



Facilities, Planning, & Operations Committee

May 2017

May 11, 2017

10:15 am - 12:15 pm

West Committee Room, McNamara Alumni Center

FAC - MAY 2017

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(Twin Cities Campus)

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Final Project Review: Intercollegiate Athletics Track and Field
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BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities, Planning & Operations

May 11, 2017

AGENDA ITEM: Risk Management in the Acquisition of Real Estate

Review **Review + Action** **Action** **Discussion**

This is a report required by Board policy.

PRESENTERS: Michael Berthlesen, Interim Vice President, University Services
Michael Volna, Associate Vice President and Interim Assistant CFO

PURPOSE & KEY POINTS

The purpose of this item is to review an analysis of contract liability and the lessons learned following the acquisition and clearing of the Electric Steel and Mathisen Kurth elevator properties in late 2016 and early 2017. The item will also include a discussion of potential areas of improvement identified by the analysis.

Acquisition Process

When the University initiates or approves exploration of a property acquisition, the property owner is contacted in an attempt to put together the business terms of a purchase. Two appraisals are obtained, with the University's goal for the purchase price not to exceed the average of the two. Following negotiation, the property owner and the University sign a purchase agreement. This agreement includes the option to terminate if assessment finds the property unacceptable (typically due to environmental or title issues) and includes a clause that the purchase is subject to Board approval if the price is over \$1.25 million and/or the parcel is greater than 10 acres and subject to concurrence (advisory) by the Minnesota Legislature.

Environmental due diligence begins at this stage. The University has a number of firms under contract on annual basis, the result of a request for proposal process every five years. Each campus typically uses local firms.

A Phase I investigation is an industry standard. It looks at ground and ground water environmental conditions, not building materials. (A limited hazardous building assessment may be part of Phase I, though it is not standard.) Both University Real Estate and University Health and Safety review the consultant report, and discuss next steps and the Phase I findings with the consultant. Based on that discussion, a Phase II assessment may be ordered.

Phase II is a more in-depth assessment involving digging (potholing or trenching) to pull samples for external lab review. The consultants use their environmental expertise to determine the scope of Phase II based on Phase I findings, with the University giving final approval. A Phase II

assessment is non-standard in scope. It is important to note that this phase is still purely environmental in range, and is often expedited to meet the timing of the purchase agreement.

Purchases take two tracks. If the University intends to keep and use buildings on the property, Capital Planning and Project Management undertakes an assessment of structures, systems, and mechanicals. Included in that assessment is an examination of building condition and function (sometimes done internally, sometimes outsourced) and hazardous building materials. One of the challenges is the accuracy of these assessments given the non-destructive testing being done. If the University desires cleared land, the practice is to stipulate that as a condition of the purchase agreement wherever possible. This can include verifications on permits pulled from local jurisdiction, location where debris was disposed, and evaluation of land for anything left behind.

When all due diligence is complete for properties over \$1.25 million and/or 10 acres, the Board reviews and acts on purchase agreement terms and conditions prior to closing. All purchases are forwarded to the Minnesota Legislature for required notification and requested concurrence.

Areas of Improvement

Several areas of improvement to this process were identified. They include:

1. Develop a clearly defined hazardous materials assessment process for structures the University intends to demolish upon closing.
2. The institution should not accept assessments commissioned by third parties.
3. A re-evaluation of the University standard for remediation of acquired land, including whether to clean property to prepare for all possible future uses.
4. Clearer communication of unknown risks at time of Board action, including potential areas for additional cost exposure.

BACKGROUND INFORMATION

A timeline of major events leading to the acquisition and clearing of the Electric Steel and Mathisen Kurth elevator properties are listed below:

- February 2015: Athletes Village schematic design approved, committing the University to displacing the practice track facility.
- May 2015: Feedback from Regents leads to the exploration of locating the track on the East Bank if possible and the potential acquisition of necessary land.
- September 2015: Intercollegiate Athletics announces intention to construct competition level track and field facilities on East Bank with a summer 2018 opening.
- November 2015: University acquires the Electric Steel property and structures, and begins a historical study.
- April 2016: Existing Recreation Sports site selected for track and field facilities.
- September 2016: University acquires land necessary to accommodate relocation of Recreation Sports bubble and fields (Mathisen Kurth elevator property).
- November 2016: Hazards identified include asbestos in roofing, prior demolition debris (some containing asbestos); soils testing engineer recommends full removal of concrete foundations and replacement of soil.
- December 2016: Preliminary abatement and mitigation costs for elevator properties are refined, the need for additional funds becomes clear, and options to reduce costs are explored.
- February 2017: Board approves additional funding to address contamination and revised demolition requirements at elevator properties.

REAL ESTATE ACQUISITION AND ASSESSMENT PROCESS

1. INITIATION

Senior Leadership initiates or approves exploration of property acquisition; property owner contacted in attempt to put together business terms of purchase, request access for appraisers

2. APPRAISAL AND NEGOTIATION

Two appraisals are obtained, with the University's goal that purchase price should not exceed the average of the two appraisals

Purchase agreement is signed, typically allows 60 days to conduct due diligence

4. FINAL ASSESSMENT

If the U intends to keep or use building/s on site, an assessment is done to determine building condition and function; may include a limited hazardous building materials investigation

If the U desires cleared land, purchase agreement will specify property owner to demolish structures prior to closing; in instances where this is not possible, a hazardous building materials investigation is completed to inform demolition scope and cost estimates

3. ENVIRONMENTAL DUE DILIGENCE

Phase I is an industry standard process, which examines ground and groundwater environmental conditions (not building materials); results of Phase I may be sufficient, or they may lead to a Phase II

Phase II is more in-depth and with a scope defined by the findings of Phase I; typical techniques include digging, potholing, and lab analysis

5. BOARD OF REGENTS APPROVAL

For properties over \$1.25 million and/or 10 acres, purchase agreement terms and conditions forwarded to Board of Regents for review/action prior to closing and to the Minnesota Legislature for required notification and requested concurrence

Risk Management in Real Estate Acquisition

Board of Regents Facilities, Planning, and Operations Committee
May 11, 2017



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Questions Raised in February

- Is this property being cleaned to standard, or to a lower level?
- What contingencies are included in real estate projects?
- Was investigation conducted internally or contracted?
- What is obligation of contracted investigators to explore reasonable risk?
- What's the standard we should expect?
- Review timing of these decisions and how one decision compels another
- How can risks like these be shared with the seller?
- What liability or accountability do external parties have?



Stages in the Acquisition Process





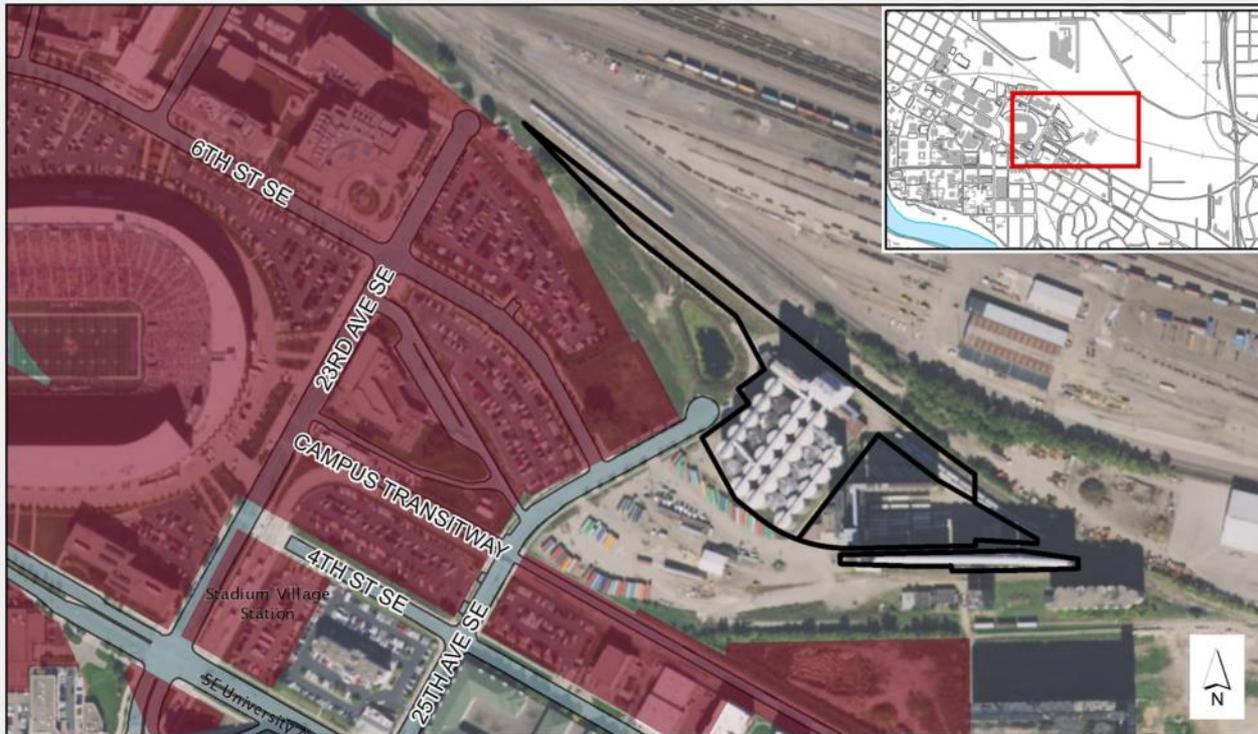


Current Risk Controls

Transaction or Assessment Type	Risk
Project-specific purchase	↑
Market conditions	↕
Two appraisals	↓
Phase I Environmental Study	↓
Phase II Environmental Study	↓
Structures Assessment	↕
Land cleared prior to closing	↓



Site Map





Unique Factors at Elevator Sites

- Time pressure on delivery of Track project
 - total costs estimated, not fully known at time of approval
- Prior owner unable to obtain demolition permit for ESE
 - transferred risk of unknowns from seller to U
- Competing offer on Mathisen property
 - limited ability to renegotiate
- Buried debris scattered, difficult to find with sampling
 - removal required due to nature of reuse



Process Analysis and Recommendations

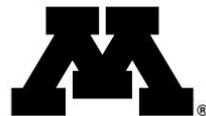
- ✓ Works well for acquisition of cleared land or with structures the University intends to retain and use
- ✗ Need for clearly defined process for acquisition of property with structures the University intends to demolish upon closing
- ✗ Do not accept assessments commissioned by third parties
- ✗ Evaluation of standard for remediation of acquired land
- ✗ More clear communication of unknown risks at time of Board action



Next Steps

- Finalize and implement processes to address identified deficiencies





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BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities, Planning & Operations

May 11, 2017

AGENDA ITEM: The Internet of Things in University Operations

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Bernard Gulachek, Interim Vice President & CIO
Kemal Badur, Senior Director, OIT Infrastructure and Operations
Jeffrey Davis, Assistant Director, Energy Management

PURPOSE & KEY POINTS

Ever-shrinking computers and ubiquitous networks have made it possible to embed interconnected computers into everyday objects, forming the Internet of Things (IoT.) The purpose of this item is to discuss the impact of IoT on the University.

IoT technologies are used in a wide variety of areas:

- Consumer devices such as refrigerators, thermostats, etc.
- Industrial or enterprise devices used in building controls and energy management.
- Research applications in sensors, drones, etc.

The University has deployed network-enabled devices in its building and industrial systems for over 20 years. Even though these devices predate the current wave of IoT devices, they serve the same purpose and have enabled the institution to provide critical services to the University community and better manage its resources. The pace of innovation has accelerated and the University anticipates new demands from the University community and new opportunities from industry partners in the “enterprise” IoT space.

With these new demands, the University will face new challenges. The huge increase in the number of devices will place additional requirements on the network infrastructure. The amount of data these devices gather will necessitate new approaches to storage and analysis. The huge diversity of devices and traffic has the potential to create security vulnerabilities if not effectively managed.

With the network upgrade underway, many of these challenges have been anticipated and the administration is confident that the network’s design will prove robust enough to deal with the increased volume of traffic and devices. Investments in the cybersecurity features of the network will ensure that the institution will not only be able to monitor the activity of connected devices and systems but also prevent malicious activity from the outside world targeting University systems.

BACKGROUND INFORMATION

The Facilities, Planning, & Operations Committee has received the following briefing related to networking and cybersecurity:

- February 2016: *Optimizing Our Physical Assets: Network Infrastructure Refresh and Issues Related to Cybersecurity*

The Internet of Things in University Operations

Board of Regents Facilities, Planning, and Operations Committee
May 11, 2017



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Overview

- What is the Internet of Things (IoT)?
- Enterprise IoT versus consumer IoT
- IoT in University operations
- Challenges
- Preparing for the future
- Discussion



What is the Internet of Things?



1985



2010



2015



What is the Internet of Things?

