of most of the art from storage to the Figge has been completed. The work for the exhibit at the Figge was finished and the exhibit was well received. UI museum staff are working with insurance consultants and conservators to complete the process of unpacking the art work that will be stored at the Figge and prepare some of the art to be ready for fall classes in the Richey Ballroom. The Richey Ballroom and Blackbox Theater, both located in the IMU, have been converted for display of collections important to students studying arts-related subjects.

The University administration has underway a process to consider the future of the UI Museum of Art. University faculty and donor/constituents of the Museum will be included in this process expected to take six months.

Power Plant and other Energy Production and Distribution Systems

The Power Plant's main boilers are functioning normally and the remaining restoration projects (e.g. make-up water facility replacement) are moving ahead. A number of projects to provide alternative systems/routes for steam distribution from the Power Plant have been completed. Construction of tunnel system barriers to isolate the Power Plant from future flooding has been completed. Another tunnel system flood mitigation contract award to protect academic buildings on the east side of the river is pending FEMA approval.

As work progresses on these building-specific barriers, UI utilities staff and the design consultants have established additional operational safeguards to minimize possible tunnel water infiltration until tunnel barriers are completed for future year protection. Additionally, continued investigation of the condition of the east campus tunnels along the river has revealed that part or all of the tunnel system along the river may need to be replaced in order to mitigate future flooding risk. The plan for these tunnels will be established in coordination with FEMA, similar to other flood impacted building projects. The more severely impacted tunnels on the west side of the river have been recovered to serve re-opened facilities but are still being studied for most effective long-term mitigation solutions that could include abandonment and use of direct buried utilities.

Original estimates of damage to the Power Plant and to the utility tunnel systems were $20M each. The current estimate of recovery cost is $21.5M combined (exclusive of mitigation components). Mitigation strategies are being explored and costs will be generated based on the plans that are established.

The construction of chilled water lines crossing the Iowa River is now complete. The City of Iowa City is planning to stage repairs to city sanitary sewer lines from the river bank location used for the river crossing project.

A critical need exists for west campus emergency power systems and redundant west campus base load power and steam. Complete reliance on the east campus Power Plant and distribution systems that traverse the river needs to be altered. Even if the Power Plant was kept dry, in a significant flood event the site may not be accessible for the delivery of fuels needed to keep it operational. A comprehensive solution to provide long-term reliability is under review, but it will be enormously expensive to accomplish.

Hawkeye Court Apartments

FEMA has determined that it will support 90% of the costs of restoration and mitigation of the existing facility, but not replacement of the facility. Timetables have not been determined.

Mitigation

University staff, along with Shive-Hattery and Sasaki and Associates, has reviewed the campus sidewalk system along the east and west banks of the river. The University is currently designing a project to re-establish the sidewalks to a consistent elevation of no less than one foot above the current 100-year flood elevation. Some sidewalks are currently at this level, however it is not consistent along all areas. The sidewalk will serve as the base for erecting Hesco barriers should higher flood waters threaten. The sidewalks would be designed to accommodate vehicles used for transporting sand/rock to the Hesco barriers and the engineers are investigating measures to minimize below-grade wash-out of the walks.

The Iowa River Model, completed at the end of March, was a collaboration between flood mitigation consultant Ayers Associates and the University of Iowa Institute for Hydraulic Research (IIHR). The Model has been shared with Iowa City, Coralville and Johnson County so that all four entities, working in tandem, fully understand the various physical components of the 2008 flood and can explore and propose flood plain changes with full understanding of the benefit and impact of each change. This milestone served as an important step in advancing long-term mitigation strategies for the University and its neighboring communities.

Recommendations on planned elevations and levels of protection against future flooding have been prepared by the UI Flood Mitigation Task Force. This information assists in the planning for recovery projects and for the facility replacement projects. The Task Force reviews engineering plans on all major flood recovery projects. The Flood Mitigation Task Force is chaired by Larry Weber, director of the University's IIHR Hydroscience & Engineering (Hydraulics Institute); and Gregg Oden, a long-serving faculty member of the UI campus planning committee.

<u>Mitigation Task Force Guidelines</u>

The University of Iowa Flood Mitigation Task Force has developed guidelines for replacement facilities for Hancher/Voxman/Clapp and the Art Building that it believes will provide reasonable protection against flood-related risks in the future. The Task Force has emphasized two recommendations: one about the footprint of each future complex and the other about the additional level of protection for each complex.

The first recommendation is that the future Hancher/Voxman/Clapp and Art Building complexes be built on a site that is at least a foot higher than the 2008 flood event. This means the "footprint," or outer walls of the buildings where they meet the ground, must be at least a foot higher than the 2008 flood event.

The second and most important recommendation of the Task Force is that the future Hancher/Voxman/Clapp and Art Building complexes be designed and built in such a way that they are protected at least to an elevation two feet above the 500-year floodplain, as that 500-year floodplain has been newly calculated by a 2009 hydrologic study conducted by the Corps of Engineers and funded by the University of Iowa. This level of protection would be approximately seven feet above the high water elevation of the 2008 flood.

The Task Force has offered further recommendations that it recognizes as contingent upon critical needs of the programs that will occupy the buildings as well as critical financial and other needs of the University. These are, where possible, to raise elevation for the footprint outside the 500-year floodplain as recalculated in 2009 and, where possible, to protect the building at an elevation higher than that recommended above. In addition, the Task Force recommends, where possible, to restrict lowest, most vulnerable portions of these two new buildings to programs and contents that may be easily evacuated and readily recovered in the event of another major flood.

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The Most Recent Financial Analysis of Flood Recovery Is Shown Below:

Flood Expenses (6-30-09)

Actuals	Encumbrances	TOTAL
$119,459,568	$13,839,239	$133,298,807

Flood Funding (6-30-09)

	FM Global	Federal Flood	FEMA	Gifts	Wells Fargo Note	TOTAL
Building/Content/Extra Exp	$50,946,212	$4,678,181	$23,130,481	$1,000,000	$15,000,000	$94,754,874

	FM Global Business Interruption	Gifts Flood Relief	TOTAL
Other	$4,053,788	$1,138,722	$5,192,510

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