



Facilities & Operations Committee

October 2014

October 9, 2014

9:45 - 11:45 AM

West Committee Room, McNamara Alumni Center

FAC - OCT 2014

1. Project Components of the President's Recommended Six-Year Capital Plan and the 2015 State Capital Budget Request - Action

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BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities & Operations

October 9, 2014

Agenda Item: Project Components of the President's Recommended Six-Year Capital Plan and the 2015 State Capital Budget Request

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

This is a report required by Board policy.

Presenters: Pamela Wheelock, Vice President, University Services

Purpose & Key Points

The President's recommended Six-Year Capital Plan (Plan) includes major capital improvements planned for fiscal years 2015 through 2020. The Plan includes projects to be funded with state capital support as well as projects funded by the University through a combination of University debt obligations, local unit resources, fundraising, and public/private partnerships.

Year 1 of the Plan (2015) outlines the projects that the University will be submitting to the State of Minnesota for consideration during the 2015 legislative session.

Wheelock will review the Six-Year Capital Plan principles and priorities with the Facilities and Operations Committee. The Finance Committee will review financial components of the plan.

Background Information

Board of Regents Policy requires a Plan that sets priorities and direction for ongoing academic and capital planning efforts. 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, defined below:

- Part I is the Plan, which is updated annually and identifies capital projects approved to proceed with preliminary project planning but not authorized to proceed with design and construction.
- Part II is the annual capital improvement budget, which authorizes the completion of design and construction projects with approved financing and schematic design, consistent with Board policies.

President's Recommendation

The President recommends that the Board approve the University of Minnesota Six-Year Capital Plan for Fiscal Years 2015–2020 and the 2015 State Capital Budget Request.

Overview

The *2014 Six-Year Capital Plan* for the University of Minnesota establishes the next three University capital requests to be submitted to the State for consideration; sets priorities and direction for continued capital project and academic planning efforts; identifies the impact of additional University debt; assigns responsibility for capital fundraising; and forecasts additional building operational costs. The plan is updated on an annual basis, and approved by the Board of Regents.

The President's recommended *2014 Six-Year Capital Plan* includes:

- 2015 state capital request
- Future state capital requests for 2016 through 2020
- Projects proposed to be financed with University resources during the period FY2015 through FY2019

Planning Process

Capital planning at the University of Minnesota begins with the academic planning process. In the spring of each year Vice Presidents, Chancellors, and Deans are asked to identify their most important program priorities and the facility improvements necessary to support those programs. Through the academic planning process, academic leadership establishes the priorities for each college and campus. Facilities Management simultaneously evaluates the current condition of the buildings and infrastructure that support all academic programs. The capital planning process merges the academic priorities, available financial resources, facility needs, and facility conditions into specific project proposals.

Although many projects have both academic and organizational value, the projects that demonstrated both a programmatic urgency and implementation readiness were advanced for further analysis in this six-year timeframe. Other factors analyzed before projects were placed in the capital plan include:

- *Projected size of future bonding bills* – The University reviews state economic forecasts, Minnesota Management and Budget debt capacity estimates and financial reports, past trends, and budget instruction documents to help shape the size of the overall capital plan.
- *Debt and operating cost impact* – The University projects debt capacity annually and builds the capital plan in adherence to the debt guidelines expressed in Board of Regents policy.
- *Private fundraising capacity* – The University evaluates its capacity to fundraise for specific projects.
- *Timing and sequencing of projects* – Many capital projects depend upon other capital project “dominoes.” For example, Pillsbury Hall, a future home for College of Liberal Arts programs, cannot be renovated until Earth Sciences are moved out of the building and into a

renovated Tate Lab, which in turn had to wait until Physics & Nanotechnology was completed.

- *Impact on academic programs (both research and instructional)* – The University manages the level of disruption that can be absorbed while still maintaining the operation of its research and teaching. Because the University does not close, renovations require “swing space” for programs to continue to operate and the institution needs to maintain a level of functional classrooms.
- *Health, safety, and regulatory requirements* – The University needs to maintain the health and safety of all its students, faculty, and staff, regardless of the program. These issues require some projects to be included in the capital plan.
- *Geographic Distribution* – The University is a system with programs and facilities across the State of Minnesota.

The resulting plan, shown in tabular form on *Attachment 2*, advances the University’s highest capital priorities while retaining flexibility in support of emerging strategic initiatives. In the case of the Six-Year Capital Plan, it is important to note that many of the investments in later years are targeted to programs with academic strategic value. Specific programmatic details remain to be determined as the project is developed.

The capital improvement plan is built around four primary stages of project development, including a) Proposal/Project Definition; b) Planning and Feasibility; c) Resource Acquisition; and d) Implementation (Design and Construction). Projects included in the Six-Year Capital Plan are eligible to begin Predesign, an exploratory process rooted in design and cost estimating that results in physical solutions to space and facility problems. Projects in the Six-Year Capital Plan that require legislative funding are submitted to the Minnesota Legislature on a biennial basis. Projects are eligible to begin fundraising once the predesign process is substantially complete.

Fully funded projects with signed predesign documents are approved by the Board of Regents in the Annual Capital Improvement Budget. Approved projects are then implemented by Capital Planning and Project Management with other key partners such as Facilities Management.