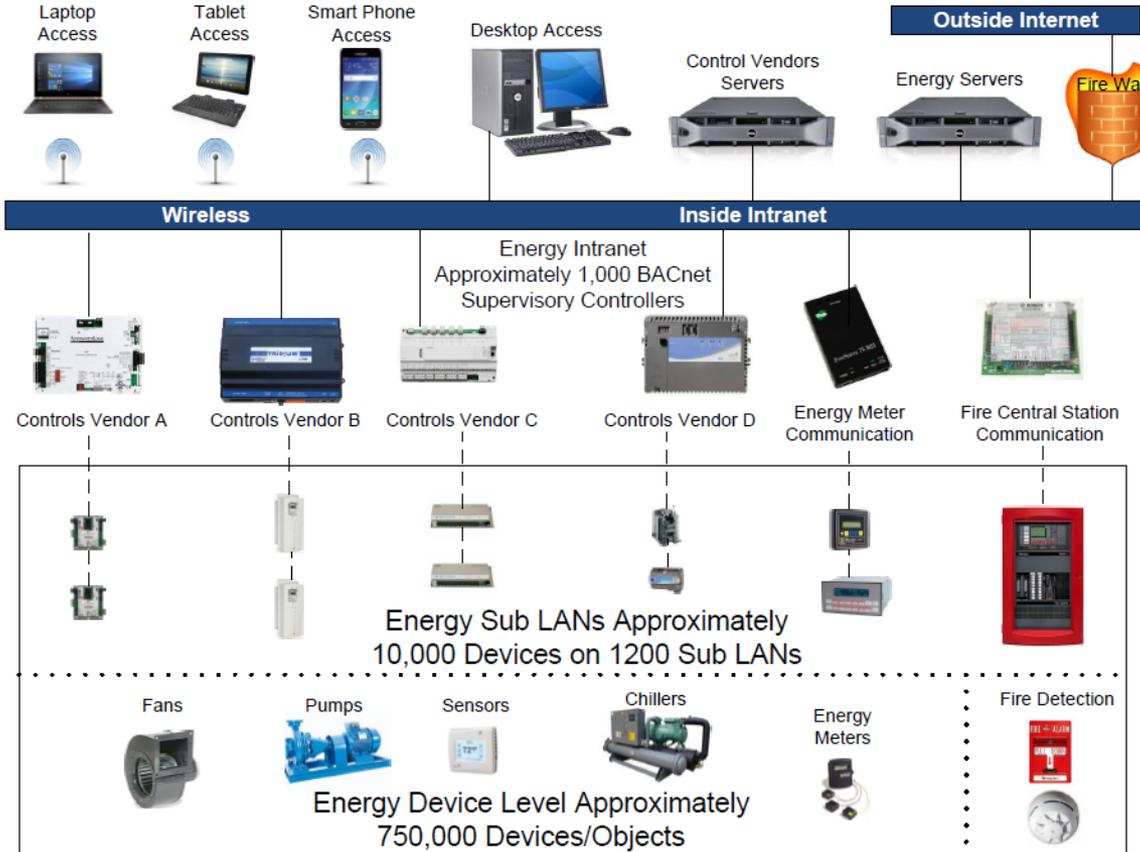


Bluetooth Smart Bulb





Enterprise vs. Commercial "IoT"





Building Automation System





Facility Operations



Combined Heat and Power Plant Control Center



Operations and Security



Public Safety Emergency Communications Center



Research Support



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952 MN Tech

01/25/2017 12:34:19AM

952-CRITICAL.RM173-RMT	Present Value 72.86 deg F	952-FRZR-D-1-173.ALM	Present Value NORMAL
Critical Rm Temp		-80 Freezer	
Time of Alarms	Low / High Limit 40.00 82.00	Time of Alarms	
11-08-2016 09:17:36 = alarm		11-08-2016 09:17:36 = alarm	
Never = fault	Alarm Condition	Never = fault	Alarm Condition
11-08-2016 09:47:37 = normal	Normal	11-08-2016 09:47:37 = normal	Normal
952-FRZR-B-1-173.ALM	Present Value NORMAL	952-FRZR-G-1-173.ALM	Present Value NORMAL
-80 Freezer		-80 Freezer	
Time of Alarms		Time of Alarms	
11-08-2016 09:51:40 = alarm		11-18-2016 12:26:05 = alarm	
Never = fault	Alarm Condition	Never = fault	Alarm Condition
11-08-2016 09:51:45 = normal	Normal	11-18-2016 13:02:36 = normal	Normal
952-FRZR-C-1-173.ALM	Present Value NORMAL	952-FRZR-K-1-173-T	Present Value -16.56 deg C
-80 Freezer		-20 Freezer Temp	
Time of Alarms		Time of Alarms	Low / High Limit
11-08-2016 09:17:36 = alarm		11-08-2016 09:17:37 = alarm	-24.00 -15.00
Never = fault	Alarm Condition	Never = fault	Alarm Condition
11-08-2016 09:47:37 = normal	Normal	11-08-2016 09:47:37 = normal	Normal



Information





Energy Management

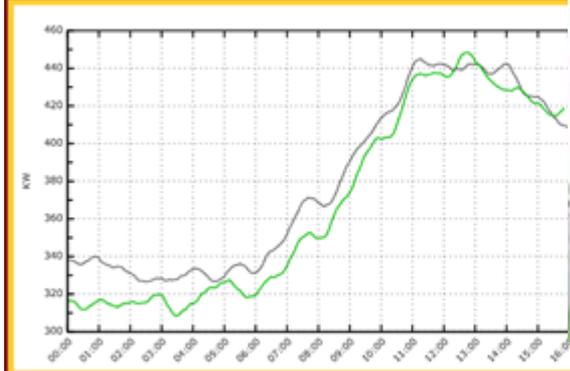


Lions Research Building/McGuire Translational Research Facility

174 TRF
 North West District
 2001 6th St. SE
 Year Built: 1991
 Gross Square Footage: 152,298
 Building Type: Office & Research Building



Lions Research Building Daily Electricity Demand 7/17/2014



Projected Costs
 \$ 44 Per Hour
 \$ 31,755 Per Month

Projected CO2 Emissions
 1,118 Lbs Per Hour
 403 Tons Per Month

Electric

Steam



Future Development: Fault Detection

Year: 2016 | Month: Dec | Event Status: Escalated, Open

EVENTS

16,708



CLOSED EVENTS

16,699



NOT CLOSED

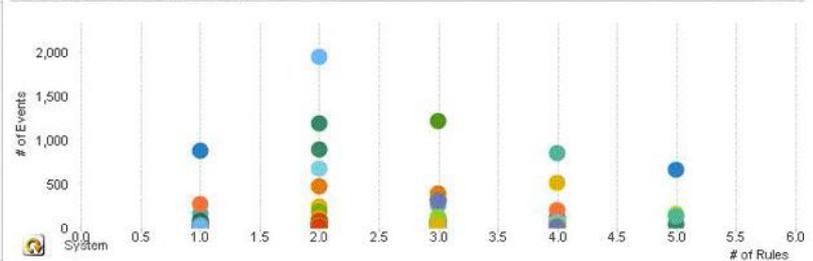
9



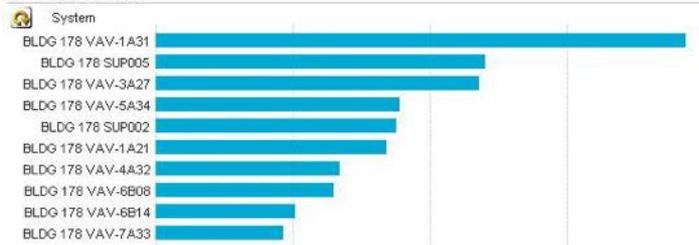
DAILY EVENTS

Week	Mon	Tue	Wed	Thu	Fri	Sat	Sun
11/28/2016				793	789	323	454
12/05/2016	700	875	723	851	872	172	257
12/12/2016	900	671	800	931	663	419	469
12/19/2016	482	438	428	590	446	169	181
12/26/2016	626	423	596	592	542	206	

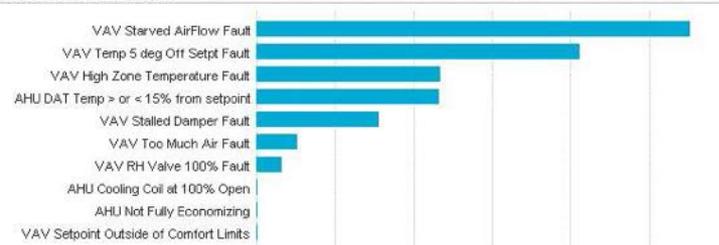
QUANTITY vs VARIETY by SYSTEM



TOP SYSTEMS



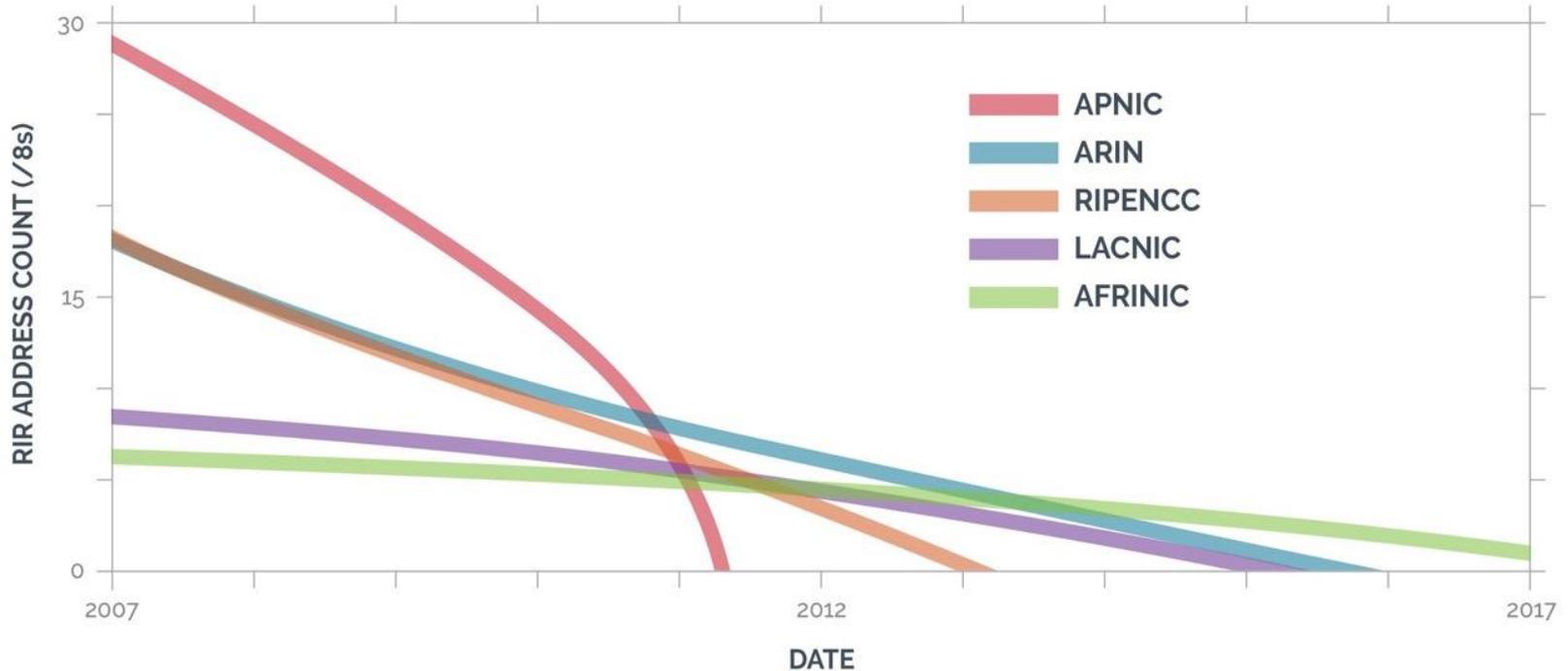
TOP EVENT RULES





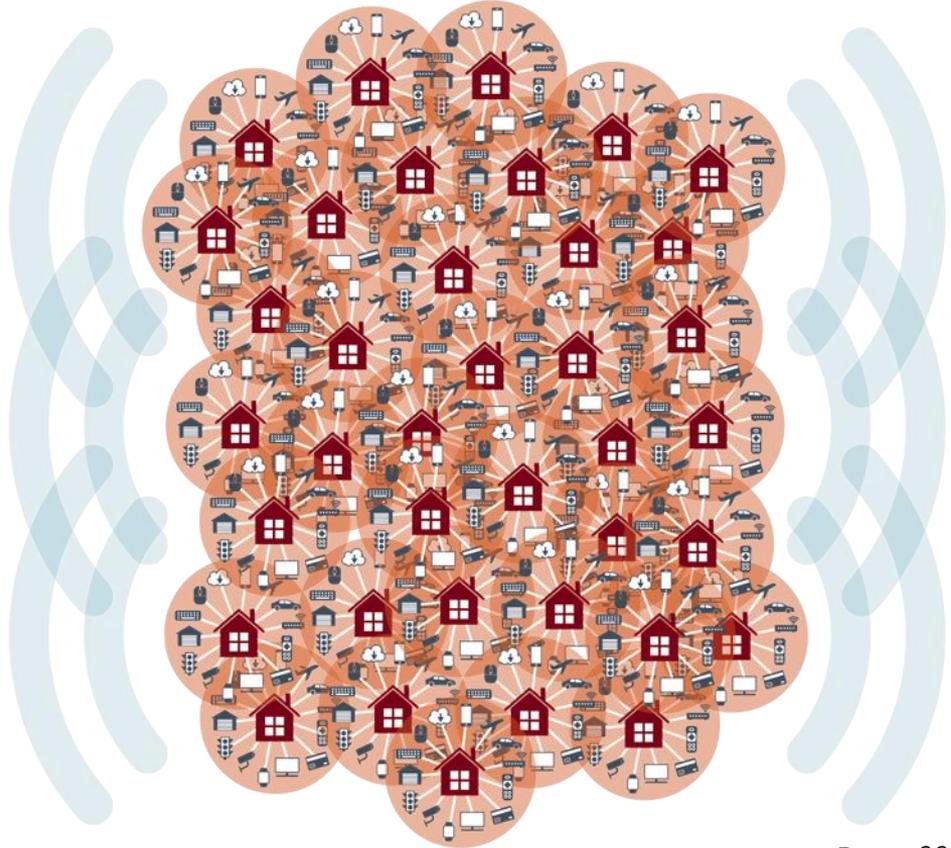
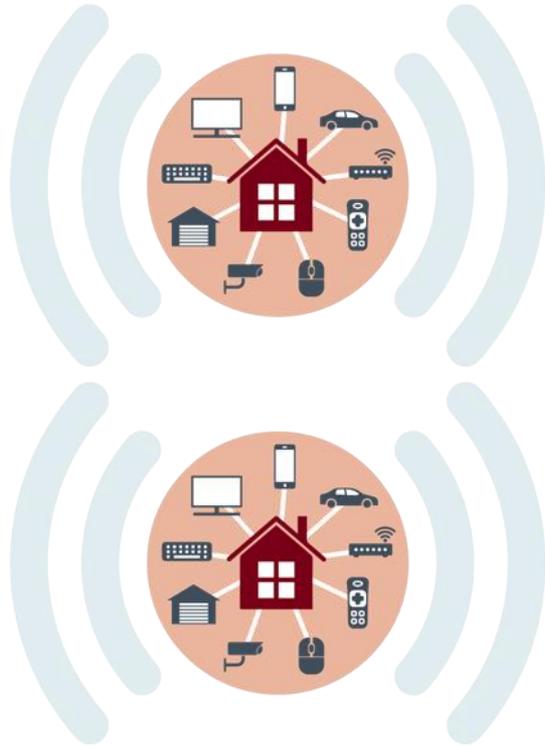
Challenges: Networking

