

# The University of Kansas

Office of the Chancellor

To: Mayor and City Commission  
FROM: Warren Corman, University Architect  
RE: KU Boathouse Proposed Location

July 7, 2007

In 1995 the University of Kansas raised its Women's Rowing Program to varsity status in order to offer additional opportunities for all women at KU. Since then, Burcham Park has served as the traditional and historical site for the KU Rowing Team. During the team's inaugural varsity season the university made a commitment to build a boat house to serve the program. Now, more than a decade later, we hope finally to fulfill that commitment. Currently, KU Rowing stores its equipment in a fenced-in area just to the north of the existing parking lot - a far cry from what was promised and what these outstanding student-athletes have deserved.

After much study, Kansas Athletics has developed a plan to build an approximately \$6 million permanent facility in this same location. Although the university considered other sites, this is the only viable site that gives reasonable access to the dock and the race course in the Bowersock Dam pool. Because of its proximity to the existing facilities, it will allow us to maintain a more secure environment for our student-athletes and community users. This wonderful facility will be the home not only of the KU Varsity Crew Team, but also the KU Recreational Club team, and will provide opportunities to the Lawrence Community.

The lower level will be subject to periodic flooding, and we have designed the building accordingly. The building, just like the ugly chain-link fenced area, will be monitored and maintained by KU; when there is a chance of flooding, the boats will be removed. The upper level will not be subject to flooding and will house Rowing team program space, visiting team space and club sport space.

All of the utilities have been carefully designed to work within a flood-prone area. The sewer line will be a small force line, with an additional liner to ensure that no leaks occur. Electricity will be delivered overhead. Trees that are removed will be replaced with a similar native tree. We plan to improve the existing parking area, add site lighting and improve the access to the dock area.

We are asking that the City Commission approve a lease for the ground where the building sits in the park, subject to those necessary approvals. We will, of course, observe any rules and regulations regarding the use of the park, especially in those times it is subject to flooding.

We have worked with and received approval when required from the State Division of Water Resources, the U.S. Army Corps of Engineers, State Division of Wildlife and Parks, and the State Historical Society. We recently met with the Pinckney Neighborhood Association and received positive feedback; we also met with the Historic Resources Commission and received approval. Final steps include working with City Staff for final review and approval of the project. We understand that the process of approval includes review and approval by the Board of Zoning Appeals, final plan approval by the Historic Resources Commission, and a Special Use Permit approval from the Planning Commission and City Commission.

This project is more than a dozen years in the making, culminating with funding derived from the entire student body at KU for six years. The University, and more importantly the student-athletes, deserve such a building and we all look forward to working together to make this project great.



**MEMORANDUM**

To: City of Lawrence, City Commissioners  
From: Andrew Pitts, Principal, Treanor Architects, P.A.  
RE: Kansas Athletics- Rowing Boathouse  
Burcham Park, Lawrence, KS

July 10, 2007

Enclosed you shall find information concerning the proposed rowing boathouse in Burcham Park. Kansas Athletics has provided Dave Corliss, City Manager a draft of the lease agreement to build and operate this boathouse on City owned land. In addition to the draft lease agreement we have provided drawings of the proposed building and a letter from Warren Corman, University Architect, describing the project. Below is additional information for your reference.

**Location of the Project:**

The project is located in Burcham Park on the north end of the park. The building footprint is north of the existing chain-link storage area and will sit over 50' back from the current bank of the river. Alternate sites were considered by the University and the design team. The Burcham Park site continues to be the most economical and practical site for this type of building and program. The team has reviewed sites that would locate the building in the floodplain, as opposed to the floodway. The only possible site is a heavily wooded area on the north bank of the river between Lyon Street and North Street. This area would require access from Riverfront Park (north of Interstate 70) through the floodway to this site. Building at this location would greatly impact the existing environment and would require significant infrastructure improvements. All other locations would directly impact the existing levee and have been discouraged by the Corps of Engineers. The Burcham Park site provides the required infrastructure in the park or on adjacent land. The site has appropriate vehicle access for the daily activities of the rowing team. The addition of this building will not increase the traffic or use in the park more than current operations. Parking for special events (regattas) is provided by adjacent property owners and this practice will continue. Alternate sites do not provide these amenities and would need to be developed as part of the project.

