

Contact: Joan Racki

**REGISTER OF UNIVERSITY OF IOWA**  
**CAPITAL IMPROVEMENT BUSINESS TRANSACTIONS**

**Actions Requested:** Consider approval of:

1. The following actions for the **Medical Laboratories – Renovate 2<sup>nd</sup> Floor South** and **Bowen Science Building – Renovate 2-400 Core** projects:
  - a. Acknowledge receipt of the University's initial submission of information to address the Board's capital project evaluation criteria (Attachment A for the Medical Laboratories and Attachment B for Bowen Science);
  - b. Accept the Board Office recommendation that the projects meet the necessary criteria for Board consideration; and
  - c. Authorize permission to proceed with project planning, including the selection of Carlson Design Team for the Medical Laboratories project and Rohrbach Associates for the Bowen Science project.
2. Permission to proceed with project planning and the selection of Shive-Hattery, Inc. as the design professional for the **Utilities Distribution System – Replace Steam and Condensate Lines to UIHC Carver Pavilion** project.
3. The following actions for the **Hawkeye Tennis and Recreation Complex – Marching Band, Athletics and Recreational Services Indoor Turf Addition**.
  - a. Acknowledge receipt of the University's initial submission of information to address the Board's capital project evaluation criteria (see Attachment C);
  - b. Accept the Board Office recommendation that the project meets the necessary criteria for Board consideration; and
  - c. Authorize permission to proceed with project planning, including the use of the design-build-bridging process, with the understanding that appropriate criteria for selection of the design-build firm would be reviewed with the Board Office.
4. Revise the Board's previously granted permission to proceed with project planning for the **Oakdale Campus / UI Research Park – Construct Vivarium Facility** to include the use of the design-build-bridging process, with the understanding that appropriate criteria for the selection of the design-build firm would be reviewed with the Board Office.
5. Project description and budget (\$16,667,545) for the **Power Plant – Install Back-Up Power and Auxiliaries** project.

**Executive Summary:**

The University requests permission to proceed with project planning and the selection of Carlson Design Team (CDT) as the design professional for the **Medical Laboratories – Renovate 2<sup>nd</sup> Floor South** project, which would modernize 5,392 square feet of research laboratories and offices for the Department of Pediatrics. The estimated project cost of \$2 million would be funded by Treasurer's Temporary Investment Income (TTI) and Indirect Cost Recoveries (ICR) from grants and contracts. The CDT has successfully completed several recent and very similar renovations in this 85-year old facility, the location of which is shown in Attachment D.

The University requests permission to proceed with project planning and the selection of Rohrbach Associates as the design professional for **Bowen Science Building – Renovate 2-400 Core** project, which would modernize approximately 7,200 square feet of research laboratory space on the second floor of Bowen Science Building (see Attachment E for map) for the Department of Pharmacology. The estimated project cost of \$2.8 million would be funded by TTI and ICR from grants and contracts. Rohrbach Associates was the design consultant for the renovations of the 2-200 and 2-300 cores. The 2-400 core was originally included in that project, but was removed due to insufficient funds at that time. Rohrbach is most familiar with the building and building systems within the building and helped to establish the design layouts that will be utilized for this project.

The University requests permission to proceed with project planning and the selection of Shive-Hattery, Inc. as the design professional for the **Utilities Distribution System – Replace Steam and Condensate Lines to UIHC Carver Pavilion** project, which would replace existing steam and condensate lines serving the UIHC Roy Carver Pavilion, and the Wendell Johnson Speech and Hearing Center. The estimated project cost of \$4 million would be funded by utility renewal and improvement funds. The University reports that Shive-Hattery has extensive knowledge of the project site, serving as engineer of record for the Carver Steam Vault project as well as a sub-consultant on the UIHC Children's Hospital project. The location of the line is shown in Attachment F.

The University requests permission to proceed with project planning and the utilization of the design-build-bridging process for two projects: **Hawkeye Tennis and Recreation Complex (HTRC) – Marching Band, Athletics and Recreational Services Indoor Turf Addition** and the **Oakdale Campus / UI Research Park – Construct Vivarium Facility**. (Permission to proceed for the latter project using traditional methods was initially approved by the Board at its April 2012 meeting.) Board policy permits the use of alternative delivery methods other than the design-bid-build process. (Section 9.07F)

The first project would study and design an addition to the HTRC to consolidate indoor and outdoor practice/rehearsal needs of the Marching Band with similar space needs of Recreational Services and Intercollegiate Athletics to maximize efficient use of resources on the Hawkeye Campus. This project offers the opportunity to create a facility that would serve all three users. The Marching Band requires approximately 10,000 gross square feet of space for indoor sit-down practice, storage of marching band instruments and equipment, and support space. The project would also study the placement of an outdoor space (size of a football field) to accommodate marching practice. The immediate proximity of these functions is important to the daily operation of the Marching Band.

The proposed area of study is shown on Attachment G. The project would also take into consideration the need to preserve the existing housing storage facility, also on the site, until such time that this function is no longer needed at this location due to the planned replacement of Hawkeye Court and Hawkeye Drive apartments. The cost of this project, which could be phased, has not yet been determined. It would be funded by a combination of Athletics gifts/earnings, Recreational Services earnings, and TTI.

The University needs additional vivarium spaces to support health science research. The Construct Vivarium Facility project would construct a new research support facility at Oakdale to provide biosafety level 1 and 2 vivarium space and related support and administrative space; it would be coordinated with the proposed vivarium space fit-out project within the Pappajohn Biomedical Discovery Building, for which the Board also previously granted permission to proceed with project planning. The proposed 41,000 gross square foot facility is anticipated to cost \$31 million; it would be funded by Facility and Administrative Indirect Cost Recoveries, Medicine Gifts and Earnings, and TTI.