Exhaustion of National IPv4 Addresses





Challenges: Networking



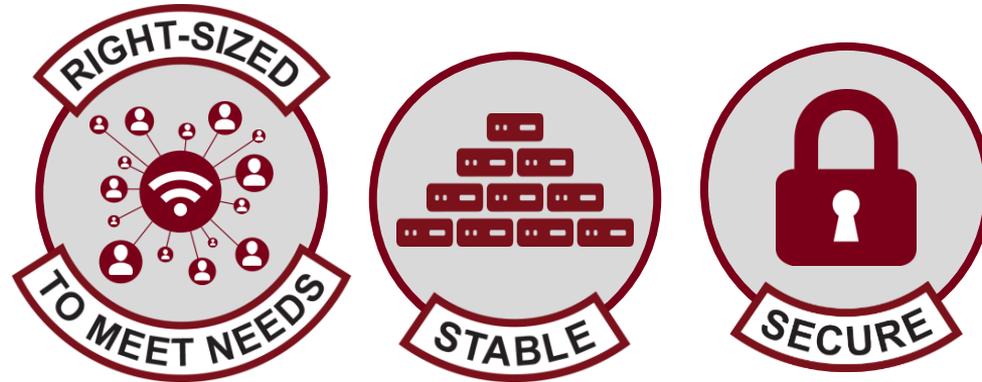


Challenges: Security and Privacy





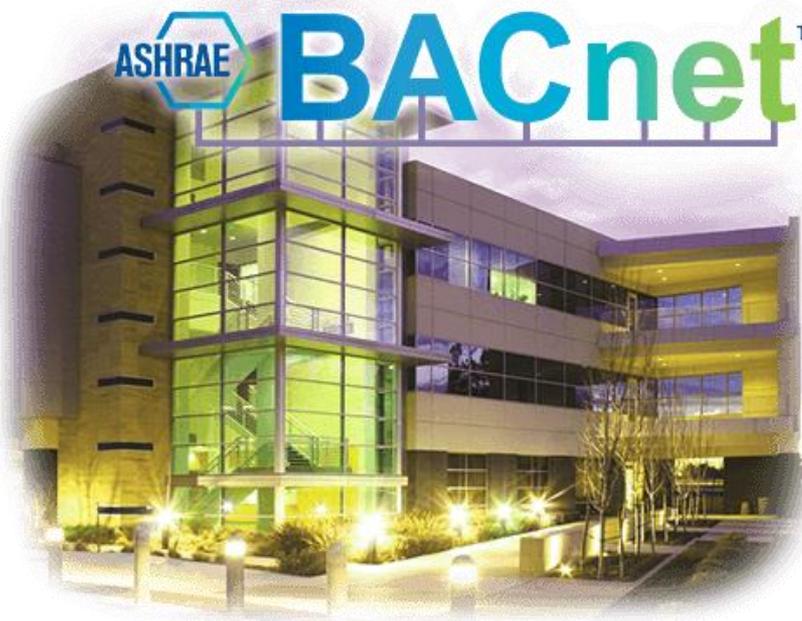
What are we doing to prepare for the future?



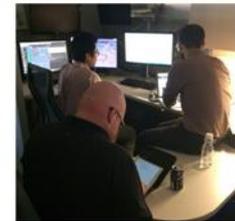
NEXT **G**ENERATION **N**ETWORK



What are we doing to prepare for the future?



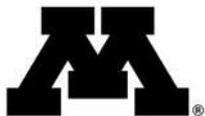
Controls Product Testing and Development





Discussion

- What is the Internet of Things (IoT)?
- Enterprise IoT versus consumer IoT
- The current state of IoT at the University
- Challenges
- Preparing for the future



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BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities, Planning & Operations

May 11, 2017

AGENDA ITEM: University Housing Cost Projections (Twin Cities campus)

Review Review + Action Action Discussion

This is a report required by Board policy.

PRESENTERS: Michael Berthlesen, Interim Vice President, University Services
Brian Swanson, Assistant Vice President, University Services

PURPOSE & KEY POINTS

The purpose of this item is to review and discuss how recent Board action and investments in housing will impact housing costs over the intermediate term.

University Services has incorporated the Board’s direction on investments in capacity, quality, renewal, and student experience into a multi-year financial projection. Given that projection, this item will focus on the expected position of the University among its Big Ten peers following this phase of investments, including housing as a component of total cost of attendance. The docket materials outline where each dollar of housing revenue comes from and where it is spent.

BACKGROUND INFORMATION

The Facilities, Planning, & Operations committee has recently examined a variety of aspects of the University’s housing strategy, including an analysis of existing housing stock; adopting a long-range vision for the superblock and riverfront housing; considering investments in quality and capacity; balancing public/private investments; and the unique role University housing plays in retention, GPAs, and graduation rates.

The following agenda items related to student housing help inform this discussion:

- February 2017: *Update on Long-Range Twin Cities Housing Plan*
- July and September 2016: *Capital Budget Amendment: Pioneer Hall Renovation and Superblock Dining Consolidation*
- July 2016: *Master Lease of Student Housing Facilities - Radius at 15th and Keeler Apartments*
- June and July 2016: *Resolution Related to Long-Term Development in Key Areas of the Twin Cities Campus*
- May 2016: *University Housing: The Role of Master Leasing in Meeting Enrollment Goals*
- February 2016: *Long-Range Campus Planning Part II: University Housing*

University Housing Cost Projections

Twin Cities Campus

Board of Regents Facilities, Planning, and Operations Committee
May 11, 2017



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Today's Agenda

- Review adopted planning assumptions
- Broad focus on cost
 - major components
 - projections for next five years
- Broader topics for future meetings
 - intersection of cost and quality
 - system campus housing programs





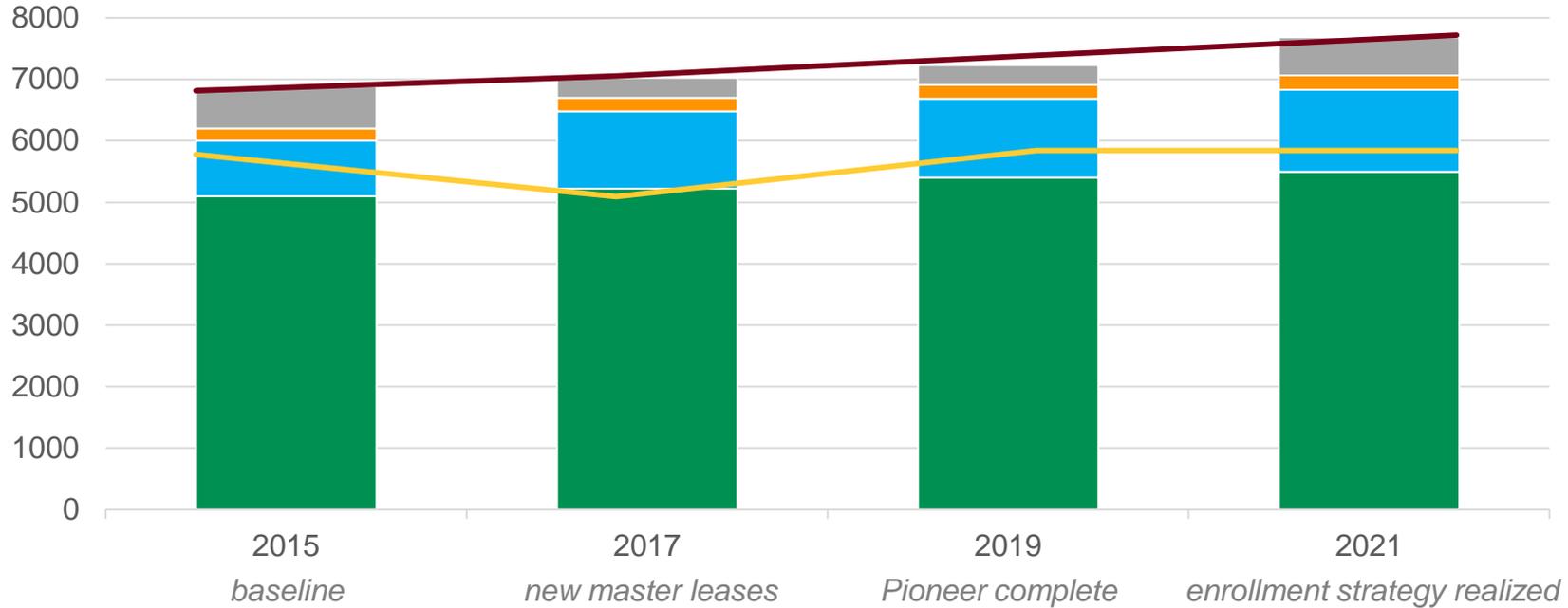
University Housing is an Auxiliary Operation

- Self-supporting enterprise
- Receives no O&M funding
- Funds depreciation for reinvestment in facilities
- Strives to balance demand and capacity





Capacity to Support Enrollment Strategy



■ First-Year ■ Second-Year ■ Transfer ■ Others/Growth — Residence Halls — Apartments



Priorities: Capacity and Quality

- Additional beds
 - master leases at Keeler, Radius on 15th
 - Pioneer Hall expansion
- Ongoing reinvestment in facilities
 - major R&R projects
 - interior refresh
 - amenities
 - Pioneer Hall and Superblock Dining project