**Description of the Building:**

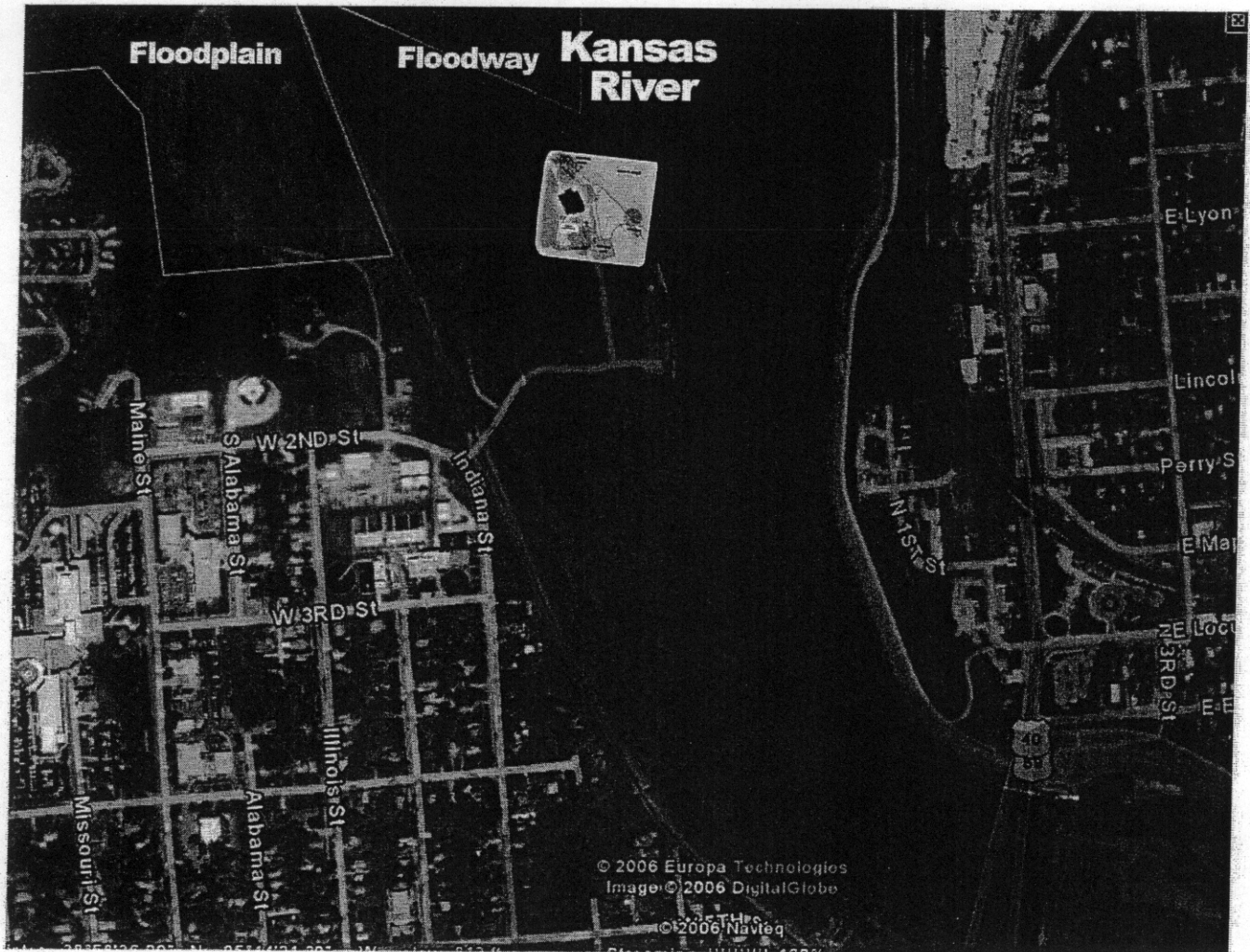
Since the building is located in the floodway the building has been designed for potential flooding. The design and structure of the building has been designed to allow floodwaters to flow through the structure and sustain the pressure applied by these forces. The design of this structure meets or exceeds the Federal Emergency Management Agency's (FEMA's) requirements for buildings in the floodway. The foundation and first floor structure will comprise of poured-in-place concrete walls, floors and structure. The building will also be supported by concrete piers that extend to bedrock. Flood vents will be installed per FEMA's guidelines and comply with the flood storage capacity requirements of Federal, State and local requirements. The first floor will contain boat storage only. All other uses will be located on the second floor. The floor-to-floor elevation is 16'-0".

**Permits / Approvals:**

The following permits and or approvals have been applied for and received to date:

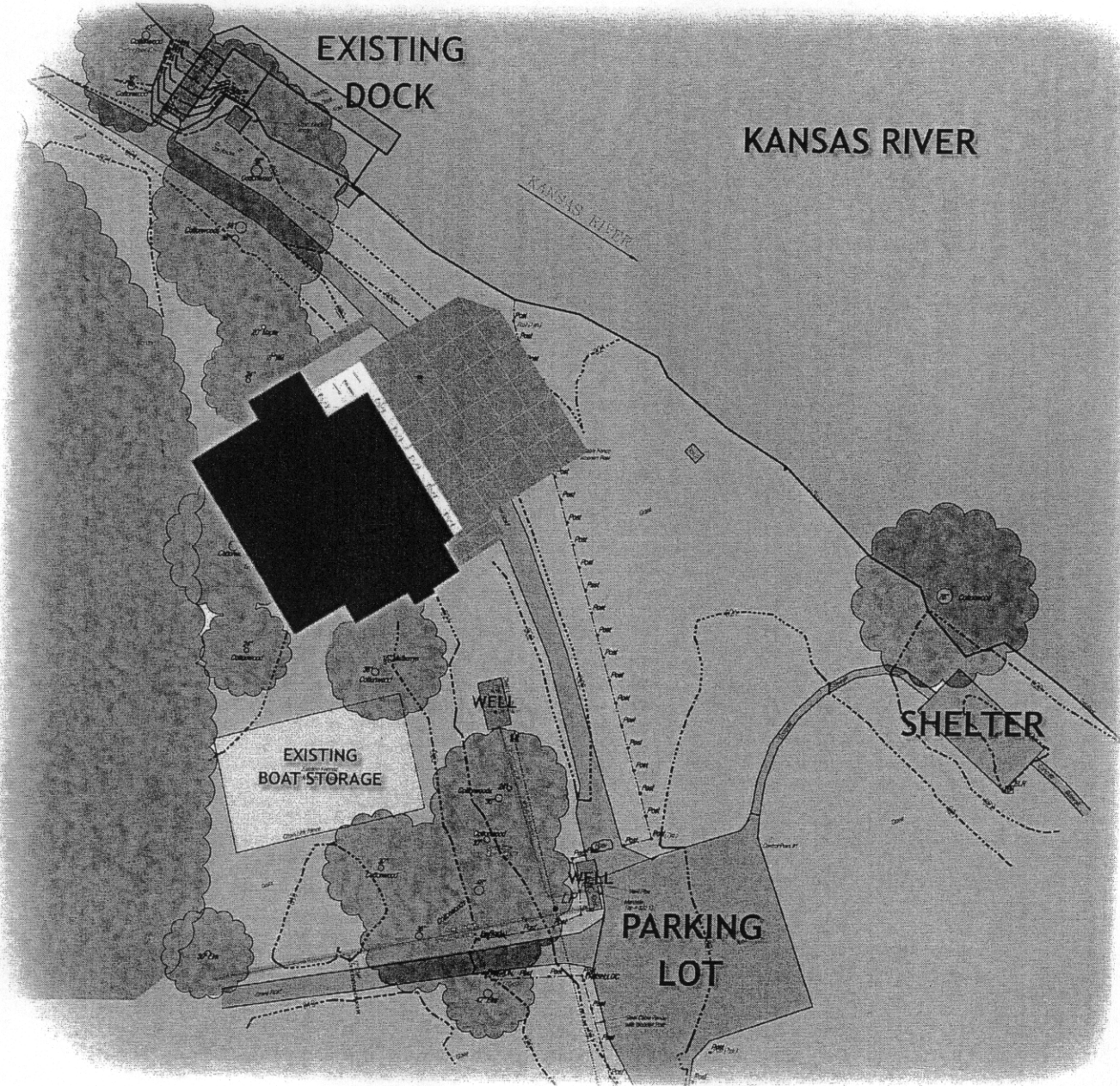
- U.S. Army Corps of Engineers- The Corps has indicated, in a letter dated March 13, 2007, that a permit authorization for this project would not be required.
- KS State Historic Society- Indicated in a letter, dated March 1, 2007, that their "office has no objection to implementation of the project."
- KS Department of Wildlife and Parks- The Department indicated in an email dated February 26, 2007, that no critical habitats occur in this portion of the river.
- KS Division of Water Resources- The department indicated, in a June 21, 2007 letter, that it would not require a permit for this project based upon its current location and site disturbance.
- Lawrence, Historic Resource Commission- The project was presented to the commission on June 21, 2007 and received approval with standard conditions.
- Pinckney Neighborhood Association- While this organization is not a required approval, our team met with the association and presented the project. The neighborhood association was extremely receptive and welcomed the project in Burcham Park.

