



Facilities, Planning, & Operations Committee

May 2016

May 12, 2016

9:45 a.m. - 11:45 a.m.

West Committee Room, McNamara Alumni Center

FAC - MAY 2016

1. Capital Project Delivery at the University

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2. University Housing: The Role of Master Leasing in Meeting Enrollment Goals

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3. Project Components of the President's Recommended FY2017 Annual Capital Improvement Budget

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4. Green Line Operations and Maintenance Addendum: Year Two Vibration and EMI Performance Standards Review

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5. Information Items

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A. Real Estate Lease: Agreement for Use of University Facilities and Services by NHL Enterprises, L.P. for 2016 Coors Light NHL Stadium Series, February 9-29, 2016 (Twin Cities Campus)

Emergency Lease Approval - Page 103

B. Final Project Review: Veterinary Isolation Facility (Twin Cities Campus)

Project Narrative - Page 107



BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities, Planning, & Operations

May 12, 2016

AGENDA ITEM: Capital Project Delivery at the University

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

This is a report required by Board policy.

PRESENTERS: Suzanne Smith, Assistant Vice President

PURPOSE & KEY POINTS

The purpose of this item is to help the Board achieve an understanding of the complex nature of capital project delivery in a public university setting. The discussion will include an overview of capital project delivery methods, internal/external approval processes for projects, RFP bidding processes for University-wide building projects, client involvement, and state versus non-state funded requirements and project costs. Board input and reporting, from planning through design approval, will be highlighted as well.

Capital Planning and Project Management (CPPM) has system-wide responsibility for campus master planning. CPPM manages the planning, design, and construction of fixed assets including new facilities, remodeling of existing facilities, utility infrastructure, furnishings, and equipment. The process begins by identifying concepts for inclusion in the six-year capital plan and continues through predesign, approval of projects in an annual capital budget, and through project delivery.

The primary project delivery methods on campus utilize a best value delivery approach and include Construction Manager at Risk, Design-Build, and Design-Bid-Build. The delivery method selected is tailored to each project and is based on several key factors such as:

- Project scope/type;
- Schedule;
- Budget;
- Complexity;
- Risk analysis; and
- Best practices.

Vendors for design and construction services for capital projects are procured through a request for proposal (RFP) process. The proposals are evaluated based on the criteria included in the RFP, and interviews are conducted with the finalists.

Project Delivery at the University

Board of Regents Facilities, Planning, and Operations Committee
May 12, 2016



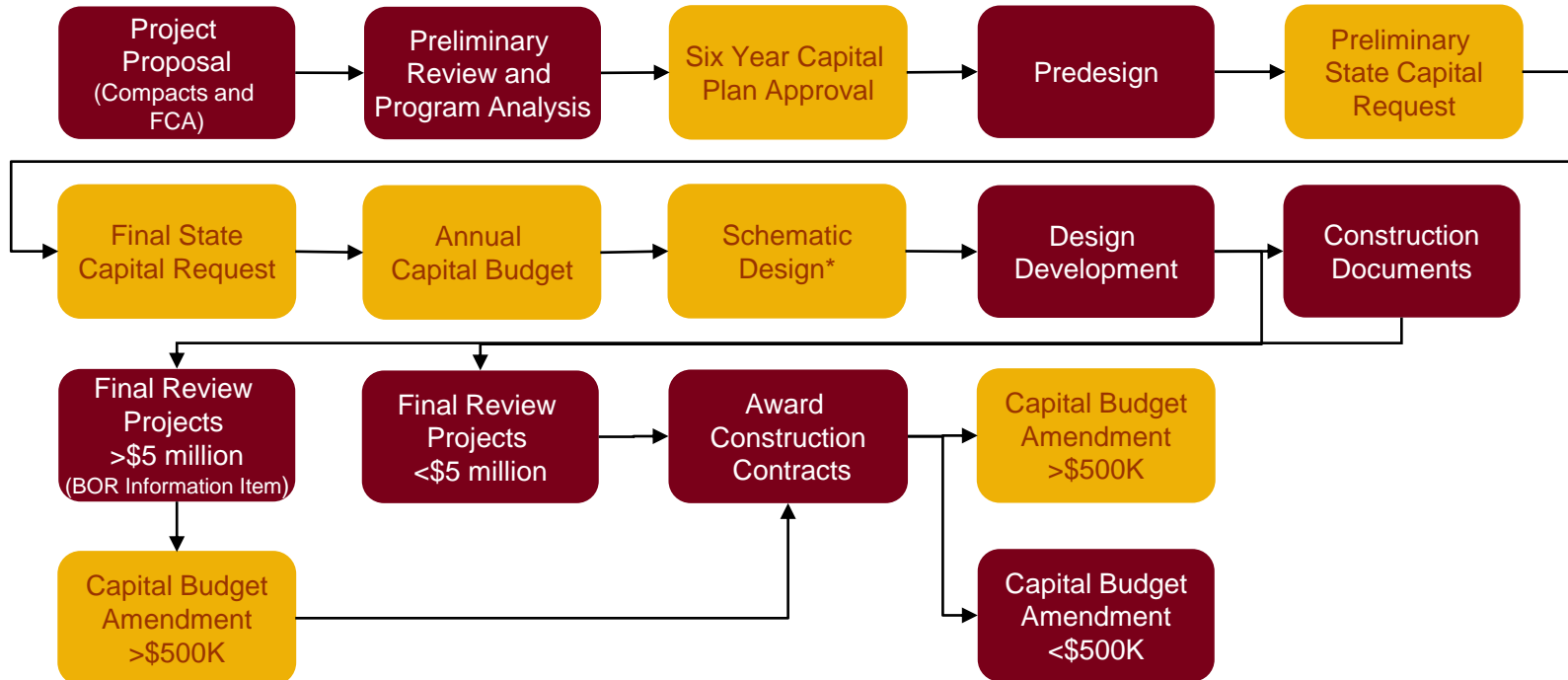
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Regents Involvement in the Capital Planning and Project Management Process

Board Approval Shaded in Gold

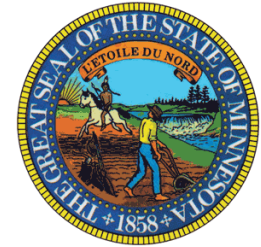


* Schematic Design may occur before the Capital Budget when a financing plan is in place.



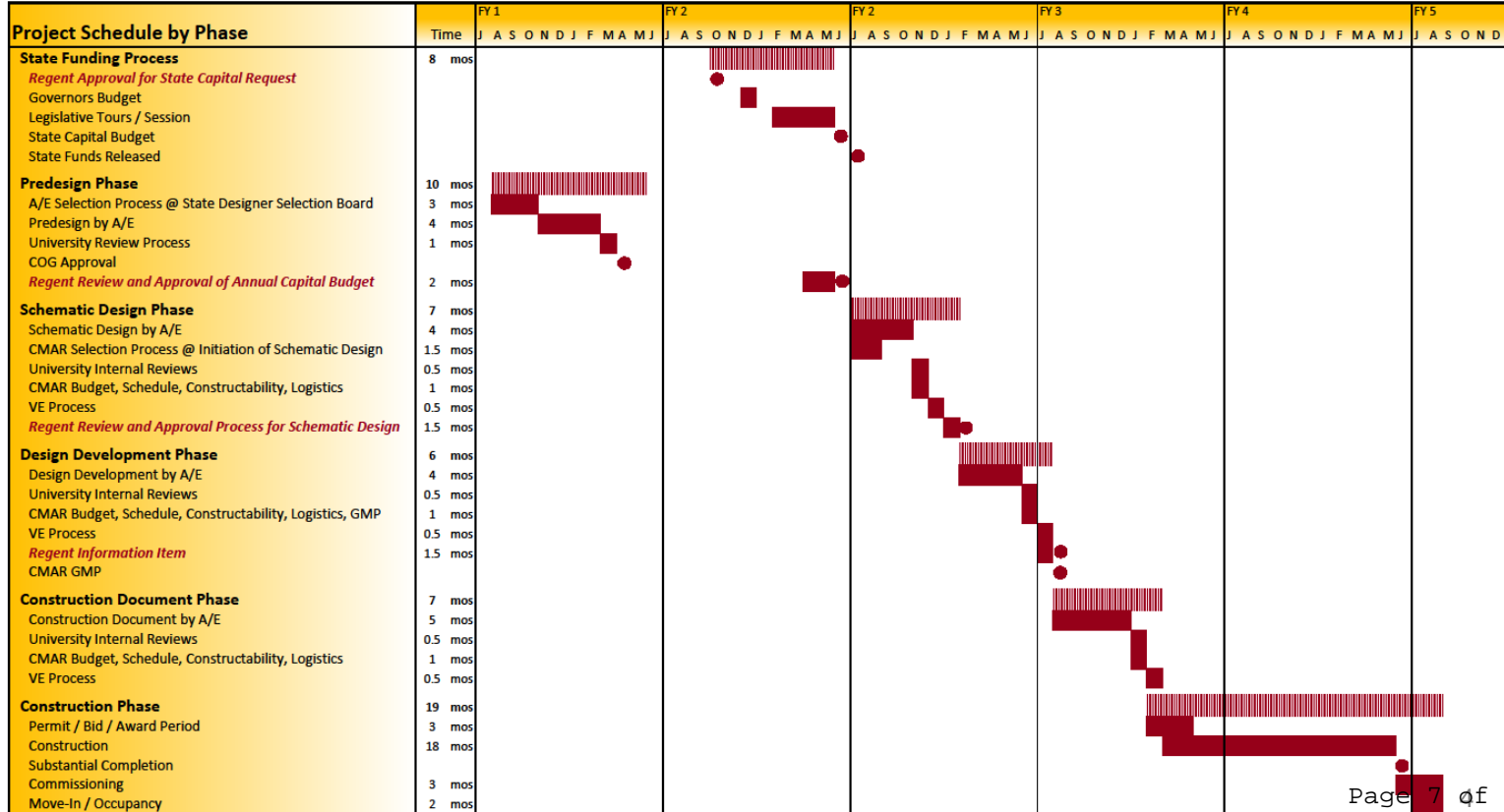
Project Delivery – State Requirements

- State Designer Selection Board
 - 11 week process vs UMN process
- Project Art
 - Dedicates 1% of the construction cost to art
- Performance and Payment Bonds
 - Required for all work over \$100,000 (1.5 – 2% cost impact)
- Prevailing Wage
- Environmental B3/2030
 - Sustainability targets for reduction of energy (first cost impacts)
- US Made Steel
 - Potential cost impacts
- Responsible Contractor Law
 - Administrative cost impacts





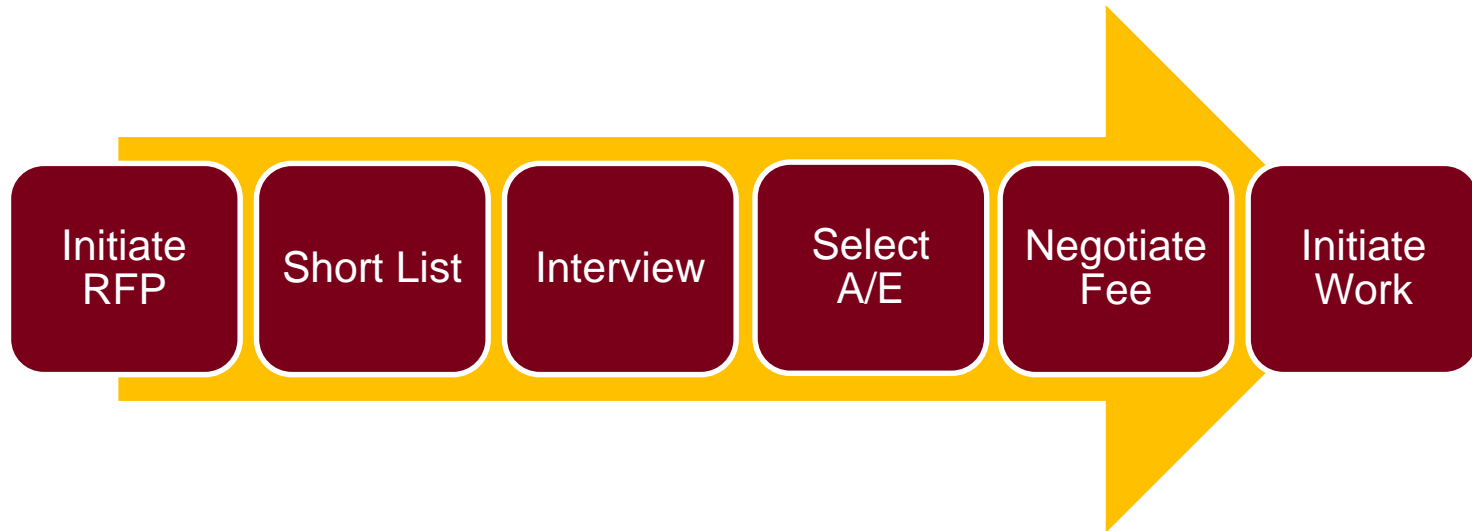
Project Delivery Process – Large Projects





Project Delivery – A/E Selection

A/E Fee Over \$100,000
Non-State





Project Delivery – Contractor Selection

Construction Contract Over \$250,000
CMAR or D / B delivery





Project Delivery

- All Capital Projects are delivered via Best Value, regardless of delivery method
 - Best Value = Price + Performance





Project Delivery - Best Value Selection Process

Request for Proposal Evaluation Criteria

Architect/Engineer

- Project Approach and Work Plan
- Team's Qualifications
- Project Fee
- Project Schedule
- Targeted Businesses Goal
- Interviews



Contractor

- Project Risk Assessment
- Team's Qualifications
- Project Cost
- Project Schedule
- Targeted Businesses Goal
- Safety (Construction)
- Interviews



Project Delivery – Methods

- Design – Bid – Build
- Design / Build
- Construction Manager @ Risk (CMAR)