The design-build bridging method for these projects would give the University needed control over the critical early design decisions that most directly impact the budget and program. The University envisions that during the schematic design phase, the projects would be defined to allow Design-Build teams to compete to finish the design and construct the facility. The selection of the successful Design-Build team would follow a two-step process that considers qualifications, and then proposed designs, cost and schedules. The processes developed would be intended to meet the open and fair process sought by the Regents institutions and the construction industry.

An architectural firm would serve as a Design-Build Bridging consultant to provide a pre-schematic design and a set of Design-Build guidelines to be used to solicit Design-Build firms. The firm would also serve as the design-build bridging consultant, serving as the University's agent throughout the life of the project. Services would include evaluating Design-Build team qualifications and proposed design submissions; reviewing the design work of the successful team to ensure compliance with the Design-Build guidelines; and assisting with construction administration to ensure compliance with the construction contract. However, the design professional on each Design-Build team would serve as the architect of record.

The University has laid out the following benefits / suitability to using design-build bridging for these projects:

- **Schedule** – the demands for both facilities are immediate, and an earlier completion date would allow the University to begin beneficial use of the facilities as early as possible.
- **Budget** – there is significant concern that the Eastern Iowa bidding market will become more volatile as time passes and more and more construction contracts are awarded. The Design-Build delivery process would allow the University to lock into a contract amount much earlier than if the traditional approach were utilized.
- **Iowa Built** –conversations and meetings with highly qualified in-state general contractors and Master Builders of Iowa (construction trade association) indicate that a Design-Build delivery approach would attract many highly qualified Iowa firms that are not currently interested in bidding University work under the traditional design-bid-build method. Design-Build allows these firms to market themselves on a “best value” basis, which is consistent with their business approach with private owners.

- **Increased Competition** – recent University experience with major projects has seen limited competition, in many cases two or three firms. There is a concern that the market will become even less competitive as the capacity of these firms is reached.
- **Competitive Creativity** – under the Design-Build process, the University would have the benefit of multiple creative designs from which to choose the one that best meets its needs. The University would be in a position to make a recommendation as to the entity which would provide the best value.
- **Location** – the proposed vivarium facility would be built in the “back of house” service district of the Oakdale Campus. This location simplifies the architecture, relationship to neighboring facilities, parking and circulation, connection to utilities, and other logistical and functional challenges that are found with more central campus buildings.
- **Non-Public Facility** – while housing state-of-the-art complex animal care facilities, the vivarium project itself is less complex since it is a non-public facility with light traffic and less varied programmatic and occupancy loadings around which to design.
- **Complexity of Construction** – The indoor turf facility would be a large pre-engineered metal building covering an artificial turf practice field. The building will have components and building systems that are less complex than most University buildings; they would lend themselves well to a design-build approach, even if construction were phased.

The **Power Plant – Install Back Up Power and Auxiliaries** project, for which the University requests approval of the project description and budget (\$16,667,545), would provide four 2-megawatt natural gas / electric generators to be located at the site of the Power Plant above the 500-year flood level. The generators would provide black start power (process of restoring a power station to operation without relying on the external electric power transmission network) for the Plant, backup generation for critical research facilities, and backup power for other key utility / information technology communication loads. The project would be funded by Utility System Revenue Bonds. The location of the Power Plant is shown in Attachment H.

**Details of the Projects:**

**Medical Laboratories – Renovate 2<sup>nd</sup> Floor South**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed with Project Planning Initial Review and Consideration of Capital Project Evaluation Criteria		Sept. 2012	Requested Receive Report
Design Professional Selection - (Carlson Design Team, Iowa City)		Sept. 2012	Requested

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The Medical Laboratories Building was constructed in 1927. This project is a continuation of the renovations which occurred in past years to meet modern scientific research needs and to provide more efficient research space. The demolition and renovation include laboratory wall construction; renovation of ceiling and flooring; appropriate upgrades to the HVAC, plumbing, electrical and data services; and installation of laboratory casework.

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**Bowen Science Building – Renovate 2-400 Core**

<u>Project Summary</u>			
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed with Project Planning Initial Review and Consideration of Capital Project Evaluation Criteria		Sept. 2012	Requested Receive Report
Design Professional Selection - (Rohrbach Associates, Iowa City)		Sept. 2012	Requested

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Bowen Science Building, constructed in 1972, is one of the University's most intensely used research facilities. In recent years, it has undergone numerous renovations to meet modern scientific research needs and to provide more efficient use of space and energy. A project currently in progress will fully modernize the adjacent 2-200 and 2-300 cores; it is scheduled for completion in March 2013. The proposed project will complete the research cores within this section of the building. The demolition and renovation will include laboratory walls, ceiling, flooring, HVAC, plumbing, laboratory casework, and electrical and data services. Existing lab casework and counters will be salvaged and reused when feasible.

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**Utilities Distribution System – Replace Steam & Condensate Lines to UIHC Carver Pavilion**

<u>Project Summary</u>			
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed with Project Planning Design Professional Selection - (Shive-Hattery, Inc., Iowa City)		Sept. 2012	Requested Requested

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The existing steam line between Hawkins Drive and UIHC Roy Carver Pavilion is operating beyond its expected life and is failing. The new steam and condensate lines will increase the distribution system's reliability by providing redundancy for UIHC and West campus buildings, including the steam driven chillers in Chilled Water Plant 2.