Components of University Housing Revenue

based on FY2018 budget



residence halls
53¢

apartments
26¢

co-ops
16¢

summer other
3¢ 2¢



Components of University Housing Rates

based on FY2018 budget



debt service / master leases
30¢

staffing
21¢

depreciation
16¢

utilities
13¢

co-ops
8¢

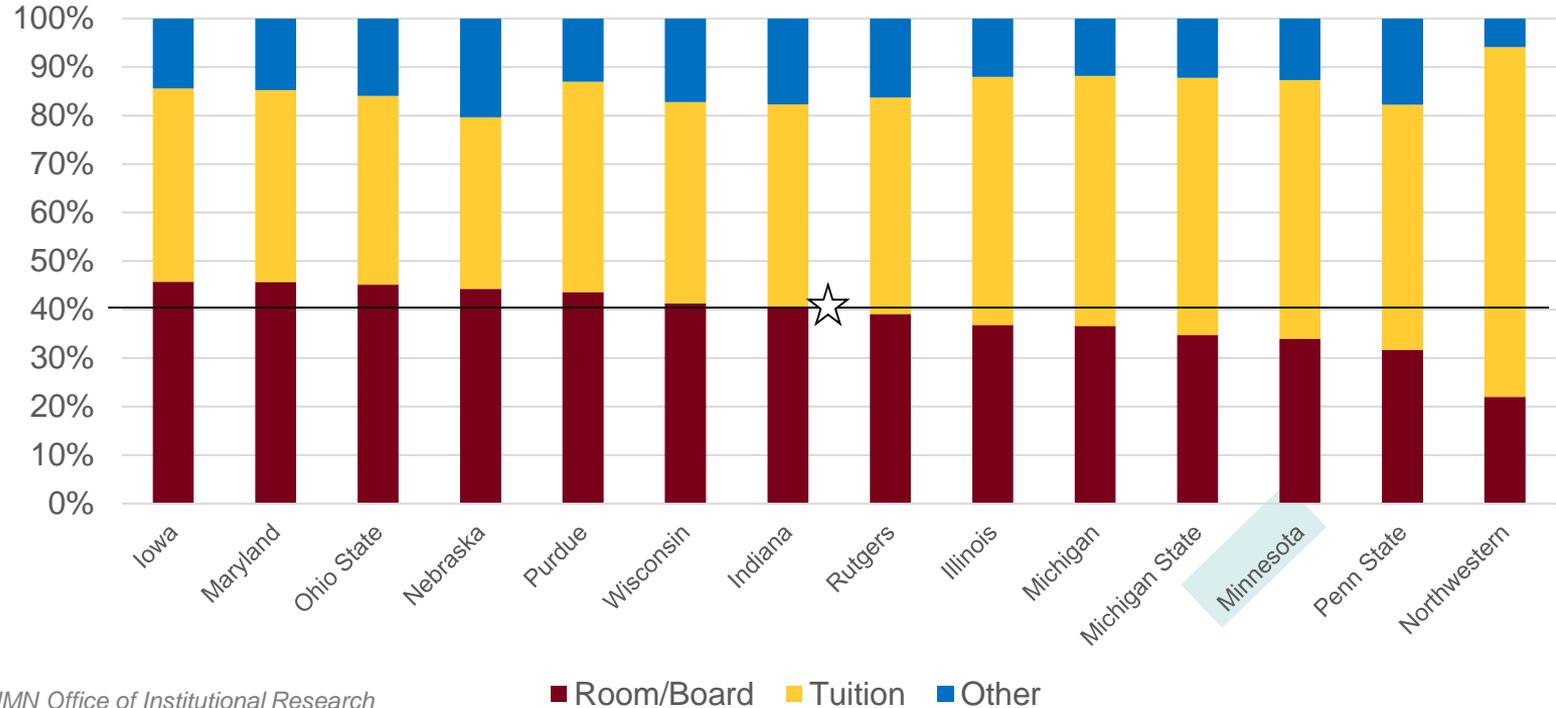
maint
5¢

supl
4¢

umn
3¢



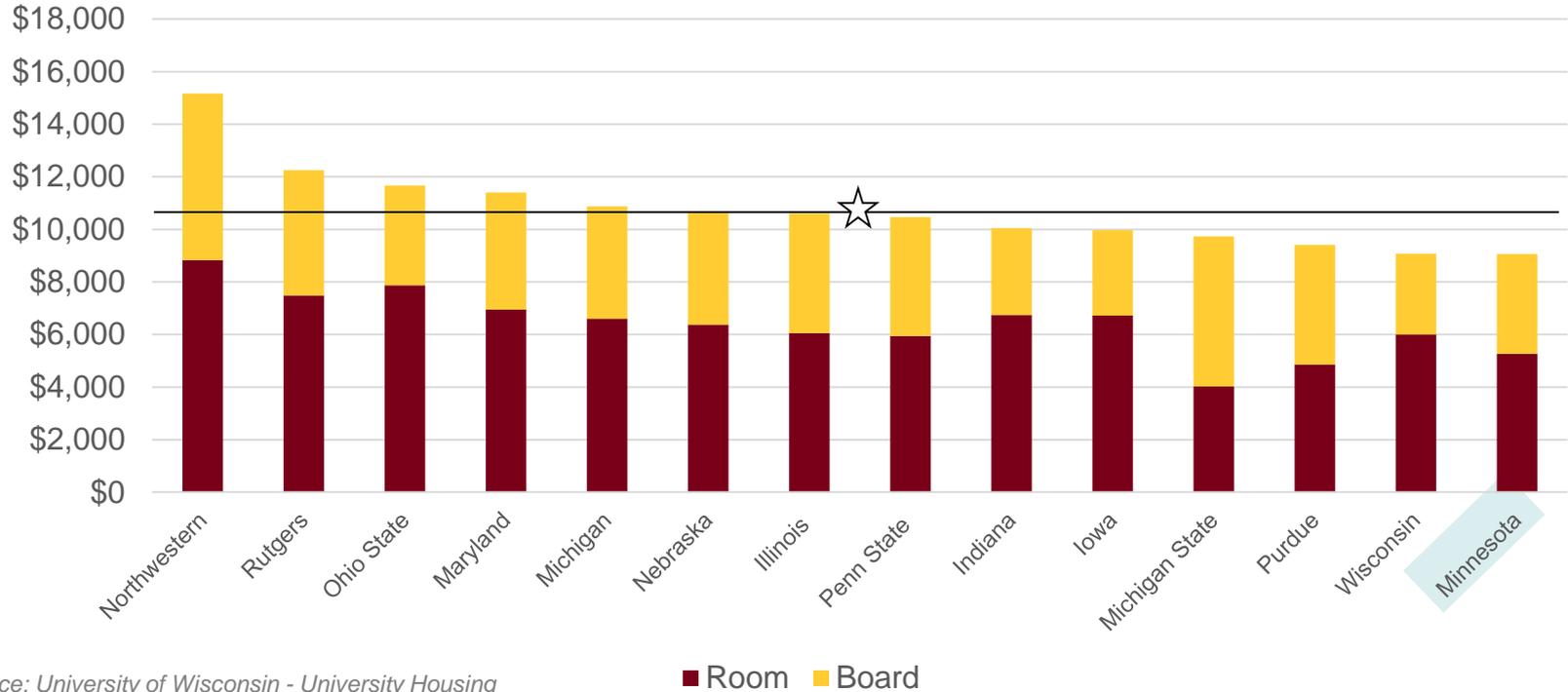
FY2017 Big Ten Total Cost of Attendance



source: UMN Office of Institutional Research



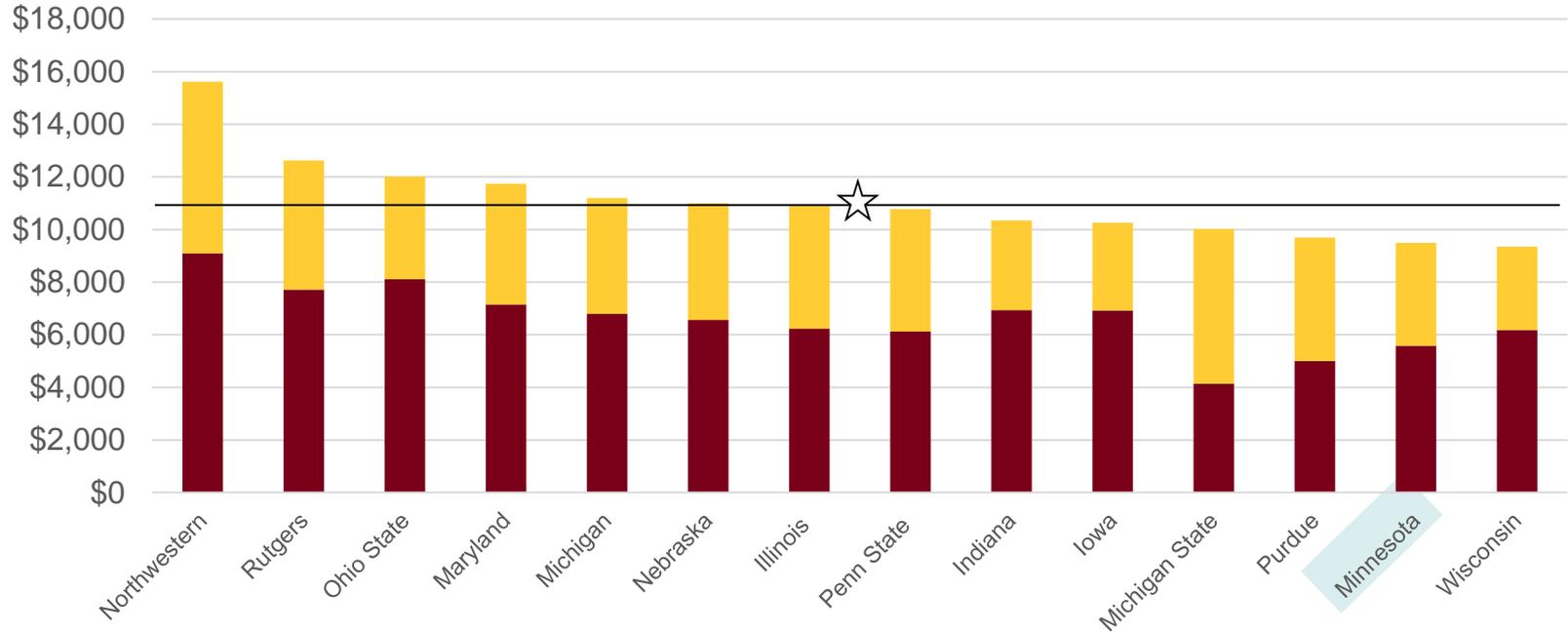
FY2017 Big Ten Rates



source: University of Wisconsin - University Housing



FY2018 Big Ten Rates (projected)

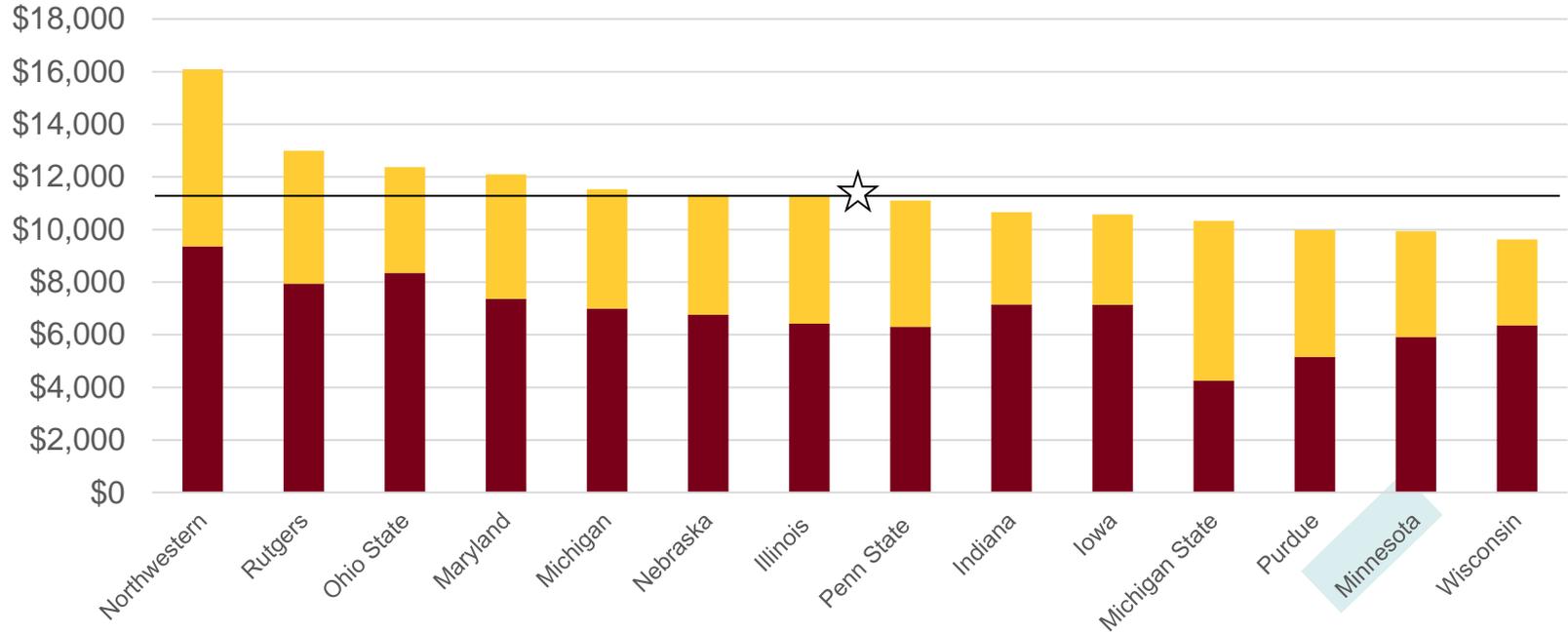


assumes peer group increase of 3% on both room and board
assumes additional 3% UMN increase on room only

■ Room ■ Board



FY2019 Big Ten Rates (projected)

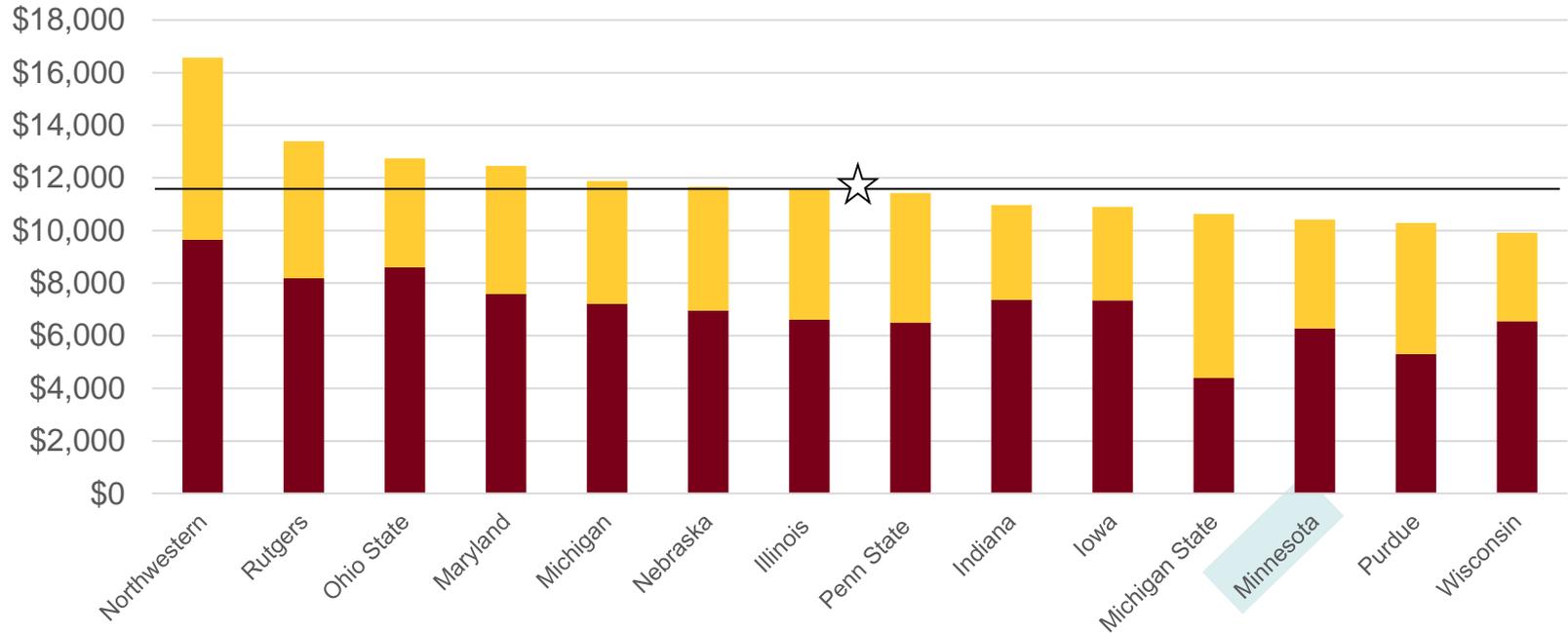


assumes peer group increase of 3% on both room and board
assumes additional 3% UMN increase on room only