Coffman - Deli



Seibert Field



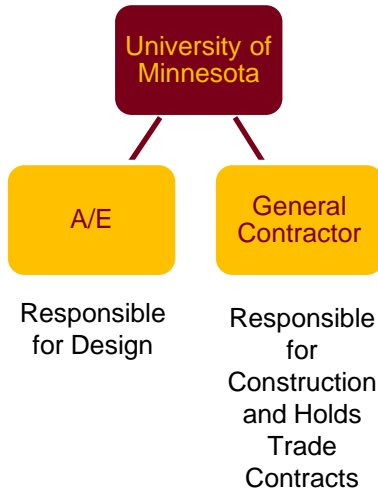
NoVA



Project Delivery Method – Contracts

Design – Bid – Build

Two Separate Contracts



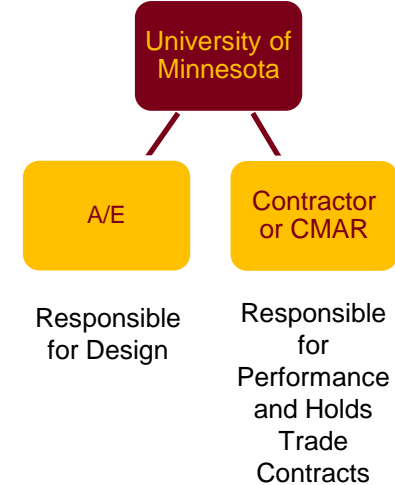
Design / Build

One Contract



CMAR

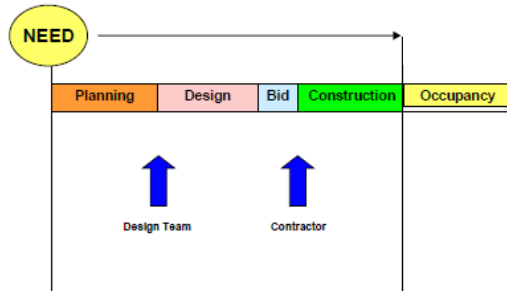
Two Separate Contracts



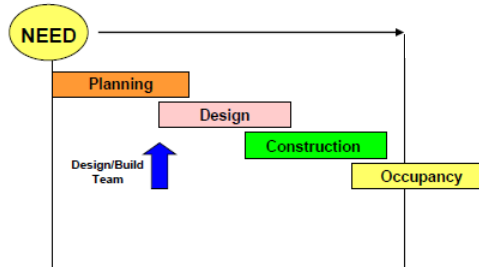


Project Delivery Method – Schedule

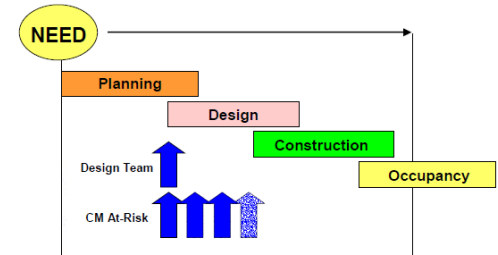
Design – Bid – Build



Design / Build



Construction Mgr at Risk





Project Delivery Method – Comparative

Design – Bid – Build

• Benefits

- Completed design
- Singular Lump Sum Bid (lower first costs)
- Industry standard, rules and roles widely understood

• Challenges

- Bid may exceed budget, (costly redesign /schedule impact)
- Longest schedule duration
- Adversarial relationship
- Most inflexible to accommodate scope change
- Higher change order cost
- All savings accrue to GC



Design / Build

• Benefits

- Single point of design and construction responsibility
- Single entity for cost, schedule and method
- Fastest schedule duration
- Design delivered economically
- Best opportunity for subcontractor expertise in the design process

• Challenges

- Design and cost systems for checks & balances difficult
- Quality may be compromised to maintain project budget
- Ability to control cost of additional work
- Difficult to utilize for large complex projects



CMAR

• Benefits

- Works with architect as a team member, acting in owner's interest
- Optimize cost estimate accuracy, schedule & quality
- Earlier completion (phased / fast-track)
- Competitive bidding and ability to prequalify subs
- Ability to pre-order long-lead items

• Challenges

- Possible duplication of mark-ups and bond costs
- Potential change order exposure if not fully designed (any fast-track)





Project Delivery Method – Selection

- Best Practices: CMAR or D/B delivery method evaluation factors
 - Project Complexity
 - CMAR if complex and/or specialized in nature and/or high need to direct A/E
 - Schedule
 - D/B or CMAR if schedule is a critical element
 - Costs
 - D/B or CMAR for early contractor input during design, maximization of scope and guarantee of cost
 - Risk Analysis
 - CMAR or D/B for likelihood of claims due to project nature
 - D/B if design is repetitive in nature or not highly specialized or single source of responsibility beneficial





Project Delivery – Current Activity

Active Capital Projects

7/1/2014 – 6/30/2015

	\$0 - \$1M	\$1 – 10M	\$10 – 50M	\$50M+	Total
Project Value	\$ 40M	\$162,000,000	\$ 324,000,000	\$ 960,000,000	\$1,486,000,000 ⁽¹⁾
Total Qty	154	43	12	10	219 ⁽²⁾

1. Predesign to Occupancy
2. Delivery method for 68 projects TBD

	\$0 - \$1M	\$1 – 10M	\$10 – 50M	\$50M+	Total
D-B-B Qty	52	20	4	0	76
D/B Qty	2	7	2	0	11
CMAR Qty	14	27	14	11	66



Project Delivery – Best Value Experience

- Benefits of Process Improvements
 - Claims Reduction to Zero
 - Team Approach / Less Adversarial
 - Fair Selection Process
 - Better Planning and Communication = Customer Satisfaction
 - Better Cost Surety and Schedule Control





Project Cost - Factors that don't differentiate UMN from the Private Sector

- Contractors and Subcontractors
- Suppliers
- Materials
- A/E fees
 - AE procured through a competitive process



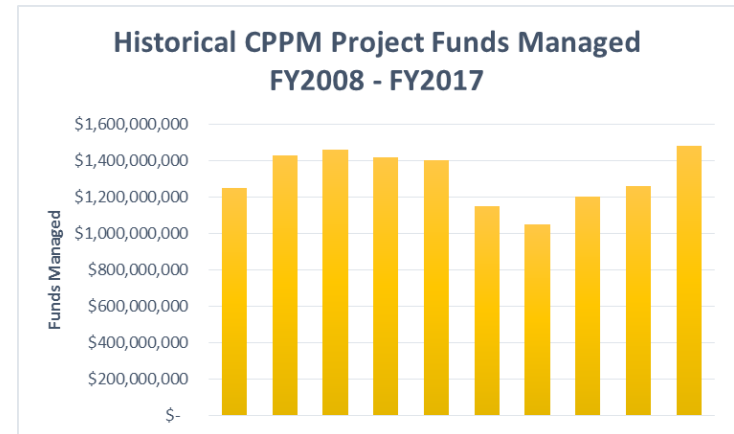
Contractors

Materials - Folwell Hall



Project Cost - Factors that don't differentiate UMN from the Private Sector

- CPPM Project Management Fees
 - Legislative Audit 2010 revised billing practice
 - Percent base to actual billable hours
 - Hourly rate is balanced yearly
 - No “profit” margin
 - CPPM fees average 1.1% of total
 - project cost vs. 2.5% to 3.5% for
 - private sector project management firms





Project Cost - Factors that do differentiate UMN from the Private Sector

- State / Federal / Grant Requirements:
 - SDSB, Art, Bonds, B3, Prevailing Wage, Steel, Other Statutes
- University's Building Standards
- University's Funding Practice
- Campus Culture
- Design Review Process
- Market Timing
- Swing Space / Multiple Moves



Project Cost Factors – State / Federal / Grant Requirements

- UMN subject to State / Federal / Grant requirements that increase cost of construction
 - Schedule, Competition, Complexity, Scope, Mandates
 - U.S. made steel vs. foreign made steel
 - Environmental B3 / 2030
 - SDSB process lengthens schedule
 - Bonds

About the State Designer Selection Board

The State Designer Selection Board (SDSB) selects the primary designer on building construction or remodeling projects as requested by state agencies (except CAAPB), the University of Minnesota, and Minnesota State Colleges and Universities on all projects with an estimated cost greater than \$2,000,000.00 or planning projects with estimated fees greater than \$200,000.00. Selection for Primary Designer is based on qualifications.

SDSB



SB2030



SAFL



Project Cost Factors – University Building Standards

- Emphasizes lower life-cycle costs over higher initial cost of construction
- Completed an external review of the Standards by design and construction professionals
 - Results: Exceeds Industry Practices and Code Requirements
 - Major Construction Categories
 - General Requirements
 - Enclosure
 - Mechanical, Electrical, and Plumbing
 - Technology



Project Cost Factors – University Funding and Other Practices

- Projects appear to cost more than private sector
 - Individual projects required to carry full burden of site infrastructure/building system and/or full remediation
 - Temporary relocation costs and multiple moves – lack of swing space
 - Opportunistic scope additions
 - University is both the Developer and the Owner / Tenant



Pleasant St



Cancer-Cardio



Amundson



Tate



Project Cost Factors – Campus Culture

- Projects managed to meet institutional priorities
 - Comply with major events on campus
- Each capital project is viewed as “one time” events
 - Client customization valued over university need for adaptable and efficient use of space
- Project contingency is set to ensure project is “successful”
 - Surplus equates to superfluous spending
 - Deficit equates to poor management



Project Cost Factors – Design Review Process

- University Approval Requirements
 - Requires projects to “speed up” or “slow down”
- Involves many individuals, groups, and committees
 - Individual division goals w/o responsibility for budget impact
 - Increases project scope, schedule and costs of construction
- Multiple staff responsibilities
 - Reviews are secondary responsibility, may result in changes during construction





Project Cost Factors – Recommendations and Next Steps

- Review Campus Standards and State Requirements Comprehensively
 - Evaluate first cost vs. life cycle building costs
 - Direction to be provided by Sr. Leadership
 - Assess feasibility of modifying/eliminating State requirements
 - Legislation
- Refine the Project Review Processes
 - Streamline project review process and staffing
- Review Campus Culture Impacts



Project Cost Factors – Recommendations and Next Steps

- Consider a “Portfolio” Approach to Measure Project Successes
 - Contingency pooled and transferrable between projects as in HEAPR funds or BDD
- Review University Funding Practices
 - Review who bears the cost of non-project infrastructure improvements and where these costs are included





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BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities, Planning, & Operations

May 12, 2016

AGENDA ITEM: University Housing: The Role of Master Leasing in Meeting Enrollment Goals

Review Review + Action Action Discussion

This is a report required by Board policy.

PRESENTERS: Pamela Wheelock, Vice President, University Services
Laurie McLaughlin, Director of Housing and Residential Life

PURPOSE & KEY POINTS

The purpose of this item is to discuss the University's housing strategy within the context of using master leasing to meet enrollment goals.

University housing exists to enhance the student experience and aligns programs and planning to meet and support the institution's enrollment strategy. The Board adopted a new enrollment strategy in March 2016. The strategy includes:

- Growing the undergraduate body to 32,000-33,000 students.
- Housing 90 percent of first-year students in University housing.
- Retaining 25 percent of those students for a second year experience.
- Providing housing to 10 percent of the incoming transfer student class.

There are two primary styles of housing that the University provides:

1. Residence halls are communities that serve as an essential piece of a first-year student's transition to the University, support retention and academic success, and ensure personal well being by creating an intentional community that minimizes the opportunity for self-isolation. This style of housing is not provided by the private market and is primarily intended for first-year students. The University is committed to offering every incoming first-year student who applies by May 1 the opportunity to live in this style of housing.
2. Suites and apartments offer increased privacy and varying levels of independence. This type of housing is desirable for second-year students and beyond. The private market has an abundant supply of this style of housing, especially apartments.

Master leasing apartments has been part of the University's housing supply mix since 1999. At present, 417 beds are leased from the Wedum Foundation at University Village. Short-term leases like this are a win/win. They allow the University to provide a competitive product to our students

without the long-term commitment of building and maintaining the facility. In addition to providing a flexible housing stock, leases of this type do not impact the University's credit rating.

With an adopted enrollment strategy that grows the undergraduate body, there will be fewer residence hall spaces available for students beyond their first year and an increasing number of second-year and transfer students in need of apartment-style housing. This shift, combined with the displacement of approximately 700 beds at Pioneer Hall (either in the 2017-2019 period or permanently beginning before or after the 2018-2019 academic year) means additional student housing will be needed. The large supply of new near-campus apartment buildings, and increased softening in occupancy in that market, suggests now is an opportune time to take advantage of private investment in housing facilities to meet the University's needs.

One unknown factor is whether students choose private apartments because of the product they offer or if it is because they desire to live in a facility without University oversight. If one or more new facilities near campus can be master leased, this would enable Housing and Residential Life to test the market and better understand which of these factors most influence student decision making. Master leasing would also complement the pilot second-year experience program slated to be delivered by University staff in fall 2016 at two privately operated apartment facilities. The pilot program will better inform how to support the second-year experience in housing.

An RFP was recently issued which contemplates a lease of 350-900 beds in one or more facilities. RFP responses are due in early May, with evaluation, review, and site visits to follow. It is anticipated that if one or more respondents were acceptable to the University, a five-year lease would be presented for review and approval at the June 2016 Board of Regents meeting.