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**Hawkeye Tennis and Recreation Complex - Marching Band, Athletics and Recreational Services Indoor Turf Addition**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed with Project Planning Initial Review and Consideration of Capital Project Evaluation Criteria		Sept. 2012	Requested Receive Report
Use of Alternative Delivery Method - Design-Build Bridging		Sept. 2012	Requested

The Marching Band used to practice during its fall season in a practice recital hall in the former School of Music facility. While the space minimally met the indoor rehearsal needs of the Marching Band, the School was located near the Park Road outdoor practice area, which was important for operational efficiency. Since the 2008 flood, the Marching Band has been using space in the former Museum of Art to maintain its proximity to the Park Road outdoor practice area; however, this space is less than optimal.

Locating new space specifically designed for Marching Band needs on the Hawkeye Campus provides indoor rehearsal space that is sufficiently large and acoustically appropriate for its needs, while being adjacent to outdoor marching space which can be built at the lowest possible cost. The site also affords direct roadway access to Kinnick Stadium on home football game Saturdays.

The requirements for indoor rehearsal space for the Marching Band are similar to the areas needed for additional indoor turf/activity space for both Recreational Services and Athletics. This project offers the opportunity to satisfy the functional needs of multiple University programs. Cold weather use of indoor turf space is critical for both Recreational Services and Athletics objectives; these needs are not currently being met. Since the Marching Band would primarily utilize the space during the fall, winter use by Recreation and Athletics would not be a conflict and would ensure efficient and year-round use of the facility.

**Oakdale Campus / UI Research Park – Construct Vivarium Facility**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed with Project Planning Initial Review and Consideration of Capital Project Evaluation Criteria		April 2012 April 2012	Approved Received Report
Use of Alternative Delivery Method - Design-Build Bridging		Sept. 2012	Requested

It is envisioned that the building would be a single-story facility with the ability to expand to address potential vivarium needs for the foreseeable future.

**Power Plant – Install Back Up Power and Auxiliaries**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed with Project Planning		Aug. 2011	Approved
Design Professional Agreement (PRVN Consultants, Muscatine) (Study through Preliminary Design)	\$ 207,000	March 2012	Not Required*
Design Professional Agreement (PRVN Consultants, Muscatine) (Full Design Services)	1,009,000	May 2012	Not Required*
Project Description and Budget	16,667,545	Sept. 2012	Requested

\*Approved by Executive Director, consistent with Board policy

The University is served by two electrical sub-stations: Substation L on the east campus and Substation U on the west campus. The proposed generators would be connected to Substation L and would be capable of feeding the Across Campus Tie to Substation U. They will thus become the main backup generators for two electric distribution loops serving critical research facilities, including the Pappajohn Biomedical Discovery Building, which is under construction. In addition, these generators will supply black-start capability for the Main Power Plant, and back-up power for the University Water Plant, the Information Technology Services communication hub located in the South Lindquist Building, and other key campus research facilities.

Project Budget

Construction	\$13,728,740
Planning and Design	2,108,772
Project Contingencies	830,033
<b>TOTAL</b>	<b><u>\$16,667,545</u></b>

Source of Funds: Utility System Revenue Bonds

Medical Laboratories – Renovate 2<sup>nd</sup> Floor South  
Evaluation Criteria

Since the project meets the Board's definition of a major capital project, the University has provided the following information in response to the Board's evaluation criteria.

Institutional Mission / Strategic Plan: This project renovates approximately 5,400 square feet of research laboratory space on second floor south, of the Medical Laboratories Building (ML) for the Department of Pediatrics, Carver College of Medicine. When completed, the renovated research space will be used to facilitate and enhance research among 4-6 faculty investigators in the area of pediatrics.

Research activities are one element of the Carver College of Medicine's threefold mission of providing patient care, education, and research. Bench-to-bedside research is an integral component of the Carver College of Medicine strategic plan and is also aligned with the UI Provost's vision of increasing extramural funding.

Other Alternatives Explored: The Medical Laboratories facility was constructed in 1927. Much of the infrastructure has been modified and upgraded over the years and improvements continue. The new model for laboratory design allows for flexibility and open communication between researchers. This model has proven successful in other Carver College of Medicine research buildings such as Carver Biomedical Research Building, Medical Education Research Facility, and the Pappajohn Biomedical Discovery Building now in construction.

Renovation is more practical and cost-effective than the alternative of building a new research building. Significant investments have been put into other portions of the Medical Laboratories Building and the University is committed to maintaining and caring for the facility. Relocation of the Pediatrics research laboratories to another building is not an option since there is no available space to accommodate this important research endeavor.

Impact on Other Facilities and Square Footage: This project will not result in the abandonment, transfer or demolition of existing facilities.

Financial Resources for Operations and Maintenance: The space is currently being maintained by Facilities Management, Building and Landscape Services from General Education Fund resources.

External Forces Justifying Approval: It is a stated goal of the Carver College of Medicine to rank in the top 20 research colleges of medicine in the country and to do this will require a significant increase in federally funded research programs. The quality of research space is critical for the College to recruit and retain high quality faculty with the capability to compete for limited extramural funding.

**Bowen Science Building – Renovate 2-400 Core  
Evaluation Criteria**

Since the project meets the Board's definition of a major capital project, the University has provided the following information in response to the Board's evaluation criteria.