Project Costs

Project costs included in the *Six-Year Capital Plan* are order-of-magnitude estimates only because programming and predesign studies for each project have not been completed. Projections are based on square foot costs recently experienced with comparable building and space types at the University, applied to the estimated square footage of each project. Project costs are represented in 2014 dollars; the 2015 projects have been escalated to midpoint of construction as required for submission to the legislature as part of the University’s capital request. Beyond the 2015 year, cost escalation for inflation has not been included because of the uncertainty of construction inflation. When programming is completed and predesign studies are prepared for projects at the appropriate time, based on their position within the *Six-Year Plan*, more accurate cost figures will be inserted into the plan when it is updated annually.

Areas of Focus for the 2014 Six-Year Plan

The *2014 Six-Year Plan* is largely a continuation of previously expressed priorities updated to reflect the outcome of the 2014 Capital Request to the MN Legislature. The plan also includes changes based on updated facility condition assessment data, new priorities emerging from the Twin Cities Campus strategic planning process, and a biennial operating budget proposal to the 2015 legislature that places a greater emphasis on repair and replacement (R & R) funds in lieu of capital request-based HEAPR funds.

The 2014 Six Year Plan was designed to further the following objectives:

- Advance strategic plan priorities
- Enhance the campus-based experience
- Align projects with available revenue sources
- Increase utilization and functionality of physical assets
- Complete capital investment sequences
- Reduce total campus square footage

The University is finalizing a strategic plan for the Twin Cities campus. This plan will be aligned with existing plans for the system campuses and will provide a roadmap for advancing the University's mission over the next three to five years. The Board of Regents is expected to act on adopting the new strategic plan at its October 2014 meeting. The plan articulates a new, inspirational vision: "[to] be preeminent in solving the grand challenges of a diverse and changing world." In pursuit of this vision, the University will:

- Leverage its breadth and depth to capitalize on its exceptional students, faculty, staff and location to generate and disseminate new knowledge and insights
- Create an educated populace able to identify, understand and solve demanding problems
- Leverage divergent paths of knowledge and creativity to address grand challenges
- Partner with communities and the people of the State of Minnesota to benefit the common good

To this end, the University is advancing four broad goals, each with related strategies and tactics:

- *Goal 1 - Build an exceptional University where grand societal challenges are addressed.* Strategies - Educate, cultivate, and empower leaders to foster institutional and societal change; target resources that will build capacity to harness the University's depth and breadth to address these grand challenges; prepare students who can uniquely contribute to solving grand societal challenges; transform curricula in a way that combines grand challenges with disciplines; and coordinate and leverage research in institutionally cross-cutting areas of strength
- *Goal 2 - Support excellence and, with intention, reject complacency.* Strategies - Establish incentives for creative disruption and accept productive tension; increase efforts to empower individual initiatives; streamline rules and regulations; and measure and set goals for meaningful diversifying experiences
- *Goal 3 - Establish a culture of reciprocal engagement, capitalizing on our unique location.* Strategies - Better leverage our location for the mutual benefit of the University

and the community to contribute to and benefit from a vibrant and enriching economic, creative, social, and intellectual environment; and clearly define and embrace what it means to be a land-grant research university in the 21st century

- *Goal 4 - Aggressively recruit, retain and promote field shaping researchers and teachers.*
Strategies - Build a pipeline to recruit and retain the best and brightest field shaping teachers and researchers; support their work with needed infrastructure and a culture of high expectations; reduce barriers to productive transdisciplinarity and advance transinstitutional partnerships; and accelerate transfer of knowledge for the public good

The final plan will include short and long term actions in each of these goal areas and each campus will align its unique goals that meet the needs of the students and regions they serve.

These objectives are the foundation of a long term capital plan that balances programmatic needs against facility condition related investments distributes opportunity geographically throughout the UMN system and completes in-process capital investment sequences.

Project Descriptions

Project Descriptions for each year of the plan can be found in Attachment 3.

Also included in Attachment 2 is a list of *Other Projects Under Consideration*. These needs were identified through the Six-Year Capital Planning process as important investments based on collegiate and academic priorities. The potential projects identified on the list are not sufficiently developed in terms of their programmatic needs and the strategic value of their investment to be placed into the Six Year Plan, but are expected to further refine their planning over the near term. Some of the unresolved issues may include project scope, location or funding source. The list of *Other Projects Under Consideration* gives an indication of the potential next tier of capital projects, while allowing some flexibility to respond to changing trends as well as emerging academic priorities.

UNIVERSITY OF MINNESOTA

2014 Six Year Capital Plan

Attachment 2

Six Year Plan - Project Funding Report

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Funding Report

2015

Stage: Resource Acquisition

State Funded Projects

File	Project Title	Campus	Total	State Funds	University Funds
400	HEAPR	Systemwide	\$55,000	\$55,000	\$0
447	St. Paul Greenhouse Replacement	UMTC	\$6,000	\$4,000	\$2,000
405	Veterinary Isolation Facility Replacement	UMTC	\$27,000	\$18,000	\$9,000
			\$88,000	\$77,000	\$11,000
		FY Total:	\$88,000	\$77,000	\$11,000
		Running Total:	\$88,000	\$77,000	\$11,000

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Funding Report

2016

Stage: Planning & Feasibility

State Funded Projects

File	Project Title	Campus	Total	State Funds	University Funds
398	HEAPR	Systemwide	\$50,000	\$50,000	\$0
408	Health Science Facility Repurposing	UMTC	\$65,000	\$43,300	\$21,700
410	Chemical Sciences and Advanced Materials Building	UMD	\$36,000	\$24,000	\$12,000
411	Pillsbury Hall Renovation	UMTC	\$27,000	\$18,000	\$9,000
403	St. Paul Interdisciplinary Laboratory	UMTC	\$46,000	\$30,700	\$15,300
448	10 Church Street SE Repurposing	UMTC	\$30,000	\$20,000	\$10,000
			\$254,000	\$186,000	\$68,000
FY Total:			\$254,000	\$186,000	\$68,000
Running Total:			\$342,000	\$263,000	\$79,000