■ Room ■ Board



FY2020 Big Ten Rates (projected)

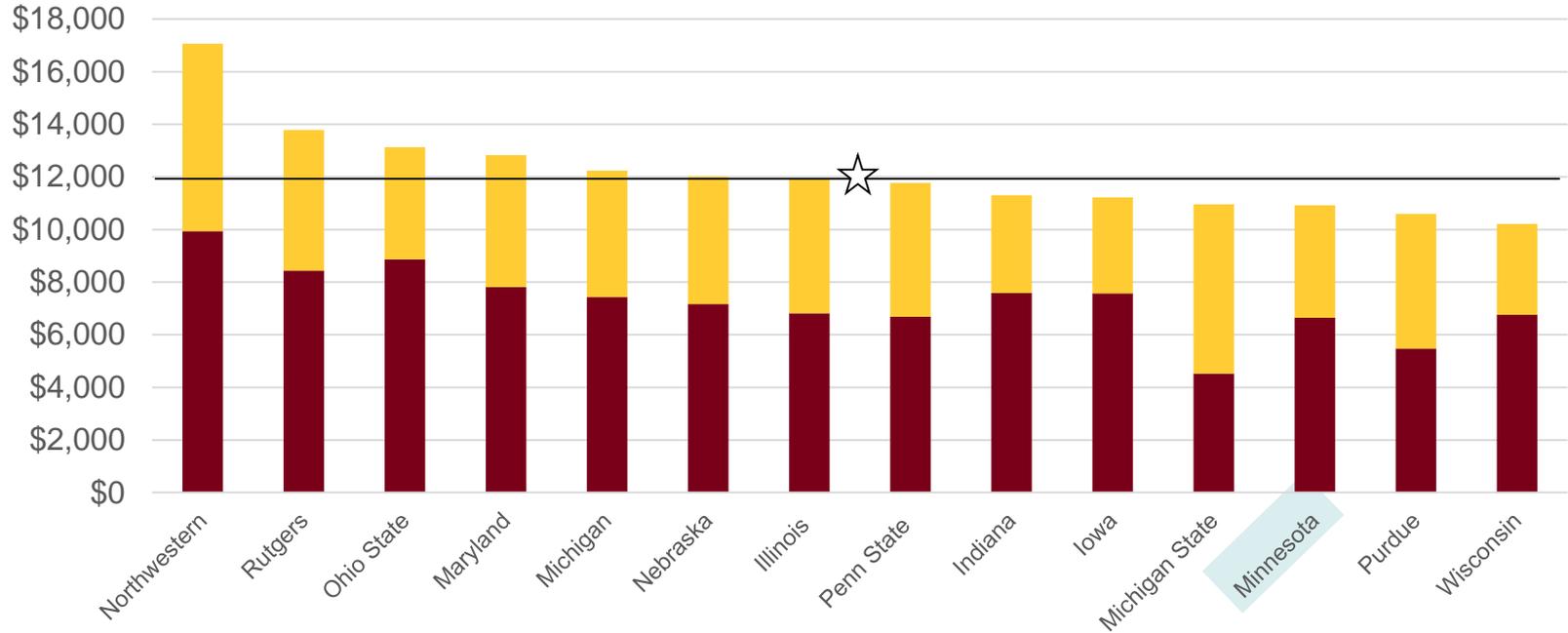


assumes peer group increase of 3% on both room and board
assumes additional 3% UMN increase on room only

■ Room ■ Board



FY2021 Big Ten Rates (projected)

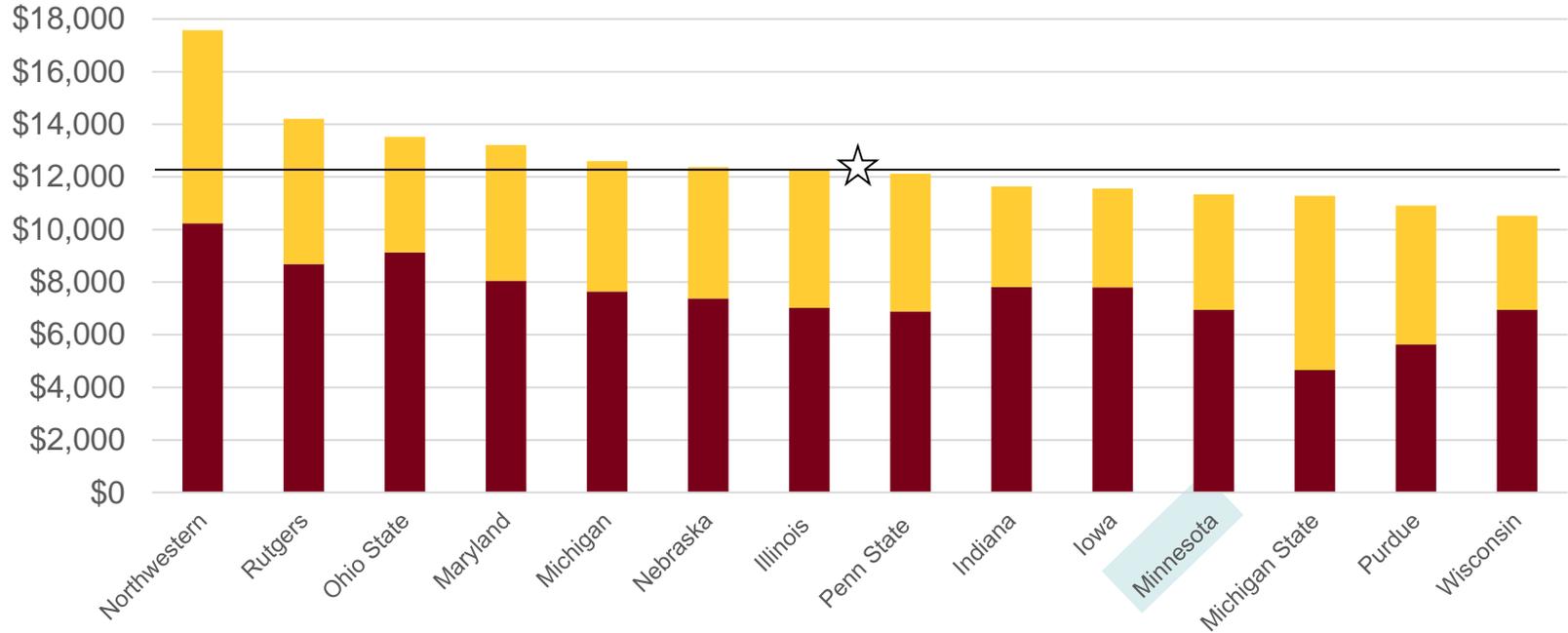


assumes peer group increase of 3% on both room and board
assumes additional 3% UMN increase on room only

■ Room ■ Board



FY2022 Big Ten Rates (projected)



assumes peer group increase of 3% on both room and board
assumes additional 1.5% UMN increase on room only

■ Room ■ Board

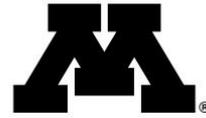


Rate Comparison: 2016 to 2022 (projected)

Category	2016	2022	Avg Annual
Meal Plan	\$3,700	\$4,400	3.0%
Room Only	\$5,050	\$6,025	3.0%
Major Renewal Investment		\$930	2.3%
Total Housing Cost	\$8,750	\$11,355	4.5%



DISCUSSION



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BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities, Planning & Operations

May 11, 2017

AGENDA ITEM: Schematic Design

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Bruce Gritters, Interim Assistant Vice President, Capital Planning and Project Management
Brooks Jackson, Vice President for Health Sciences and Dean of the Medical School

PURPOSE & KEY POINTS

The purpose of this item is to take action on the schematic design for the following project:

- *Health Sciences Education Center (Twin Cities campus)*

A project data sheet is included in the docket materials and addresses the basis for request, project scope, cost estimate, funding, and schedule for this project. A map locating the project on the Twin Cities campus is also included.

BACKGROUND INFORMATION

The committee reviewed this project at its February 2017 meeting.

Health Sciences Education Center (Twin Cities campus)

This project will demolish, renovate, and construct a new 194,300 square foot Health Science Education Center for the Academic Health Center at the current site of Veterans of Foreign War/ Masonic Memorial buildings (to be demolished) and within the Phillips-Wagensteen building (partial renovation) on the East Bank of the Twin Cities campus. The proposed facility, the new “front door” to the Academic Health Center, will enhance the state’s reputation for innovative research and education focused on educating and training the state’s health professional workforce.

PRESIDENT’S RECOMMENDATION

The President recommends approval of schematic design for the projects listed below, and of the appropriate administrative officers proceeding with design and construction:

- *Health Sciences Education Center (Twin Cities campus)*

**Health Sciences Education Center
Twin Cities Campus – East Bank
Project No. 01-000-16-1270**

1. Basis for Request:

The Academic Health Center (AHC) is one of the most comprehensive health sciences centers in the nation, comprised of six schools with 6,200 students in 60 programs (professional, graduate, and undergraduate). Approximately 70% of all health professionals working in Minnesota are trained at the University of Minnesota. The proposed facility, the new “front door” to the Academic Health Center, will enhance the state’s reputation for innovative research and education focused on educating and training the state’s health professional workforce. New space will consist of active learning classrooms, technology-rich simulation and production environments, informal study, and learning spaces that will be used by all schools within the Academic Health Center. It will support new national accreditation and curriculum standards that promote team-based care and prepare our future health care workforce by introducing them to the latest health discoveries, technologies and methods.

2. Scope of Project:

The Center will become the new “front door” to the AHC and is located within the AHC district at the current site of the Veterans of Foreign War (VFW) and Masonic Memorial (Masonic) buildings on the Twin Cities East Bank Campus. Both VFW and Masonic will be demolished as a part of this project. The project consists of constructing a new, approximately 142,100 gross square foot, five-story building which will be connected to the existing Phillips-Wangensteen Building (PWB). Approximately 52,200 gross square feet in PWB (Levels 2, 3, 5) will also be renovated to accommodate the program. The total project incorporates 194,300 gross square feet of active learning classrooms, simulation, knowledge management (library), student services, student study spaces, inter-professional lounge, event space, and a café.

3. Master Plan:

The project is in compliance with the Twin Cities Campus Master Plan, dated March 2009, and the AHC 2016 Strategic Facilities Plan.

4. Environmental Issues:

Identified remediation costs include full hazardous materials abatement of VFW and Masonic Memorial and the select renovation of Phillips-Wangensteen Building (Levels 2, 3, 5). The project budget accounts for the remediation as currently identified.

5. Cost Estimate:

Construction Cost	\$ 87,915,000
Non-Construction Cost	20,715,000
<hr/> Total Project Cost	<hr/> \$108,630,000

6. Capital Funding:

Reallocated Bond Proceeds Authorized by State	\$ 8,630,000
State of MN Debt (2017 State Request)	66,700,000
University Debt	33,300,000
<hr/> Total Capital Funding	<hr/> \$108,630,000

7. Capital Budget Approvals:

This project was approved in FY2016 Annual Capital Budget (design services) and will be included in the FY2018 Annual Capital Budget (construction services).

8. Annual Operating and Maintenance Cost:

It is anticipated that annual cost for new HSEC building is \$959,000, an approximate net savings of \$811,000 per year from the current operating cost of VFW/Masonic Memorial.