BACKGROUND INFORMATION

The Board of Regents has participated in the following recent presentations that inform this discussion related to student housing and/or enrollment:

- Resolution on Enrollment Principles and Tuition/Aid Philosophy (February/March 2016)
- A Vision to Guide Long-Term Development and Change in Key Areas of the Twin Cities Campus (February 2016)
- Long-Range Campus Planning II: University Housing (February 2016)
- Aligning Tuition / Aid Philosophy with Enrollment Strategy (December 2015)
- Principles and Objectives to Govern Enrollment Management Through 2025 (October 2015)
- University Enrollment Management (October 2015)
- Twin Cities Campus Planning: Housing Strategy and AHC Facilities (July 2015)
- Implementing the Master Plan: District Planning (June 2015)
- Annual Capital Budget (June 2015)
- Twin Cities Campus Student Housing Strategy (May 2015)
- Balancing UMTC Strategies around Enrollment and Financial Aid (February 2015)
- Demographic Trends and System-wide Enrollment Management (October 2014)
- Annual Capital Budget (June 2014)
- Providing a Memorable Student Experience (May 2014)

The Role of Master Leasing in Meeting Enrollment Goals

Board of Regents Facilities, Planning, and Operations Committee
May 12, 2016

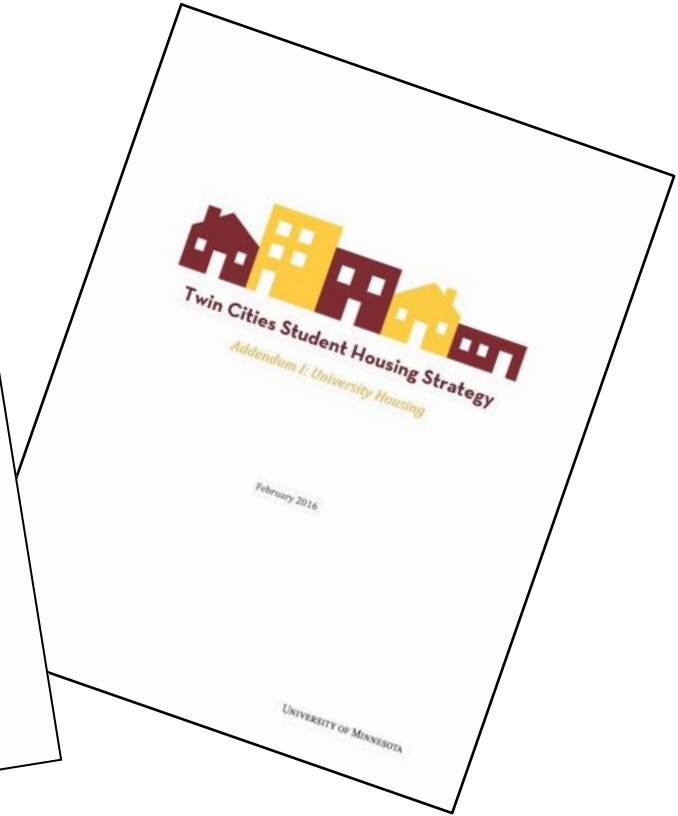
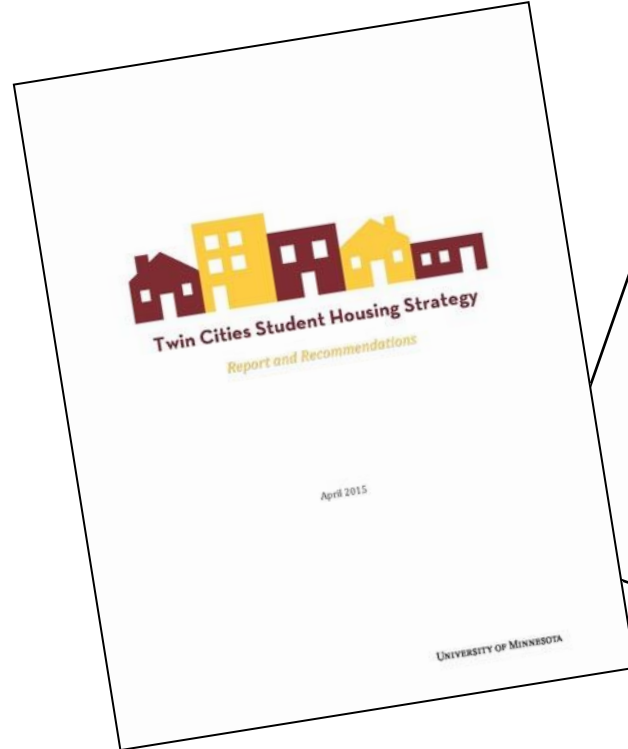


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Housing Strategy





University Goals

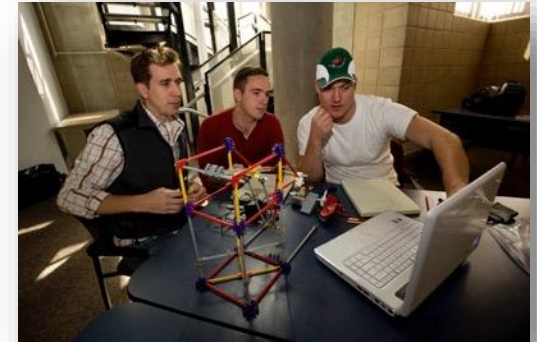
- Support newly adopted enrollment goals
- Improve student experience and academic achievement
- Assess product and quantity needed to meet student demand
- Reduce reliance on institutional debt capacity wherever possible
- Keep room and board rates in the bottom half of the Big 10





Regents 2016 Enrollment Plan

- Undergraduate body of 32,000-33,000
- University goals provide housing for
 - 90% of first-year students
 - (guarantee for all who apply by May 1, 88-90% historical capture)
 - 25% returning for a second year
 - 10% of incoming transfer students





Current Capacity

Type	Beds
Residence Halls	5,758
Apartments	1,028
Total	6,786





Projected Demand: Fall 2021

Population	Beds Needed
First-Year Students	5,499
Second-Year Students	1,334
Transfer Students	230
International Students	150
Upper Division Students	350
Other	150
Total	7,713





Projected Demand: Bed Type

Type	Today	2017	2018	2019	2020	2021
Residence Hall	5,758	6,015	6,098	6,206	6,317	6,329
<i>First-Year Need*</i>	<i>5,050</i>	<i>5,147</i>	<i>5,221</i>	<i>5,320</i>	<i>5,417</i>	<i>5,417</i>
Apartment	1,028	1,335	1,345	1,356	1,372	1,384
Total	6,786	7,350	7,443	7,563	7,689	7,713

**approximately 1.5% of first-year students (student athletes) live in apartments*



Two Unique Markets



Residence Halls

(solely university product)

Apartments

(mostly private sector product)



**Apartments:
if we build them,
will they lease them?**



Why Master Leasing?

- Ability to quickly add or reduce capacity
- Leases do not impact University debt capacity
- Flexibility in product as student trends change





Experience with Master Leasing

- University Village
 - began in 1999 when facility was new
 - 417 beds
 - option to renew for additional two years
- University manages all assignments, billing, staffing
 - operates like any other U owned apartment facility





Intended Goals

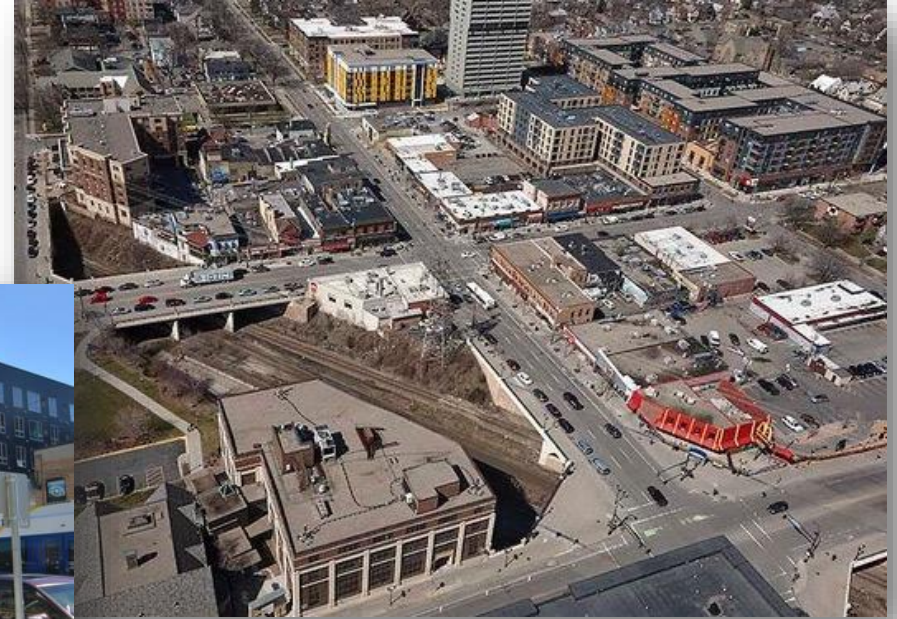
- Support enrollment targets
- Preserve residence hall capacity primarily for first-year students
- Add apartment capacity for second-year and transfer experience
- Test market to understand student preferences





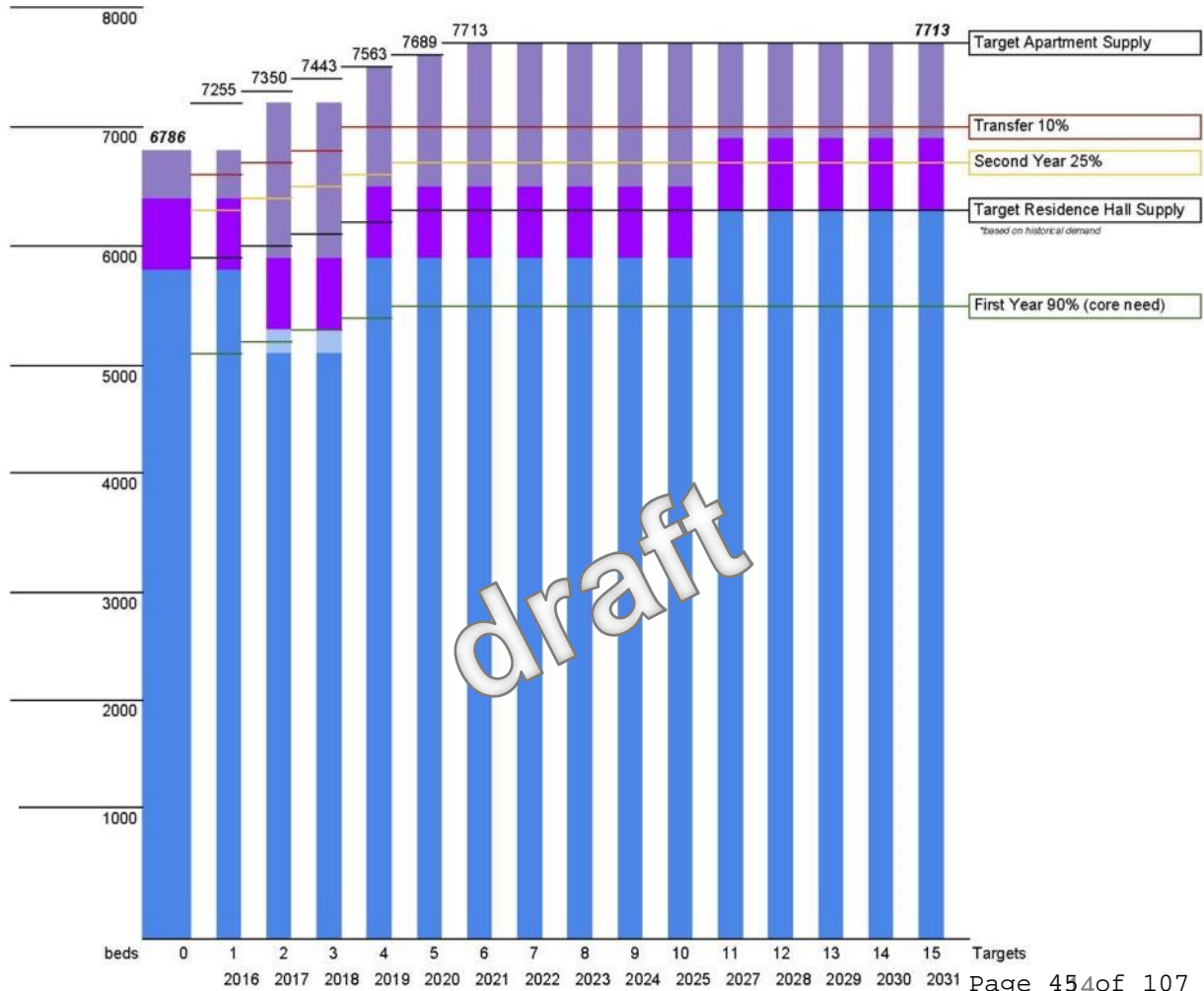
Current RFP

- Anticipates 350-900 beds
- Evaluation and tours
- Recommendation in June





Demand Forecast



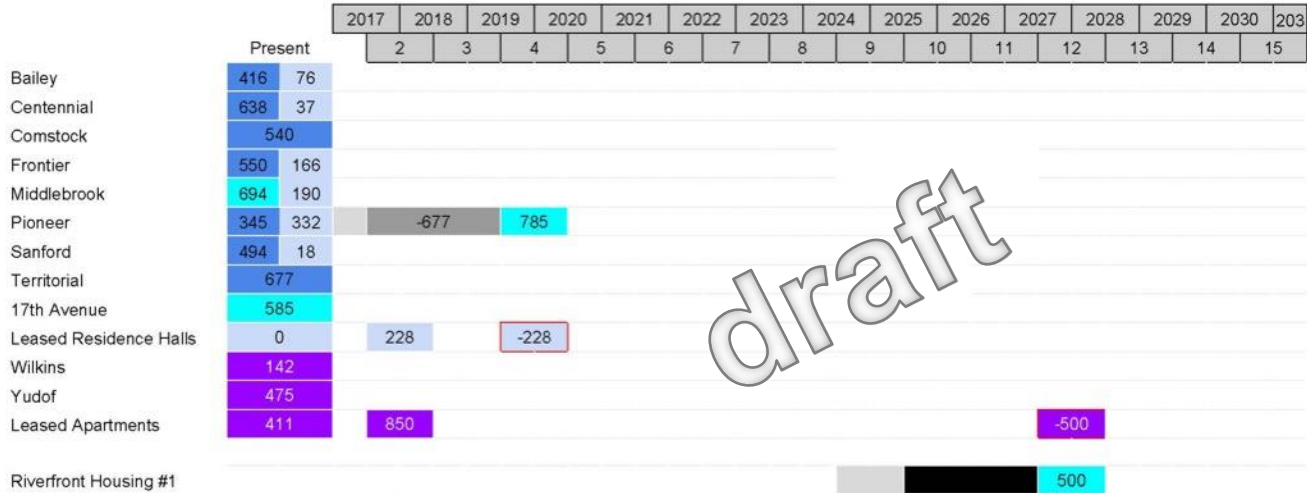


Declarations

- Existing facilities continue to be relevant and are expected to remain in inventory
 - well-maintained and regularly refreshed
 - potential for modification over time to reduce student:bath ratio
 - exception for Centennial and Territorial if current hospital and AHC sites on riverfront are cleared
- Facilities are strategically positioned on campus to enhance first-year experience
- Experience with expanded master leasing will inform future own vs. lease decisions



Facility Plan



	Present	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	203
TOTAL	6786	7187	7187	7744	7744	7744	7744	7744	7744	7744	7744	7744	7744	7744	7744	7744
CHANGE	-	401	0	557	0	0	0	0	0	0	0	0	0	0	0	0
Total Residence Halls	5758	5309	5309	5866	5866	5866	5866	5866	5866	5866	5866	5866	6366	6366	6366	6366
Total Apartments	1028	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1378	1378	1378	1378





Future Investment and Capacity

- Systems and modernization investments in residence halls and apartments (excluding Pioneer) do not require full-year shutdown
 - investments paid in cash from funded depreciation do not impact institutional debt capacity
- Leased apartment stock is flexible over time
- Residence Hall capacity grows at a measured, responsible pace





DISCUSSION



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BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities, Planning, & Operations

May 12, 2016

AGENDA ITEM: Project Components of the President's Recommended FY 2017 Annual Capital Improvement Budget

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

This is a report required by Board policy.

PRESENTERS: Pamela Wheelock, Vice President, University Services
Suzanne Smith, Assistant Vice President
Monique Mackenzie, Director of Planning

PURPOSE & KEY POINTS

The purpose of this item is to provide additional detail regarding projects included in the President's Recommended FY 2017 Annual Capital Improvement Budget (capital budget). The University adopts an annual capital improvement budget that authorizes projects costing more than \$500,000 to begin design and construction during the upcoming fiscal year.

