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**UNIVERSITY OF IOWA FLOOD RECOVERY –
FACILITY REPLACEMENT STUDY**

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

Executive Summary: The University of Iowa has provided the attached the facility replacement study for Hancher/Voxman/Clapp and the Art Building East Complex.

UNIVERSITY OF IOWA REPORT
FACILITY REPLACEMENT STUDY
(March 2009)

Executive Summary

Following FEMA study and review, on January 26, 2009, the University of Iowa announced that two UI facilities extensively damaged by the 2008 flood had exceeded the FEMA “50% rule” threshold. Essentially the “50% rule” involves a calculation of the ratio of a facility’s recovery cost to the overall value of the facility. When this ratio is exceeded, FEMA can provide financial support for either “recovery/mitigation in place” or “replacement” of the facilities. FEMA’s financial support of eligible costs would be 90% of either option, but would not include funding for additional program space needed under either scenario. The two facilities exceeding this FEMA threshold are the Hancher/Voxman/Clapp complex and the Art Building East complex.

The University, in conjunction with its architect and engineering partners, has reviewed the options now available to it. This executive summary and the more extensive documents following provide a guide to the issues to be addressed by the University and the Board in making a decision on “recovery/mitigation in place” versus “replacement” of these critical University assets.

The University seeks in March to engage the Board in a review of the circumstances and facts as they are known, with the intent of returning to the Board at its April meeting with a specific recommendation.

HANCHER/VOXMAN/CLAPP

The Hancher/Voxman/Clapp complex is the home of the University of Iowa School of Music and the University’s principal performing arts venue, Hancher Auditorium. It contains approximately 297,000 gross square feet of space: a 2,500 seat auditorium (Hancher Auditorium), a 700-seat recital Hall (Clapp Recital Hall), and the Voxman Music Building (home of the UI School of Music). The Hancher/Voxman/Clapp complex was constructed 36 years ago and is inadequate in several ways for the programs currently offered by Hancher Auditorium and the School of Music. This facility was damaged extensively during 2008 flood and remains in a precarious location subject to future flooding.

School of Music

Specialized office, rehearsal and instructional space is required for the School of Music and its diverse areas of study that range from voice to piano to the pipe organ to 21st century electronic music. All areas of study, rehearsal and performance have specialized acoustical needs. Storage needs of the School and its students are unique as well – storage of large band and symphonic instruments, music, library materials, and marching band uniforms requires large amounts of climate controlled space.

Hancher Auditorium

Hancher Auditorium hosts 20-30 major performances annually, many extending over several days. It also hosts many University functions (e.g.: graduation ceremonies, lectures). Annually over 50,000 patrons would attend events at Hancher. Many artists and audience members crave more intimate, less formal performance spaces which can enhance the connection between artist and audience. Pre-flood Hancher was remarkably intimate for a facility as large as it was, but it did not satisfy many artists and audience members who are looking for more direct and intimate connections.

Location

The 36-year adjacency of Hancher Auditorium and the School of Music has worked well and is highly desirable in a restored (recovery/mitigation) or a new replacement facility. The benefits to the students to learn from and interact with professional musicians and performers engaged by Hancher Auditorium is a major factor in seeking to continue the physical proximity of the School of Music and Hancher. It is equally important that undergraduate students participating in Music classes and instructional sessions be sufficiently close to other central campus classrooms so that they can within the standard ten minute class period break arrive on time for their next scheduled class.

COST – “RECOVERY/MITIGATION IN PLACE”

- Preliminary Estimate: \$53 million. This estimate includes full recovery of existing spaces and elevation of all mechanical spaces; treatment of the lower level foundation system; and code requirement upgrades.
- It does not include a needed off-site addition to address pre-flood programmatic issues and displaced functions. This cost is approximated at \$55 million. FEMA requirements and future coverage for flood losses, as well as the potential difficulty in obtaining commercial insurance make expanding the current footprint problematic at best.
- Projected University Costs: \$65 million

COST – “REPLACEMENT”

- Preliminary Estimate: \$180 million. This estimate would replace the original 297,000 gross square feet in the Hancher/Voxman/Clapp complex and includes current code requirement costs as well as demolition of the existing facilities.
- The replacement estimate above does not include additional program space costs which could be accommodated on a new site. Additional program space identified as critical could cost an additional \$40 million but could be bid separately as an “add alternate” or added in a subsequent project to ultimately protect the overall project budget.
- Incorporation of state-of-the-art sustainable design could add an additional 10% to the cost of the project. Other assumptions include a substantial parking ramp and incremental gallery space within the Hancher/Voxman/Clapp replacement.
- Projected University Costs: \$114 million

SITE SELECTION

Factors influencing the site selection for a replacement of Hancher/Voxman/Clapp include:

- Protection from future flooding risks
- Significant land area
- Program adjacencies and proximity to campus for students
- Visibility
- Parking and general site access

SITE SELECTION - PRELIMINARY FINDING

Many sites have been suggested and examined. However, based on the criteria listed above and in particular, the key programmatic adjacencies, the sites with most initial promise are north and west of the existing Hancher/Voxman/Clapp complex. This area remained dry during the flood; it benefits from considerable topographical elevation change that would protect a new structure from future and even more severe flooding. This assumption will be tested with the forthcoming river modeling and worst-case scenarios being considered on behalf of the University by Ayres Associates (UI's flood mitigation consultant) and the University's flood mitigation task force led by Larry Weber and Gregg Oden. Until the results of these studies are available, no final site recommendation will be made to the Board.

A map of the area under consideration is attached.

ART BUILDING EAST COMPLEX

The Art Building East complex is a collection of buildings including the original, historic School of Art & Art History Building which was completed in 1936. The buildings, the last of which was constructed in the 1970s, contain 92,000 square feet. The complex is located south of the Museum of Art Building and is directly across Riverside Drive from the Art Building West. A map illustrating these sites is attached.

The University of Iowa School of Art and Art History (SAAH) successfully combines studio arts (the making of art) and the academic study of art and architecture. The School lost two buildings to the flood—three, including the Museum of Art which is integral to the School's art education. Art Building West is a new building that houses art history, painting and photography. The original Art Building, including the printmaking wing added in the 1970s, housed most of the remaining studio arts. Adjacent to and north of the Art Building are a set of structures housing the various art forms that use industrial-type equipment: sculpture, metal-smithing, and ceramics. Immediately prior to the flood, a major renovation project involving the Art Building East complex had just begun. Due to the flood, the construction contract was suspended and ultimately terminated.

As an interim measure, the studio arts and other functions of the School have been shifted to a remodeled, leased commercial building about three miles from the campus.

Whether located in the Art Building East complex or in a new facility, the studio arts would require adjacency to Art Building West to maintain the hallmark programmatic connections at the University between the study of art and the creation of art. Furthermore, student and faculty access to some art museum gallery space is necessary for both the study of art and the

teaching of its creation. Therefore, a recent decision was made to create gallery and art teaching spaces within the Richey Ballroom of the IMU.