# University of Kansas Athletics Boathouse



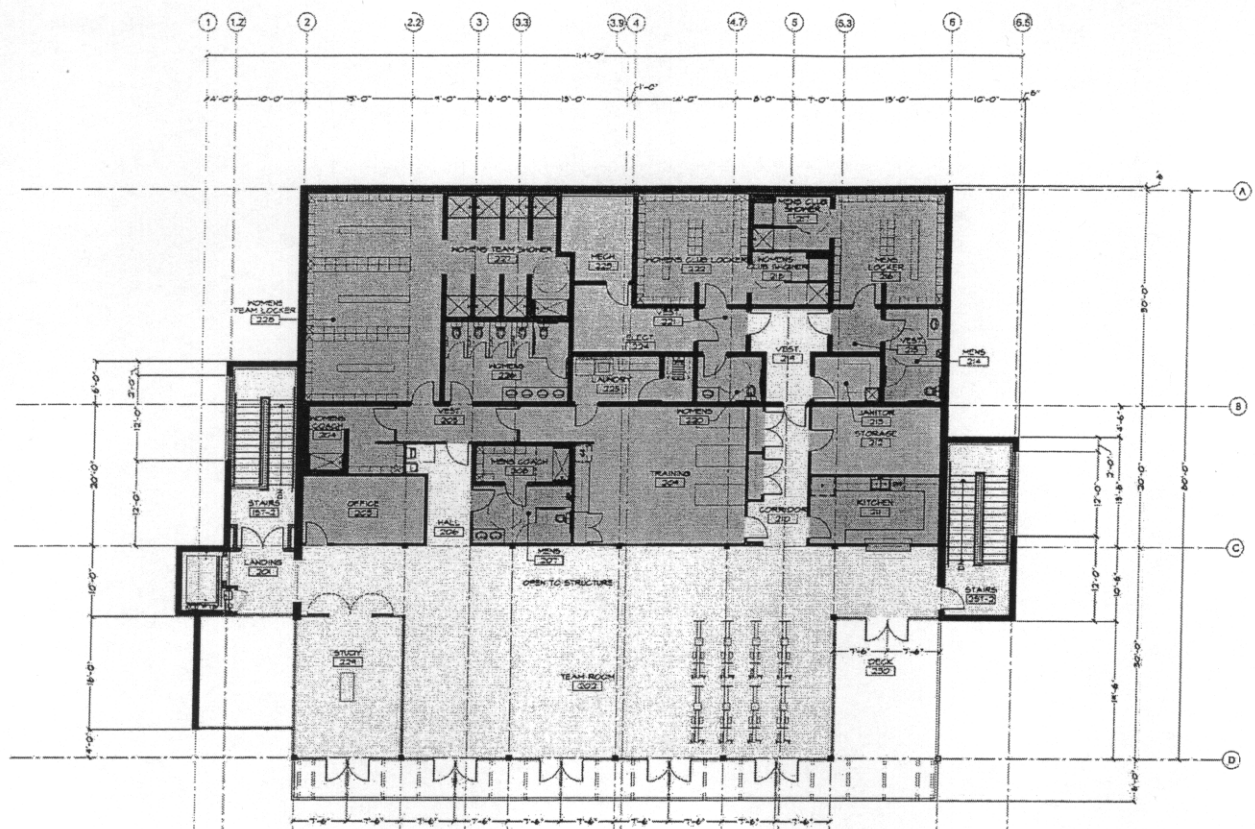
Site Map

# University of Kansas Athletics Boathouse

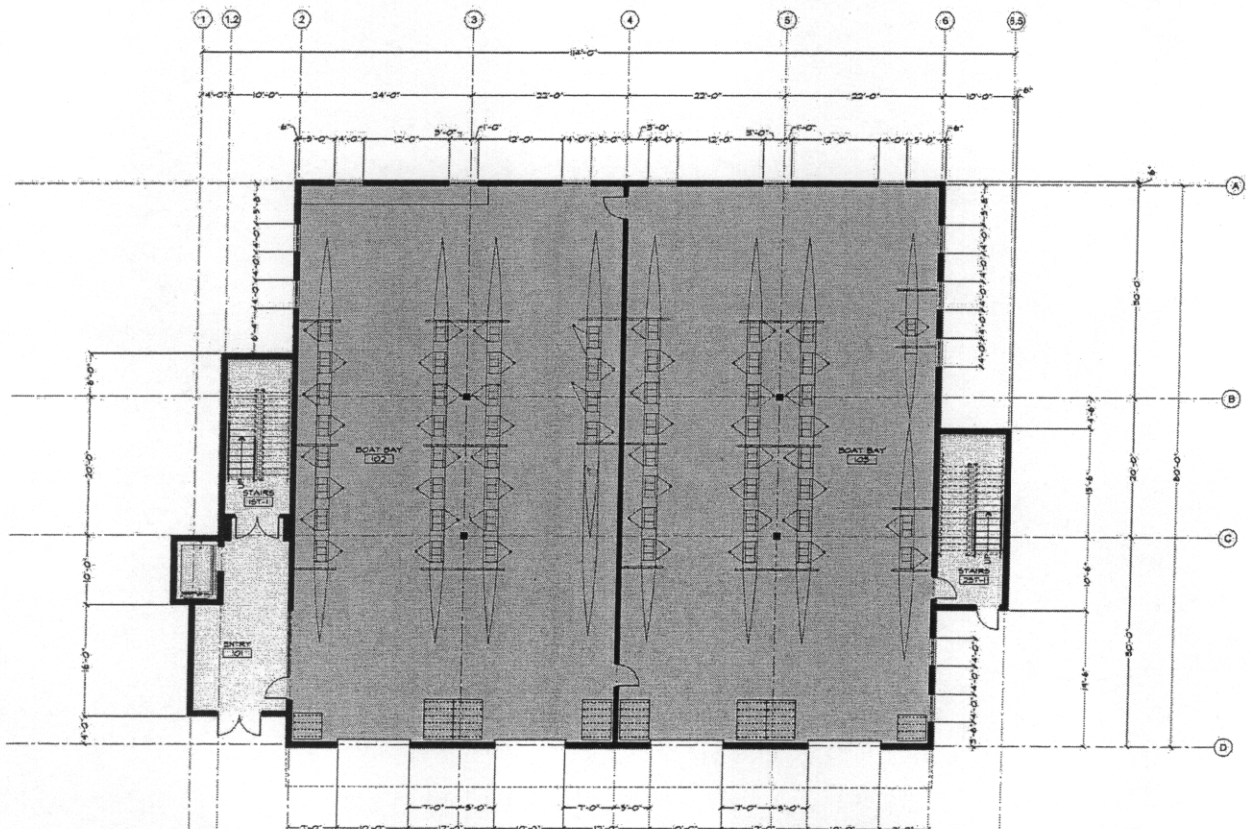


Site Master Plan



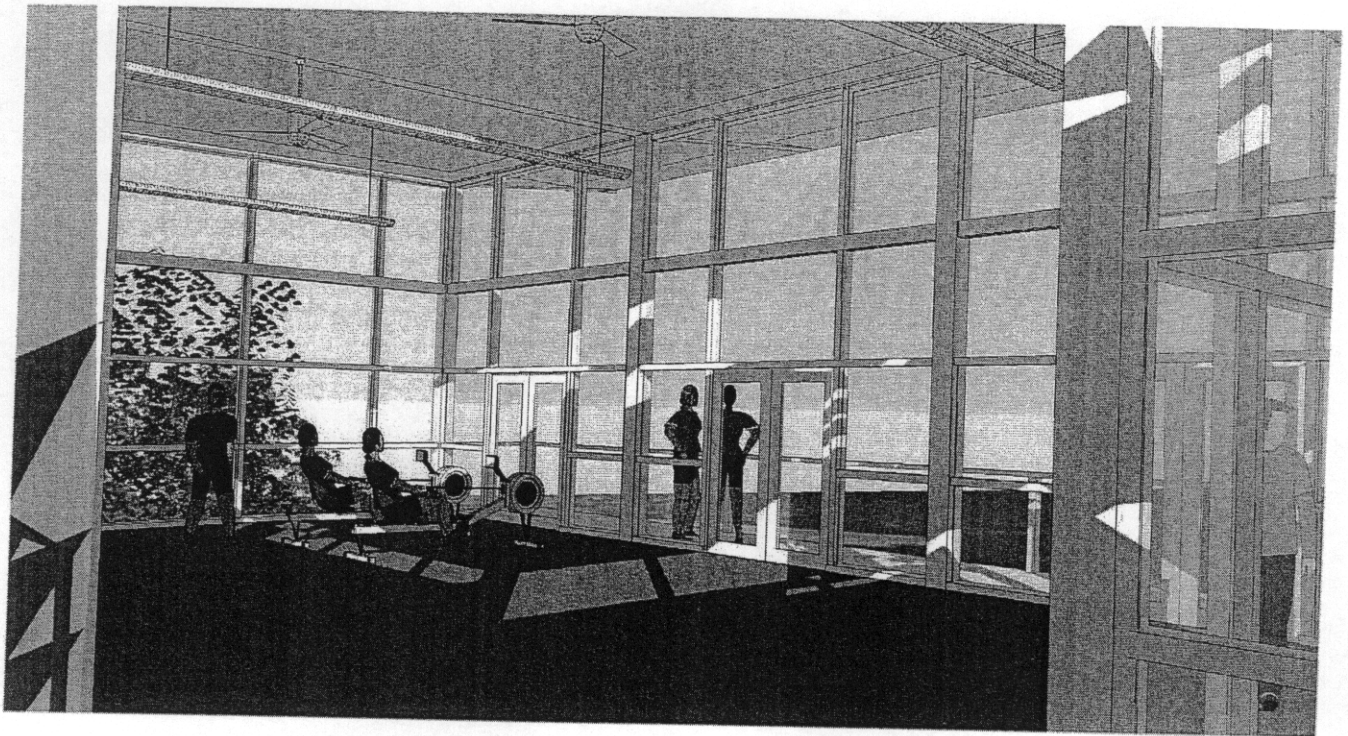


DRAWING: **SECOND FLOOR PLAN**

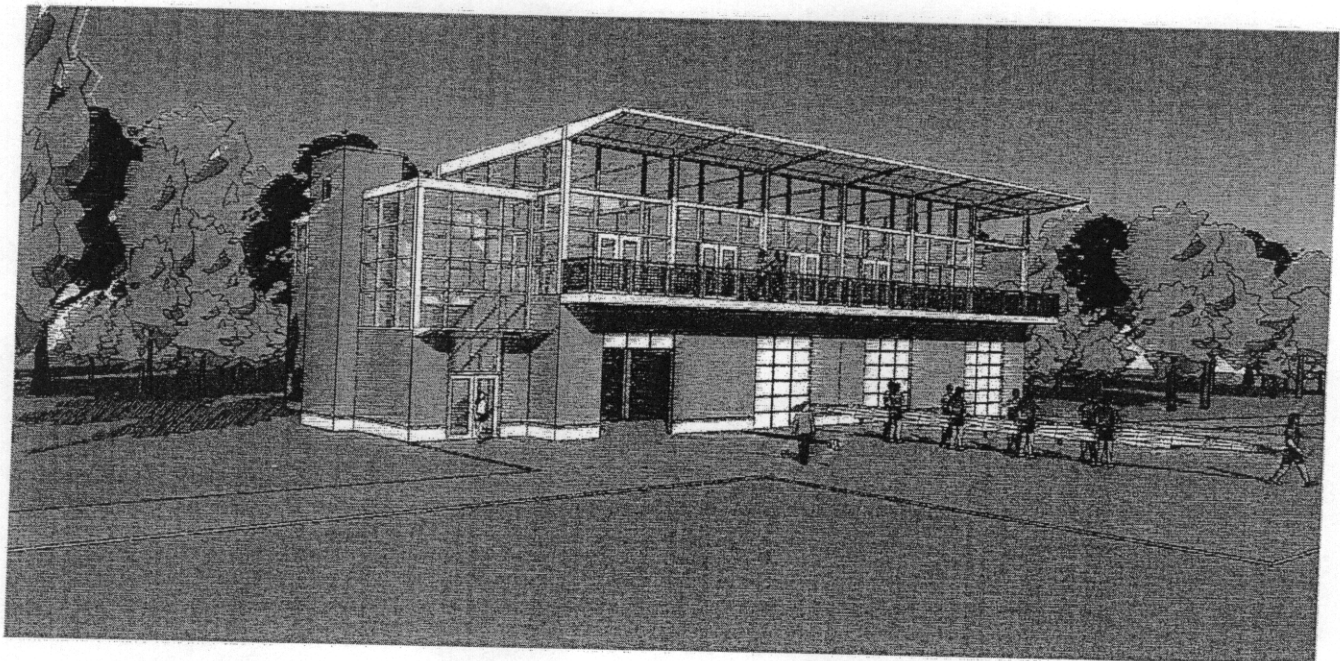


DRAWING: **GROUND FLOOR PLAN**





Interior Rendering



Exterior Rendering

# Memorandum

## City of Lawrence

### Legal Services Department

**TO:** David L. Corliss, City Manager

**FROM:** Toni Ramirez Wheeler, Director of Legal Services

**CC:** Debbie Van Saun, Assistant City Manager  
Ernie Shaw, Interim Director of Parks and Recreation Department

**Date:** July 12, 2007

**RE:** Ground Lease With KU Athletics Department For Facility in Burcham Park For KU's Rowing Teams

The City and the KU Athletic Department have had a longstanding cooperative arrangement under which the KU Rowing Teams have stored rowing equipment in Burcham Park in a secured and defined area.

The KU Athletic Department is proposing to build a \$6 million permanent facility in Burcham Park and is seeking the appropriate land use approvals. If the KU Athletic Department obtains the land use approvals, City staff will recommend the City Commission authorize the City Manager to enter into a lease agreement with the Athletic Department. Some of the significant terms of the lease agreement will include:

**Term** – The initial lease term will be 25 years, with options to renew.

**Nominal Lease Payments** – The City will charge the Athletic Department a nominal fee for the lease.

**Use** – The Athletic Department will be permitted to use the leased premises for its rowing teams and other athletic uses, including practices and meets. City staff also hopes to negotiate terms which will permit the City to use the boathouse when it is not being used by the Athletic Department.

**Indemnification** – Under the lease, the Athletic Department will hold the City harmless and indemnify the City against all claims, damages, and expenses of any kind imposed on or incurred by the City for an occurrence arising out of KU's use and occupancy of the Leased Premises.