The capital budget is reflective of the following planning principles.

1. Advance the academic excellence of the University of Minnesota by aligning capital projects with the Platform for Excellence.
2. Address service unit priorities that support the academic priorities.
3. Ensure that investments in existing facilities and infrastructure contribute to the safety, renewal, preservation, and restoration objectives and are aligned with the priorities of the University's academic plan.
4. Give preference to projects that create flexible space, improve space utilization, and reduce operational costs.
5. Protect the University's financial position by keeping capital expenditures within projected debt capacity limits.
6. Advance the guiding principles of campus master plans and the Board's sustainability policies.

BACKGROUND INFORMATION

Board of Regents policy: *Board Operations and Agenda Guidelines* directs the administration to conduct capital planning with a “six-year time horizon, updated annually.” This annual capital planning process is completed in two parts:

- Part 1 is a six-year capital improvement plan that establishes the institution’s capital priorities for an additional five years into the future. This plan becomes the basis for continued capital and financial planning. It is presented to the Board annually in the fall.
- Part 2, approved by the Board in June, is the annual capital improvement budget for the coming fiscal year in which projects with completed predesigns and financing plans are approved to proceed with design and construction.

Additionally, funding pools categorized as Repair and Replacement (R&R) or Higher Education Asset Preservation and Replacement (HEAPR) will include multiple projects intended to preserve and renew existing campus facilities. Projects funded by these pool dollars include projects intended to extend the life and functionality of existing University facilities and infrastructure.

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Annual Capital Improvement Budget

Project Funding Report

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Funding Report

Academic Affairs

File	Facility	Project Title	Total	Local Funds	Grants / Gifts	Institutional Funds	State Debt	University Debt	Comments
<i>AHC Shared Units</i>									
3286	New Facility	AHC Phase I: Health Sci Ed Facility	\$100,000	\$0	\$0	\$0	\$66,700	\$33,300	FY16 State Request
3310	Hasselmo Hall	Installation of NMR	\$700	\$700	\$0	\$0	\$0	\$0	
<i>College of Biological Sciences</i>									
3287	New Facility	Plant Growth Research Facility	\$6,600	\$0	\$0	\$0	\$4,400	\$2,200	FY16 State Request
<i>College of Food Ag & Nat Res Sci</i>									
3304	Rosemount ROC	Administrative Building Replacement	\$825	\$0	\$0	\$825	\$0	\$0	
<i>College of Liberal Arts</i>									
3282	Pillsbury Hall	Pillsbury Hall Rehabilitation	\$33,000	\$0	\$0	\$0	\$22,000	\$11,000	FY16 State Request
<i>Student Affairs, Vice Provost</i>									
3305	Multiple	R&R - Student Affairs	\$1,100	\$1,100	\$0	\$0	\$0	\$0	
			\$142,225	\$1,800	\$0	\$825	\$93,100	\$46,500	

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Funding Report

Intercollegiate Athletics

File	Facility	Project Title	Total	Local Funds	Grants / Gifts	Institutional Funds	State Debt	University Debt	Comments
<i>Intercollegiate Athletics</i>									
3307	Cowles Stadium	Artificial Turf	\$1,400	\$1,400	\$0	\$0	\$0	\$0	Athletics has Fitz email confirmation
3336	Multiple	R&R - Athletics	\$1,300	\$1,300	\$0	\$0	\$0	\$0	
			\$2,700	\$2,700	\$0	\$0	\$0	\$0	

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Funding Report

Duluth Campus

File	Facility	Project Title	Total	Local Funds	Grants / Gifts	Institutional Funds	State Debt	University Debt	Comments
<i>UM Duluth</i>									
3285	New Facility	Chemistry and Adv Materials Science	\$40,750	\$0	\$0	\$0	\$27,200	\$13,550	FY16 State Request
3316	Multiple	R&R - Student Life	\$3,200	\$3,200	\$0	\$0	\$0	\$0	
3320	Housing Facilities	High Voltage Feeder Replacment	\$4,715	\$0	\$0	\$0	\$0	\$4,715	
3319	Martin Library	Securian Math Emporium	\$900	\$150	\$750	\$0	\$0	\$0	
3318	Malosky Stadium	Track Replacement	\$700	\$700	\$0	\$0	\$0	\$0	
3317	Multiple	R&R - Facilities Management	\$3,000	\$3,000	\$0	\$0	\$0	\$0	
			\$53,265	\$7,050	\$750	\$0	\$27,200	\$18,265	

UNIVERSITY OF MINNESOTA

Funding Report

University Services

File	Facility	Project Title	Total	Local Funds	Grants / Gifts	Institutional Funds	State Debt	University Debt	Comments
<i>Facilities Management</i>									
3339	TC Campus	R&R - Energy Conservation	\$4,000	\$2,000	\$0	\$2,000	\$0	\$0	
3299	Systemwide	HEAPR	\$100,000	\$0	\$0	\$0	\$100,000	\$0	FY16 State Request
3337	TC Campus	R&R -Twin Cities	\$9,250	\$8,250	\$0	\$1,000	\$0	\$0	
3338	TC Campus	R&R - Utility Infrastructure	\$12,305	\$12,305	\$0	\$0	\$0	\$0	
<i>Housing & Residential Life</i>									
3324	TC Campus	R&R- Housing & Residential Life	\$14,700	\$14,700	\$0	\$0	\$0	\$0	
<i>Parking & Transportation Services</i>									
3326	TC Campus	R&R - Parking Infrastructure	\$5,010	\$5,010	\$0	\$0	\$0	\$0	
3327	TC Campus	Transportation Infrastructure	\$2,600	\$2,600	\$0	\$0	\$0	\$0	
3328	TC Campus	Church Street Tunnel	\$2,654	\$2,654	\$0	\$0	\$0	\$0	
<i>U Market Services</i>									
3329	U Market Services	R & R - U Market	\$500	\$500	\$0	\$0	\$0	\$0	
<i>University Dining Services</i>									
3325	TC Campus	R&R - Dining Services	\$1,405	\$1,405	\$0	\$0	\$0	\$0	
<i>University Services</i>									
3288	Systemwide	Academic and Student Experience	\$24,000	\$0	\$0	\$0	\$16,000	\$8,000	FY16 State Request
			\$176,424	\$49,424	\$0	\$3,000	\$116,000	\$8,000	

UNIVERSITY OF MINNESOTA

Funding Report

Report Summary

Total	Local Funds	Grants / Gifts	Institutional Funds	State Debt	University Debt
\$374,614	\$60,974	\$750	\$3,825	\$236,300	\$72,765

UNIVERSITY OF MINNESOTA

Annual Capital Improvement Budget

Project Description Report

The following project information sheets, ordered by file number, provide brief descriptions of each project.

UNIVERSITY OF MINNESOTA

Project Description Report

3282 Pillsbury Hall Rehabilitation

Vice President: Academic Affairs

Campus: Twin Cities

Facility: Pillsbury Hall

Total Cost: \$33,000

Description: This project will completely renovate Pillsbury Hall, replacing obsolete science facilities with modern, flexible non-laboratory teaching, learning, and research spaces for College of Liberal Arts Humanities Programs. The renovated space is anticipated to be divided amongst, office, classroom and assembly type spaces to support multiple modes of learning and alternative workplace environments. At nearly 60,000 gross square feet, the renovation is expected to maintain an equivalent amount of space when complete. The building's systems will be updated to comply with current standards and codes, while retaining and celebrating the historic character of the second oldest building on the Twin Cities campus

RRC: College of Liberal Arts

RRC Contact: John Coleman

Project Manager: Roger Wegner, Mike Kisch

3285 Chemistry and Adv Materials Science

Vice President: Duluth Campus

Campus: Duluth

Facility: New Facility

Total Cost: \$40,750

Description: This project will construct approximately 58,000 square feet of research & instructional laboratories, teaching space, offices, and meeting space for the Swenson College of Science and Engineering for the Duluth Campus. The building will be three stories with a mechanical and electrical penthouse. The research laboratory space will consist of flexible wet and dry labs with adequate utilities, environmental controls, and modern safety accommodations. It will serve the needs of evolving research and teaching pedagogy. The project had prior authorized funding of \$2.25M. The total project budget will be \$43M.

RRC: Duluth Campus

RRC Contact: Lendley Black

Project Manager: John Rashid

3286 AHC Phase I: Health Sci Ed Facility

Vice President: Academic Affairs

Campus: Twin Cities

Facility: New Facility

Total Cost: \$100,000

Description: This project will construct a new education and training facility for the Academic Health Center to support interdisciplinary team-based learning and care. The new facility will include active learning classrooms, simulation centers, collaboration space, studios, and inter-professional lounges. The design calls for a new 4 story 138,500 gsf building and interior renovation of 50,000 gsf (approx. 3 floors) in the Phillips-Wangensteen Building (PWB). The total project will affect 188,500 gsf of space. This project will demolish the existing Masonic Memorial Hospital and the VFW Cancer Center buildings. This project had prior authorization in the 2016 Capital Budget.

RRC: AHC Shared Units

RRC Contact: Brooks Jackson

Project Manager: Trevor Dickie, TBD

UNIVERSITY OF MINNESOTA

Project Description Report

3287 Plant Growth Research Facility

Vice President: Academic Affairs

Campus: Twin Cities

Facility: New Facility

Total Cost: \$6,600

Description: This project will construct a new approximately 12,000 square foot greenhouse addition to the Plant Growth Facilities for the College of Biological Sciences Conservatory and demolish the existing Biological Sciences Greenhouse on the St Paul campus. The new greenhouse will be furnished with modern temperature, humidity, and lighting controls. It will be monitored via the master greenhouse campus control system. Upon completion, plant specimens and program activities currently housed in the existing Biological Sciences Greenhouse will be moved to the new facility and the old greenhouse will be demolished.

RRC: College of Biological Sciences

RRC Contact: Valerie Forbes

Project Manager: Trevor Dickie, TBD

3288 Academic and Student Experience

Vice President: University Services

Campus: Systemwide

Facility: Systemwide

Total Cost: \$24,000

Description: This project will convert obsolete spaces on the Crookston, Duluth, Morris, and Twin Cities campuses into modern spaces to meet the needs of today's programs and provide new learning opportunities across Minnesota. Up-to-date classrooms, instructional laboratories, and collaboration spaces are essential to attract the best and brightest students and remain competitive with other regional universities. Funds will be used to modernize space in the Biological Sciences Center (UMTC), A.B. Anderson Hall (UMD), Humanities Building and Blakely Hall (UMM) and Owen Hall, Dowell Hall and Sahlstrom Hall (UMC). The overall student experience at the University of Minnesota will be improved by enhancing the physical environment and adding modern classroom learning technologies.

RRC: University Services

RRC Contact: Pamela Wheelock

Project Manager: Multiple

3299 HEAPR

Vice President: University Services

Campus: Systemwide

Facility: Systemwide

Total Cost: \$100,000

Description: The funds authorized will be used system-wide to maximize and extend the life of the University's existing physical plant. Individual projects will fall into one of four broad categories – Health and Safety, Building Systems, Energy Efficiency, and Utility Infrastructure. The system-wide HEAPR advisory committee makes recommendations on individual projects to the Vice President for University Services using data from the Facility Condition Assessment and Building Code Deficiency Report.

RRC: Facilities Management

RRC Contact: Brian Swanson

Project Manager: Andrew Chan

UNIVERSITY OF MINNESOTA

Project Description Report

3304 Administrative Building Replacment

Vice President: Academic Affairs

Campus: Rosemount

Facility: Rosemount ROC

Total Cost: \$825

Description: This project will construct a new administrative office building of approximately 2,800 square feet at the Rosemount Research and Outreach Center. This building replaces an existing facility which is located on a parcel leased for gravel mining and must be vacated by the end of the 2016 calendar year.

RRC: College of Food, Agriculture and Natural Sciences

RRC Contact: Brian Buhr

Project Manager: George Mahowald

3305 R&R - Student Affairs

Vice President: Academic Affairs

Campus: Twin Cities

Facility: Multiple

Total Cost: \$1,100

Description: Funds authorized in this request will be used for facility depreciation, maintenance and repairs for Boynton, Recreation and Wellness Center and Student Union Activities.

RRC: Student Affairs

RRC Contact: Danita Young

Project Manager: various

3307 Artificial Turf

Vice President: Intercollegiate Athletics

Campus: Twin Cities

Facility: Cowles Stadium

Total Cost: \$1,400

Description: This project will replace approximately 47,000 square feet of existing sod and sprinkler system with monofilament artificial turf. An alternate will be included to install approximately 11,000 square feet of electric infield heating. The scope of work will include storm water management and proper field drainage.

RRC: Intercollegiate Athletics

RRC Contact: Elizabeth Goetz

Project Manager: Pete Nickel

UNIVERSITY OF MINNESOTA

Project Description Report

3310 Installation of NMR

Vice President: Academic Affairs

Campus: Twin Cities

Facility: Hasselmo Hall

Total Cost: \$700

Description: This project will renovate and repurpose an existing 605 square foot laboratory on the first floor of Hasselmo Hall for the Center of Drug Design. The project will purchase and install a new 400 Mhz NMR and upgrade utilities, fire sprinklers, oxygen sensors, and emergency ventilation to meet the environmental and safety requirements for operation.

RRC: AHC Shared Units

RRC Contact: Brooks Jackson

Project Manager: Roger Wegner

3316 R&R - Student Life

Vice President: Duluth Campus

Campus: Duluth

Facility: Multiple

Total Cost: \$3,200

Description: Funding authorized in this request will be used for facility and infrastructure improvements and repair and replacement projects in the residence halls, apartments, and other student service facilities on the Duluth campus

RRC: Duluth Campus

RRC Contact: Lendley Black

Project Manager: John Rashid

3317 R&R - Facilities Management

Vice President: Duluth Campus

Campus: Duluth

Facility: Multiple

Total Cost: \$3,000

Description: Funding authorized in this request will be used for facility and infrastructure improvements and repair and replacement projects on the Duluth campus.

RRC: Duluth Campus

RRC Contact: Lendley Black

Project Manager: John Rashid

UNIVERSITY OF MINNESOTA

Project Description Report

3318 Track Replacement

Vice President: Duluth Campus
Campus: Duluth
Facility: Malosky Stadium
Total Cost: \$700

RRC: Duluth Campus
RRC Contact: Lendley Black
Project Manager: John Rashid

Description: This project will replace the existing running and field events tracks at Malosky Stadium. The existing track has reached the end of its useful life. Facilities Management has been patching the track but large cracks have now formed. The project includes removal of the existing track surface (including the track surfaces that serve the field events (long jump, pole vault, etc.), inspection and repair of the sub base as required, and installation of a new track surface.