COST – “RECOVERY/MITIGATION IN PLACE”

- Preliminary Estimate: \$58 million. This cost assumes full recovery of existing spaces, protection or relocation of all mechanical/electrical systems, treatment of the lower level foundation system, and code requirement upgrades.
- A pure recovery/mitigation strategy for this complex is difficult if not impossible. Water has infiltrated the lower level of the building for decades. In addition to the above, \$17 million in new space for displaced functions would also have to be constructed off site.
- The current site is directly adjacent to the river, the facilities are badly damaged, and protection from other than a major flood wall is problematic.
- Projected University Costs: \$59 million

COST – “REPLACEMENT”

- Preliminary Estimate: \$45 million. This cost assumes the replacement of the entire Art Building East complex to a new site, on a square-foot-for-square-foot basis (105,000 gross square feet plus modern code requirement space needs), including demolition of the existing building.
- Additionally, the plan assumes the inclusion of program space additions that meet current and basic teaching program requirements. The cost of meeting these space requirements is approximately \$15 million.
- Projected University Costs: \$20 million

SITE SELECTION - PRELIMINARY FINDING

Site requirements to meet program needs are critically tied to the arts campus and specifically Art Building West. There is very limited University land untouched by the 2008 flood that would be potentially available for the construction of a new studio arts facility near Art Building West. Sites north and west of Art Building West will be evaluated for suitability for a facility of this type. Selection of a site to the north and west could result in the need to raze a University building currently used for graduate painting; the relocation of that program would thus need to be factored into the analysis. The potential site is directly adjacent to an existing residential neighborhood and thus would require attention to massing, sound and lighting issues.

A final site selection recommendation for replacement of the Art Building East complex will require substantial additional study and refinement. Careful review by the UI Flood Mitigation Task Force, the Campus Planning Committee and professional consultants will be conducted in the next several weeks. The results of these site selection efforts and ultimate UI recommendations will be communicated to the Board as part of a formal request for permission to proceed with project planning.

Although site selection issues are extremely challenging, the condition of the damaged buildings, the high cost of protecting the riverside site, and the difficulty in obtaining future flood protection underwriting make the “recovery/mitigation in place” option for the Art Building East

complex an undesirable choice. An alternative must be found, and the University will keep the Board apprised of that process.

Hancher/Voxman/Clapp
Facility Replacement Study

Hancher/Voxman/Clapp consists of 297,000 gross square feet and was constructed in the early 1970s. It houses the University's School of Music (Voxman Music Building), including practice and performance venues with substantial acoustical control needs. The complex contains a 2,500 seat performing arts hall (Hancher Auditorium) and a 700 seat recital hall (Clapp Recital Hall).

The University has for a number of weeks been developing recovery and mitigation strategies with the technical support of Neumann Monson Architects. Upon confirmation that FEMA will provide funding support for the potential replacement of the Hancher/Voxman/Clapp complex, the University expanded this work to evaluate both recovery/mitigation and replacement options. The University is also using Neumann Monson Architects to assist in this process. The following factors, developed in conjunction with the Board Office, have been studied in order to evaluate the differences between these two options and ultimately to recommend a course of action to the Board.

Program

The University asked its consultants to examine and compare restoration and mitigation of the current Hancher/Voxman/Clapp complex with replacement of School of Music and Hancher program in a comparably sized new building. While FEMA will provide 90% of the funding to restore or replace Hancher/Voxman/Clapp, plus any code-required expansion, investigation of the pre-flood program for the School of Music and Hancher functions makes clear that a square-foot-for-square foot replacement is inadequate. Prior to the flood, a study was underway to identify options to relieve space and program shortages as well as space inadequacies within the existing structure. Built 36 years ago, Hancher/Voxman/Clapp has aged and the academic and performance needs of the 21st century have passed it by.

Currently, the School of Music has 38 studio faculty (performers), 15 academic faculty (e.g., music theoreticians, historians, and therapists), and 75-80 teaching assistants. There are approximately 200 graduate students and 230 undergraduates. The School had over 6,800 enrollments in FY 2008. Whether in restored or replaced space, all instructors of performance need teaching studios containing high quality pianos, rather than conventional office space. Academic faculty in music require offices sufficient to house at least upright pianos which are needed for instructional purposes. Organ studios or rehearsal and performance venues require yet more space. In addition, all studios and performance venues must isolate sound one from another and provide appropriate acoustics, criteria that vary by type of instrument. Storage, too, is a major need. Just as Hancher's largest shows need considerable back of stage space, the School of Music needs considerable day-to-day storage space for students' materials and instruments; band, orchestra, and choral libraries; the main music library; University-owned instruments; marching band uniforms and instruments.

In the last 36 years, the School has added or expanded programs in music therapy (now among the top five nationally), jazz, chamber music, and percussion. The pre-flood, 1970s classrooms were too small to accommodate contemporary technology and the necessary number of seats.

Likewise, the recording studio was too small for new technology. Both Harper Hall (student and faculty recitals) and Clapp Recital Hall were so in demand that on-site rehearsals were not often possible. In addition to preexisting needs for additional square feet, the acoustics and HVAC of Clapp Recital Hall were serious issues before the flood. In either restoration or replacement the academic functions of the School require more space than was available in Voxman. Not only the School but also Hancher guest performers now need space for working with faculty and students that Hancher does not provide. Although in the past, productions came to Iowa City for a day or two, it is now more often the norm that academic workshops are a part of the package, visits are longer, and space needs are more diverse.

Hancher and the School of Music share the need for performance venues. Every year the School of Music produces 400 performances. All studio students give recitals as part of their training; all studio faculty give recitals as part of their mentoring and professional development. In addition to individual performances, there are performances by an array of ensembles: bands, orchestras, choirs, operas, jazz ensembles, and chamber groups. Studio faculty are evaluated by the number and quality of undergraduate and graduate students attracted to work with them. When any studio falls behind its target numbers, many ensemble groups also suffer. The reputation of the School depends upon the offering of the full range of musical genres — from opera to jazz. Academic faculty are judged more conventionally by the quality of the students that they attract to the School and the graduates they produce. Hancher offers 20-30 major performances per year to a regional audience. Over 50,000 patrons attended events at Hancher in its last full year of operation. Hancher also provides outreach activities reaching an additional 20,000 individuals including school children.