Institutional Mission / Strategic Plan: This project will renovate approximately 7,200 square feet of research laboratory space in the Bowen Science Building (BSB) for the Department of Pharmacology, Carver College of Medicine. When completed, the renovated research space will be used to facilitate and enhance research among faculty investigators in the area of pharmacology and the training of undergraduate students, graduate students, and post doctoral fellows in this field and related research areas. The renovation is aligned with the Carver College of Medicine and University of Iowa research goals of being in the top ten of Public Universities for research funding.

Other Alternatives Explored: The Bowen Science Building was occupied in 1972. The 2-400 core on the second floor of the building was last modified in 1997 and is the last to be modernized for the scientific and research needs of the Department of Pharmacology. The current design does not provide for collaborative relationships among faculty, students and post doctoral fellows. This core is contiguous to the soon-to-be completely renovated 2--200 and 2-300 cores.

Relocation of this single core would not be practical for the department. The three cores will share common space – conference room, break room, autoclave room, and behavioral lab space.

The original program and design included the renovation of Cores 2-200, 2-300, and 2-400. Due to budgetary constraints, the renovation of the 2-400 was postponed.

This renovation will complete the original renovation goals for the Department of Pharmacology.

Impact on Other Facilities and Square Footage: There will be no change in square footage as the project involves the renovation of existing laboratories.

Financial Resources for Construction Project: Treasurer's Temporary Investment Income (TTI) and Indirect Cost Recoveries from grants and contracts.

Financial Resources for Operations and Maintenance: This space is currently being maintained by Facilities Management, Building and Landscape Services from General Education Fund resources.

External Forces Justifying Approval: The project will enhance the research mission of the Carver College of Medicine and the University of Iowa and will help to meet the following goals: 1) accommodate the recruitment of new faculty, 2) retain faculty capable of competing for extramural research funding, 3) provide state of the art research facilities, and 4) sustain the commitment to training the next generation of scientists.

Hawkeye Tennis and Recreation Complex -  
Marching Band, Athletics and Recreational Services Indoor Turf Addition  
Evaluation Criteria

Since the project meets the Board's definition of a major capital project, the University has provided the following information in response to the Board's evaluation criteria.

Institutional Mission / Strategic Plan: This project will study and design an addition to the Hawkeye Tennis & Recreation Complex (HTRC), to address needs of the Marching Band, Recreational Services and Athletics. The area of study will target development of the space surrounding the HTRC and will maximize efficient use of resources on the Hawkeye Campus. The University plans to consolidate indoor and outdoor practice/rehearsal needs of the Marching Band with similar space needs of Recreational Services and Intercollegiate Athletics. This project offers the opportunity to create a facility that will serve all three users on the Hawkeye Campus. The Marching Band requires approximately 10,000 gross square feet of space for indoor sit-down practice, storage of marching band instruments and equipment, and support space. The project will also study the placement of an outdoor space (size of a football field) that accommodates marching practice. The immediate proximity of these functions is important to daily operation of the Marching Band.

Recreational Services has high demand for additional indoor turf space to be utilized by Sports Clubs and Intramural Sports programs. Sports teams such as soccer, rugby, lacrosse, and baseball clubs would make use of the facility. The department of Athletics also has need for additional indoor turf space for various sports within their program, many of which are located at or near the Hawkeye Campus.

The plans for this project will explore both scope and timing for an addition to the HTRC that will be shared to serve the needs described above. The project will take into consideration the need to preserve the existing UI Housing storage facility, also on the site, until such time that this function is no longer needed at this specific location due to the planned replacement of Hawkeye Court and Hawkeye Drive apartments.

Other Alternatives Explored: In addition to space needs for the Marching Band, both Athletics and Recreational Services are in need of additional indoor turf space to serve activities that are primarily occurring on the Hawkeye Campus. Increased participation in Recreational Services activities by UI students, combined with Athletics' need to provide practice space on a year-round basis have strained their collective abilities to meet the demand for indoor/turf activity space. The project location is ideal for all of the projected user groups. Access to the facility is available via University Cambus and there will be adequate parking adjacent to the facility. Constructing the facility as part of the existing Hawkeye Tennis and Recreation Complex will allow a point of central control for Recreational Services, which will monitor and operate the facility.

Impact on Other Facilities and Square Footage: The new facility may require phasing to account for the existing Housing Services Building which sits directly east of the current complex. Programming of the new facility, and its phases, will address these issues and will be coordinated with the ongoing investigation into the replacement of significantly outdated Hawkeye Court and Hawkeye Drive apartments.

Financial Resources for Construction Project: A combination of Athletics gifts/earnings, Recreational Services earnings, and Treasurer's Temporary Investment Income (TTI).

Financial Resources for Operations and Maintenance: Athletics and Recreational Services will share in the funding of continued operation of the building, extending the arrangement already established for the Hawkeye Tennis & Recreation Complex.

External Forces Justifying Approval: The Marching Band used to practice during its fall season in a (practice) recital hall in the former School of Music. The space was used by the School of Music for various ensemble practices, yet was undersized for the needs of the Marching Band. Although the space minimally met the indoor rehearsal needs of the Marching Band, the School was located near the Park Road outdoor practice area which was important for operational efficiency. Since the flood, the Marching Band has been using space in the former Museum of Art to maintain the proximity to the Park Road outdoor practice area, although this space is less than optimum for indoor practice space for a large marching band.