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Funding Report

2017

Stage: Planning & Feasibility

State Funded Projects

File	Project Title	Campus	Total	State Funds	University Funds
401	HEAPR	Systemwide	\$45,000	\$45,000	\$0
415	Collections and Contemporary Learning	UMTC	\$40,000	\$26,700	\$13,300
449	Programmatic Renewal (UMD, UMM, UMC)	Systemwide	\$18,000	\$12,000	\$6,000
			\$103,000	\$83,700	\$19,300
		FY Total:	\$103,000	\$83,700	\$19,300
		Running Total:	\$445,000	\$346,700	\$98,300

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Funding Report

2018

Stage: Proposal

State Funded Projects

File	Project Title	Campus	Total	State Funds	University Funds
399	HEAPR	Systemwide	\$40,000	\$40,000	\$0
441	AHC Interprofessional Education Center	UMTC	\$100,000	\$66,700	\$33,300
455	Child Development Replacement	UMTC	\$21,000	\$14,000	\$7,000
452	Research and Outreach Center Investments	ROCs & Stations	\$6,000	\$4,000	\$2,000
409	St. Paul Research Laboratory Renovation	UMTC	\$24,000	\$16,000	\$8,000
451	Undergraduate Teaching Laboratory Facility	UMTC	\$42,000	\$28,000	\$14,000
			\$233,000	\$168,700	\$64,300
FY Total:			\$233,000	\$168,700	\$64,300
Running Total:			\$678,000	\$515,400	\$162,600

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Funding Report

2019

Stage: Proposal

State Funded Projects

File	Project Title	Campus	Total	State Funds	University Funds
402	HEAPR	Systemwide	\$40,000	\$40,000	\$0
453	West Bank Classrooms Replacement	UMTC	\$30,000	\$20,000	\$10,000
			\$70,000	\$60,000	\$10,000
		FY Total:	\$70,000	\$60,000	\$10,000
		Running Total:	\$748,000	\$575,400	\$172,600

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Six Year Plan - Project Funding Report

2020

Stage: Proposal

State Funded Projects

File	Project Title	Campus	Total	State Funds	University Funds
446	HEAPR	Systemwide	\$40,000	\$40,000	\$0
414	Academic Priority	UMR	\$45,000	\$30,000	\$15,000
454	AHC Strategic Investment	UMTC	\$70,000	\$46,700	\$23,300
457	Biosystems & Ag Engineering Laboratory Renovation	UMTC	\$50,000	\$33,300	\$16,700
456	Chemistry Research Laboratory Investment	UMTC	\$30,000	\$20,000	\$10,000
450	McNeal Hall Renovation	UMTC	\$24,000	\$16,000	\$8,000
			\$259,000	\$186,000	\$73,000
FY Total:			\$259,000	\$186,000	\$73,000
Running Total:			\$1,007,000	\$761,400	\$245,600

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Six Year Plan - Project Funding Report

Under Consideration / Evaluation

Stage: Proposal

State Funded Projects

File	Project Title	Campus	Total	State Funds	University Funds
463	UMD Academic Priority	UMD	\$0	\$0	\$0
			\$0	\$0	\$0

University Funded Projects

File	Project Title	Campus	Total	State Funds	University Funds	
461	Admissions Welcome Center	UMTC	\$0	\$0	\$0	
444	Athletics Facilities Phase 1 Projects	UMTC	\$0	\$0	\$0	
407	Biological Sciences Active Learning Classrooms	UMTC	\$0	\$0	\$0	
419	Bolstad Golf Course Renovation	UMTC	\$0	\$0	\$0	
460	Field House Renovation	UMTC	\$0	\$0	\$0	
459	Pioneer Hall Renovation or Replacement	UMTC	\$0	\$0	\$0	
462	Public Space Reinvestments	UMTC	\$0	\$0	\$0	
431	Recreational Sports Project	UMTC	\$0	\$0	\$0	
416	Space Utilization Program	UMTC	\$0	\$0	\$0	
418	Superblock Dining Replacement	UMTC	\$0	\$0	\$0	
425	Washington Ave Bridge and Plaza	UMTC	\$0	\$0	\$0	
			\$0	\$0	\$0	
			FY Total:	\$0	\$0	\$0
			Running Total:	\$1,007,000	\$761,400	\$245,600

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Six Year Plan - Project Funding Report

Definitions

Proposal: Projects in this stage represent preliminary conceptual ideas regarding program need and related capital requirements. Local units normally identify these ideas as part of the compact process. Projects do not have permission to begin predesign or fundraising without administrative approval from the Capital Oversight Group.

Planning and Feasibility: Projects in this stage have been determined to be an institutional priority and have been approved to begin predesign activities. Financial feasibility, including the completion of a fundraising feasibility study with the University of Minnesota Foundation, is assessed at this stage.

Resource Acquisition: Projects in this stage have an approved pre-design document and have been approved to actively seek funds.

Six Year Plan - Project Description Report

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Description Report

400 HEAPR

Vice President: Systemwide

RRC: Systemwide

Campus: Systemwide

RRC Contact:

Facility: Systemwide

Year: 2015

Total Cost: \$55,000

Stage: Resource Acquisition

Description: This request is for funds 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. HEAPR funds do not require a one-third University funding match. Funding for the HEAPR program is included each year in the legislative request.