In a restored Hancher/Voxman/Clapp complex a program priority would be to reconfigure the 700-seat Clapp Recital Hall as a more multipurpose performance space by adding a pit, wings etc. although this would leave the large organ without a home. Hancher programs would also have occasional need for such a 700-seat venue that the School would use regularly for recitals and guest artists. A small organ rehearsal space could be added to a restored building as a mitigation strategy; a small organ performance venue would have to be included within Voxman. In a restoration scenario, the current Hancher auditorium would lose 500 seats to the need for ADA upgrades and could gain little flexibility to its back of stage operation. A larger footprint would be needed to regain the 500 seats, and yet the architecture limits any appropriate options for constructing an addition. An expansion of the footprint to achieve mitigation strategies or to accommodate School of Music programs may be difficult to achieve given FEMA regulations and the potential difficulty in acquiring commercial insurance coverage. Expansion for future program growth on this site would therefore be restricted or impossible. Thus a restoration/mitigation option would need to include the housing of certain displaced program functions in a facility away from the current site.

In a replacement building, Hancher could gain more flexibility in its programming and more synergistic relationships with the School of Music. Hancher would be better served if, like many of its peers, it could offer even its larger productions in a 2000-seat space especially designed to provide the entire audience clear lines of sight to the stage and to provide more back-of-stage space for the use in contemporary, large shows. It could also have rehearsal space for its performers and workshop space as well. In a replacement option, the School could better align its performance venues with its current performance needs, gaining a 700-seat hall especially designed for its multiple needs, a separate small organ recital hall, and, if possible, a much needed 400-seat recital hall. Additionally, a replacement option could provide the opportunity to incorporate gallery space to display works of the UI Museum of Art.

The 36-year adjacency of Hancher Auditorium and the School of Music has worked well and is highly desirable in a restored or replaced building. Restoration of the current complex would maintain an internal link through the back stage; a replacement building would enable the creation of shared lobbies and a shared box office for all the performance venues, and thus a greater shared energy. Although the adjacency of Hancher and the School is fundamental to the programs, other adjacencies are also important to successful operation. To enable lessons, rehearsals, and performances, students need lockers for instruments near these spaces and reasonable distances to transport instruments. The larger the instrument or equipment, the greater the need for close adjacencies between lockers, studios, rehearsal spaces, and performance venues. Music undergraduates must also be reasonably proximate to all their other classes on campus, making a more distant site undesirable.

Cost

Recovery and mitigation of the existing structure –

Preliminary estimates provided by the study team, and based on initial site investigation, indicate a cost of approximately \$53 million to recover and mitigate the existing Hancher/Voxman/Clapp complex. Due to restrictions related to adding space on the existing site, approximately \$15 million in new space for displaced functions would have to be constructed off site. Additionally, in order to address critical program needs, approximately \$40 million in essential program upgrades would be constructed remotely from the existing buildings. The recovery/mitigation option would offer less assurance of future flood protection and capability of insurance underwriting than a replacement building located outside the area of flood threat.

Replacement of the existing complex –

The replacement of the entire facility to a new site, on a square-foot-for-square-foot basis (297,000 gross square feet plus approximately 15,000 gross square feet for modern code requirement space needs), including demolition of the existing building, is estimated at \$180 million. The plan also assumes the inclusion of \$40 million for program space additions to meet modern, yet basic facility provisions. Additional program needs are to be designed as separate components that can be added as either alternates to the base project or as subsequent phases. Incorporation of state-of-the-art sustainable design could add an additional 10% to the cost of the project. Other assumptions include a substantial parking ramp and incremental gallery space within the Hancher/Voxman/Clapp replacement.

Costs will continue to be refined as additional architectural and engineering analysis occurs.

Interim solutions –

Following the 2008 flood, immediate action was taken to accommodate 30,000 students for fall classes. The facilities and functional sacrifices were many. Of all the impacted programs, the School of Music was hit hardest. The unique combination of acoustical needs and equipment related to the practice and instruction of music made most temporary venues critically short of minimum program requirements. Between the fall 2008 and spring 2009 semesters, the UI installed numerous mobile units to address the most pressing of these needs. While they have provided relief, they represent only a portion of the program space lost to the flood. Notwithstanding the option pursued (recovery/mitigation or replacement), there will be additional interim space requirements for Music.

In coordinating the University's effort with FEMA, a deadline of August 2009 has been established with respect to any additional interim solutions. This makes expedited resolution of all interim space needs critical. The UI is currently pursuing on-campus options that will provide a longer-term interim solution. It will be a combination of the existing mobile units (relocated to address both important program adjacencies and an arrangement with FEMA that the mobile units must be moved from their current location on the arts campus due to proximity to the Iowa River), modified campus space and use of existing campus and private/leased properties. It is expected that these solutions will provide the basic needs for the School of Music for the time period needed to complete a permanent solution which will be years.

The cost for the next stage of interim solutions is being determined at this writing. As part of this plan and to follow through on relocation of the mobile units while also addressing interim space needs for Theater (also currently utilizing mobile units on the same site), the UI is pursuing a lease of space adjacent to the arts campus.

University – match funding cost summary –

Assuming FEMA will support 90% of all eligible expenses, the University's responsibility for the recovery/mitigation option would be \$65 million. The University's share of a replacement complex would be \$114 million. As described above, pre-flood limitations and the difficulty associated with incorporating program improvements within or attached to the existing structure make the product of the recovery/mitigation option far inferior to replacement space in terms of basic programming and function.

Site Selection

In determining the most appropriate site for the placement of a potential new building complex replacing Hancher/Voxman/Clapp, several critical factors have been and will be considered:

Conservative protection from future flooding risks –

Current computer-based Iowa River modeling, being completed by flood mitigation consultant Ayres Associates, with aid from the University's IIHR – Hydroscience & Engineering (Hydraulics Institute), will help to inform specific decisions related to "flood-safe" sites. It is expected that the river modeling will be complete by the end of March. Sites considered must provide clear protection from any future flooding with assumptions that long-term flooding could be more severe than that experienced in 2008. UI determination of suitable sites will follow review by the University's Flood Mitigation Task Force, the Campus Planning Committee and professional consultants. Sites under review will be shared with the Board at its March meeting.

Significant land area –

The large size of the building program and the requirement of many of the components to be one story will require a significant land area to properly accommodate the new building complex. A site size of about six to seven acres would be the desired minimum. Adjacent parking space would be critical as well.

Program adjacencies and proximity to campus –

Early investigation of basic program needs has concluded that direct adjacencies between a new performing arts center and the academic programs of the School of Music are critical. Furthermore, the existing consolidation of the varied UI arts programs remains a priority of the institution. This co-location results in programmatic synergies and a shared and vibrant learning community for the arts. Additionally, as the complex will host a full academic program, proximity to the undergraduate core of the main campus and how student pedestrians will access the site are key considerations.

Visibility –

The public component of this complex as a regional performing arts center requires that the facility be easy to find. Additionally, as was the case with Hancher Auditorium, this structure should serve as a symbol for the University and for the arts within the State. This requires direct, visible access.