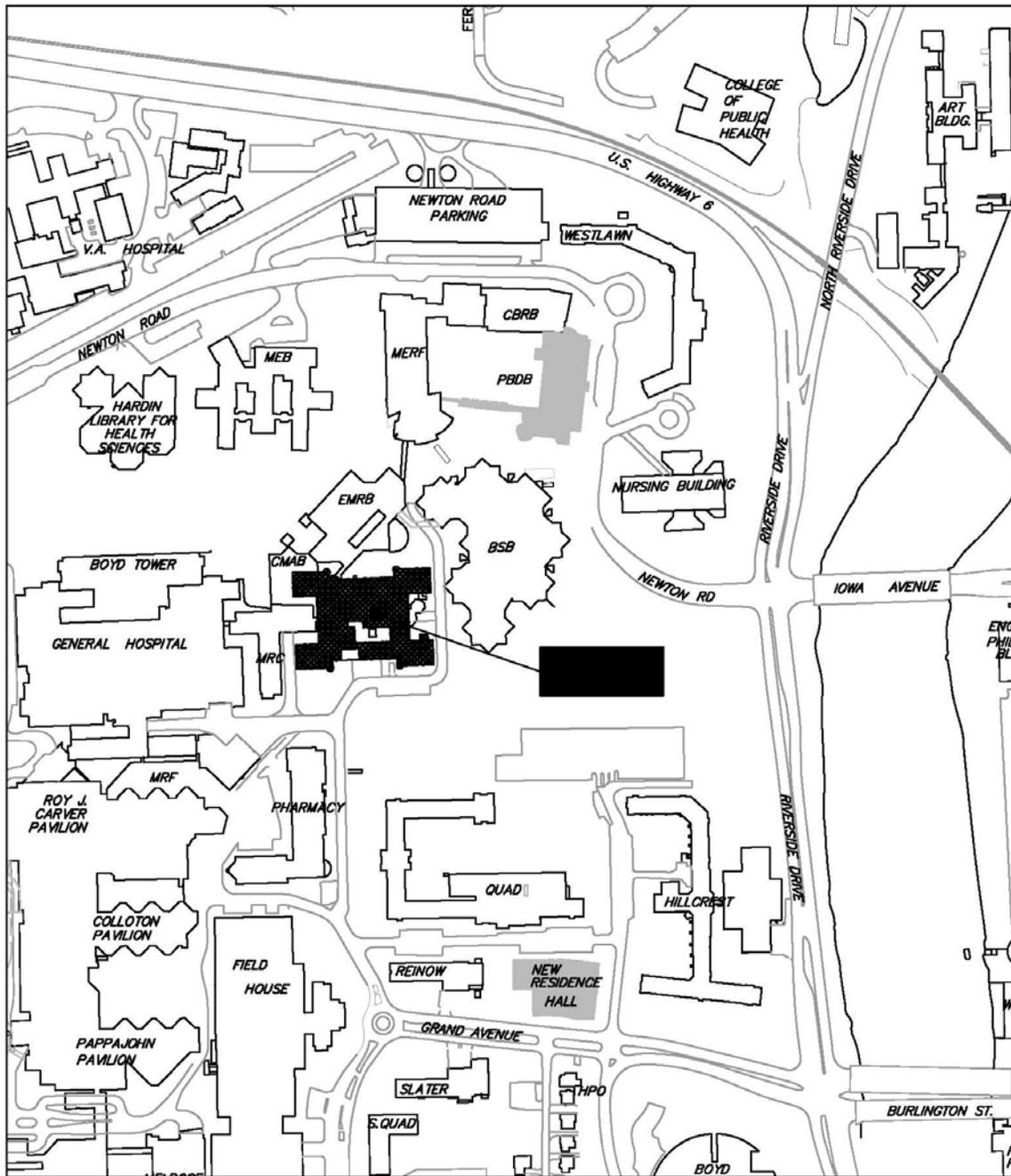
Locating new space specifically designed for Marching Band needs on the Hawkeye Campus provides indoor rehearsal space that is sufficiently large and acoustically appropriate for the Marching Band's needs, and is adjacent to outdoor marching space which can be built at the lowest possible cost outside of the main campus area. The site also affords direct roadway access to Kinnick Stadium on home football game Saturdays.

The indoor rehearsal space requirements of the Marching Band are similar to the space requirements needed for additional indoor turf/activity space for both Recreational Services and Athletics. This project offers the opportunity to satisfy the functional needs of multiple University programs.