403 St. Paul Interdisciplinary Laboratory

Vice President: Academic Affairs

RRC: Academic Affairs

Campus: UMTC

RRC Contact: Hanson, K.

Facility: New Facility

Year: 2016

Total Cost: \$46,000

Stage: Planning & Feasibility

Description: This project will construct a new interdisciplinary research laboratory building for the College of Biological Sciences (CBS), College of Food, Agricultural, and Natural Resource Sciences (CFANS), and College of Veterinary Medicine (CVM). The new facility will accommodate principal investigators in fields such as plant pathology, animal infectious diseases, microbial systems, synthetic biology, and fungal evolution. This project was included in the University's 2014 capital request.

405 Veterinary Isolation Facility Replacement

Vice President: Health Sciences

RRC: College of Veterinary Medicine

Campus: UMTC

RRC Contact: Ames, T.

Facility: New Facility

Year: 2015

Total Cost: \$27,000

Stage: Resource Acquisition

Description: This project will create a biocontainment facility for the College of Veterinary Medicine to house and perform research with large animals and pathogenic agents. The initial program definition, which will be confirmed in pre-design, has suggested a 38,500 gross square feet (GSF) facility comprised of biocontainment laboratories, large animal isolation space and a small animal vivarium. The existing Veterinary Isolation Buildings will be demolished following the construction of this project.

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Six Year Plan - Project Description Report

407 Biological Sciences Active Learning Classrooms

Vice President: Academic Affairs

Campus: UMTC

Facility: TC Campus

Total Cost: \$0

Description: This project will convert existing classroom space on the fourth floor of Biological Sciences Center into active learning classrooms for laboratory based Biological Sciences coursework.

RRC: College of Biological Sciences

RRC Contact: Hays, T.

Year: Under Consideration / Evaluation

Stage: Proposal

408 Health Science Facility Repurposing

Vice President: Health Sciences

Campus: UMTC

Facility: Phillips-Wangensteen Building

Total Cost: \$65,000

Description: This project will renovate office, clinic, and lab space in the Phillips Wangensteen Building and other AHC spaces that will be vacated by groups that will relocate to the Ambulatory Care Clinic and research buildings in the Biomedical Discovery District. The renovated spaces will be a mixture of office, classroom, and laboratory space and will allow the Academic Health Center to undertake a multi-phased process of consolidating space assignments and decommissioning obsolete facilities.

RRC: Health Sciences

RRC Contact: Jackson, B.

Year: 2016

Stage: Planning & Feasibility

409 St. Paul Research Laboratory Renovation

Vice President: Academic Affairs

Campus: UMTC

Facility: TC Campus

Total Cost: \$24,000

Description: This investment will renovate laboratories in one or more research buildings on the St. Paul Campus. Renovation of space will be prioritized to achieve collegiate goals of synergy among researchers and to allow for the demolition of obsolete St. Paul campus research space.

RRC: Academic Affairs

RRC Contact: Hanson, K.

Year: 2018

Stage: Proposal

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Description Report

410 Chemical Sciences and Advanced Materials Building

Vice President: Duluth Campus

Campus: UMD

Facility: New Facility

Total Cost: \$36,000

Description: The project will construct a new building on the Duluth campus to support faculty and students in the Departments of Chemistry and Biochemistry, and advance an emergent Material Science and Engineering program. The building will be comprised of research and undergraduate instructional laboratories, a research center dedicated to industrial/academic partnerships with direct connections to industry in northeast Minnesota, and medium-sized general purpose classrooms that are in short supply on the campus. This project was included in the University's 2014 capital request.

RRC: Swenson College of Science and Engineering

RRC Contact: Black, L.

Year: 2016

Stage: Planning & Feasibility

411 Pillsbury Hall Renovation

Vice President: Academic Affairs

Campus: UMTC

Facility: Pillsbury Hall

Total Cost: \$27,000

Description: This project will preserve and enhance Pillsbury Hall after the current occupants move into the renovated Tate Laboratory. New teaching and learning spaces will replace outdated and inefficient laboratories that no longer support modern scientific study and research. Mechanical and electrical systems, restrooms and accessibility will be updated with this historically sensitive renovation. Funding for Tate Laboratory was approved in the University's 2014 capital request.

RRC: College of Liberal Arts

RRC Contact: Duvall, R.

Year: 2016

Stage: Planning & Feasibility

414 Academic Priority

Vice President: Rochester Campus

Campus: UMR

Facility: New Facility

Total Cost: \$45,000

Description: The project will create academic space for the growing UMR student community. Master plan projections indicate that the campus is expected to be outgrown its existing facilities by 2020 prompting the need for additional dedicated academic space. The proposed building will include space to support active, collaborative, and adaptive learning environments, space for student laboratories, space for faculty/student interaction, and space that is open and adaptable.

RRC: Academic Affairs

RRC Contact: Lehmkuhle, S.

Year: 2020

Stage: Proposal

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Description Report

415 Collections and Contemporary Learning

Vice President: Academic Affairs

Campus: UMTC

Facility: TC Campus

Total Cost: \$40,000

Description: This project will address the collections needs of multiple colleges and the University Libraries by providing space for storage, preservation, regeneration, and characterization of essential resources that support research across the University system. Project planning will include an analysis of options to reconfigure stack space into areas that will engage faculty and students and support contemporary learning and scholarship.

RRC: Academic Affairs

RRC Contact: Hanson, K.