Parking and general site access –

In hosting major performance events throughout the year, the site for this facility will require ample and well organized parking or available shared space for parking. To minimize congestion, the facility should be located on the perimeter of the campus while meeting needs of undergraduate pedestrians to reach the campus center. It will also be well served to exist on a main community thoroughfare with clear access to and from the interstate highway system.

Many sites in and around the community and within the University campus have been suggested and preliminarily studied. However, based on the criteria listed above and in particular, the key programmatic adjacencies, the site location with most initial promise is north and west of the existing complex.

This area remained dry during the flood and considerable topographical elevation change in this area would indicate it is positioned to protect a new structure from future and more severe flooding. This assumption will be tested with the forthcoming river modeling. Worst-case scenarios will also be considered. Until then, no final recommendation of site will be made to the Board.

This general area north and west of Hancher/Voxman/Clapp is already served by considerable surface parking, existing utilities, and it offers direct access to Interstate-80. While Hancher currently acts as a dramatic entry element for those approaching the UI and Iowa City from the north, the site northwest of Hancher along Park Road may offer improved vistas to and from the complex. This general site would allow the facility to harmonize with the existing and striking Levitt Center, with potential for the new facility to function as a welcoming landmark for visitors to the facility, the University and the community. However, more review of this site location is needed.

Other sites have been considered. Those and others will be carefully examined before a final recommendation is made. At the meeting in March, a brief examination of other sites will be presented to the Board.

Final site selection for a replacement of Hancher/Voxman/Clapp will require additional study and refinement. Careful review by the UI Flood Mitigation Task Force, the Campus Planning

Committee and professional consultants will be conducted. The results of this site selection reviews will be communicated to the Board as part of a formal permission to proceed with project planning.

Adequacy, cost and approvals for on-site mitigation improvements

Insurance does not provide funding for flood mitigation. However, mitigation and loss prevention methods assist with the underwriting process to obtain reasonably priced commercial flood insurance. FM Global (the University's insurance carrier) and FEMA have provided suggestions for flood mitigation strategies which are considered in the overall mitigation plan. Mitigation plans will need to be submitted with permanent repair work requests on a project worksheet for FEMA funding approval.

FEMA mitigation (flood protection) specialists have spent weeks touring the flooded UI facilities. They are working with UI project managers and design consultants to establish a framework for determining the most appropriate mitigation strategies. Following the FEMA on-campus efforts, the University is now drafting proposals for each building that will describe the ways in which existing buildings remaining will be protected from future flooding events. These will become Project Work Sheets that are then reviewed by FEMA. As concurrence with the scope of the individual mitigation efforts is reached, the University will advance design and construction projects intended to recover and protect the impacted buildings in the shortest possible period of time and in full coordination with the Board Office.

The mitigation supported by FEMA may not be what the University finds to be necessary. Ultimately, FEMA will have the final determination of what is approved. It also will have final approval of reimbursement levels for mitigation work, and it remains less than absolutely clear whether FEMA will reimburse 90% of mitigation costs or whether these reimbursements will be truncated based upon overall flood damage to the building under consideration.

The intent of the mitigation efforts is to either prevent the infiltration of future flood waters into a previously flooded building, or as the situation requires, recognize that components of an existing building may be flooded again. In these circumstances the objective will be to protect building systems and finishes through a series of internal-to-the-building mitigation strategies.

There is likely to be a combination of internal "hardening" of buildings and external barriers intended to keep the water away where possible. Some of the 2008 flooded buildings offer relatively simple mitigation solutions. For some facilities, a project underway to "bulk-head" or seal underground steam tunnels throughout the existing riverside utility system will sharply curtail future flooding risks. These tunnel bulk-heads will more effectively protect many buildings including the Adler Journalism Building, Becker Communications, other higher elevation steam tunnels that would have otherwise remained dry, and most critically, the Main Power Plant. Other buildings suffered flooding from several sources and the mitigation strategies may be more complex. These will require significant work and creative solutions that offer protection while maintaining both architectural and landscape integrity.

Potential landscape-based mitigation solutions will be carefully reviewed for their impact on the functional and visual setting along the Iowa River. While protection is paramount, maintaining and strengthening an intimate engagement with the Iowa River remains an institutional priority. UI campus planning consultant Sasaki and Associates is a key resource as these issues are reviewed.

The existing Hancher/Voxman/Clapp complex has endured lower level water infiltration for years. The main lobby of Hancher Auditorium is on grade; main floor seating areas and the orchestra pit area are well below grade and their exterior walls are susceptible to sub-grade hydrostatic pressure. The building's mechanical system is also located below grade. The building structure does permit the elevation of building systems to newly constructed space on top of the Voxman Music Building roof. Additionally, other critically needed spaces, including rooms for the School of Music's fixed organs, can be elevated as part of an addition to the north end of Voxman. However, the Hancher configuration forces more extreme and costly measures to protect against underground water infiltration as the stage area and orchestra pit will need to remain below grade.

Consequences of FEMA environmental, historical and mitigation evaluations

The review of environmental, historic and mitigation evaluations may add time in the overall approval and project obligation by FEMA. Historic and environmental reviews are considered in the funding process. There may be additional funds provided to a project because of the historic or environmental recommendations. For example: to keep part of Art Building East because of historical considerations may require additional federal funding in addition to funding for the replacement of the building.

As part of the continued partnership between the University, Iowa Homeland Security and FEMA, several FEMA teams have been part of a constant presence during the flood recovery stage. In considering the potential replacement of Hancher/Voxman/Clapp, and with the recovery of any of the flood-impacted facilities, a critical step insures that careful consideration of campus and community heritage is addressed. In recent weeks, FEMA and Iowa Homeland Security historical and archaeological experts have toured and studied flooded buildings and impacted grounds and have worked to understand the history of those areas hit by the flood. This effort will continue in coordination with the University.

FEMA is required to review and approve all proposed flood recovery, mitigation and potential replacement plans in order to secure the planned federal funding support. This review includes consideration of the specific historic value related to facilities that will either be altered for recovery and protection, or those that may be removed and replaced. Alterations must adhere to Secretary of Interiors standards in order to maintain intended architectural integrity, and thus, FEMA support.

In the case of Hancher/Voxman/Clapp, the FEMA-associated historians will conduct a comprehensive review to appropriately address the heritage related to the facility and the site on which it rests. The process does not intend to prevent demolition, should that be the most sensible course of action. Instead, it establishes how best to address campus heritage regardless of the course of action. For any existing structures that might be removed and also considered historical by FEMA, the team will explore appropriate options for recording and remembering those lost structures. Where a structure's history can be recalled on the former site, every effort is made to do so and FEMA indicates it will also support funding for those measures.

In studying a potential replacement facility for the Hancher/Voxman/Clapp complex, FEMA has indicated that as the original facility was designed by an internationally renowned architect (Max Abramovitz) and intended as an iconic structure, FEMA funding would again allow for that top level of architectural expression in a new facility.