**Insurance** – The Athletic Department will insure its facility and equipment in amounts and on conditions requested by the City.

**Repairs, Maintenance, and Utilities** – The Athletic Department will maintain the facility and pay for its own utilities.

City staff is currently reviewing a draft lease submitted by the Athletic Department. Staff is in agreement with many of its terms. We will forward the recommended lease to the City Commission for consideration after KU obtains the land use approvals.

Let me know if you need anything else.



## **Project Description**

### Introduction

Students at the University of Kansas voted on and passed a referendum to build a new boathouse in April of 2006. In late 2006, Toreanor Architects, in association with Peterson Architects of Cambridge, MA, had been selected to design the project. The new boathouse will be built in the City-owned Burcham Park in north Lawrence, Kansas.

### Program

The program for a boathouse is of a remarkably simple character, with only a handful of spaces under consideration. The building type virtually shakes down to a large storage space for shells, oars, and rigging; vertical circulation to the remainder of spaces on an upper floor, including a team room, minor storage space, offices, and locker rooms. The area of the storage space is roughly equal to the area required for the remainder of the program.

### Design Concept

The design concept that has been presented and approved is very simple and straightforward. The building has been sited to impact the environment of Burcham Park in a positive manner, making the park safer and preserving open space and views of the river to the greatest extent possible. Much thought and discussion was given to the building's orientation and placement. The building is nestled into a grove of mainly cottonwood trees at the far north end of the park and faces east-northeast, allowing the sun to reach the pavement of the boat staging area much of the day and also maximizing the views of the river.