3319 Securian Math Emporium

Vice President: Duluth Campus
Campus: Duluth
Facility: Martin Library
Total Cost: \$900

RRC: Duluth Campus
RRC Contact: Lendley Black
Project Manager: John Rashid

Description: This project will renovate and expand the Mathematics Learning Laboratory from its current 2,500 square feet location to 5,000 square feet. The existing 72 seat conventional computer laboratory will be replaced with new active learning arrangement allowing for uniform collaborative groups of up to 128 students. Life safety system modifications, HVAC alterations, active learning technology upgrades, architectural finishes, and improved lighting will improve functionality of the space. Existing offices displaced by the expansion of the Math lab will be relocated.

3320 High Voltage Feeder Replacement

Vice President: Duluth Campus
Campus: Duluth
Facility: Housing Facilities
Total Cost: \$4,715

RRC: Duluth Campus
RRC Contact: Lendley Black
Project Manager: John Rashid

Description: This project will replace all feeders and primary switching equipment associated with the DU5 and DU6 feeder systems that power all Campus Housing facilities, Student Health Services and exterior street, sidewalks, and parking lot lighting around this part of the campus, originating at the Fire Station substation on College Street. Primary switching and load-break equipment associated with the feeds and transformers serving the softball field and Vermillion/Burntside hall will also be replaced. Existing Minnesota Power transformers serving UMD's Oakland Apartments will be purchased by UMD and connected to the new system that will be fed from both the Fire Station substation on College Street and the Campus Utility Building substation on St. Marie Street.

UNIVERSITY OF MINNESOTA

Project Description Report

3324 R&R- Housing & Residential Life

Vice President: University Services

Campus: Twin Cities

Facility: TC Campus

Total Cost: \$14,700

Description: Funding authorized in this request will be used for facility and infrastructure improvements, and repair and replacement projects in the residence halls, apartments and family student housing units on the Twin Cities campus. Notable investments in facilities for FY17 include Frontier Hall HVAC system upgrade, Commonwealth Terrace Cooperative replacement of streets/curb/gutter, Centennial Hall replacement of 2 passenger elevators, and Sanford Hall Dining Hall & Servery Refresh.

RRC: Auxiliary Services

RRC Contact: Laurie Scheich

Project Manager: Daniel Elliot

3325 R&R - Dining Services

Vice President: University Services

Campus: Twin Cities

Facility: TC Campus

Total Cost: \$1,405

Description: Funding authorized in this request will be used for facility and infrastructure improvements, and repair and replacement projects in food venues on the Twin Cities campus.

RRC: Auxiliary Services

RRC Contact: Laurie Scheich

Project Manager: Leslie Bowman

3326 R&R - Parking Infrastructure

Vice President: University Services

Campus: Twin Cities

Facility: TC Campus

Total Cost: \$5,010

Description: Funding authorized in this request will be used for parking facility and infrastructure improvements and repair and replacement projects on the Twin Cities campus, including improvements to surface parking, structured parking, emergency generators, and elevators.

RRC: Auxiliary Services

RRC Contact: Laurie Scheich

Project Manager: Sandy Cullen

UNIVERSITY OF MINNESOTA

Project Description Report

3327 Transportation Infrastructure

Vice President: University Services

Campus: Twin Cities

Facility: TC Campus

Total Cost: \$2,600

Description: Funding authorized in this request will be used for transportation infrastructure improvements and repair and replacement projects on the Twin Cities campus, including improvements to streets, sidewalks, bridges, building linkages, and safety systems. A notable investment includes the reconstruction of 8th Street SE.

RRC: Auxiliary Services

RRC Contact: Laurie Scheich

Project Manager: Sandy Cullen

3328 Church Street Tunnel

Vice President: University Services

Campus: Twin Cities

Facility: TC Campus

Total Cost: \$2,654

Description: This project will construct a new underground tunnel connection, approximately 207 feet in length, between the existing Tate Science and Teaching building and the Rapson link. The tunnel will fill a gap in the Gopher Way by connecting the Northrop Mall western campus to the College of Science and Engineering eastern campus across Church Street. The proposed tunnel will enhance pedestrian circulation, building services, and utilities in the district and reduce the amount of service traffic on Church Street.

RRC: Auxiliary Services

RRC Contact: Laurie Scheich

Project Manager: Kevin Ross

3329 R & R - U Market

Vice President: University Services

Campus: Twin Cities

Facility: U Market Services

Total Cost: \$500

Description: Funds authorized in this request will be used for replacement of the warehouse portion of the roof. The front third of the roof was replaced in 2008.

RRC: Auxiliary Services

RRC Contact: Laurie Scheich

Project Manager: TBD

UNIVERSITY OF MINNESOTA

Project Description Report

3336 R&R - Athletics

Vice President: Intercollegiate Athletics

Campus: Twin Cities

Facility: Multiple

Total Cost: \$1,300

Description: Funding authorized in this request will be used for facility and infrastructure improvements, and repair and replacement projects in athletics venues on the Twin Cities campus.

RRC: Intercollegiate Athletics

RRC Contact: Elizabeth Goetz

Project Manager: various

3337 R&R -Twin Cities

Vice President: University Services

Campus: Twin Cities

Facility: TC Campus

Total Cost: \$9,250

Description: Funding authorized in this request will be used for facility and infrastructure improvements, and repair and replacement projects on the Twin Cities campus.

RRC: Facilities Management

RRC Contact: Mike Berthelsen

Project Manager: various

3338 R&R - Utility Infrastructure

Vice President: University Services

Campus: Twin Cities

Facility: TC Campus

Total Cost: \$12,305

Description: Funding authorized in this request will be used for utility infrastructure improvements, and repair and replacement projects on the Twin Cities campus.

RRC: Facilities Management

RRC Contact: Mike Berthelsen

Project Manager: various

UNIVERSITY OF MINNESOTA

Project Description Report

3339 R&R - Energy Conservation

Vice President: University Services

Campus: Twin Cities

Facility: TC Campus

Total Cost: \$4,000

Description: Funding authorized in this request will be used on the Twin Cities campus to enhance the energy efficiency of the buildings and infrastructure on the Twin Cities campus.

RRC: Facilities Management

RRC Contact: Mike Berthelsen

Project Manager: various

University of Minnesota
Potential Additions
Annual FY 2017 Capital Improvement Budget

Campus	Resource Responsibility Center	Facility	Title
UMD	Duluth	New Facility	Research Greenhouse
UMTC	College of Science & Engineering	Shepherd Labs	Robotics Lab
UMTC	Intercollegiate Athletics	Mariucci Arena	Weight Room Remodel
UMTC	Public Safety	New Facility	Public Safety Facility
UMTC	University Services	Faye Thompson Center	Partial Renovation
UMTC	University Services	Re-Use Warehouse	Renovation for Waste & Recycling Program
UMTC	University Services	Pioneer Hall	Renovation of Residence Hall
UMTC	University Services	Superblock Dining	Renovation and Consolidation of Resident Dining
UMTC	Libraries	Multiple	Rarebooks Discovery Center

FY 2017 Annual Capital Improvement Budget

Facilities Planning and Operations
May 12, 2016



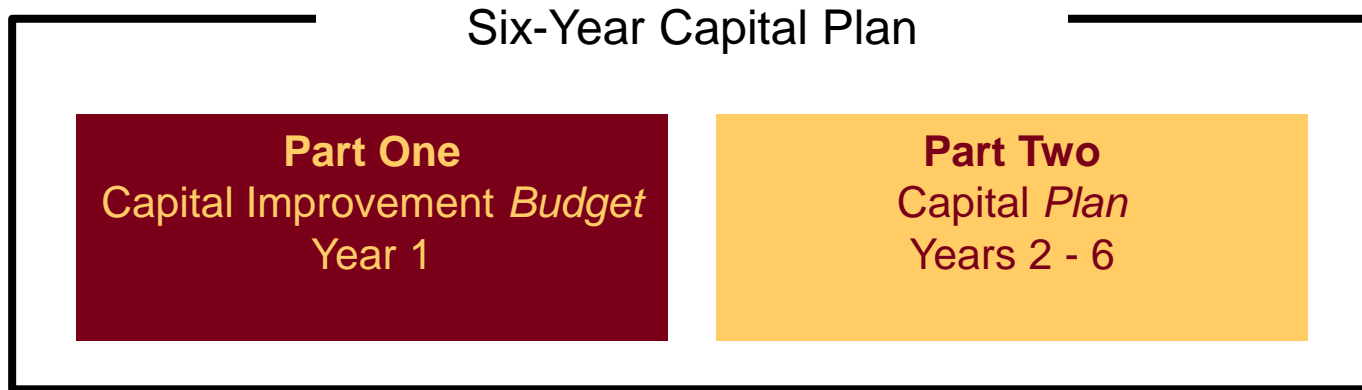
UNIVERSITY OF MINNESOTA

Driven to DiscoverSM



Capital Plan

- Board of Regents policy directs the administration to develop a capital budget with a “six-year time horizon, updated annually”





Annual Capital Improvement Budget

- Year 1 of the Six-Year Capital Plan
- Includes individual projects over \$500,000
- Projects need to have a completed predesign
- Projects must be fully funded
- Approved projects move into design and/or construction





2016 State Capital Request Update

- The capital improvement budget information in the docket material reflects the full value of the University's state request
- The capital improvement budget will be updated for the June meeting to reflect the final bill outcome





Included State Capital Request Projects

Request
(dollars in millions)

Location	Project	Total	State	U of MN
SYSTEM	HEAPR	\$100.0	\$100.0	\$0.0
UMD	Chemistry and Advanced Materials Science	\$40.8	\$27.2	\$13.6
UMTC	AHC Phase I: Health Science Education Facility	\$100.0	\$66.7	\$33.3
UMTC	Plant Growth Research Facility	\$6.6	\$4.4	\$2.2
SYSTEM	Academic and Student Experience Investments	\$24.0	\$16.0	\$8.0
UMTC	Pillsbury Hall Renovation	\$33.0	\$22.0	\$11.0
Total:		\$304.4	\$236.3	\$68.1



HEAPR Projects

- HEAPR legislation provides very strict guidelines on the type of projects that can be funded
 - Intended to give the University and MNSCU flexibility to operate within these strict guidelines
- Funds are intended to preserve and renew existing campus facilities by funding five kinds of projects
 - Accessibility
 - Building Systems
 - Energy Efficiency
 - Health and Safety
 - Infrastructure





HEAPR Projects

- The 2016 request of \$100 million will fund more than 95 projects system-wide
- The preliminary project list will be adjusted to align project priorities with final state funding
- Projects include:
 - UMD Sports and Health Center HVAC Upgrades
 - UMM Humanities HVAC Improvements
 - UMC Electrical Infrastructure
 - WCROC Critical Infrastructure and Safety
 - UMTC Mechanical Engineering: Phase 3
 - UMTC Ruttan Windows, Skylights and Doors
 - UMTC Boss Lab Infrastructure: Phase 2





2017 Annual Capital Budget

Line Item Projects

Campus	Project	Amount
<i>Individual Projects</i>		
UMTC Campus	AHC Phase I: Health Sci Ed Facility	\$ 100,000
UMD Campus	Chemistry and Advanced Materials Science	\$ 40,750
UMTC Campus	Pillsbury Hall Rehabilitation	\$ 33,000
Systemwide	Academic & Student Experience Investments	\$ 24,000
UMTC Campus	Plant Growth Research Facility	\$ 6,600
UMD Campus	High Voltage Feeder Replacement	\$ 4,715
UMTC Campus	Church Street Tunnel	\$ 2,654
UMTC Campus	Artificial Turf	\$ 1,400
UMD Campus	Securian Math Emporium	\$ 900
UMTC Campus	Administrative Building Replacement	\$ 825
UMTC Campus	Installation of NMR	\$ 700
UMD Campus	Track Replacement	\$ 700
Dollars in Thousands		\$ 216,244



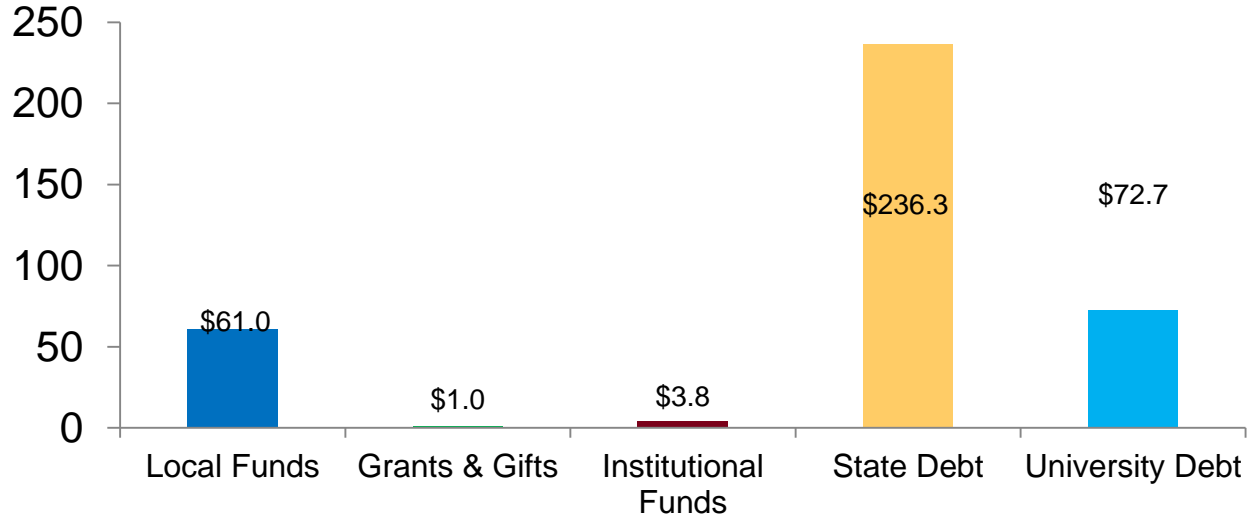
2017 Annual Capital Budget

Repair and Replacement Pools

Campus	Project	Amount
<i>Repair & Replacement Funding</i>		
Systemwide	HEAPR	\$ 100,000
UMTC Campus	R&R - Housing and Residential Life	\$ 14,700
UMTC Campus	R&R - Utility Infrastructure	\$ 12,305
UMTC Campus	R&R - Twin Cities	\$ 9,250
UMTC Campus	R&R - Parking Infrastructure	\$ 5,010
UMTC Campus	R&R - Energy Conservation	\$ 4,000
UMD Campus	R&R - Student Life	\$ 3,200
UMD Campus	R&R - Facilities Management	\$ 3,000
UMTC Campus	R&R - Transportation Infrastructure	\$ 2,600
UMTC Campus	R&R - Dining Services	\$ 1,405
UMTC Campus	R&R - Athletics	\$ 1,300
UMTC Campus	R&R - Student Affairs	\$ 1,100
UMTC Campus	R&R - U Market Services	\$ 500
Dollars in Thousands		\$ 158,370



Annual Capital Improvement Budget: \$374.6 million



72% of total from State
28% of total from U of M



Potential Additions for June

Campus	Facility	Project
UMD	New Facility	Research Greenhouse
UMTC	Shepherd Labs	Robotics Lab
UMTC	Multiple	Rarebooks Discovery Center
UMTC	Mariucci Arena	Weight Room Remodel
UMTC	New Facility	Public Safety Facility
UMTC	Faye Thompson Center	Partial Renovation
UMTC	Superblock Dining	Consolidation and Renovation
UMTC	Pioneer Hall	Renovation
UMTC	Re-Use Warehouse	Renovation for Waste and Recycling Program



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BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities, Planning, & Operations

May 12, 2016

AGENDA ITEM: Amendment to the Green Line Operations and Maintenance Addendum

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

This is a report required by Board policy.