The University of Iowa fully understands the critical role it holds in helping to retain the history and heritage of the community, and the State. It embraces the efforts made on this front by FEMA and is confident that a satisfactory and rewarding solution will result.

Cost and Future Implications for Flood Loss Coverage

Property Insurance

The University of Iowa currently has \$120 million in commercial flood insurance and \$22 million in federal flood insurance. The ability of the University to continue commercial flood coverage at the current limit of \$120 million and/or increase limits is affected by the economy, risks specific to the University and the condition of the insurance market. Overall, flood insurance availability for the University is rather fragile and could easily be affected by a change in market conditions or risk factors. The insurance market calculates the probability of a claim occurring and the potential loss associated with the loss, then determines the limits of liability and the number of policies to be written. The University is subject to that process at each annual renewal.

Loss history and the potential for losses to occur for the University affect the placement of insurance. The amount of the flood loss for 2008, previous flood losses, the risks associated with the river, ability to mitigate the flood loss and recover the University are all underwriting factors. In difficult insurance environments, underwriters are looking for the best accounts to write coverage. Additionally, some insurance markets simply no longer provide coverage. Due to the current economy and market conditions the insurance market capacity is more difficult and is expected to continue to be difficult.

In the future as the economy improves, insurance capacity may become more available. It may be a few years before there is enough capacity in the market place to provide additional limits to the University. Conversely, if there is another flood event the University insurance coverage would most likely be reduced significantly which would leave the University and the state exposed for flood loss and recovery. According to the University's Risk Manager and executives from FM Global, the property insurance market is hardening and is expected to continue to harden over the next several months. Therefore, the capacity to write insurance and insurance rates will be affected even without another flooding event.

The University experienced significant increase in premium for the September 1, 2008 renewal. However, the University was able to obtain limits of \$120 million. The additional cost for flood coverage was approximately \$1 million. Early market indication is that the University will be able to maintain the \$120 million flood limit for the renewal of September 1, 2009. The premium rate for flood is expected to remain fairly stable with little increase. If however, there are significant claims occurring in the next few months, the insurance market could be affected which in turn would affect the University's ability to secure the current \$120 million in flood coverage and the premium rate.

The University would like to obtain a \$200 million flood limit. However, based upon the economy and market conditions, it is unlikely that additional flood coverage can be obtained in the near term. It may be a few years before there is the capacity in the insurance market to obtain additional flood coverage.

The major risk factor to the University is the location of assets closest to the river. Mitigation does assist to reduce the river risk factor and would be a consideration in underwriting the flood coverage. Moving forward without implementing mitigation and replacing assets away from the river would negatively affect the risk analysis for underwriting the flood coverage and the

potential for maintaining the current limits or increasing limits. Mitigation will always pose a greater risk factor than replacement to a location that is not flood-prone. That risk will determine the availability and premium cost for insurance.

FEMA

Currently, there is a FEMA directive that indicates FEMA will only pay for the increase loss amount above the previous loss. Additionally, the University is expected to be able to provide insurance in the amount of the previous loss. For example: The current loss amount was estimated at \$232 million. If the next loss was \$300 million, then FEMA would pay no more than 75% of \$68 million. FEMA is assuming that the insurance market would provide insurance equal to the amount of the previous loss (which is highly unlikely as stated previously). This directive is under discussion with Iowa Homeland Security and FEMA.

FEMA funding is provided by the federal government. The economy and the overall amount of FEMA disaster claims could create uncertainty in a future flood as to the ability for funding available through FEMA and the level of match required.

Working with FEMA it is important in the process that projects are obligated by the federal government to insure financial support. If the funding is delayed the ability to start or complete projects will be affected. The more UI facilities that are out of harm's way from river flooding, the further any insurance or FEMA assistance can go in recovering from losses should another flood disaster occur along the Iowa River.

Schedule for approval of plans and completion and occupancy of projects

It is currently assumed that the University will, after receiving guidance from the Board in March, present a formal proposal for permission to proceed with project planning for either a recovery/mitigation of Hancher/Voxman/Clapp or the replacement of the complex, at the April Board meeting. Preliminary thinking based upon available information is that the replacement option is in the long-term best interest of the University and the state. However, further work will be done prior to a final recommendation and a requested action of the Board to approve.

Once permission to proceed with project planning is granted by the Board, the UI will engage in an architectural selection process and immediately assemble a design team specializing in this type of project. If any alternative or expedited delivery methods are considered, they will be presented to and coordinated with the Board as part of this process.

Based on the scale of a potential replacement facility, the design phase is expected to require a period of time lasting no less than one year. The heightened level of architectural quality/expression and innovative sustainability elements could extend this period. This schedule assumes the currently accepted Board method of project delivery.

The size of the project, depending on the final scope of work to be bid, would suggest that the construction period, utilizing typical delivery methods would be approximately three years. This results in a completion for a facility replacement of roughly 4.5 years (fall 2013). All of this would be dependent upon timely approvals of project scope and details by FEMA and adequate financing to meet expected cash flow requirements.

A repair and mitigation project would require a slightly shorter period of design (9 months) and the construction duration would be expected to be roughly 2 years. Completion could be expected by spring 2012. However, this assumes the necessary approvals of mitigation work

and any supporting approvals by FEMA, the Corps of Engineers and the State DNR. This time period would be elongated if any external levees or flow restrictions are a part of the mitigation plan.

The associated interim solutions will require immediate action in order to meet the FEMA deadline for completion by August, 2009. Work continues and all efforts will be made to accomplish the required work by the deadline. It is then expected that the School of Music will operate at a very basic but better level until completion of the permanent solution. It can also be expected that some additional, though minor, adjustments may be needed as the interim solutions are activated and put into practice by faculty and students.

The lost functions available with Hancher Auditorium and Clapp Recital Hall are not easily replicated and this kind of design and construction work can not be accomplished by the FEMA August 2009 deadline. As such, a combination of campus spaces used for assemblies will serve to provide various recital and performance opportunities. These will be well short of matching pre-flood conditions and additional considerations will be made should other acceptable performance spaces become an option during the interim period.

Determine interim stage flood risks

The University is updating its Flood Emergency Response Plan (FERP) for 2009 to incorporate the lessons learned from the 2008 flood. Changes to the FERP, in the form of an addendum, will include expanded measures for responding to flood risks. The updated plan includes practices related to increased river flows up to 50,000 cfs discharge from the Coralville Reservoir. The 2008 flood peaked at approximately 40,000 cfs and the 1993 flood was less than 30,000 cfs.

The modified plan will also include a phased evacuation plan linked to dam discharge rates that will facilitate a more gradual evacuation process. Employees of the UI will be assigned more specific roles and locations in preparation of a growing flood threat and the general response will depend less on volunteers and more on UI staff and contractors.