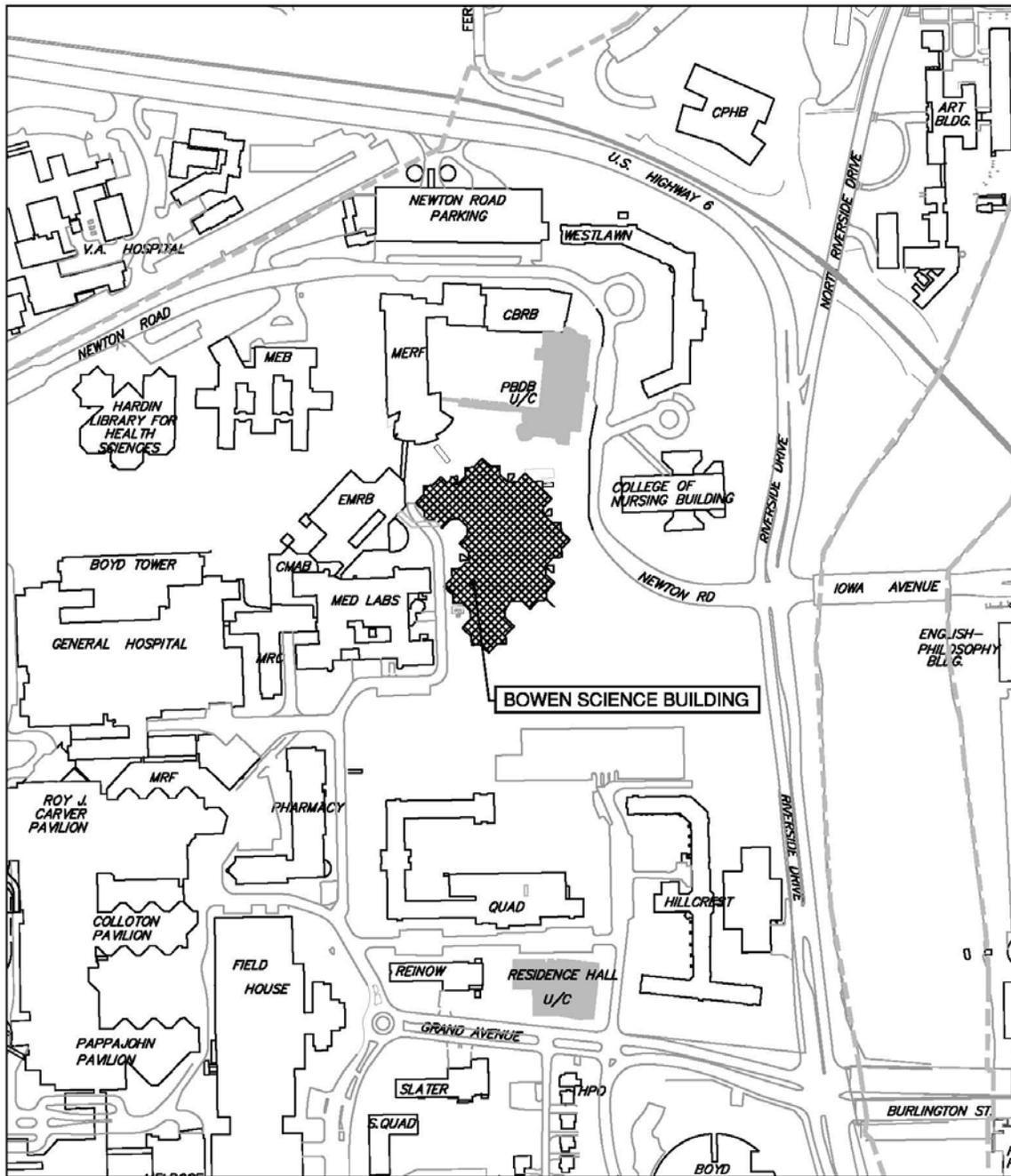
Cold weather use of indoor turf space is critical to the success of both Recreational Services and Athletics objectives and these needs are not currently being met. As the Marching Band would primarily utilize the space during the warmer temperatures in the fall, winter use by Recreation and Athletics will not conflict with needs of the Marching Band, and will ensure efficient and year-round use of the facility.

This new project will allow the University to provide more programs that offer student opportunities for learning, leadership development, social interaction, communication, and a sense of belonging. All these attributes are known to be results of participation in Sport Clubs, Intramural Sports, and Academic Physical Education classes.

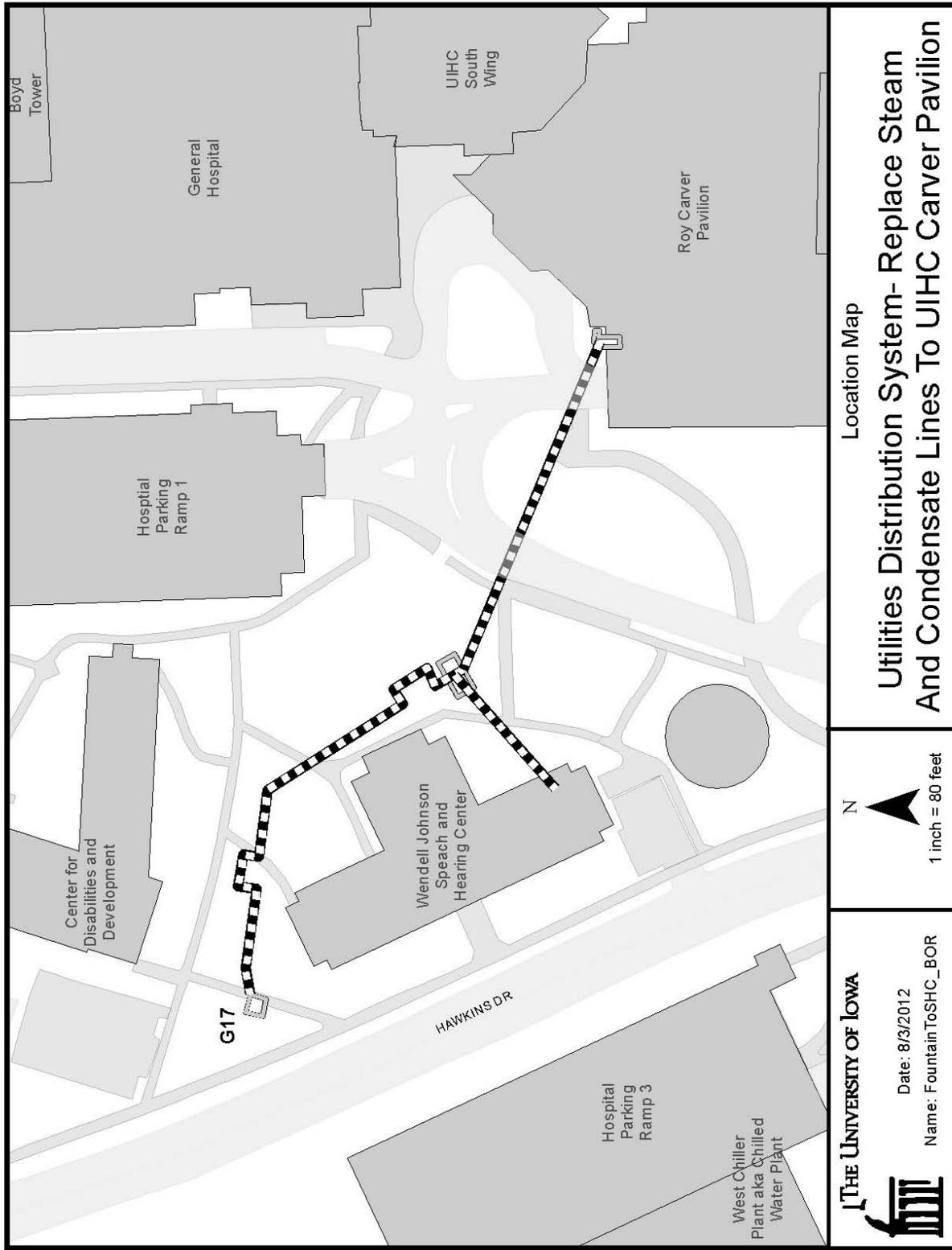
Intramural Sports programs are turning student teams away in the indoor soccer leagues due to limited access to indoor turf space. Academic classes within the Health & Physical Activity Skills Program are in need of more space to accommodate the increasing student demand.