PRESENTERDS: Pamela Wheelock, Vice President, University Services
Brian Herman, Vice President for Research

PURPOSE & KEY POINTS

The purpose of this item is action on a resolution to authorize the University administration to execute an express written agreement with the Metropolitan Council that permanently modifies a limited number of Vibration and Electromagnetic Interference (EMI) Performance Standards related to Metro Transit Green Line Operations. This written agreement was contemplated in the Board’s action approving the Operations and Maintenance Addendum in May 2014 (addendum).

The addendum contemplated a one-year trial period in order to ensure no adverse impacts to the University’s research as a result of the limited relaxation of performance standards. However, additional exceedances of the EMI performance standards during year one of Green Line operations required additional work be completed along the corridor prior to the University considering permanent approval of the new performance standards.

The resolution also delegates to the President or designee the ability to negotiate other changes as necessary to the agreement or addendum. This delegation aligns with standard University practice for other joint powers agreements.

Protecting the University’s Research Enterprise and Ensuring a Durable Agreement with Mitigations and Performance Standards

One of the key components of the 2010 Agreement was the commitment to construction of track-based vibration and electromagnetic interference (EMI) mitigation systems and the establishment of vibration and EMI performance standards to ensure the long-term protection of the University’s research environment. These standards were established after extensive data gathering and negotiations. In order for the Met Council to start revenue service between Ontario Street and the Washington Avenue Bridge, the Met Council was required to certify that Green Line operations meet these standards. A detailed certification protocol was articulated in the Agreement and implemented between August 2013 and January 2014.

The EMI performance standards are based upon modeling of what the EMI mitigation system could achieve and required the University to “give up real estate” – meaning that equipment very sensitive to shifts in magnetic fields will no longer be able to be located within 75 feet of the rails.

The vibration performance standards are based upon the existing ambient conditions prior to construction (2009) of 19 specific research laboratories in 9 buildings near Washington Avenue. The intention was that the Green Line operations should be mitigated so that vibration conditions would be no worse than they were prior to its construction – when Washington Avenue was used by cars, trucks, and buses. The 19 laboratories were intended to serve as a proxy for the University’s research environment in general, and were selected based upon the location in the building as well as the research conducted at the time.

According to the Agreement, “If Met Council pre-revenue Certification Protocol testing indicates that the CCLRT operations do not comply with the Performance Standards set for in Article 5, then notwithstanding anything to the contrary in this Agreement, the Met Council, at its sole cost and expense, shall implement a corridor-based solution or make operational adjustments to ensure that CCLRT operations comply with the Performance Standards.”

EMI:

Initially, the Met Council intended to operate the trains across the Washington Avenue Bridge at 45 mph. However, during the EMI certification testing, the Met Council determined that when westbound trains accelerated after leaving the EMI mitigation zone, an electromagnetic spike was transmitted down the entire length of the mitigation zone. As a result, the Met Council committed in the Addendum to maintaining a constant speed of 30 mph westbound across the Washington Avenue Bridge. This 30 mph speed must be reached prior to the train leaving the EMI mitigation zone (at the bridgehead).

Following this operational adjustment, Green Line operations generally met the EMI performance standards. There were two exceptions: 1) For three specific test runs at Kolthoff Hall, the performance measure for the Bz field (2.0mG at 75 ft) was exceeded by .2mG. These exceedances occurred when two trains passed in front of Kolthoff Hall. The Met Council’s consultant believed these were due to the one of the operators speeding up in order to meet the other train directly in front of the monitor and can be addressed by enforcing the train speed limit; and 2) There were additional exceedances at the sensors near Washington and Walnut (near 717 Delaware), but the University does not anticipate any issues there due to the distance between rails and University facilities.

As a result of these two exceptions, the Met Council requested a minor relaxation of the EMI performance standards. The Board approved such relaxation in 2014, subject to a one-year trial period. The University administration would have been comfortable with making this change permanent; however, the results of the two most recent quarterly compliance tests were unfavorable, showing a lack of compliance with the EMI Performance Standards. The Met Council has conducted diagnostic testing and believes to have identified the source of the problem: debris accumulating in the electrical rail access boxes, causing an imbalance in the double split power supply EMI mitigation system.

In May 2015, the Board of Regents delayed action on the permanent modification of the performance standards for one year to May 2016, to allow the Met Council to find an engineering solution to the degradation of the EMI mitigation system. Throughout the summer

of 2015, the Met Council worked with the manufacturer on a permanent solution to the accumulation of debris in the electrical rail access boxes: debris-resistant rail access box inserts. In September 2015, the solution was implemented and subsequent testing has shown compliance with the EMI Performance Standards.

Vibration:

During vibration certification testing, the Met Council was unable to certify that the Green Line operations would be able to meet the vibration performance standards in certain labs in Kolthoff Hall and Amundson Hall. As a result, the Agreement includes a commitment to slow the train to 15 mph in front of Amundson Hall. Rather than slowing Green Line operations in front of Kolthoff Hall to 15 mph, which would need to continue across the Washington Avenue Bridge due to the EMI impacts noted above, the Met Council requested a relaxation of the vibration performance standards for two laboratories at a limited number of specific frequencies. The Board approved such relaxation in 2014 subject to a one-year trial period. The results of the quarterly vibration testing conducted by the Met Council demonstrate compliance with the new Vibration Performance Standards. However, given the challenges with EMI compliance and the interdependence between EMI and vibration compliance, the University recommended in May 2015 that the Board of Regents delay action on the permanent modification of the performance standards for one year to May 2016, to allow the Met Council to find an engineering solution to the degradation of the EMI mitigation system.

BACKGROUND INFORMATION

The University community has considered and discussed a variety of transit options along Washington Avenue for many decades. A timeline of review and action by the Board of Regents over the past 14 years includes the following:

May 8, 2015 – Approved a resolution allowing a one-year extension of the trial period for the relaxed Vibration and EMI Performance Standards to give the Met Council time to engineer and implement a corridor-based remedy for the EMI Performance Standard exceedances that resulted from debris entering into rail access boxes along the line.

May 9, 2014 – Approved a resolution authorizing the administration to execute the Operations and Maintenance Addendum, which included the relaxation of a limited number of Vibration and EMI Performance Standards for a one-year trial period.

September 8, 2010 – Approved a resolution to authorize the administration to execute a Memorandum of Understanding II Agreement (“Agreement”), between the University of Minnesota, the Metropolitan Council, Hennepin County, and the City of Minneapolis (“Parties”). Approved of a Temporary Easement for Construction of Civil West and Systems and approval of a Permanent Easement that will allow the Metropolitan Council to construct and operate the Central Corridor Light Rail Transit (CCLRT) line on University property.

April 21, 2010 – Granted the Metropolitan Council a Temporary Easement for Construction of Advanced Traffic Improvements related to the Central Corridor Light Rail Transit project, to be effect from April 21, 2010 to November 15, 2010.

March 12, 2009 – Adopted the 2009 Master Plan for the Twin Cities campus which established principles and guidelines to promote public transit, identified the Central Corridor Light Rail

Transit route through the Minneapolis campus, and designated the Washington Avenue Transit Mall as a new public space.

July 8, 2008 – Approved a Memorandum of Understanding between the University, Metropolitan Council, City of Minneapolis, and Hennepin County regarding the development of the Central Corridor Light Rail Transit Line through the University of Minnesota Twin Cities Campus.

June 12 -13, 2008 – Received a presentation of the results of the Northern Alignment feasibility analysis and the Washington Avenue at-grade alignment with pedestrian mall and mitigations. Approved a resolution stating that the University will pursue the Washington Avenue at-grade with a transit/pedestrian mall alternative, contingent upon the execution of all necessary agreements needed to achieve a mitigation plan, betterments, and all future mitigation measures and improvements. This resolution also stated that all future Agreements related to CCLRT must be approved by the Board of Regents.

July 12, 2001 – Resolved that the Northern Alignment is preferred and that if the Central Corridor line were to operate on Washington Avenue that it be below grade. Furthermore, if the project planners were to adopt an at-grade alternative on Washington Avenue, it would include removing automobile traffic from Washington Avenue.

April 6, 2001 – Adopted a resolution that the administration return with recommendations on alternatives for the Central Corridor Light Rail Transit line.

President's Recommendation

The President recommends approval of the resolution.



REGENTS OF THE UNIVERSITY OF MINNESOTA

RESOLUTION RELATED TO

**Operating And Maintenance Addendum to the
Agreement For The Central Corridor Light Rail
Transit Project Through the
University Of Minnesota - Twin Cities Campus**

WHEREAS, on August 31, 2010, the University of Minnesota and the Metropolitan Council (“Met Council”) successfully concluded negotiations on an Agreement for the Central Corridor Light Rail Transit Project Through the University of Minnesota, Twin Cities Minneapolis Campus (“Agreement”) that addressed the University’s concerns about the construction and operation of the Central Corridor Light Rail Transit (“CCLRT”) Project line grade along Washington Avenue, and settled the University’s lawsuit against the Met Council; and

WHEREAS, in the Agreement, the Met Council unambiguously committed to construct and operate the CCLRT line in compliance with vitally important, rigorous performance standards for vibration and electromagnetic interference (“EMI”). The Agreement was incorporated into the Met Council’s Final Environmental Impact Statement (“FEIS”) and the Federal Transit Administration’s Record of Decision (“ROD”); and

WHEREAS, the Board of Regents approved the Agreement in its meeting on September 8, 2010, and the Agreement was duly fully executed by all parties on September 30, 2010; and

WHEREAS, the Met Council, City of Minneapolis, Hennepin County, and University staff negotiated in 2014 an Operating and Maintenance Addendum (“Addendum”) to the Agreement to resolve the parties’ rights and obligations with respect to the on-going maintenance and operation of the CCLRT after it commences revenue operation; and

WHEREAS, the operation of the CCLRT during the vibration and EMI certification testing required by the Agreement exceeded the vibration and EMI performance standards set out in the Agreement under certain circumstances, thus requiring the Met Council to take corridor- and operational-based solutions to mitigate the EMI and vibration in those circumstances before it commenced revenue operation; and

WHEREAS, the University was willing to allow a one-time amendment to a limited number of the vibration and EMI performance standards in order to permit the Met Council to begin revenue operation on June 14, 2014, and in the Board of Regents meeting on May 9, 2014, resolved to permit that amendment on the condition that no future incremental amendments would be contemplated and that the term of this one time amendment to the vibration and EMI performance standards would be one (1) year from the date revenue service commenced in order to ensure no adverse impacts to University research as a result of making such amendments permanent; and

WHEREAS, first year quarterly EMI compliance testing in fall 2014 and winter 2015 showed additional exceedances of the EMI Performance Standards that required Met Council action and prevented the University from considering making the amendments contemplated in the Addendum permanent; and

WHEREAS, the Met Council identified the cause of such exceedances and successfully developed and implemented a permanent corridor-based engineering solution to address these exceedances to the University's satisfaction in fall 2015; and

WHEREAS, the Met Council has successfully completely subsequent vibration and EMI testing in compliance with the temporary EMI and Vibration Performance Standards.

NOW, THEREFORE, BE IT RESOLVED that the Board authorizes the President or his designee to enter into the express written agreement to permanently modify the specific Vibration and EMI Performance Standards contemplated in the Addendum.

BE IT FURTHER RESOLVED, that the Board delegates to the President or his designee the ability to negotiate from time to time other changes as necessary to the Agreement or Addendum in a manner consistent with this Resolution and University Policy.