Year: 2017

Stage: Planning & Feasibility

416 Space Utilization Program

Vice President: University Services

Campus: UMTC

Facility: TC Campus

Total Cost: \$0

Description: This project will support a variety of efforts directed at improving the utilization of existing campus space. Near term efforts are focused on implementing pilot projects to match work styles, technology and organizational structure with an overall reduction in space that better suits work methods. Decommissioning and demolition will be an equally important element of this strategy.

RRC: University Services Admin

RRC Contact: Swanson, B.

Year: Under Consideration / Evaluation

Stage: Proposal

418 Superblock Dining Replacement

Vice President: University Services

Campus: UMTC

Facility: New Facility

Total Cost: \$0

Description: This project will construct a new consolidated dining facility for the four residence halls in the superblock. The two existing facilities are under-sized and not capable of providing the level of food service expected by today's students. A consolidated facility will result in additional operational efficiencies.

RRC: Housing & Residential Life

RRC Contact: Scheich, L.

Year: Under Consideration / Evaluation

Stage: Proposal

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Six Year Plan - Project Description Report

419 Bolstad Golf Course Renovation

Vice President: Academic Affairs

Campus: UMTC

Facility: Bolstad Golf Course

Total Cost: \$0

Description: This project will renew the existing golf course through investments in the course, clubhouse, and maintenance/storage facilities. Project timing is dependent on fundraising.

RRC: Recreational Sports

RRC Contact: Brown, D.

Year: Under Consideration / Evaluation

Stage: Proposal

425 Washington Ave Bridge and Plaza

Vice President: University Services

Campus: UMTC

Facility: Washington Avenue Bridge

Total Cost: \$0

Description: This project will restore or replace the Washington Avenue Bridge pedestrian enclosure and address circulation, sightlines, aesthetics and functionality of the Washington Avenue Bridge plaza area as a gathering place and event space.

RRC: Facilities Management

RRC Contact: Berthelsen, M.

Year: Under Consideration / Evaluation

Stage: Proposal

431 Recreational Sports Project

Vice President: Academic Affairs

Campus: UMTC

Facility: TC Campus

Total Cost: \$0

Description: This project is the final component of the Recreational Sports improvement plan funded by the Twin Cities campus student capital enhancement fee. Remaining identified needs include a satellite West Bank facility and outdoor recreation fields.

RRC: Recreational Sports

RRC Contact: Brown, D.

Year: Under Consideration / Evaluation

Stage: Proposal

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Description Report

441 AHC Interprofessional Education Center

Vice President: Health Sciences

Campus: UMTC

Facility: New Facility

Total Cost: \$100,000

Description: This project will address fundamental changes in health sciences education and training programs driven by accreditation requirements and faculty and student expectations. The new facility will consolidate and expand current learning environments and may include simulation centers, clinical care skills labs, multimedia learning labs, technology enhanced library and study spaces and interactive learning environments for connecting with the Duluth and Rochester campuses. The specific program will be determined following a strategic review of curriculum changes across the AHC schools.

RRC: Health Sciences

RRC Contact: Jackson, B.

Year: 2018

Stage: Proposal

444 Athletics Facilities Phase 1 Projects

Vice President: Athletics

Campus: UMTC

Facility: TC Campus

Total Cost: \$0

Description: This project will invest in athletic practice and academic facilities to provide University of Minnesota student athletes with the best opportunity to succeed and ensure the University remains competitive with other Big Ten schools. Top priorities for investment include a new football practice facility, academic support and training table facilities. This project is dependent on fundraising efforts.

RRC: Intercollegiate Athletics

RRC Contact: Teague, N.

Year: Under Consideration / Evaluation

Stage: Proposal

447 St. Paul Greenhouse Replacement

Vice President: Academic Affairs

Campus: UMTC

Facility: Plant Growth Facilities-West

Total Cost: \$6,000

Description: This project will renovate or replace collections and teaching greenhouse space on the St. Paul Campus. The greenhouse will be furnished with modern temperature, humidity and lighting controls and monitored via the master greenhouse campus control system. This project was included in the University's 2014 capital request.

RRC: Academic Affairs

RRC Contact: Hanson, K.

Year: 2015

Stage: Resource Acquisition

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Description Report

448 10 Church Street SE Repurposing

Vice President: Academic Affairs

Campus: UMTC

Facility: 10 Church Street SE

Total Cost: \$30,000

Description: This project will renovate the existing Bell Museum for the College of Design following the completion of the new Bell Museum on the St. Paul Campus.

RRC: Academic Affairs

RRC Contact: Hanson, K.

Year: 2016

Stage: Planning & Feasibility

449 Programmatic Renewal (UMD, UMM, UMC)

Vice President: Systemwide

Campus: Systemwide

Facility: System Campuses

Total Cost: \$18,000

Description: This program will fund facility improvements that support academic and student-focused programmatic needs in existing facilities on the Duluth, Morris and Crookston campuses.

RRC: Systemwide

RRC Contact: Multiple

Year: 2017

Stage: Planning & Feasibility

450 McNeal Hall Renovation

Vice President: Academic Affairs

Campus: UMTC

Facility: McNeal Hall

Total Cost: \$24,000

Description: This project will bring Minneapolis based CEHD departments together on the St. Paul campus in space that will be vacated by the College of Design. The research-driven focus of these units is in alignment with recent efforts by CEHD to establish a vibrant, research community in St. Paul and allows for the demolition of Peik Hall in Minneapolis.

RRC: College of Education and Human Development

RRC Contact: Quam, J.