9. Time Schedule:

Proposed Design Completion	November 2017
Proposed Substantial Completion*	December 2019

*Assumes 2017 State Appropriation for construction

10. Project Team:

Architect:	Perkins+Will
Construction Manager at Risk:	JE Dunn Construction

11. Recommendation:

The above described project scope of work, cost, funding, and schedule is appropriate:



Brooks Jackson, Vice President for Health Sciences



Brian Burnett, Senior Vice President for Finance and Operations

Health Sciences Education Center University of Minnesota Twin Cities Campus

Site Map



Health Sciences Education Center

North

Health Sciences Education Center

Twin Cities Campus

Board of Regents Facilities, Planning, and Operations Committee
May 11, 2017



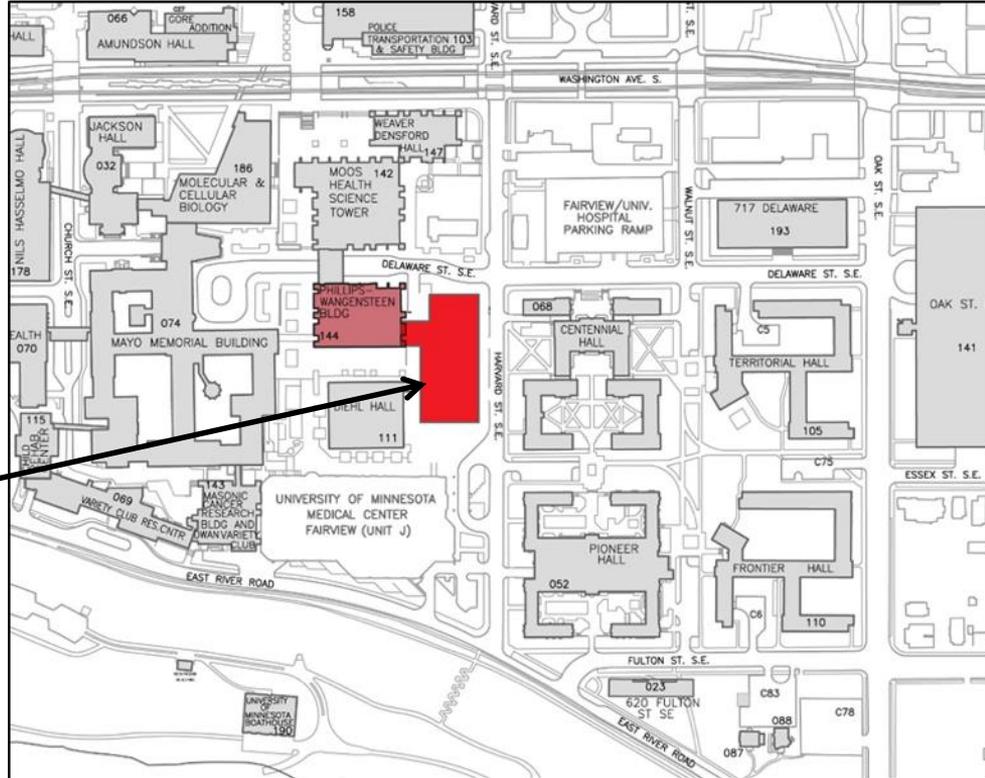
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Location Map

Health Sciences
Education Center
Project Site





Project Rationale

- Promote new model of team-based teaching/learning
- Compete for the best students
- Consolidate, update, and expand clinical simulation
- Renew biomedical library as hub for knowledge creation/management
- Demolish “Do Not Invest” buildings
- Backfill vacated space in Phillips-Wangensteen





Project Description

- 194,300 square foot health sciences education center
 - 142,100 sf new construction and 52,200 sf PWB renovation
 - Student services
 - Active learning classrooms
 - Simulation/immersion
 - Study/inter-professional space
 - Renewed biomedical library (non-collections)
as hub for knowledge creation/management
 - Café
 - Demolition of VFW/Masonic buildings





Project Description

- Cost Estimate
 - Construction \$ 87,915,000
 - Non-construction 20,715,000
 - Total Project Cost \$108,630,000

- Capital Funding:
 - Reallocated Bond Proceeds \$ 8,630,000
 - State of MN Debt (2017 State Request) 66,700,000
 - University Debt 33,300,000
 - Total Approved Project Budget \$108,630,000



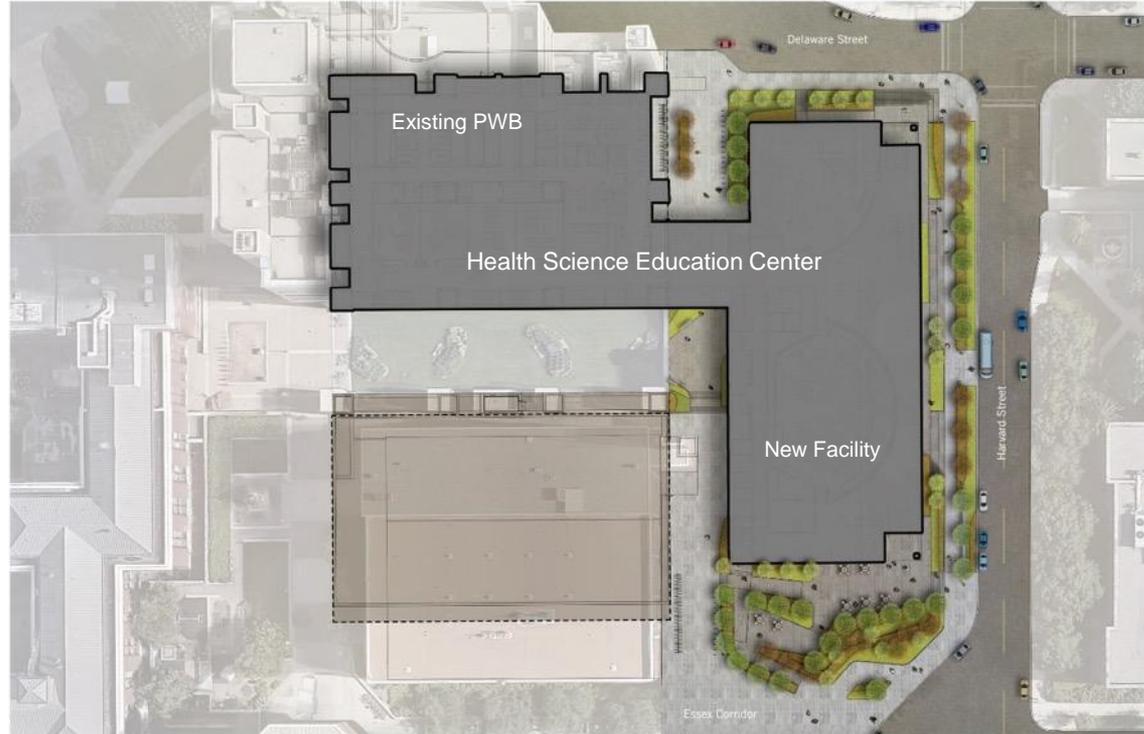
Project Description

- Anticipated Completion
 - December 2019*
 - * Pending 2017 State Capital Budget request
- Estimated Annual Operating Costs
 - \$959,000 new construction
 - (\$1,770,000) reduction for demolition
- Carbon Footprint
 - 1,098 Metric Tons new construction
 - (18,442) Metric Tons reduction for demolition
- Architect
 - Perkins+Will
- Construction Manager at Risk
 - JE Dunn Construction





Site Plan





Concourse (2nd)/ Street (3rd) Floor Plans



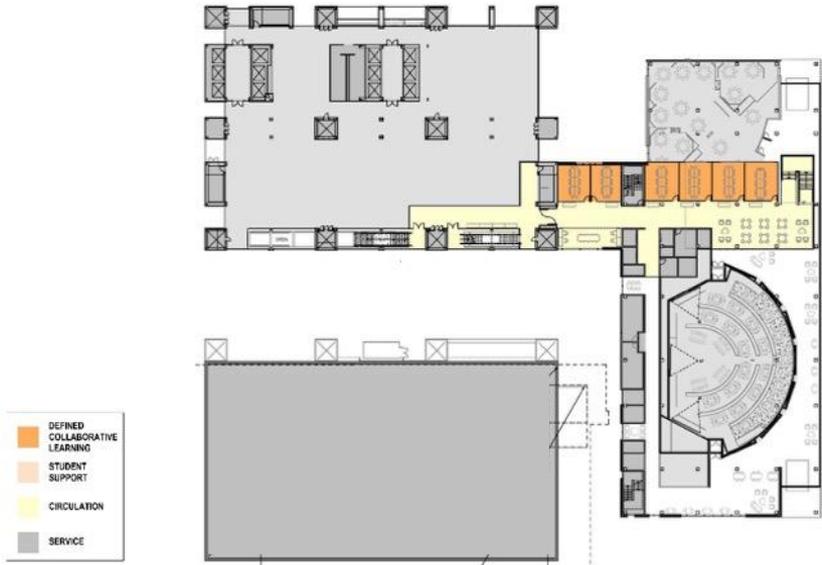
Concourse



Street



Fourth/Fifth Floor Plans



Fourth



Fifth



Sixth/Seventh Floor Plans





Building Exterior





Building Exterior





Building Interior

New Link to PWB



Existing Link to PWB Looking East





Building Interior





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BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities, Planning & Operations

May 11, 2017

AGENDA ITEM: Schematic Designs

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS:

Bruce Gritters, Interim Assistant Vice President, Capital Planning and Project Management
Laurie McLaughlin, Director of Housing and Residential Life
Samuel Mukasa, Dean, College of Science & Engineering

PURPOSE & KEY POINTS

The purpose of this item is to review and take action on the schematic designs for the following projects:

- *Pioneer Hall Renovation and Consolidated Superblock Dining (Twin Cities campus)*
- *Science and Engineering Robotics Laboratories Renovation (Twin Cities campus)*

Project data sheets are included for each project in the docket materials and address the basis for request, project scope, cost estimate, funding, and schedule for this project. Maps locating the projects on the Twin Cities campus are also included.

BACKGROUND INFORMATION

Pioneer Hall Renovation and Consolidated Superblock Dining

This project will retain the character defining features of the existing building, while strategically expanding the building footprint to improve the housing and dining programs from their current conditions. The housing component will increase the number of beds currently available, while aligning program delivery with comparable facilities on campus. The dining program will be brought to grade, with seating capacity expanded to better serve the student population of the superblock while offering expanded meal and serving options.

The Board approved the Pioneer Hall project as a capital budget amendment in the amount of \$104,500,000 at its September 2016 meeting.

Science and Engineering Robotics Laboratories Renovation

The project will provide needed expansion space of approximately 13,570 square feet in Shepherd Labs for students, faculty, and staff. Having the robotics researchers located in contiguous space will also assist in enhancing important collaborations. Space on the first floor will also be allocated to the college's Solar Vehicle Project, which with the emerging developments in autonomous vehicle technologies will soon have a strong connection to work in robotics.

The Board approved the Robotics Lab project as a component of the FY 2017 Annual Capital Improvement Budget in the amount of \$12,203,000.

PRESIDENT'S RECOMMENDATION

The President recommends approval of schematic design for the projects listed below and of the appropriate administrative officers proceeding with the design and construction for this project:

- *Pioneer Hall Renovation and Consolidated Superblock Dining (Twin Cities campus)*
- *Science and Engineering Robotics Laboratories Renovation (Twin Cities campus)*



**Pioneer Hall Renovation and Consolidated Superblock Dining
Twin Cities Campus
Project No. 01-052-16-1234**

1. Basis for Request:

The Pioneer Hall renovation and Superblock dining consolidation will address long-needed improvements to the residential experience of this historic building, while expanding the dining program and seating capacity to better serve the broad student population of the Superblock offering expanded meal service options.

Pioneer Hall does not meet current building code and ADA requirements, and is in need of significant modifications, including the addition of elevators and integration of HVAC. The last significant renewal of Pioneer Hall was completed in 1977; while some repair and replacement of systems have continued since, no major work has been done over the past 15 years.

In addition to building deficiencies, both residential and dining components require significant investment to align with other residential halls and dining experiences on campus, as well as peer institutions. Dining at Pioneer and Centennial are below-grade and physically constrained regarding type of service and delivery format. Operating two dining centers (neither with the capacity to serve the entire Superblock) creates duplication in equipment, operating costs, and staff expenses. Efficiencies and cost savings are possible in a consolidated facility.

2. Scope of Project:

This project will retain the character-defining features of the existing building, while strategically expanding the building footprint to improve housing and dining programs. The housing component will increase the number of beds to 756, while aligning program delivery and student amenities with comparable University facilities. The plan also incorporates study and community spaces to enhance first-year student experience.

The dining program will be raised up to grade level, and seating capacity expanded to serve the student population of the Superblock while offering expanded meal, serving, and seating options. Seating capacity for the new dining facility will accommodate 850 students at any given time.

3. Master Plan or Precinct/District Plan:

The project is in compliance with the Twin Cities Campus Master Plan dated 2009.

4. Environmental Issues:

Soil borings do not indicate any contaminated soil on this site. It is anticipated that asbestos abatement will be required during the partial demolition of the existing facility. The project budget accounts for asbestos abatement.

5. Cost Estimate:

Construction Cost	\$ 90,836,500
Non Construction Cost	13,663,500
Total Project Cost	\$104,500,000

6. Capital Funding:

University Debt	\$104,500,000
Total Capital Funding	\$104,500,000

7. Capital Budget Approvals:

The project was approved as a Capital Budget Amendment to the FY2017 Annual Capital Budget in September 2016.

8. Annual Operating and Maintenance Cost and Source of Revenue:

The estimated annual net increase in operating and maintenance cost is estimated to be approximately \$500,000.