The floor plans and forms of the building reflect the simplicity of the program and sensitivity to the site. A deck would be placed along the east face that allows views of the river from a raised position. To enhance security in the park and for the users of the building, as much glass as possible has been placed into the east face of the structure. The building will be situated in the trees in "repose" rather than as an "object" on the site.

### Materials, Components and Structural Systems

The foundation is likely to be a deep concrete pier/grade beam system bearing on rock approximately 60 feet down. A geotechnical investigation is underway and will be used to inform our design. It is currently presumed that the building will be built of load-bearing single-wythe masonry on the lower level with steel floor and roof framing above. The second floor would be concrete on steel deck. The design team intends to investigate precast concrete construction as well to see if it might be more cost-effective in such a simple structure.

Other exterior materials would include aluminum storefront or curtainwall systems with low-e glass. Roofing could either be metal or a membrane roof of the University's standard type.

Finishes of the interior of the building will be fleshed out in the Design Development phase of our work.

### Mechanical and Electrical Systems

It is currently our intention to provide rooftop-mounted HVAC systems, as the mechanical space designated will be filled with plumbing and electrical equipment. Exhaust from toilet rooms will be collected into a central exhaust system. Fuel for HVAC equipment will be electric, as natural gas will not be made readily available by the local provider.

Power will be brought to the building overhead to keep the service to the building out of the flood plain. The requirement for power will be quite high compared to similar facilities, as it will be used for heating, cooling, and water heating as well as for lighting and general use.