Green Line Operations and Maintenance Addendum: Vibration and EMI Performance Standards Review

Board of Regents Facilities, Planning, and Operations Committee
May 12, 2016



UNIVERSITY OF MINNESOTA

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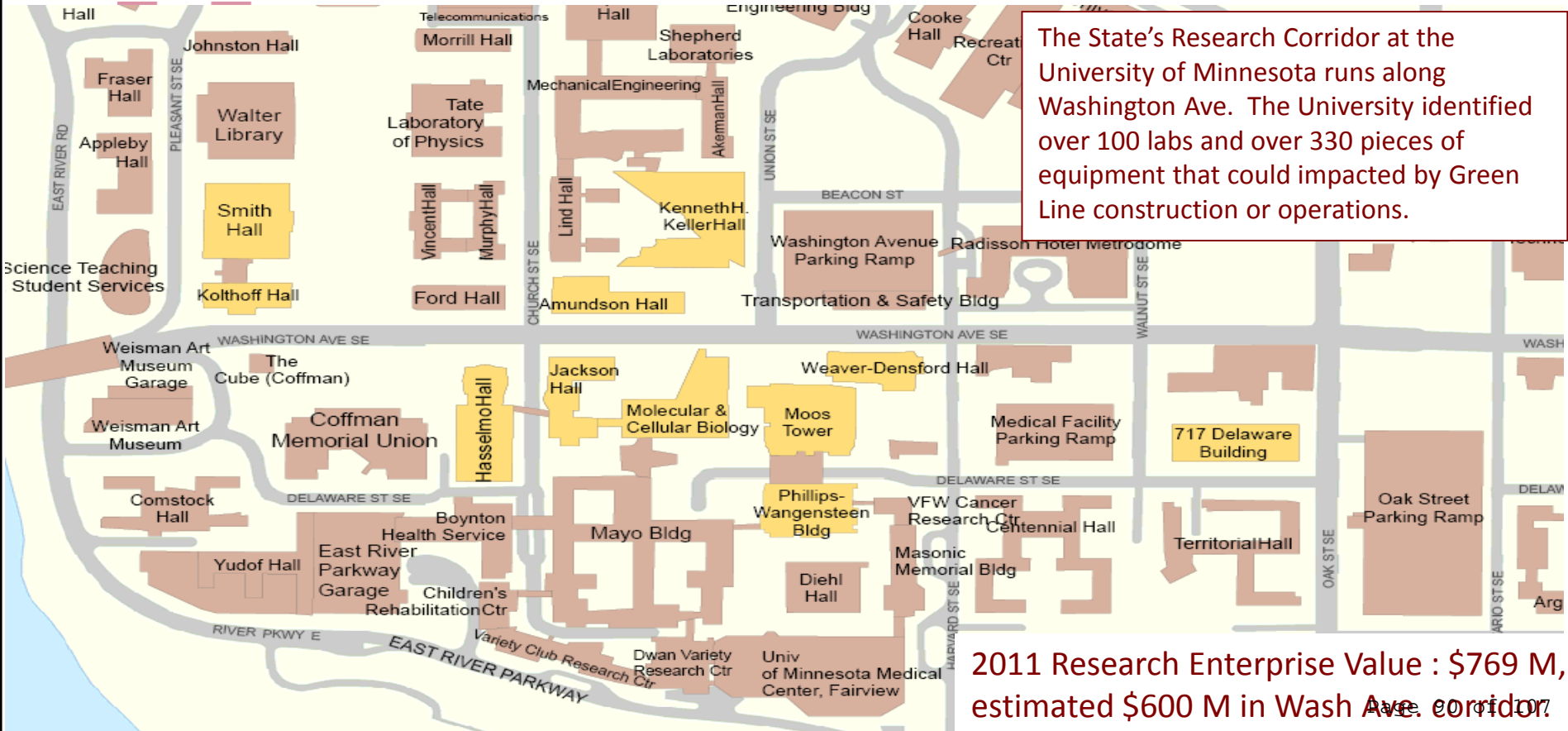
Background

- In June 2008, the Board approved a resolution pursuing the Washington Avenue at-grade option, and **at that time reserved the authority to approve all future Agreements related to light rail transit.**
- The Board of Regents approved an Agreement in September 2010 related to the construction and operations of the Central Corridor Light Rail Transit Project Through the University of Minnesota, Twin Cities – Minneapolis Campus.
- The 2010 Agreement envisioned a subsequent Operations and Maintenance Agreement.
- The Board of Regents approved the Operations and Maintenance Addendum in May 2014 to pave the way for the June 14, 2014 start of Revenue Service.



Impact to State's Research Corridor

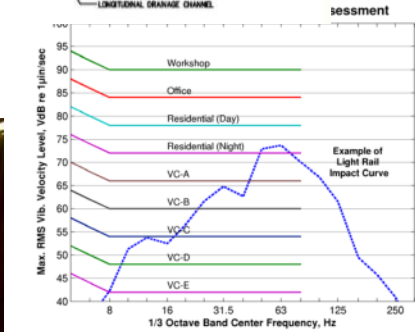
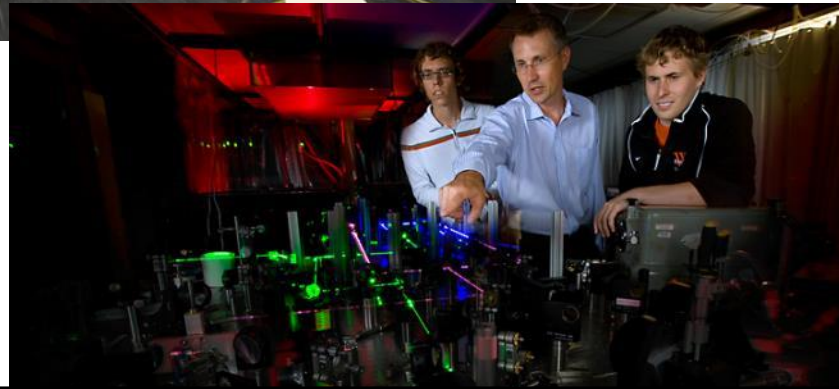
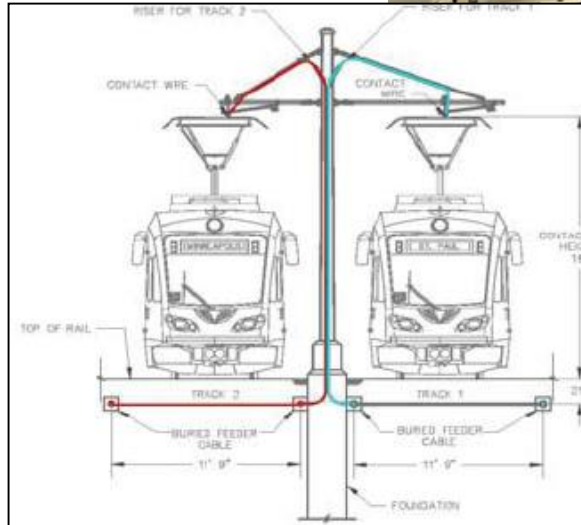
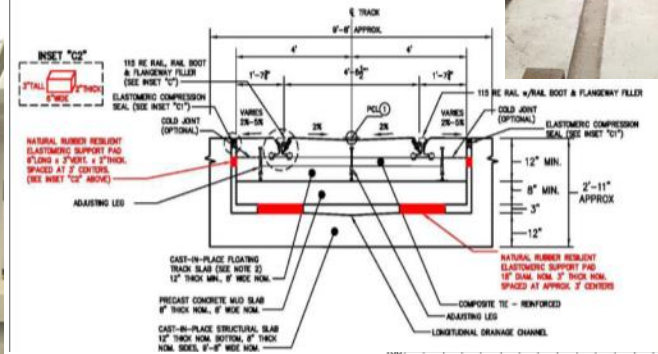
The State's Research Corridor at the University of Minnesota runs along Washington Ave. The University identified over 100 labs and over 330 pieces of equipment that could be impacted by Green Line construction or operations.



2011 Research Enterprise Value : \$769 M, estimated \$600 M in Wash Ave. corridor



Protecting our Research Environment and Ensuring Enforceable Obligations





Protecting our Research Environment and Ensuring Enforceable Obligations

- 2010 Agreement established Vibration and Electromagnetic Interference (EMI) Performance Standards and ongoing commitment to testing and monitoring
- Met Council required to certify compliance with Vibration and EMI Performance Standards in order to begin revenue service through campus
- Certification testing August 2013 – January 2014 (warm weather and cold weather conditions)
- **Floating Slab Track and Double Split Power Supply generally effective at mitigating Vibration and EMI as envisioned**



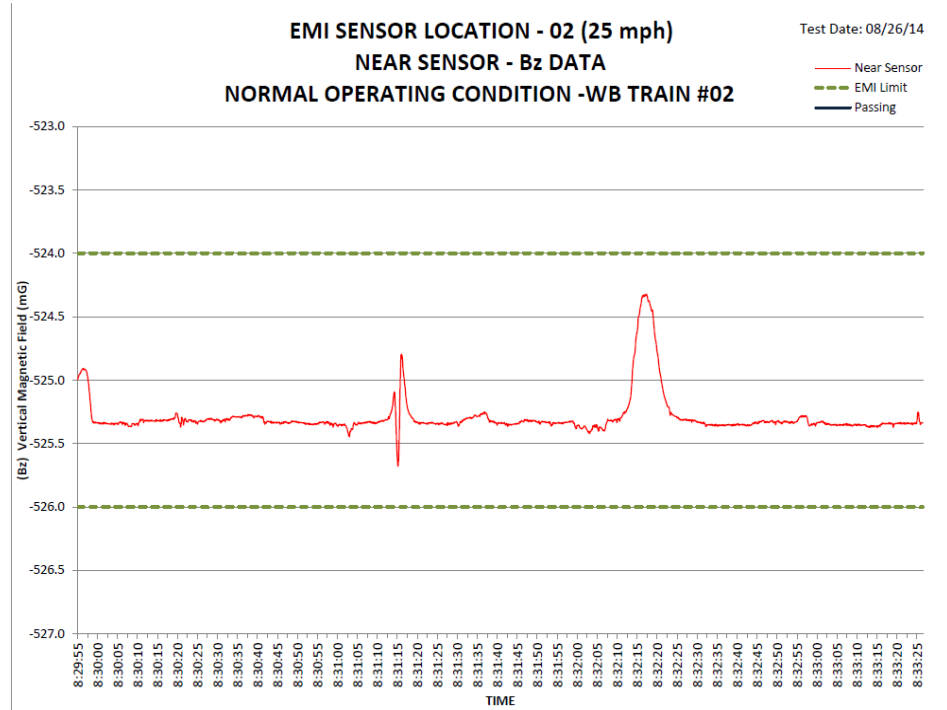
Protecting our Research Environment and Ensuring Enforceable Obligations

- Limited areas where Met Council unable to meet performance standards
 - Met Council committed to operational changes:
 - Slowing the train at Amundson (vibration) and westbound across the Washington Ave Bridge (EMI)
 - Speed monitoring
 - **U agreed to a limited relaxation of performance standards for Kolthoff Hall (vibration and EMI) and at Washington and Walnut (EMI)**
 - **One year trial period**
 - **Ability to return to original performance standards in the future if negatively impacts research**



August 2014 Quarterly EMI Testing

- Similar results to certification testing
- Clear indication of train signature
- Well within EMIT Performance Standards

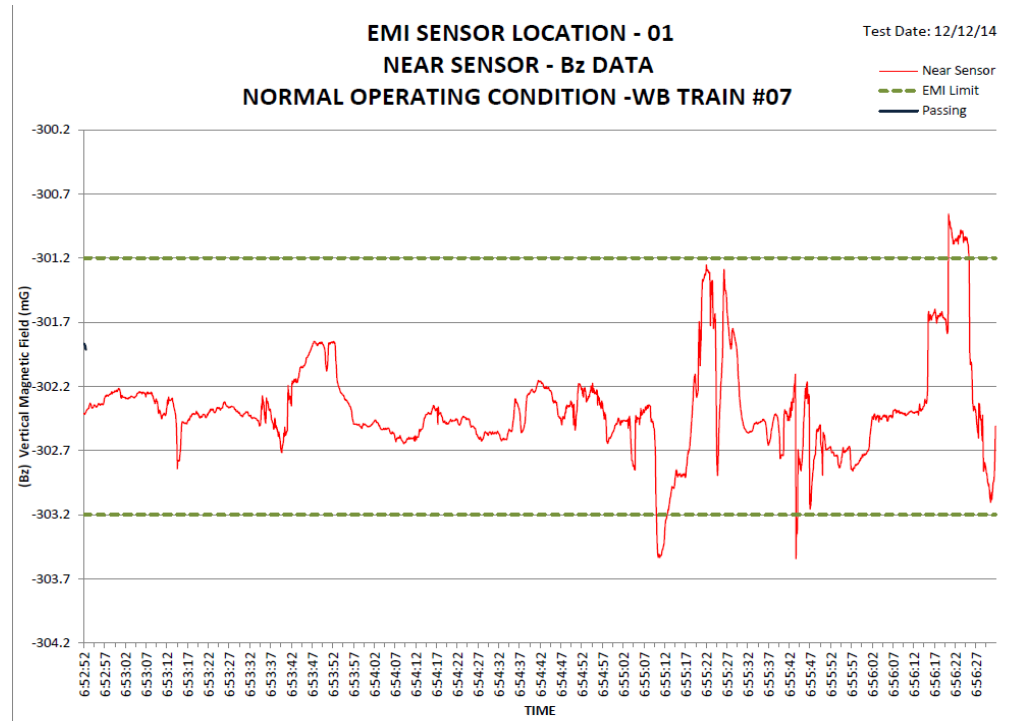




December 2014 Quarterly EMI Testing

Summary of Results at Near Sensor:

- Met 2 mG Performance Measure: 6 GRAPHS
- Exceedance between 2 and 2.5 mG: 15 GRAPHS
- Exceedance between 2.5 and 3 mG: 13 GRAPHS