Year: 2020

Stage: Proposal

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Description Report

451 Undergraduate Teaching Laboratory Facility

Vice President: Academic Affairs

Campus: UMTC

Facility: New Facility

Total Cost: \$42,000

Description: This project will provide state-of-the-art, energy efficient teaching laboratories, student collaboration spaces, and classrooms for teaching undergraduate chemistry laboratory courses. The new laboratories will replace and improve upon outdated facilities currently spread throughout multiple locations (including faculty research laboratories) in Smith and Kolthoff Halls. Adequate laboratory space is a limiting factor in the University's ability to meet the demand for STEM related programs.

RRC: Academic Affairs

RRC Contact: Hanson, K.

Year: 2018

Stage: Proposal

452 Research and Outreach Center Investments

Vice President: Systemwide

Campus: ROCs & Stations

Facility: Systemwide

Total Cost: \$6,000

Description: This program will fund a variety of projects at the Research and Outreach Centers across the state.

RRC: Systemwide

RRC Contact: Buhr, B.

Year: 2018

Stage: Proposal

453 West Bank Classrooms Replacement

Vice President: Academic Affairs

Campus: UMTC

Facility: New Facility

Total Cost: \$30,000

Description: This project will replace existing traditional learning space on the Minneapolis West Bank Campus with active learning classrooms.

RRC: Academic Affairs

RRC Contact: Hanson, K.

Year: 2019

Stage: Proposal

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Description Report

454 AHC Strategic Investment

Vice President: Health Sciences

Campus: UMTC

Facility: TC Campus

Total Cost: \$70,000

Description: This project will address needs identified by Academic Health Center strategic facility planning.

RRC: Health Sciences

RRC Contact: Jackson, B.

Year: 2020

Stage: Proposal

455 Child Development Replacement

Vice President: Academic Affairs

Campus: UMTC

Facility: New Facility

Total Cost: \$21,000

Description: This project will replace the functionally obsolete Child Development building with new offices, seminar rooms, and research facilities for the Institute of Child Development, as well as state-of-the-art facilities for the Shirley G. Moore Laboratory School. The new building will provide a modern, adaptable environment to support innovative programmatic applications, translating current research and theory into best practices.

RRC: College of Education and Human Development

RRC Contact: Quam, J.

Year: 2018

Stage: Proposal

456 Chemistry Research Laboratory Investment

Vice President: Academic Affairs

Campus: UMTC

Facility: TC Campus

Total Cost: \$30,000

Description: This project will renovate the antiquated teaching labs in Smith and Kolthoff Halls to state-of-the-art energy efficient research space needed for new faculty in the chemistry department. The project will improve lab bench, equipment and research support spaces and create opportunity for more specialized research experimentation. It will accommodate a greater number of faculty and graduate assistants needed to support the growing undergraduate enrollment in Chemistry.

RRC: College of Science and Engineering

RRC Contact: Crouch, S.

Year: 2020

Stage: Proposal

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Description Report

457 Biosystems & Ag Engineering Laboratory Renovation

Vice President: Academic Affairs

Campus: UMTC

Facility: Biosystems & Ag Engineering

Total Cost: \$50,000

Description: This project will provide new research laboratories to meet growing demands and satisfy requirements of federal grant proposals for CFANS. It will consolidate CFANS departments by grouping users in functionally appropriate space. Computational labs will be constructed in BAE and wet lab or volumetric research in Engineering Fisheries Laboratory. A new second floor will be added to Engineering and Fisheries Laboratory, maximizing the usable space for research.

RRC: College of Food, Agricultural and Natural Resource Sciences

RRC Contact: Buhr, B.

Year: 2020

Stage: Proposal

459 Pioneer Hall Renovation or Replacement

Vice President: University Services

Campus: UMTC

Facility: TC Campus

Total Cost: \$0

Description: This project will explore options meeting the facility renewal needs of Pioneer Hall.

RRC: Housing & Residential Life

RRC Contact: Scheich, L.

Year: Under Consideration / Evaluation

Stage: Proposal

460 Field House Renovation

Vice President: Academic Affairs

Campus: UMTC

Facility: TC Campus

Total Cost: \$0

Description: This project will make necessary improvements to the exterior of the Field House facility originally relocated to the University from Washington in 1949.

RRC: Recreational Sports

RRC Contact: Brown, D.

Year: Under Consideration / Evaluation

Stage: Proposal

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Description Report

461 Admissions Welcome Center

Vice President: Academic Affairs

Campus: UMTC

Facility: TC Campus

Total Cost: \$0

Description: This project will explore options for consolidating freshman, transfer and international student admissions into a single more publicly accessible location.

RRC: Academic Affairs

RRC Contact: Hanson, K.

Year: Under Consideration / Evaluation

Stage: Proposal

462 Public Space Reinvestments

Vice President: University Services

Campus: UMTC

Facility: TC Campus

Total Cost: \$0

Description: This program will fund a variety of small physical enhancements intended to improve the campus experience for students, employees and visitors.

RRC: Facilities Management

RRC Contact: Berthelsen, M.

Year: Under Consideration / Evaluation

Stage: Proposal

463 UMD Academic Priority

Vice President: Duluth Campus

Campus: UMD

Facility: UMD Campus

Total Cost: \$0

Description: This project will address academic facility needs on the Duluth campus. Academic, financial and physical planning processes on the Duluth campus will identify the campus's priorities for its next major investment.

RRC: Academic Affairs

RRC Contact: Black, L.