Project Schedule

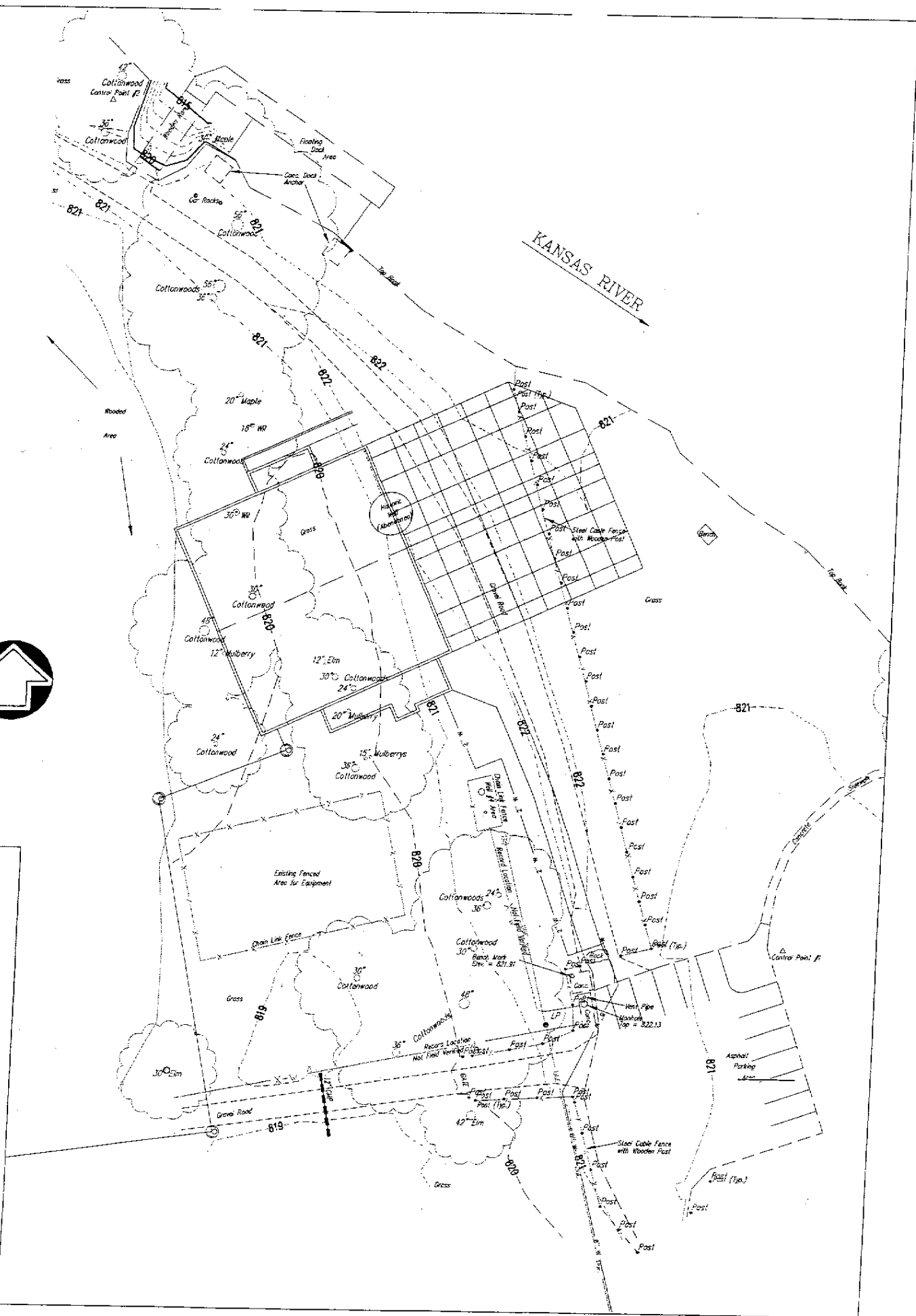
The project schedule completed in January of 2007 has been accelerated. Originally, it was thought that the U.S. Army Corps of Engineers would require Design Development documents and would then require 4 to 6 months to review the project. The project underwent a preliminary review and was found to not require a full 402/404 permit, meaning that the formal review was not required. The schedule has been shortened to eliminate that review, allowing occupancy earlier in the fall of 2008.



**NORTH**  
**SCALE: 1" = 50'**

**Landplan Engineering, P.A.**

**Civil Engineering  
Landscape Architecture  
Community Planning  
Surveying**





Received 7-17-17  
Civil Engineering  
Landscape Architecture  
Community Planning  
Surveying

## Landplan Engineering, PA

1310 Wakarusa Drive  
Lawrence, Kansas 66049

tele 785.843.7530  
fax 785.843.2410  
email info@landplan-pa.com

### KU Boathouse

Impacts of Planned Structure

Statement as to Hydrologic & Hydraulic Study / Wave Action

T. Jeffrey Martin  
KS P.E. 9976

The KU boathouse is being designed as a primarily elevated structure with boat storage on its lower level. The project has been reviewed by the Kansas Department of Water Resources and by the US Army Corps of Engineers. Approvals/no objection letters have been obtained from both agencies. As the structure is in the floodway, we understand, the City of Lawrence requires Hydrologic & Hydraulic Study relative to the impact of the structure relative to the flow of water when the Kansas River is at flood stage.

We have been in contact with the engineering firm that produced the cross sections for the model that is required for the Hydrologic & Hydraulic Study. They have given out copies to the following agencies, FEMA, City of Lawrence and DWR of Kansas. None of the agencies have copies of the study. The engineering firm has forwarded a copy of a model but not one directly correlated with FEMA data. We have, however, done an analysis and the following is a statement of our findings of the likely impact of the structure on the flow of water during flood stage on the Kansas River.

The structure is to be located partially in an area of forest (see attached exhibit Existing Tree & Shrub Coverage). That area is protected by existing forests to the north, which is the principal direction from which the river flows at that station of the river. The primary flow of the river is diverted around the northern portion of the park, even in flood stage, due to the forest, though the forest does become flooded. A full scale H&H analysis of the Kansas River at flood stage could not accurately reflect the proposed structure, as the impediments to flow are in a forest protected area and the additional impediments, if any, are de minimis. In other terms, the model is akin to a photograph and the resolution of such models is not to the accuracy of the scale of the building relative to the size of floodway/floodplain. The impediments to be removed are not in the model nor does the relative scale of the building lend itself to the model.