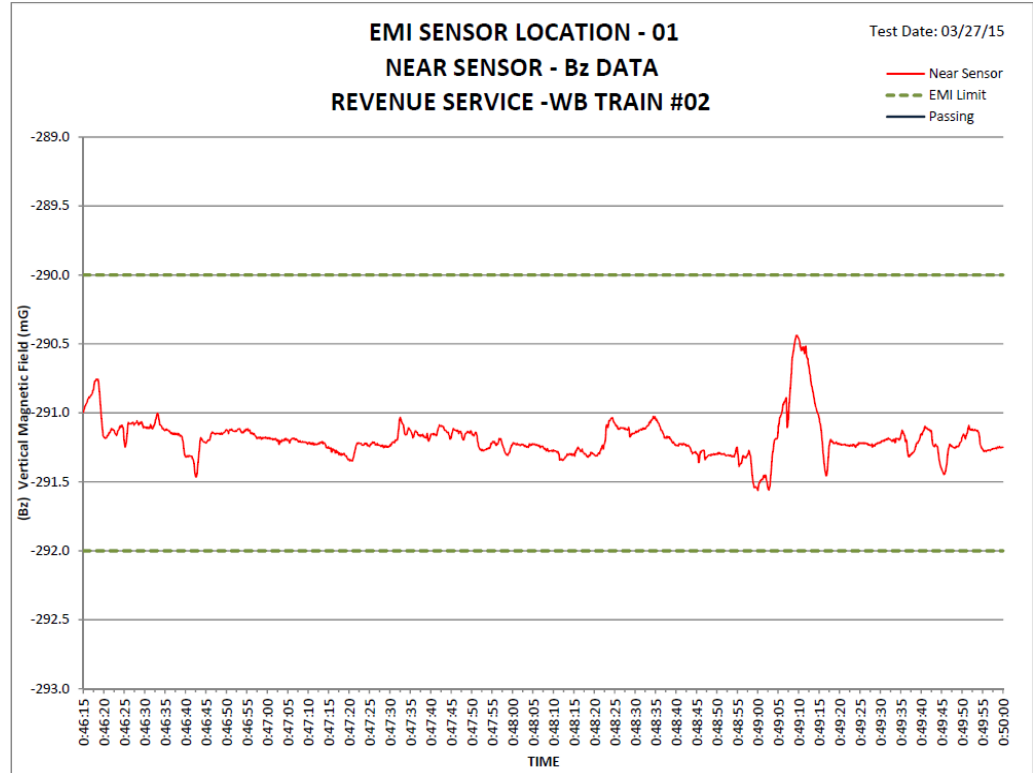
March 27, 2015 Diagnostic Testing

Rail Access Box



Partial Cleanout

Full Cleanout





EMI Solution

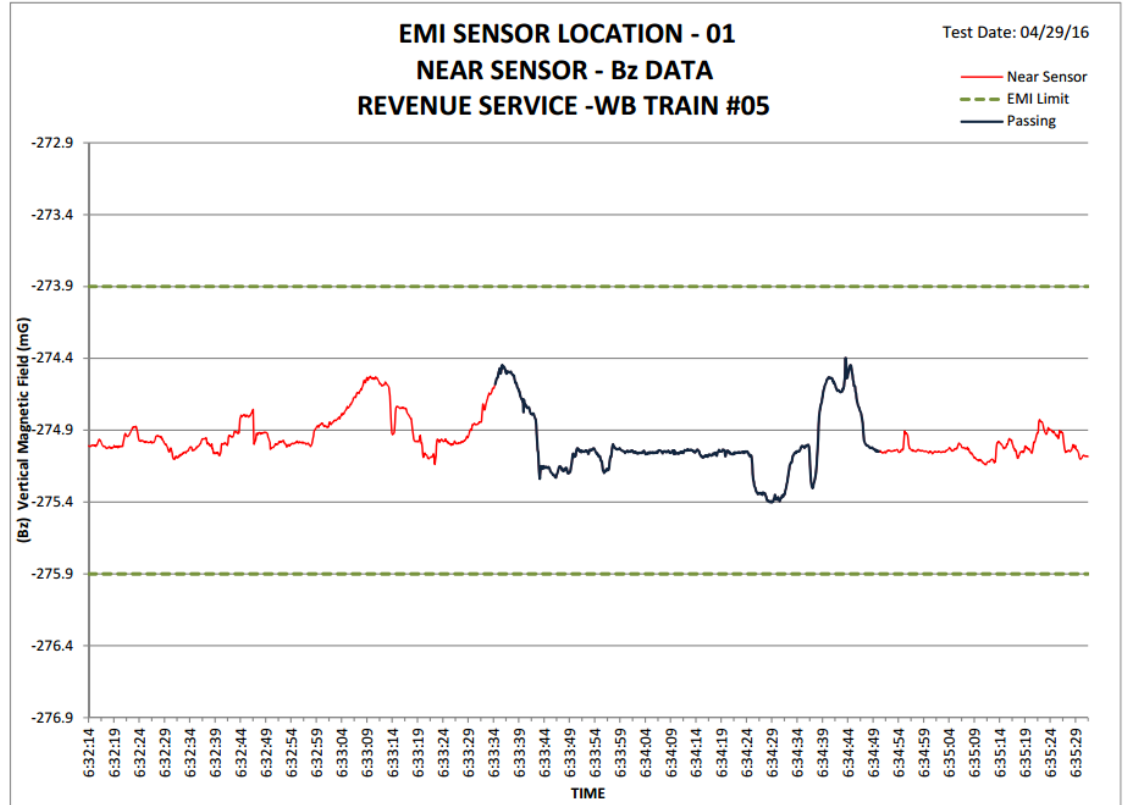
- In May 2015, the Board of Regents delayed action on the permanent relaxation of the performance standards for one year to May 2016, to allow the Met Council to find an engineering solution to the degradation of the EMI mitigation system.
- Summer of 2015, Met Council worked with the manufacturer on a permanent solution to the accumulation of debris in the electrical rail access boxes – debris resistant rail access box inserts.
- In September 2015, the solution was implemented and subsequent testing has shown compliance with the EMI Performance Standards.



April 2016 EMI Testing



New Debris-Resistant
Rail Access Cover





Resolution

- **WHEREAS**, on August 31, 2010, the University of Minnesota and the Metropolitan Council (“Met Council”) successfully concluded negotiations on an Agreement for the Central Corridor Light Rail Transit Project Through the University of Minnesota, Twin Cities Minneapolis Campus (“Agreement”) that addressed the University’s concerns about the construction and operation of the Central Corridor Light Rail Transit (“CCLRT”) Project line grade along Washington Avenue, and settled the University’s lawsuit against the Met Council; and
- **WHEREAS**, in the Agreement, the Met Council unambiguously committed to construct and operate the CCLRT line in compliance with vitally important, rigorous performance standards for vibration and electromagnetic interference (“EMI”). The Agreement was incorporated into the Met Council’s Final Environmental Impact Statement (“FEIS”) and the Federal Transit Administration’s Record of Decision (“ROD”); and
- **WHEREAS**, the Board of Regents approved the Agreement in its meeting on September 8, 2010, and the Agreement was duly fully executed by all parties on September 30, 2010; and
- **WHEREAS**, the Met Council, City of Minneapolis, Hennepin County, and University staff negotiated in 2014 an Operating and Maintenance Addendum (“Addendum”) to the Agreement to resolve the parties’ rights and obligations with respect to the on-going maintenance and operation of the CCLRT after it commences revenue operation; and
- **WHEREAS**, the operation of the CCLRT during the vibration and EMI certification testing required by the Agreement exceeded the vibration and EMI performance standards set out in the Agreement under certain circumstances, thus requiring the Met Council to take corridor- and operational-based solutions to mitigate the EMI and vibration in those circumstances before it commenced revenue operation; and
- **WHEREAS**, the University was willing to allow a one-time amendment to a limited number of the vibration and EMI performance standards in order to permit the Met Council to begin revenue operation on June 14, 2014, and in the Board of Regents meeting on May 9, 2014, resolved to permit that amendment on the condition that no future incremental amendments would be contemplated and that the term of this one time amendment to the vibration and EMI performance standards would be one (1) year from the date revenue service commenced in order to ensure no adverse impacts to University research as a result of making such amendments permanent; and
- **WHEREAS**, first year quarterly EMI compliance testing in fall 2014 and winter 2015 showed additional exceedances of the EMI Performance Standards that required Met Council action and prevented the University from considering making the amendments contemplated in the Addendum permanent; and
- **WHEREAS**, the Met Council identified the cause of such exceedances and successfully developed and implemented a permanent corridor-based engineering solution to address these exceedances to the University’s satisfaction in fall 2015; and
- **WHEREAS**, the Met Council has successfully completely subsequent vibration and EMI testing in compliance with the temporary EMI and Vibration Performance Standards.



Resolution

NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:

The Board authorizes the President or his designee to enter into the express written agreement to permanently modify the specific Vibration and EMI Performance Standards contemplated in the Addendum. The Board further resolves to delegate to the President or his designee the ability to negotiate from time to time other changes as necessary to the Agreement or Addendum in a manner consistent with this Resolution and University Policy.



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BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities, Planning, & Operations

May 12, 2016

AGENDA ITEM: Information Items

Review Review + Action Action Discussion

This is a report required by Board policy.

PRESENTERS: Pamela Wheelock, Vice President, University Services

PURPOSE & KEY POINTS

Information Items are intended to provide the Board of Regents with information needed for them to provide their oversight responsibilities. This agenda item provides an update on the following:

A. Real Estate Lease: Agreement for Use of University Facilities and Services by NHL Enterprises, LP for 2016 Coors Light NHL Stadium Series, February 9-29, 2016 (Twin Cities Campus)

Board of Regents Policy: *Reservation and Delegation of Authority* reserves to the Board authority to approve the purchase or sale of real property with a value greater than \$1,250,000 or larger than ten (10) acres, and leases of real property, easements, and other interests in real property if the initial term amount to be paid by or to the University exceeds \$1,250,000, consistent with Board policies. In accordance with Board of Regents Policy: *Board Operations and Agenda Guidelines*, the President requested emergency action for the approval of the agreement with NHL Enterprises, LP for the 2016 Coors Light NHL Stadium Series. The emergency approval was requested to allow execution of the lease prior to the next scheduled Board meeting, and is included here as an information item.

B. Final Project Review: Veterinary Isolation Facility (Twin Cities Campus)


In accordance with the Board of Regents Policy: *Reservation and Delegation of Authority*, final project review is required to come to the committee as an information item prior to the awarding of a construction contracts. The new Veterinary Isolation Facility will replace the three existing Veterinary Isolation buildings with a new 31,140 square foot bio-containment facility. The new Veterinary Isolation Facility will support the research and control of infectious diseases that are shared between animals and humans.

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

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

February 19, 2016

To: President Eric Kaler

From: Brian Steeves, Executive Director & Corporate Secretary 

Re: *Emergency Approval*

Chair Johnson and Vice Chair McMillan approved your request for emergency approval of the following action (as described in the attached letter) on February 19, 2016:

- Real estate transaction - NHL stadium lease

I understand that this information will be reported to the Board of Regents at the March 2016 meetings, as required by Board policy.

c: Regent Thomas Devine, Vice Chair, Facilities, Operations, & Planning Committee
Richard Pfitzenreuter, Vice President & Chief Financial Officer
Pamela Wheelock, Vice President, University Services
Beth Goetz, Interim Athletics Director, Intercollegiate Athletics
Susan Carlson Weinberg, Director, Real Estate Office

February 19, 2016

The Honorable Dean Johnson
The Honorable David McMillan

Dear Members of the Board:

Board of Regents Policy: *Board Operations and Agenda Guidelines* allow for an emergency procedure if an emergency situation exists as defined in the Guidelines. Specifically, in Section II, Subd. 10, the policy reads as follows:

“Upon the recommendation of the president, the Board chair, vice chair, and the respective committee chair may act on behalf of the Board when delay for Board approval poses a significant health, safety, or financial risk to the University. Any such emergency approvals will be brought to the next meeting of the Board, consistent with Board policy.”

I am recommending use of this emergency process for Board approval of the following item, to prevent delay that could pose a financial risk to the institution: TCF Bank Stadium Event Agreement, February 9-29, 2016 - Review/Action:

Agreement for Use of University Facilities and Services by NHL Enterprises, L.P. for 2016 Coors Light NHL Stadium Series, February 9-29, 2016 (Twin Cities Campus)

Upon Board approval of this transaction, the University will be able to execute the agreement for the subject event, which includes a facility use fee of \$800,000 and additional other revenues and cost reimbursements to the University totaling an estimated \$1.6 million.

Thank you for your attention to this request. The contract was just finalized with the National Hockey League and given the timing of the event requires immediate action. Additional information regarding this item is enclosed.

Sincerely,



Eric W. Kaler
President

Enclosures

cc: Regent Thomas Devine, vice chair, Facilities and Operations Committee
Brian Steeves, executive director and corporate secretary, Board of Regents
Richard H. Pfutzenreuter, III, vice president and chief financial officer
Pamela Wheelock, vice president, University Services
Beth Goetz, interim athletics director, Intercollegiate Athletics
Susan Carlson Weinberg, director of Real Estate

**AGREEMENT FOR USE OF UNIVERSITY FACILITIES AND SERVICES
BY NHL ENTERPRISES, L.P.
FOR 2016 COORS LIGHT NHL STADIUM SERIES,
FEBRUARY 9-29, 2016
(TWIN CITIES CAMPUS)**

1. Recommended Action

The President recommends that the appropriate administrative officers receive authorization to execute the TCF Bank Stadium Event Agreement for the 2016 Coors Light NHL Stadium Series, February 9-29, 2016.

2. Description of Facilities and Services

The facilities to be used for the 2016 Coors Light NHL Stadium Series, more fully described in the Stadium Event Agreement, include:

TCF Bank Stadium: Seating bowl, playing field, western plaza, storage area, and indoor lobby

Mariucci Arena: Indoor lobby and interior concourse

3. Event Activities

February 19, 2016 – Team Family Skates (optional event)

February 20, 2016 – Team Practices/Alumni Game

February 21, 2016 – 2016 Coors Light NHL Stadium Series Game, Chicago Blackhawks vs. Minnesota Wild

February 22, 2016 – Alternate Date for Game/NHL Ancillary Events

NHL Enterprises has use of the facilities covered by the Agreement during the period of February 9 - 29, 2016.

4. Fees

The fees to be paid pursuant to the subject agreement by NHL Enterprises include a facility use fee of \$800,000. An additional \$744,466 in estimated reimbursements is anticipated for such items as parking, security, and building operations. Finally, the estimated value for spaces reserved for


University use, including complimentary tickets, would add an additional \$73,295 to estimated revenues for a total estimated at \$1,617,761.

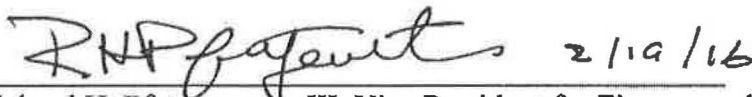
5. Use of Funds Received by the University

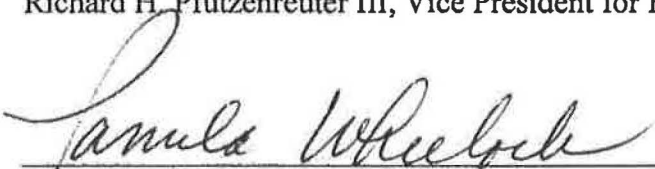
Intercollegiate Athletics will receive the revenues and cost reimbursements related to the use of TCF Bank Stadium and Mariucci Arena for this event. The University units, such as Parking and Transportation Services and the University of Minnesota Police Department, which provide services in conjunction with this event will receive the reimbursements for those services. Additional revenue for parking will go directly to Parking and Transportation Services from this event and is not included as a term and condition of this agreement.

6. Recommendations:

The above-described real estate transaction is appropriate:

 2/19/16
Beth Goetz, Interim Director of Intercollegiate Athletics

 2/19/16
Richard H. Pfitzenreuter III, Vice President for Finance and CFO


Pamela Wheelock, Vice President for University Services

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

Veterinary Isolation Facility, 02-409-15-1262

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:

This project will demolish and replace the existing three Veterinary Isolation buildings, built in 1958, with a new 31,140 SF bio-containment facility on the St. Paul campus. The new facility will support the University's growing infectious diseases research initiatives, house ABLS-2 and ABLS-3 bio-containment areas, and include small animal holding areas.

The new Veterinary Isolation Facility will provide the infrastructure to allow the College of Veterinary Medicine to become a leader in infectious disease research by attracting faculty, securing more research grants, and facilitating collaborative research among departments. It will also support the University's mission to protect the health of Minnesotans and livestock, create new diagnostic tests and surveillance systems, and develop new vaccines and treatments.

Board of Regents Approval Summary:

Capital Budget:	FY 2016
Schematic Plans:	February 2016

Project Team:

Architect:	Alliance
Construction Manager:	Knutson Construction

Project Budget:

2015 State Appropriation	\$18,000,000
University Debt	\$11,090,000
<u>Department of Veterinary Medicine</u>	<u>\$410,000</u>
Total Capital Funding	\$29,500,000

Project Schedule:

Begin Construction:	June 2016
Substantial Completion:	December 2017

Consistency of project with approved scope, schedule and budget:

Yes No