Year: Under Consideration / Evaluation

Stage: Proposal

UNIVERSITY OF MINNESOTA

Six Year Plan - Project Description Report

Definitions

Proposal: Projects in this stage represent preliminary conceptual ideas regarding program need and related capital requirements. Local units normally identify these ideas as part of the compact process. Projects do not have permission to begin predesign or fundraising without administrative approval from the Capital Oversight Group.

Planning and Feasibility: Projects in this stage have been determined to be an institutional priority and have been approved to begin predesign activities. Financial feasibility, including the completion of a fundraising feasibility study with the University of Minnesota Foundation, is assessed at this stage.

Resource Acquisition: Projects in this stage have an approved pre-design document and have been approved to actively seek funds.

2014 Six-Year Capital Plan for FY2015 to FY2020

Board of Regents Facilities and Operations Committee
October 2014



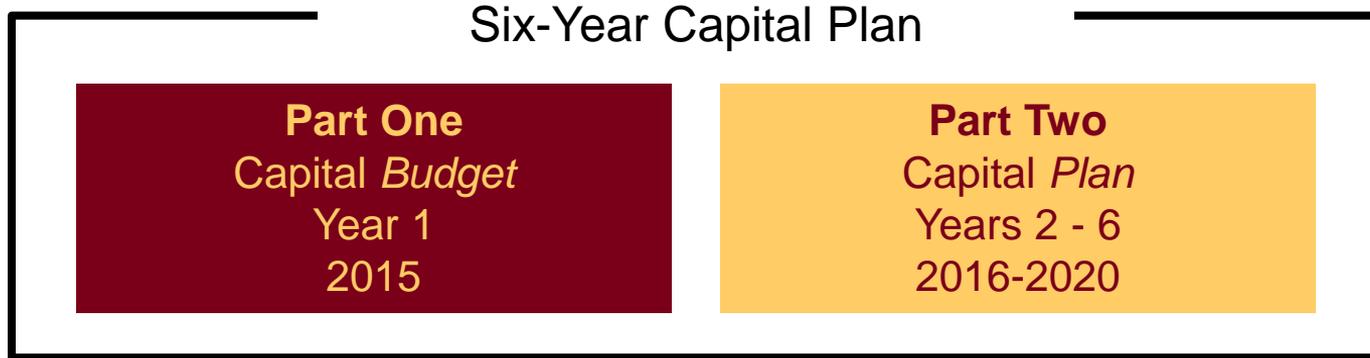
UNIVERSITY OF MINNESOTA

Driven to DiscoverSM



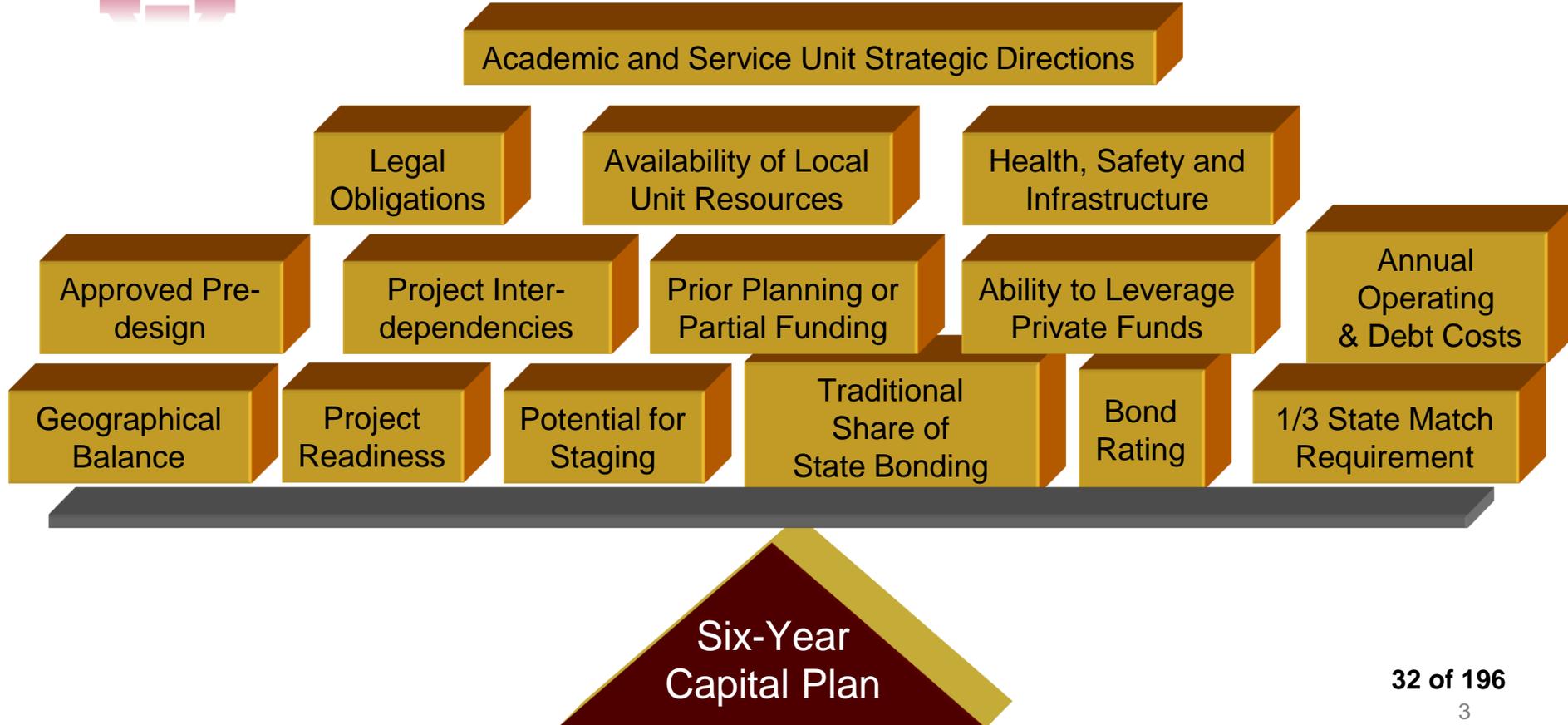
What is the Six-Year Capital Plan?