Thus, with respect to the City's requirements, this memorandum is intended to document the offsets being provided in the floodway. This is common when bridge approaches and other necessary structures are built in a floodway.

Construction of the boathouse will add and remove impediments to flow (see attached exhibits: New Structures Onsite and Existing Items to be Removed). Those to be added are associated with the pillars upon which the structure is to be built, the elevator shaft being installed to address ADA requirements, and lower-level exterior walls. Note that the exterior walls and any interior structures will provide for flow through the building on the lower level, which is the storage area. At the 100 year event the building's side presents an impediment of approximately 600 square feet netting out the vents for flow through. The measured trees to be removed total 197 inches, which translates to approximately 200 square feet of impediments at the 100 year event. Also to be removed is the fenced storage area, currently used for boats. This is a chain-link fenced area. As is common, chain-link fencing catches debris and acts as an impediment as was visible following recent flood events. The fence cross section to the 100 year event flow is roughly the same as that of the building, approximately 608 square feet assuming total debris blockage. In essence, the removal of fencing provides an offset for the walls, exterior and interior, of the boathouse's lower level. In addition, smaller brush and trees, not of a size to be noted on survey, will be removed. As such we are removing approximately 800 square feet of measured



impediments plus smaller trees and brush and adding only 600 square feet. Thus we anticipate that the combination of items to be removed; such as the fencing, brush, small trees, and noted larger trees; exceed the impediment to flow to be added by the boathouse.

The KU boathouse will provide minimal impact on flows, as the area is already impeded by the forest. Being in a forested area, the existing velocities through the area of construction are likely slower than other open areas in the floodway. Even without the offset of the impediments being removed and noting that the resolution of modeling does not address items of the scale of the impediments to be added and removed relative to the size of the river and the flows involved, one can logically anticipate no discernable net rise associated with this structure.

# Memorandum

## City of Lawrence

### Public Works

**TO:** Dave Corliss, Debbie Van Saun, Shelia Stogsdill  
**FROM:** Matt Bond, P.E. - City Stormwater Engineer  
**Date:** July 25, 2007  
**RE:** KU Boathouse

This memo provides a requested overview of the KU Boathouse project as it relates to current City Code and possible areas of concern due to the proposed location within the floodway of the Kansas River as designated by the Federal Emergency Management (FEMA) Flood Insurance Rate Map (FIRM).

#### **BOATHOUSE WITHIN FEMA FLOODWAY**

The applicant's proposal involves building a boathouse in the Floodway of Kansas River. According to the latest FIRM (November 7, 2001) the base flood elevation (BFE) for the proposed location is approximately 829.5 feet. According to recent topographic mapping the existing ground elevation varies between 820 and 822 feet for the proposed pad site. The applicant is conservatively using a BFE of 830 feet. In addition the proposed structure has a first floor elevation of 823.1 feet and a second floor elevation of 839.1 feet. The entire first floor of the proposed structure is to be cast in place reinforced concrete construction including the walls which will be supported by concrete piers extending to bedrock to withstand possible high flow velocities during flood events. The applicant has shown that flood vents will be used in the construction of the building which are to comply with FEMA guidelines. However there is a discrepancy between the details shown on the Special Use Permit and the architects elevation and plan drawings as to the actual number being used.

The floodplain development permit also proposes 750 yd<sup>3</sup> of fill. Clarification of the location and the amount of fill will need to be addressed. With regards to public safety of the occupants the event of the Kansas River rising rapidly without warning is minimal. Furthermore the following three boathouses are also in the planning stages of being located within the floodway in there corresponding geographic areas:

- Bethlehem, Pennsylvania (Lehigh University Rowing Team)
- Grand Rapids, Michigan (Grand Rapids Rowing Association)
- Concord, New Hampshire (The Friends of Concord Crew)

#### **NFIP & CRS PARTICIPATION**

The City of Lawrence is currently a participant in the National Flood Insurance Program (NFIP). The adoption and enforcement of floodplain management ordinances to reduce future flood damage makes NFIP participation possible. In exchange, the NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in the community.

In addition to inclusion in the NFIP the City of Lawrence is also participating in the Community Rating System (CRS). CRS is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted. The City of Lawrence entered the CRS on October 1, 2004. Only eight communities in the state of Kansas are listed on the CRS and only four are current. The City's present rating is a Class 8 which qualifies for a 10% discount.

The community's continued eligibility to participate in the NFIP is subject to audits from the Federal Insurance Administration. Intuitively it is logical to construct a boathouse near the river although it is unknown how the issuance of the requested Special Use Permit will be viewed by the Federal Insurance Administration during an audit.

### **CITY CODE**

Variances will need to be obtained for this project as they relate to the following sections of Chapter 20 Article 13 of the current City Code. Immediately following each code citation is the applicant's response and additional staff comments where applicable.

*Sec. 20-1204(b) Any encroachment, including fill, New Construction, substantial improvements, or other Development is prohibited within the Regulatory Floodway.*

A boathouse lends itself to its proximity to the water front. This unique structure is to be used for the purpose of interaction with the river itself and is not going to be used as a place of business nor a residence. The applicant understands that the structure will experience flooding and the resulting damage, clean up and repair of the facility will come at the applicants cost.

*Sec. 20-1309(g)(2)(i) The Board of Zoning Appeals may approve a variance from the flood protection regulations of Article 12 only after finding that the requested variance meets all of the following criteria:*

- a. a determination by the Board of Zoning Appeals that the variance is the minimum necessary, considering the flood hazard to afford relief;*  
"The existing boat storage area is 4,000 sq.ft. of gravel surface with a 6' chain link fence surrounding the existing boats. During high water the boats are removed from this area. The new facility will have approximately 8,000 sq. ft. and the boats will be stored inside during the high water."
- b. a showing of good and sufficient cause;*  
"The facility is required to be located next to the river for easy of access for the boats and rowers."
- c. a determination by the Board of Zoning Appeals that failure to grant the variance would result in an Unnecessary Hardship to the applicant, as that term is defined in Sec.20-1309(g)(1); and*  
"Failure to grant these variances would require that the existing facility storage remain. The University of Kansas Rowing Team or the City of Lawrence would not be able to enlarge or expanse the sport of rowing in this area."
- d. a determination by the Board of Zoning Appeals that the granting of a variance will not result in increased flood Heights, additional threats to public safety, extraordinary public*

*expense, create nuisances, cause fraud on or in victimization of the public, or conflict with existing local laws or ordinances.*

"Granting the variance would not increase the flooding height; )the building is being constructed with openings in the lower level that would allow the water to go thru the structure; additional threats to public safety; )the building has been located so that during rowing secession the rowers will be view both up and down stream; extraordinary public expense; )the construction cost of this facility are from private funding and no public funding is being utilized; create nuisance, cause fraud on or in victimization of the public; )the existing facility located in the same park has not cause the public problems; conflict with the existing local law or ordinances; ) the existing facility and new facility is not in conflict with existing laws or ordinances."