Until more permanent and structural mitigation measures are approved by FEMA and put into place, the UI's response to a flood risk will be based principally on an operational response (i.e. contents evacuation, Hesco barriers, and other protective measures). Stockpiles of essential flood prevention materials and pre-negotiated agreements for contractor support will be a part of the plan.

If the decision is to replace eligible facilities, construction would occur above an elevation that would be reasonably considered a risk for flooding. In addition to historical data, the University is considering potential future land-use and climate changes that could increase the frequency and/or severity of future flooding in its flood risk assessment. If the decision is to renovate, rather than rebuild eligible facilities, the FERP will be employed to protect the work under construction. Additionally, since the contractor is responsible for the care, custody and control of the project site, measures would be taken by the contractor to protect the work in progress and the materials and equipment on site. Builders Risk insurance for the project would also be in place to cover any potential damages.

Opportunities for energy savings, operational savings and improved sustainability of design

The replacement of Hancher/Voxman/Clapp offers an opportunity to demonstrate the State's commitment to sustainability. The facility would employ both emerging and best practice design elements to provide a structure with a low climate and low environmental impact. The architecture could reflect Iowa's leadership in an emerging green economy. Beyond providing a highly visited and highly visible venue, the building would showcase sustainability to increase public awareness and encourage others to embrace a green practices.

With energy efficient systems, green roofs, photovoltaic panels, and other technologies side-by-side, the art and science of sustainability would be on display in an inviting building that offers all who visit building that an opportunity to experience the form and function of sustainability.

If the decision is to restore the facility complex at its site along the river, the design and construction would make use of the latest and best practices for sustainable design. However, rebuilding an existing facility offers far less opportunity for sustainability and energy efficiency than a replacement building.

**Art Building East Complex
Facility Replacement Study**

Art Building East is a collection of buildings including the original, historic School of Art & Art History Building which was completed in 1936. The buildings, the last of which was constructed in the 1970s, contain 92,000 square feet. A map indicating the existing facility and profile of the 2008 flood is attached.

Upon confirmation that FEMA will provide funding support for the potential replacement of the Art Building East complex, the University initiated a study evaluating both recovery/mitigation and replacement options. The University engaged InVision Architects to assist in this process. The following factors, developed in conjunction with the Board Office, have been studied in order to evaluate the differences between these two options and ultimately to recommend a course of action to the Board.

Program

The University of Iowa School of Art and Art History (SAAH) successfully combines studio arts (the making of art) and the academic study of art and architecture. Reviewers praise this combination program model and recognize it as rare. With this structure, SAAH has maintained high rankings for a number of its programs, including the top rated printmaking program in the country, for example. The School has lost access to two buildings due to the flood—three, including the Museum of Art which is integral to art education. Art Building West is a new building housing art history, painting and photography. The original Art Building, constructed in 1936 with a printmaking wing added in the 1970s, housed most of the rest of studio arts, except newer functions, like intermedia, that would not fit. Adjacent to the Art Building are a set of low quality structures housing the various art forms that use industrial kinds of equipment: sculpture, metal-smithing, and ceramics. Immediately prior to the flood, a major renovation project involving the Art Building East complex had just begun. Due to the flood, the construction contract was suspended and ultimately terminated.

Whether in a restored structure or a replacement, the studio arts need good access to natural light. In the case of the more industrial art forms, space for large equipment as well as kilns and exhaust is also necessary. It is difficult to imagine restoration of space as it was because these buildings were not only too small for the remaining School program, but also took on water in the basement in a normal spring. The structures for metal-smithing, ceramics, and sculpture were in need of refurbishing and repair. UI values the history and architecture of the original 1936 Art Building, but, on its own, it is inadequate to house studio arts functions. In fact, necessary mitigation strategies would further reduce the number of programmable square feet in the Art Building. In a replacement building, studio arts could bring their newer programs—intermedia, digital photography—into adjacency with all other arts programs; they could enjoy the cross-media energies that derive from being under one roof; and they could occupy environmentally modern space.

Whether in the Art Building East complex or a new facility, the remaining studio arts would require adjacency to Art Building West to maintain the important programmatic connections between the study of art and the creation of art. Furthermore, student and faculty access to some art museum gallery space is necessary for both the study of art and the teaching of its creation. Adjacency to one or more art galleries would be ideal. However, an expansion of the current footprint to achieve mitigation strategies or to accommodate School of Art & Art History programs may be difficult to achieve given FEMA regulations and the potential difficulty in acquiring commercial insurance coverage. Expansion for future program growth on this site would therefore be restricted or impossible.

Cost

Recovery and mitigation of the existing structure –

Preliminary estimates provided by the study team indicate that a fully recovered Art Building East complex, with appropriate flood mitigation will cost \$58 million. This cost assumes full recovery of existing spaces, protection or relocation of all mechanical/electrical systems, treatment of the lower level foundation system, and code requirement upgrades. A purely recovery/mitigation strategy for this complex is difficult as the lower level has been a key source of water infiltration for decades. Protecting the lower level to continue to house mechanical systems would be an extreme measure. Due to restrictions related to adding space on the existing site, approximately \$17 million in new space for displaced functions would also have to be constructed off site.

Replacement of the existing complex –

The replacement of the entire Art Building East complex to a new site, on a square-foot-for-square-foot (105,000 gross square feet plus modern code requirement space needs) basis, including demolition of the existing building, is estimated at \$45 million. Additionally, the plan assumes the inclusion of program space additions that meet current and basic program requirements. The original building dates back to 1936 and shortly before the flood a project to add and improve space to address current needs had been bid. It is estimated that this additional program-based space would cost \$15 million. The additional program needs are to be designed as separate components that can be added as either alternates to the base replacement or as subsequent phases.

Costs will continue to be refined as additional information becomes available.

Interim solutions –

Following the 2008 flood, immediate action was taken to accommodate 30,000 students for fall classes. A critically important interim solution for the studio arts programs was the comprehensive renovation and repurposing of a vacant Menard's store located at the south edge of Iowa City. Though quite separate from the main campus and the arts campus, the facility has proven to address a majority of the most pressing studio arts programmatic needs, and as such will serve as an acceptable longer-term interim solution, allowing for completion of a permanent solution. The costs associated with interim solutions at the former Menards facility for the School of Art & Art History to date are approximately \$4 million. Additional improvements are expected to be undertaken during the summer of 2009.

University – match funding cost summary –

Assuming FEMA will support 90% of all eligible expenses, the University's responsibility for the recovery/mitigation option would be \$59 million. The University's share of a replacement complex would be \$20 million. As described above, pre-flood limitations and the difficulty associated with incorporating program improvements within or attached to the existing structure make the product of the recovery option far inferior to replacement space, in terms of basic programming and function.