 <p><b>THE UNIVERSITY OF IOWA</b> Plotted: July 13, 2012 MedLab_0459501</p>	<p>N</p>  <p>Scale: 1" = 300'</p>	<p>LOCATION MAP</p> <p><b>Medical Laboratories - Renovate 2nd Floor South</b></p>
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 <p><b>THE UNIVERSITY OF IOWA</b> # 0429301 Plotted: July 16, 2012 BSB-2-400_Core.dwg</p>	<p><b>Legend</b></p> <p>--- University Property Line</p>	<p><b>N</b></p>  <p>Scale: 1" = 300'</p>	<p><b>LOCATION MAP</b></p> <p><b>Bowen Science Building</b> <b>Renovate 2-400 Core</b></p>
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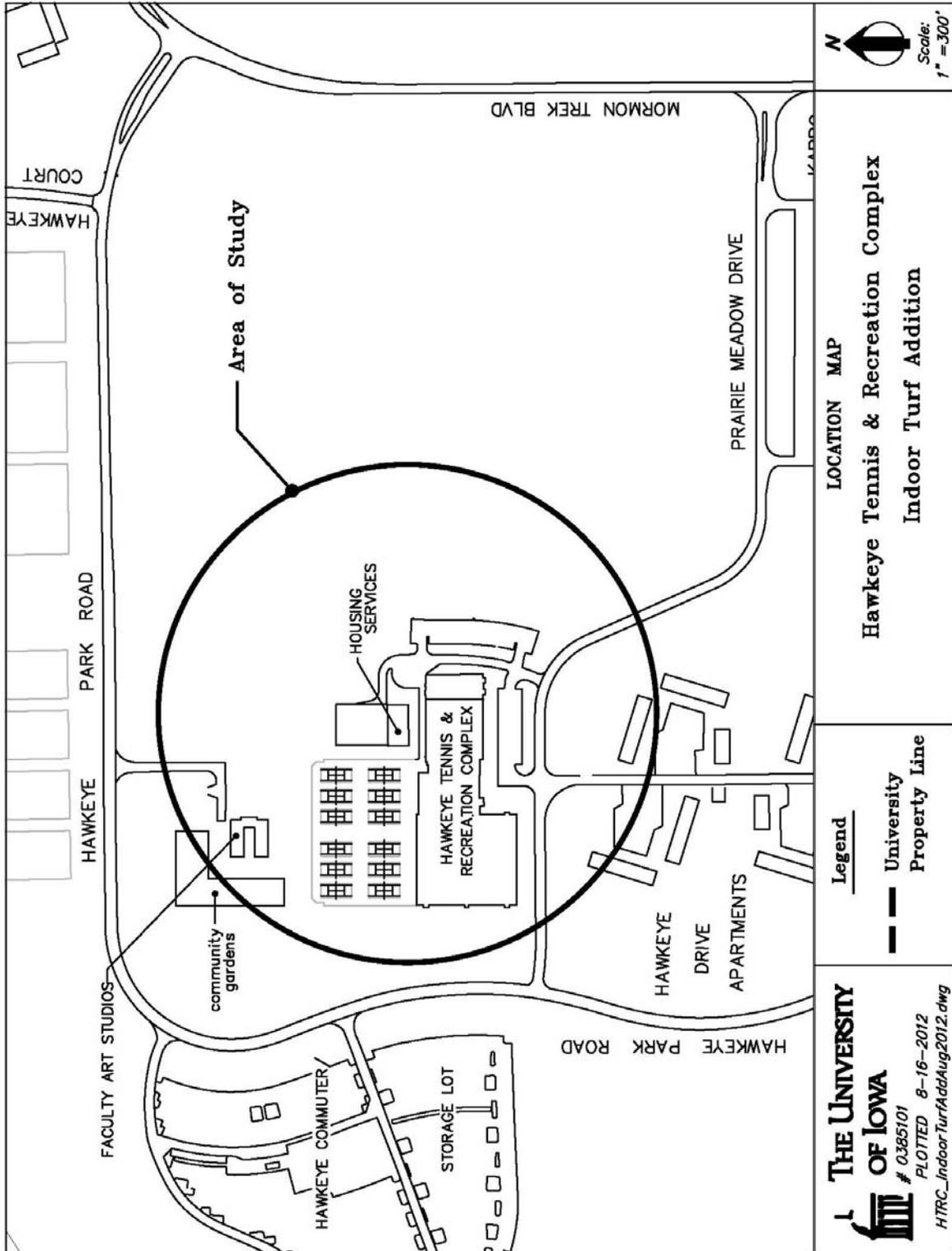