*Sec. 20-1309(g)(2)(ii) The Board of Zoning Appeals may approve a zoning variance from the flood protection regulations of Article 12 only after considering all technical evaluations, relevant factors, and standards specified in Article 12 and meeting the terms of K.S.A. 12-734. In addition, the following factors shall be considered:*

- a. the danger of injury from materials swept onto other lands;*

"This facility is being designed and constructed not to move down stream during the any high water."

- b. the danger of life and property due to flooding or erosion damage;*

"This facility will not add to the flooding problem or erosion damage in the future."

- c. the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual Owner or occupant;*

"This facility will not be susceptible to flooding being of concrete structure and elevated above the floodplain for the second floor. The first floor will have only boat storage; all utilities shall be elevated to the second floor above the base flood elevation. The facility will also not be occupied as a residence."

- d. the importance of the services provided by the proposed facility to the community;*

"This facility shall expand the knowledge of the citizen of the City of Lawrence of the Kansas River and the sport of rowing in this area."

- e. the necessity to the facility of a waterfront location, where applicable;*

"This facility can be located off the water front but the number of hours added to the rowing group would be large. The rowing team needs to be located next to the river to transport the boat to and from the river."

- f. the availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;*

"Other property within the area is available but the rowing team would be required to transport the boats across the railroad tracks and would add hours to the daily practice of the team."

- g. the compatibility of the proposed use with existing and anticipated development;*



"The existing use of the property is recreational and the add facility would allow other recreational uses of the existing park facility. These uses could be summer camps for the area kid's day use of the rowing facility and possible rental of the facility to private organizations."

- h. the relationship of the proposed use to the Comprehensive Plan and Floodplain management program for that area;*

"The Comprehensive Plan and Floodplain Management show this to be recreational usage in the future. The boat facility is a recreational use."

- i. the safety of Access to the property in times of flood for ordinary and emergency vehicles;*

"This area is accessible thru the existing park. The park controls the access to the park. If high water was going to happen the City of Lawrence would close the park access which closes off access to the boat storage facility. This would keep all the public from accessing this structure."

- j. the expected Heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and*

No response from the applicant was provided. Additional technical analysis should be provided to show expected water surface elevations as it relates to the construction of the boathouse. A base flood elevation would see a flood depth of 6.9 feet in relation to the proposed finished floor elevation and an approximate ten foot depth for the surrounding ground. Mean velocities would range between 6.7 and 9.7 feet per second (fps) according to the FIS. Duration and rate of rise would depend upon upstream Kansas River Basin inflows.

- k. the costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and Streets and bridges.*

"At this time cost of maintain for this facility shall be Kansas University and will be addressed in a lease agreement between the City of Lawrence and Kansas University."

## **SUMMARY**

Staff anticipates that all regulatory issues can be addressed. However it is still unknown how the issuance of a Special Use Permit (SUP) for the construction of the proposed boathouse will be viewed in an audit of the City of Lawrence's participation in the NFIP or CRS. The addition of fill as well as the structure itself need be modeled. Additional hydraulic information is needed to show that there is in fact **no rise** in the water surface elevation of the Kansas River. This will need to be shown in a hydraulic model. The discrepancy of the number of flood vents will also need to be addressed. Furthermore the applicant is fully aware that the location in question does flood and assumes all responsibility of liability, damages, repair and cleanup of the structure. Provided that the applicant clarifies the placement of fill to be used on site, uses the proposed flood proofing techniques outlined in the SUP, shows hydraulically that there is no net rise in the water surface elevation of the Kansas River and accepts the liabilities involved with locating in a floodway this project is recommended for approval.













-----Original Message-----

From: Alison Roepe [mailto:wind-walker@sbcglobal.net]

Sent: Monday, August 27, 2007 10:21 AM

To: Denny Brown

Subject: KU Boathouse in Burcham Park

To the Planning Commission:

I have several concerns about the proposed boathouse that KU intends to build in Burcham Park:

1. There are a number of very old, large Cottonwood, Willows and Mulberry trees that are in the proposed site.

I feel that it is important to consider the longevity of their presence in the park, and their contributions to the overall beauty of the park. This is a public park, first and foremost, with KU wanting to build a permanent structure that will be primarily for their use. Since there is plenty of space in the proposed area, couldn't the siting of the building move out from the trees so as not to destroy so many of them?

I spoke with Paul Patterson Friday, and he stated that Cottonwoods are often hollow anyway, and could be a detriment/hazard to the boathouse. The city recently cut down a huge Cottonwood at the entrance of the park, over 100 years old, and it was not hollow. I don't know how this could be determined on a living tree. There are a few examples of trees that have fallen, died of natural causes that are hollow, but it is merely speculation if a given tree might be hollow, and therefore a danger to the proposed boathouse. And there is root structure to consider as well with digging foundations.

2. Will this structure rise above the tops of the trees, and be seen from the entrance of the park? Burcham Park is one of the few parks in town without many manmade structures (except for the wells that are there for the water department). It would be great if there was an effort to make it blend with nature.

3. Is there any consideration to building this with "Green Materials." It is in a public park, and it would be a good statement for the city of Lawrence, KU and for people that come to the park to see that there are efforts to be more ecologically conscious, especially in a park?

4. Instead of the slab of concrete which will not blend with the natural landscape, is it possible to consider using a more natural looking stone (even if fabricated) which will drain better, and not be such an eyesore?

Thank You,

Alison Roepe

312 Indiana Street

Lawrence, KS 66044

785-832-1418