Site Selection

In determining the most appropriate site for a potential new facility replacing the Art Building East complex, several critical factors have been and will be considered:

Conservative protection from future flooding risks –

Current computer-based Iowa River modeling, being completed by flood mitigation consultant Ayres Associates, with aid from the University's IIHR – Hydrosience & Engineering (Hydraulics Institute), will help to inform specific decisions related to "flood-safe" sites. It is expected that the river modeling will be complete by the end of March. Sites considered must provide clear protection from any future flooding with assumptions that long-term flooding could be more severe than that experienced in 2008. UI determination of suitable sites will follow review by the University's Flood Mitigation Task Force, the Campus Planning Committee and professional consultants. Sites under review will be shared with the Board at its March meeting.

Program adjacencies and proximity to campus –

Early investigation of basic program needs have revealed that direct adjacencies between a new studio arts facility and the existing Art Building West (to be recovered and protected) are critical. The close and synergistic relationship between studio arts and art history requires that students and faculty frequent both facilities, as was the case prior to the 2008 flood. Additionally, as the complex will be fully academic in its functions, proximity to the undergraduate core of the main campus and how student pedestrians will access the site is a key consideration.

Land area –

The relatively large size of the building program will require a significant land area to properly accommodate this facility. The building program requirements for outdoor yard space for kilns and bulk materials will influence both the land area requirement and access considerations. While the new building program could and should be arrayed in a more

vertical configuration than the existing one and two story Art Building East complex, a vertical configuration will need to strike a balance between land use efficiency and program connectivity. An estimated minimum site size for the new facility will be in the range of 1.25 – 1.5 acres.

Visibility and Image –

It is not critical that this facility be directly exposed to public view. The program should help to display the creativity and learning that occurs inside, but its outward presence can be limited to the immediate functional area in which it would reside. There are very functional and service-oriented components to the building and these need not and should not occupy important campus vistas.

Parking and general site access –

The daily traffic to the facility can remain primarily pedestrian. However, effective service approach and staging is an important factor in evaluating a potential site due to the large equipment and product components of the various studio arts.

Though critically tied to the arts campus and specifically to Art Building West, there is very limited UI land, untouched by the 2008 flood that would be potentially available for the construction of a new studio arts building. A site north and west of Art Building West is being evaluated for its capacity for a facility of this type. It could likely result in the need to raze an existing UI building currently being used for graduate painting; relocation of that program would need to be addressed. The site would be directly adjacent to an existing residential neighborhood and attention to massing, sound and lighting impact would be needed.

Final site selection for a replacement of the Art Building East complex will require additional study and refinement. Careful review by the UI Flood Task Force, the Campus Planning Committee and professional consultants will be conducted as this effort continues. The results of these site selection efforts will be communicated to the Board as part of a formal permission to proceed with project planning.

Adequacy, cost and approvals for on-site mitigation improvements

Insurance does not provide funding for flood mitigation. However, mitigation and loss prevention methods assist with underwriting process to obtain reasonably priced commercial flood insurance. FM Global and FEMA have provided suggestions for flood mitigation strategies which are considered in the overall mitigation plan. Mitigation plans will need to be submitted with permanent repair work requests on a project worksheet for FEMA funding approval.

FEMA mitigation (flood protection) specialists have spent weeks touring the flooded UI facilities. They are working with UI project managers and design consultants to establish a framework for determining the most appropriate mitigation strategies. Following the FEMA on-campus efforts, the University is now drafting proposals for each building that will describe the ways in which existing buildings remaining will be protected from future flooding events. These will become Project Work Sheets that are then reviewed by FEMA. As concurrence with the scope of the individual mitigation efforts is reached, the University will advance design and construction projects intended to recover and protect the impacted buildings in the shortest possible period of time and in full coordination with the Board Office.

The mitigation supported by FEMA may not be what the University finds to be necessary. Ultimately, FEMA will have the final determination of what is approved. It also will have final

approval of reimbursement levels for mitigation work, and it remains less than absolutely clear whether FEMA will reimburse 90% of mitigation costs or whether these reimbursements will be truncated based upon overall flood damage to the building under consideration.

The intent of the mitigation efforts is to either prevent the infiltration of future flood waters into a previously flooded building, or as the situation requires, recognize that components of an existing building may be flooded again. In these circumstances the objective will be to protect building systems and finishes through a series of internal-to-the-building mitigation strategies.

There is likely to be a combination of internal “hardening” of buildings and external barriers intended to keep the water away where possible. Some of the 2008 flooded buildings offer relatively simple mitigation solutions. For some facilities, a project underway to “bulk-head” or seal underground steam tunnels throughout the existing riverside utility system will sharply curtail future flooding risks. These tunnel bulk-heads will more effectively protect many buildings including the Adler Journalism Building, Becker Communications, other higher elevation steam tunnels that would have otherwise remained dry, and most critically, the Main Power Plant. Other buildings suffered flooding from several sources and the mitigation strategies may be more complex. These will require significant work and creative solutions that offer protection while maintaining both architectural and landscape integrity.

Potential landscape-based mitigation solutions will be carefully reviewed for their impact on the functional and visual setting along the Iowa River. While protection is paramount, maintaining and strengthening an intimate engagement with the Iowa River remains an institutional priority. UI campus planning consultant Sasaki and Associates is a key resource as these issues are reviewed.

As related to the Art Building East complex, the original 1936 structure is one that has suffered with decades of water infiltration in the lower level due to high water tables and direct proximity to the Iowa River. The addition of the 1969 print-making wing brought the edge of the complex directly adjacent to the river bank and as such limits the amount of landscape-based mitigation strategies. This hampers opportunities to better protect the 1936 structure. The main floor of the original Art Building did not receive water during the 2008 flood and damage was limited to the lower level. As such, if the lower level is isolated and the mechanical/electrical systems located there are relocated to higher ground, appropriate protection of the building is possible. However, the building's design of smaller intricate spaces, limits the flexibility of rerouting ducts and cabling. Thus moving the building systems are a challenge and doing so would likely take central programmed space out of play.

The south studio additions to the complex are on low ground and host a collection of large, heavy equipment associated with sculpture, ceramics, and metal works arts. In this location, protection of building systems is secondary to the potential equipment loss and a remedy is most difficult as ground level access is required.

Consequences of FEMA environmental, historical and mitigation evaluations

The review of environmental, historic and mitigation evaluations may add time in the overall approval and project obligation by FEMA. Historic and environmental reviews are considered in the funding process. There may be additional funds provided to a project because of the historic or environmental recommendations. For example: to keep part of Art Building East complex because of historical considerations may require additional federal funding in addition to funding for the replacement of the building.