9. Time Schedule:

Proposed Design Completion	November 2017
Proposed Construction Completion	August 2019

10. Project Team

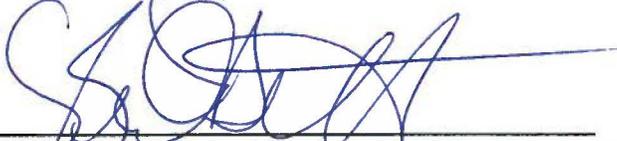
Architect:	TKDA
Construction Manager at Risk:	McGough Companies

11. Recommendation:

The above described project scope of work, cost, funding, and schedule is appropriate:



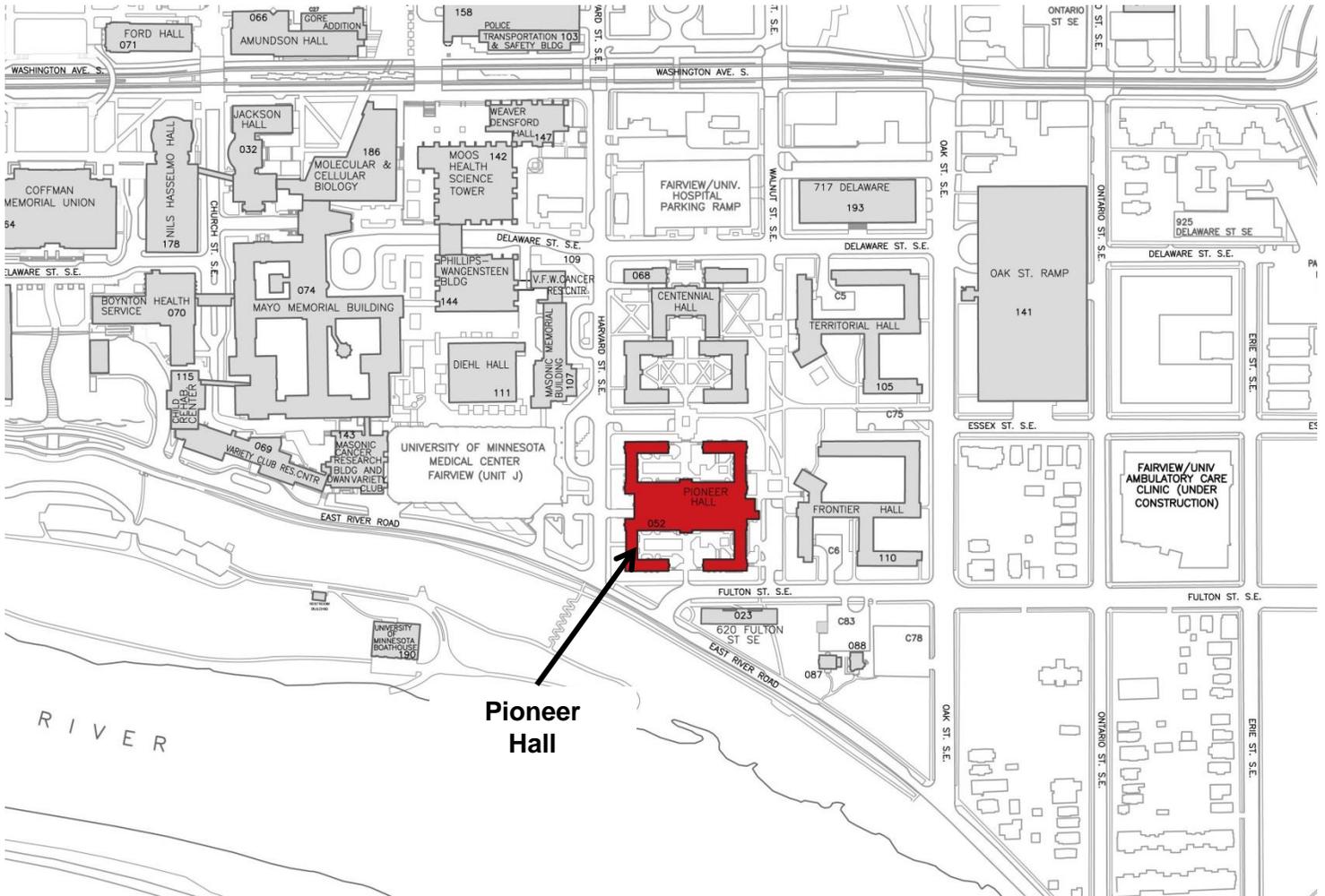
Michael Berthelsen, Interim Vice President for University Services



Brian Burnett, Senior Vice President for Finance and Operations

Pioneer Hall Renovation and Consolidated Superblock Dining Twin Cities Campus

Site Location Map



Pioneer Hall



Pioneer Hall Renovation and Consolidated Superblock Dining Facility Twin Cities Campus

Board of Regents Facilities, Planning, and Operations Committee
May 11, 2017



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Project Rationale

- Addresses existing facilities deficiencies
 - code and ADA deficiencies
 - no elevators, air conditioning
 - antiquated building systems
- New facility supports
 - revitalization of historic residential facility
 - integrated community lounges and study space
 - consolidated dining facility efficiently delivers dining for the Superblock





Project Description

- 256,500 square foot residence hall and dining facility
 - 756 student beds
 - Community and study lounges
 - 850 seat dining hall to serve all Superblock residents
 - Distributed dining concept
 - Housing and Residential Life administrative and support areas





Design Evolution since September 2016

- Maintained bed count
 - incorporates additional beds on lower floors
 - eliminated the need for a fifth floor
- Increased square footage for dining
 - distributed dining concept and venues
 - variety of seating typologies
 - improved queuing and circulation





Project Description

- Cost Estimate
 - Construction \$90,836,500
 - Non-construction 13,663,500
 - Total Project Cost \$104,500,000

- Capital Funding
 - University Debt \$104,500,000
 - Total Approved Project Budget \$104,500,000



Project Description

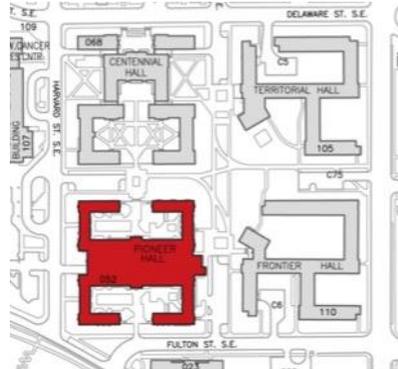
- Anticipated Completion
 - August 2019
- Estimated Annual Operating Costs
 - approx. \$500,000 net increase
- Carbon Footprint
 - 2139 metric tons (*net +103*)
- Architect
 - TKDA
- Construction Manager at Risk
 - McGough





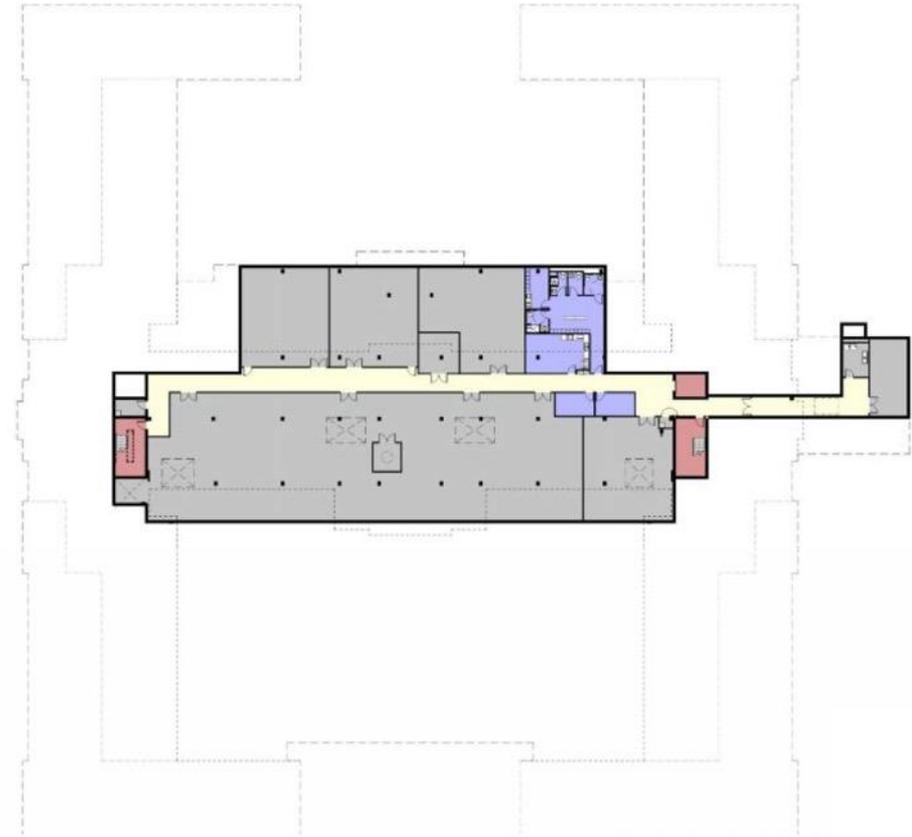
Site Plan

Key Plan





Basement



-  Circulation
-  Staff/ Admin
-  Support Spaces
-  Vertical Circulation



First Floor

- Circulation
- Community
- Dining
- Resident Bathroom
- Residential Unit
- Staff/ Admin
- Support Spaces
- Vertical Circulation





Second thru Fourth Floors

-  Circulation
-  Community
-  Resident Bathroom
-  Residential Unit
-  Support Spaces
-  Vertical Circulation





Building Exterior



Aerial view of North Courtyard



View looking South towards Main Entrance



Building Exterior



View looking East along Harvard Street



Building Exterior



View looking North along Fulton towards Dining Center



Building Interior



Main Building Lobby Lounge



Building Interior



View of Seating Court in the Dining Center



Building Interior



View of One of a Variety of Seating Areas within Dining Center



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**College of Science and Engineering Robotics Lab Remodel
Twin Cities Campus
Project No. 3334**

1. Basis for Request:

The Robotics Research Lab in the College of Science and Engineering's Department of Computer Science and Engineering Robotics is a component of the University's MnDrive initiative. The project will consolidate several existing robotics research laboratories into the first and second floors of Shepherd Laboratories. The current robotics labs are dispersed among several buildings (Keller Hall, Smith Hall, and Walter Library) and are not adequate to support the new faculty hires made possible under the MnDRIVE initiative.

The project will provide the needed expansion space of approximately 13,570 square feet for additional students, faculty, and staff. Having the robotics researchers located in contiguous space will also assist in enhancing important collaborations. Space on the first floor will also be allocated to the college's Solar Vehicle Project, which with the emerging developments in autonomous vehicle technologies will soon have a strong connection to work in robotics.

2. Scope of Project:

Shepherd Labs, constructed in 1966, is located on the Twin Cities' East Bank Campus in the Engineering District. The project will totally renovate the first and second floors of Shepherd Labs. The program for the Robotics Lab is divided into several categories: shared workshop, open labs, large and small conference rooms, student organization, first floor loading/storage, offices/workstations, shared collaboration areas, and support space.

The main exterior entrance on the north side of Shepherd Lab will be relocated toward the west to create a more visible and prominent main entry to the building. The addition of windows to both the first and second floors will provide much needed daylight into the research spaces. The renovation will remove a section of the interior second floor structure to create an open bay, two-story space in which to fly drones. The project will remodel the existing toilet facilities, create a much-needed new women's toilet room on the second floor, and provide two ADA / gender neutral toilet rooms on each floor. The project will replace the ventilation systems, electrical power, lighting systems, and add fire sprinklers to the space.

The project is 19,260 gross square feet, of which 13,570 is assignable square footage.

3. Master Plan or Precinct/District Plan:

The project is in compliance with the 2009 Twin Cities Master Plan.

4. Environmental Issues:

The renovation of the first and second floors of Shepherd Labs will encounter existing asbestos ceiling tiles, pipe insulation, and floor tile. The project will abate the asbestos prior to the contractor initiating any construction activities.

5. Cost Estimate:

Construction Cost	\$ 10,845,000
Non Construction Cost	1,358,000
<hr/>	
Total Project Cost	\$ 12,203,000

6. Capital Funding:

College of Science and Engineering	\$ 203,000
MN Drive	2,000,000
Private Gifts	10,000,000
<hr/>	
Total Capital Funding	\$ 12,203,000

7. Capital Budget Approvals:

The project was approved in the FY2017 Annual Capital Budget.

8. Annual Operating and Maintenance Cost and Source of Revenue:

The operating and maintenance costs will remain approximately the same.

9. Time Schedule:

Proposed Design Completion	November 2017
Proposed Construction Completion	August 2018

10. Project Team

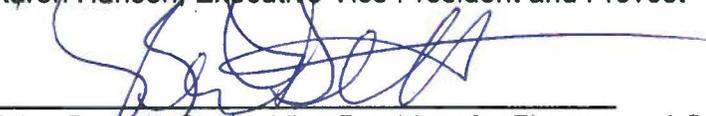
Architect:	BWBR Architects
Construction Manager at Risk:	Knutson Construction

11. Recommendation:

The above described project scope of work, cost, funding, and schedule is appropriate:



Karen Hanson, Executive Vice President and Provost



Brian Burnett, Senior Vice President for Finance and Operations

College of Science and Engineering Robotics Lab Remodel

Twin Cities Campus

Board of Regents Facilities, Planning, and Operations Committee
May 11, 2017



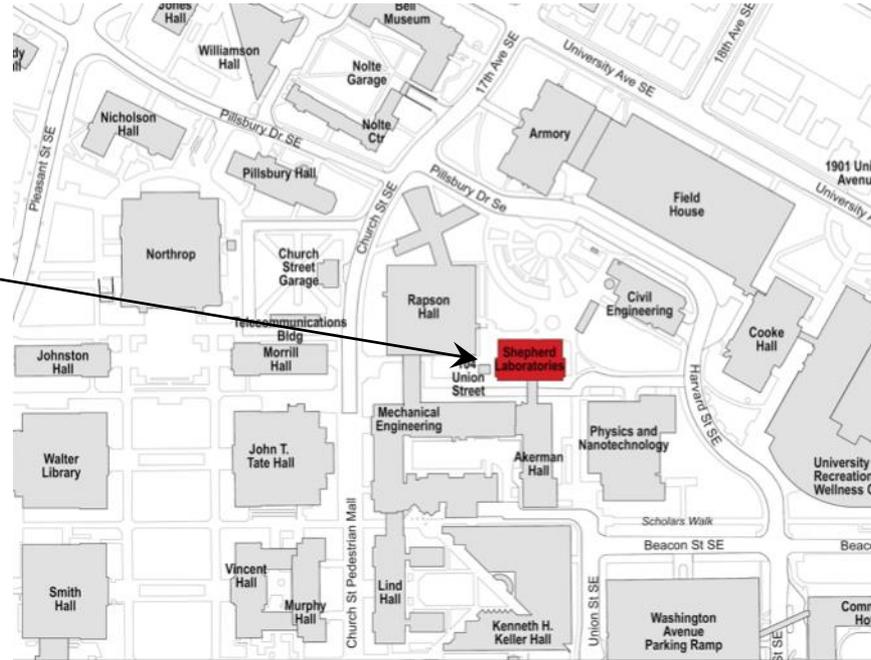
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Location Map