Location Map  
Utilities Distribution System- Replace Steam  
And Condensate Lines To UIHC Carver Pavilion

N  
1 inch = 80 feet

**THE UNIVERSITY OF IOWA**  
Date: 8/3/2012  
Name: FountainToSHC\_BOR

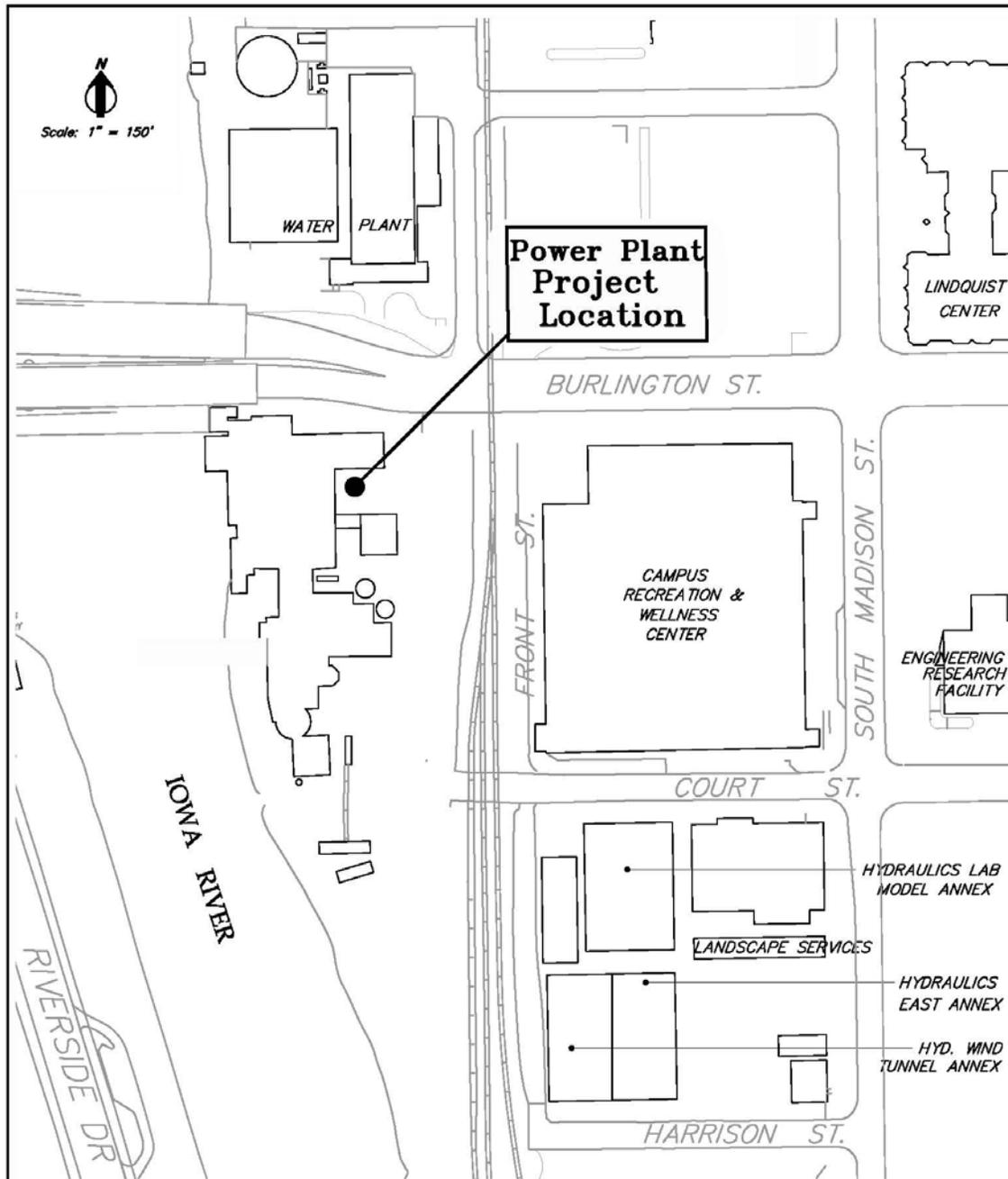




**LOCATION MAP**  
**Hawkeye Tennis & Recreation Complex**  
**Indoor Turf Addition**

**Legend**  
 — University  
 - - - Property Line

**THE UNIVERSITY OF IOWA**  
 # 0385101  
 PLOTTED 8-16-2012  
 HTRC\_IndoorTurfAddAug2012.dwg



 <p><b>THE UNIVERSITY OF IOWA</b> # 0353801 Plotted: May 17, 2012 PP-BackUpPower_0353801_May17.dwg</p>	<p><b>Location Map:</b> <b>Power Plant – Install Back Up Power and Auxiliaries</b></p>
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