As part of the continued partnership between the University, Iowa Homeland Security and FEMA, several FEMA teams have been part of a constant presence during the flood recovery stage. In considering the potential replacement of the Art Building East complex, and with the recovery of any of the flood-impacted facilities, a critical step insures that careful and appropriate consideration of campus and community heritage is addressed. In recent weeks, FEMA and Iowa Homeland Security historical and archeological experts have toured and studied flooded buildings and impacted grounds and have worked to understand the history of those areas hit by the flood. This effort will continue in coordination with the University.

FEMA is required to review and approve all proposed flood recovery, mitigation and potential replacement plans in order to secure the planned federal funding support. This review includes consideration of the specific historic value related to facilities that will either be altered for recovery and protection, or those that may be removed and replaced. Alterations must adhere to Secretary of Interiors standards in order to maintain intended architectural integrity, and thus, FEMA support.

In the case of the Art Building East complex, the FEMA-associated historians help to establish a comprehensive review that will include numerous interested parties, all with the intent to appropriately address the heritage related to the facility and the site on which it rests. The process does not intend to prevent demolition, should be the most sensible course of action. Instead, it establishes how best to address campus heritage regardless of the course of action. For any existing structures that might be removed and also considered historical by FEMA, the team will explore appropriate options for recording and remembering those lost structures. Where a structure's history can be recalled or maintained on the original site, every effort is made to do so and FEMA indicates it will also support funding for those measures. Ideas are already being considered on this front.

The original Art Building was constructed in 1936, and along with the Theater Building represented the original creation of the arts campus. The structure held a commanding and attractive presence on the banks of the Iowa River. The north end of the building has become recognized for the studio and teaching space for famed Iowan artist Grant Wood. Subsequent additions to the complex, to the east and south of the original building, have limited the original intent of the building's role on the Iowa River, but it remains an attractive anchor to arts campus development over the years.

The University of Iowa fully understands the critical role it holds in helping to retain the history and heritage of the community, and the State. It embraces the efforts made on this front by FEMA and is confident that a satisfactory and rewarding solution will result.

Cost and Future Implications for Insurance Coverage

Property Insurance

The University of Iowa currently has \$120 million in commercial flood insurance and \$22 million in federal flood insurance. The ability of the University to continue commercial flood coverage at the current limit of \$120 million and/or increase limits is affected by the economy, risks specific to the University and the condition of the insurance market. Overall, flood insurance availability for the University is rather fragile and could easily be affected by a change in market conditions or risk factors. The insurance market calculates the probability of a claim occurring and the potential loss associated with the loss, then determines the limits of liability and the number of policies to be written. The University is subject to that process at each annual renewal.

Loss history and the potential for losses to occur for the University affect the placement of insurance. The amount of the flood loss for 2008, previous flood losses, the risks associated with the river, ability to mitigate the flood loss and recover the University are all underwriting factors. In difficult insurance environments, underwriters are looking for the best accounts to write coverage. Additionally, some insurance markets simply no longer provide coverage. Due to the current economy and market conditions the insurance market capacity is more difficult and is expected to continue to be difficult.

In the future as the economy improves, insurance capacity may become more available. It may be a few years before there is enough capacity in the market place to provide additional limits to the University. Conversely, if there is another flood event the University insurance coverage would most likely be reduced significantly which would leave the University and the state exposed for flood loss and recovery. According to the University's Risk Manager and executives from FM Global, the property insurance market is hardening and is expected to continue to harden over the next several months. Therefore, the capacity to write insurance and insurance rates will be affected even without another flooding event.

The University experienced significant increase in premium for the September 1, 2008 renewal. However, the University was able to obtain limits of \$120 million. The additional cost for flood coverage was approximately \$1 million. Early market indication is that the University will be able to maintain the \$120 million flood limit for the renewal of September 1, 2009. The premium rate for flood is expected to remain fairly stable with little increase. If however, there are significant claims occurring in the next few months, the insurance market could be affected which in turn would affect the University's ability to secure the current \$120 million in flood coverage and the premium rate.

The University would like to obtain a \$200 million flood limit. However, based upon the economy and market conditions, it is unlikely that additional flood coverage can be obtained in the near term. It may be a few years before there is the capacity in the insurance market to obtain additional flood coverage.

The major risk factor to the University is the location of assets closest to the river. Mitigation does assist to reduce the river risk factor and would be a consideration in underwriting the flood coverage. Moving forward without implementing mitigation and replacing assets away from the river would negatively affect the risk analysis for underwriting the flood coverage and the potential for maintaining the current limits or increasing limits. Mitigation will always pose a greater risk factor than replacement to a location that is not flood-prone. That risk will determine the availability and premium cost for insurance.

FEMA

Currently, there is a FEMA directive that indicates FEMA will only pay for the increase loss amount above the previous loss. Additionally, the University is expected to be able to provide insurance in the amount of the previous loss. For example: The current loss amount is estimated at \$232 million. If the next loss was \$300 million, then FEMA would pay no more than 75% of \$68 million. FEMA is assuming that the insurance market would provide insurance equal to the amount of the previous loss (which is highly unlikely as stated previously). This directive is under discussion with Iowa Homeland Security and FEMA.

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Once permission to proceed with project planning is granted by the Board, the University will engage in an architectural selection process and immediately assemble a design team with experience in designing this type of project. If any alternative or expedited delivery methods are considered, they will be presented to and coordinated with the Board as part of this process.

Based on the scale of this potential replacement facility, the design phase is expected to require a period of time lasting approximately one year. This schedule assumes the currently accepted Board method of project delivery. Should alternative delivery methods be considered, the period between start of design and start of construction could be significantly reduced, but this has not yet been studied.

The size of the project, depending on the final scope of work to be bid, would suggest that the construction period, utilizing typical delivery methods would be approximately two years. This results in a completion for a facility replacement of roughly three years (summer 2012).

A repair and mitigation project would require approximately the same duration, with completion expected by the summer of 2012.

While limiting program continuity and some level of success, it is accepted that the current interim solutions and the continued effort to recover Art Building West (currently schedule to be complete by late 2010, depending on unresolved mitigation strategies) will provide basic program needs until the permanent solution is completed.

Determine interim stage flood risks

The University is updating its Flood Emergency Response Plan (FERP) for 2009 to incorporate the lessons learned from the 2008 Flood. Changes to the FERP, in the form of an addendum, will include expanded measures for responding to flood risks. The updated plan includes practices related to increased river flows up to 50,000 cfs discharge from the Coralville Reservoir. The 2008 flood peaked at approximately 40,000 cfs and the 1993 flood was less than 30,000 cfs.

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With energy efficient systems, green roofs, photovoltaic panels, and other technologies side-by-side, the science of sustainability would be on display in an inviting building that offers the opportunity to experience the form and function of sustainability.

If the decision is to restore the complex at its site along the river, the design and construction would make use of the latest and best practices for sustainable design. However, rebuilding an existing facility offers less opportunity for sustainability and energy efficiency than a new building.