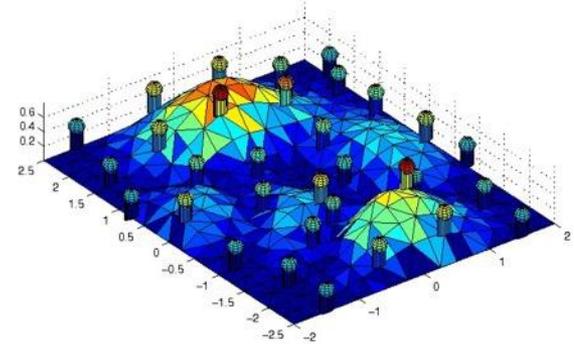
Shepherd Laboratories





Project Rationale

- Robotics as MnDRIVE focus area
 - robotics, sensors, and advanced manufacturing
 - solar vehicle project with emerging autonomous vehicle technology
- Consolidated and expanded space for researchers and student activity
 - project will move distributed to contiguous space





Project Description

- Renovation of 19,260 gsf in the first and second floors
- Shared workshops, open labs, faculty and student workstations
- Student organization space, including Solar Vehicle Project
- Two story open-bay drone test flight space
- Additional exterior windows allow daylight into the spaces





Project Description

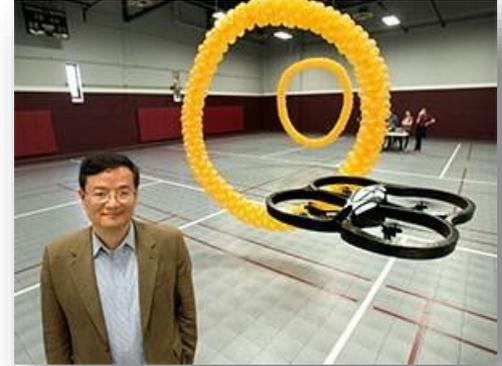
- Cost Estimate
 - Construction \$ 10,845,000
 - Non-construction 1,358,000
 - Total Project Cost \$ 12,203,000

- Capital Funding
 - College of Science and Engineering \$ 203,000
 - Mn DRIVE 2,000,000
 - Private Gifts 10,000,000
 - Total Approved Project Budget \$ 12,203,000



Project Description

- Anticipated Completion
 - August 2018
- Estimated Annual Operating Costs
 - No significant change
- Architect
 - BWBR Architects
- Construction Manager at Risk
 - Knutson Construction





Building Exterior – North Elevation (existing)





Building Exterior - North Elevation (proposed)





First Floor Plan





Second Floor Plan





Open Bay Lab / Drone Flight Area





Collaboration Area





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BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities, Planning & Operations

May 11, 2017

AGENDA ITEM: Consent Report

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Michael Berthlesen, Interim Vice President, University Services

PURPOSE & KEY POINTS

The purpose of this item is to review and take action to clarify the final project scope for program and fundraising purposes for the following project:

- A. Affirmation of Final Scope for Intercollegiate Athletes Village (Twin Cities campus)*

BACKGROUND INFORMATION

In September 2015, the Board approved the Athletes Village project, including potential additions or project features that could be added later. As the project has proceeded, the final plans now include climate-controlled connections and exclude the linemen’s facility. These plans remain within the approved scope, schedule, and budget and do not require further Board action.

PRESIDENT’S RECOMMENDATION

The President recommends approval of the Consent Report.

**AFFIRMATION OF FINAL SCOPE FOR
INTERCOLLEGIATE ATHLETES VILLAGE
(TWIN CITIES CAMPUS)**

1. Recommended Action

The President recommends that the Board of Regents affirm the administration's plans regarding the final scope of the Athletes Village on the Twin Cities campus. This includes the construction of climate controlled connections, but excludes a potential linemen's facility.

2. Basis for Request

The Athletes Village project, given final approval by the Board of Regents in September 2015, included "add alternates" for climate controlled connections between facilities as well as a dedicated facility for the football team's linemen. As the project has progressed, contingency funds have become available to fully fund the connections option. These connections will be achieved through a combination of public corridors and skyways. During this same time the leadership of the football program have changed, and no longer prioritizes a facility for the linemen's program.

In order to provide clarity and end discussion on these matters, the Administration requests Board affirmation of this plan. No funding or design approval is required for this plan.

3. Recommendations

The above-described final scope meets the programmatic, financial, and facility needs for this project:



Mark Coyle, Director of Intercollegiate Athletics



Brian Burnett, Senior Vice President for Finance and Operations



BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities, Planning & Operations

May 11, 2017

AGENDA ITEM: Information Item

- Review
 Review + Action
 Action
 Discussion
- This is a report required by Board policy.

PRESENTERS: Michael Berthlesen, Interim Vice President, University Services

PURPOSE & KEY POINTS

The purpose of this item is to provide an update on the following:

- A. Final Project Review: Intercollegiate Athletics Track and Field Facility and Relocated Recreation Wellness Facilities (Twin Cities campus)
- B. Final Project Review: AHC Renovation and Relocation Program (Twin Cities campus)

BACKGROUND INFORMATION

In accordance with Board of Regents Policy: *Reservation and Delegation of Authority*, final project review is required to come to the committee prior to the awarding of a construction project.

A. Final Project Review: Intercollegiate Athletics Track and Field Facility and Relocated Recreation Wellness Facilities (Twin Cities campus)

This project will construct a new competition-level track and field facility at the Athletes Village. The selected site is the current location of the Recreation Sports Bubble and Softball Field. The relocation of the Recreation Sports Bubble and Softball Field will reconstruct the existing facilities like-for-like on University-owned land east of TCF Bank Stadium.

B. AHC Renovation and Relocation Program (Twin Cities campus)

Several Academic Health Center departments and programs are housed in the Veterans of Foreign Wars Cancer Research Center and the Masonic Memorial Building. These two buildings have been designated “do not invest” in the University’s building-by-building strategy. The current occupants must be moved out of the buildings prior to demolition and relocated within the Academic Health Center to ensure continuation of critical research and clinical operations.

Due to the construction schedule, University Services sought final project review from Board and committee leadership prior to the May meeting, which is noted in the docket materials.

**University of Minnesota
Final Review of Capital Projects over \$5 Million**

**Intercollegiate Athletics Track and Field Facility and Relocated Recreation Wellness Facilities
Project Number 01-000-16-1667**

Policy Summary:

According to Board of Regents Policy *Reservation and Delegation of Authority*, Article I, Section VIII, Subdivision 9, "The Board reserves to itself the authority for a subsequent review of approved capital budget projects with a value greater than \$5,000,000 prior to the award of construction contracts."

Project Summary:

The project will construct a new Track and Field Facility at the Athletes Village site at the current location of the Recreation Sports Bubble and Softball Field. The nine-lane track will also include areas for field events such as discuss/hammer throw, long jump, pole vault, etc. The facility will include 3,741 sf of support facilities required for a NCAA competition-level track including restrooms, press box, and 4,000 seat capacity (permanent and temporary) stands.

The relocation of the Recreation Sports Bubble and Softball Field will reconstruct the existing facilities. The project will repurpose the existing sports bubble and salvage, as applicable, the existing mechanical, plumbing, and electrical systems.

Board of Regents Approval Summary:

Capital Budget Amendment:	September 2016
Schematic Plans:	February 2017

Project Team:

Design/ Build Contractor:	PCL Construction
Design/ Build Architect:	DLR Group

Project Budget:

<u>University Debt</u>	<u>\$19,000,000</u>
Total Capital Funding	\$19,000,000

Project Schedule:

Bubble Relocation begin Construction:	June 2017
Bubble Relocation Substantial Completion:	October 2017
Track Facility begin Construction:	November 2017
Substantial Completion:	August 2018

Consistency of project with approved scope, schedule and budget:

Yes No

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Regents of the University of Minnesota
Office of the Board of Regents

600 McNamara Alumni Center
200 Oak Street S.E.
Minneapolis, MN 55455
Phone: 612-625-6300

April 27, 2017

To: Michael Berthelsen, Interim Vice President for University Services

From: Brian Steeves, Executive Director & Corporate Secretary 

Re: VFW and Masonic Relocation Projects - Final Project Review

Chair Johnson and Vice Chair McMillan have reviewed and acknowledge your request for final project review for the following project (as described in the attached memorandum):

- VFW and Masonic Memorial Relocation Projects.

I understand that this information will be reported to the Board of Regents at the May 2017 meetings, as required by Board policy.

c: President Eric W. Kaler
Jon Steadland, Interim Chief of Staff
Brian Burnett, Senior Vice President for Finance and Operations

UNIVERSITY OF MINNESOTA

Twin Cities Campus

*University Services
Office of the Vice President*

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Minneapolis, MN 55455
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MEMORANDUM

April 24, 2017

TO: Regent Dean Johnson, Chair, Board of Regents
Regent David McMillan, Vice Chair, Board of Regents and Chair, Facilities, Planning,
and Operations Committee

FROM: Michael Berthelsen 
Interim Vice President for University Services

RE: VFW and Masonic Relocation Projects - Final Project Review

According to Board of Regents Policy Reservation and Delegation of Authority, Article I, Section VIII, Subdivision 10, "The Board reserves to itself the authority for a subsequent review of approved capital budget projects with a value greater than \$5,000,000 prior to the award of construction contracts."

The VFW and Masonic Relocation Projects are within the scope, schedule, and budget approved by the Board of Regents. In order to maintain the project scope, schedule, and budget, it is important that the University award the construction contract prior to the next Board of Regents meeting. Therefore, I am requesting your review of this project outside the normal Board of Regents meeting schedule. With the award of this contract, we are committing to complete the project as outlined in the attached Project Summary.

We will include the attached Project Summary as part of the information items for the May 11, 2017 Board of Regents Facilities, Planning, and Operations Committee meeting.

Please feel free to contact me if you have any questions or concerns.

c: Eric Kaler, President
Jon Steadland, Interim Chief of Staff
Brian Burnett, Senior Vice President and Chief Financial Officer
Brian Steeves, Executive Director and Corporate Secretary, Board of Regents

**University of Minnesota
Final Review of Capital Projects over \$5 Million**

**VFW/Masonic Memorial Relocation Projects
Project Number 01-000-17-0309**

Policy Summary:

According to Board of Regents Policy *Reservation and Delegation of Authority*, Article I, Section VIII, Subdivision 9, "The Board reserves to itself the authority for a subsequent review of approved capital budget projects with a value greater than \$5,000,000 prior to the award of construction contracts."

Project Summary:

There are several Academic Health Center departments and programs remaining in the Veterans of Foreign Wars Cancer Research Center (VFW) and the Masonic Memorial (MM) Building. These two buildings have been designated "do not invest" in the University's Building-by-Building Strategy. The current occupants must be moved out of the existing buildings prior to demolition and relocated within the Academic Health Center to ensure that critical research and clinical operations can continue.

Sub-Project A: This project consists of 14,000 sf of minor office renovations in PWB, Floor 1, in unoccupied clinic space. The departments served will be Vascular Surgery, Radiation Oncology, and Gastroenterology. The majority of the existing clinic rooms and spaces will be utilized as is with finish upgrades and minor mechanical, electrical, and plumbing work.

Sub-Project B: This project will move a laboratory from the basement of MM to 7th floor PWB. It consists of 1,500 sf of minor finish upgrades and mechanical and electrical work to accommodate the relocated laboratory equipment.

Sub-Project C: This project consists of 2,800 sf of minor office renovations on 6th floor PWB for the Family Medicine Department. This VFW/MM Relocation project will fund the design portion of the project. The Health Sciences Education Center project will fund the construction.

Sub-Project D: This project has been deleted from the scope by the AHC. The researcher has been accommodated in other space within the AHC.

Sub-Project E: This project will move a laboratory from the second floor of MM to 14th floor Moos. It consists of 5,600 sf of major architectural upgrades, mechanical, electrical, and plumbing work to provide four Class 10,000 / ISO 7 clean rooms, a gowning room, tissue culture rooms, and supplemental lab spaces. Minor office upgrades on the floor are also included.

Sub-Project F: This project has been deleted from the scope by the AHC. Portions of this scope have been added to Sub-Project H.

Sub-Project G: This project consists of moving the Lillehei Clinical Research Unit from MM to first floor PWB. The project includes minor architectural, mechanical, electrical, and plumbing work to construct a hospital-based clinic, a waiting area, reception area, laboratory spaces, and clinic and patient support areas. The project area is 3,900 sf.

Sub-Project H: This project will construct a new overnight stay clinic on first floor PWB. The 10,500 sf facility includes major architectural, mechanical, electrical, and plumbing work to construct a hospital-based clinic with six patient rooms and adjacent toilet rooms, reception area, staff and researcher touch down spaces, small laboratory, and clinic support spaces.

Sub-Project I: This project consists of moving the Pharmacy Group currently located on Moos Tower Level 14 to the PWB Basement into existing laboratory space. The 8,500 sf facility includes minor architectural, mechanical, electrical, and plumbing work to prepare the space for the group. This project must occur before Project E can begin.

Board of Regents Approval Summary:

Capital Budget Amendment:	February 2017
Schematic Plans:	February 2017

Project Team:

Design/ Build Contractor:	MA Mortenson Construction
Design/ Build Architect:	BWBR Architects

Project Budget:

Medical School	\$1,000,000
Health Sciences	\$1,000,000
Facilities Management	\$ 45,000
University Debt	\$11,320,000
Total Capital Funding	\$13,365,000

Project Schedule:

Projects begin Construction:	May 2017
Projects Substantial Completion:	October 2017

Consistency of project with approved scope, schedule and budget:

Yes No