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





Considerations and Constraints

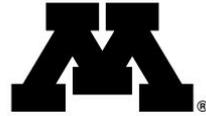




Proposed 2015 Capital Request

Request
dollars in thousands

Location	Project	Total	State	U of MN
SYSTEM	HEAPR	\$ 55,000	\$ 55,000	\$ -
UMTC	Veterinary Isolation Facility Replacement	\$ 27,000	\$ 18,000	\$ 9,000
UMTC	St. Paul Greenhouse Replacement	\$ 6,000	\$ 4,000	\$ 2,000
		Total:	\$ 88,000	\$ 77,000
			\$ 11,000	



UNIVERSITY OF MINNESOTA
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BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities & Operations

October 9, 2014

Agenda Item: Planning and Vision for the Rochester Campus

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

This is a report required by Board policy.

Presenters: Pamela Wheelock, Vice President, University Services

Purpose & Key Points

This item presents to the Board of Regents the University of Minnesota, Rochester (UMR) campus master plan, entitled *Envision UMR: A Campus Master Plan for the Next Chapter of Growth*. Included in the docket material is a copy of the UMR Master Plan.

The plan supports the UMR's strategic plan and mission: to promote learning and development through personalized education in a technology-enhanced environment; and to serve as a conduit and catalyst for leveraging intellectual and economic resources in Rochester and southeastern Minnesota through its signature academic, research, and public engagement programs in collaboration with other campuses of the University of Minnesota, other higher education institutions throughout the state and nation, governmental and non-profit organizations, and private enterprise.

The *Envision UMR* master plan defines a conceptual and physical framework to implement the campus over time, weaving it into the fabric of downtown Rochester yet creating a distinctive identity for the University. The plan describes a long-term vision for the campus as well as near-term implementation steps, including specific guidance for a first-phase building. The vision is focused on three goals:

1. A physical plan will situate a new UMR campus within the Education District, organizing buildings, open spaces, and key connections to be developed by UMR and its partners.
2. The plan will identify a strategy for inclusion of partnerships within the Education District.
3. An implementation plan will lay out a timeline with key roles and next steps.

Envision UMR describes an academic campus that will be a showcase of innovation in American higher education, while fitting neatly into the downtown Rochester community. The first phase is envisioned to support core UMR academic needs as enrollment grows to projected levels, while subsequent phases are envisioned with the potential to incorporate increasing support and

partnership space. Urban design principles will steer land use, buildings, infrastructure, open space, circulation networks and partnerships to dramatically regenerate the site.

The vision is not simply for a campus in the community, but for a “community campus.” Accordingly, the planning process was informed by extensive engagement with UMR students, faculty, and staff as well as other local partners and stakeholders. The input received was significant, and helped to shape a plan that will benefit from broad support within the Rochester community for years to come.

Outreach and engagement with stakeholders shaped three themes in *Envision UMR*:

1. **Campus in the City:** Integrate UMR’s physical campus with the fabric of the city, and create synergistic relationships with partnership organizations.
2. **Campus on the Park:** Envision the Education District as an open space link between downtown Rochester and Soldiers Memorial Field Park.
3. **Campus Connectivity:** Provide access and multiple modes of transportation connecting UMR with its urban context.

In the new campus, the first building and associated site improvements (labelled “UMR-1” in the master plan) will meet core UMR growth needs by providing spaces for classrooms and labs, student services, informal study and gathering, offices for faculty and staff, etc. The master plan embraces UMR’s Active Learning Classroom approach as a model for the future. The building is envisioned at approximately 120,000 gross square feet, and is sited on property already owned by the University. The table below shows the distribution of space types in UMR-1 as a percentage of Net Assignable Square Feet:

UMR-1: PLANNED INTERIOR SPACE	
<i>Program Type Floor Area</i>	<i>% of Net ASF*</i>
Study & Informal Gathering	27%
Active Learning Classroom	22%
Instructional Laboratory	15%
Faculty Office and Support Space	12%
Welcome Atrium	7%
Staff Office and Support Space	5%
Retail/food & beverage	12%

*Assignable Square Feet

Phasing beyond UMR-1 is increasingly prospective and long-range. As described in the plan, potential projects include UMR-2, a second building dedicated to academic and support uses. Subsequent phases are envisioned to include partnership and support spaces as well as academic space. Actual phasing projects and timelines will depend on enrollment, resources, local partnerships, and other factors.

The master plan is based not only on projected enrollment and program growth at UMR, but also on the goal of increasing the University’s presence as one of several civic partners that give strength to downtown Rochester. As identified in previous planning efforts (the 2009 *University of Minnesota*

Rochester Master Plan and the 2010 *Downtown Rochester Master Plan*), the new campus occupies a designated Education District at the edge of an expanding downtown and adjacent to Rochester's largest park, Soldiers Field Memorial Park. The City's vision for this quadrant of downtown is to create a dense "urban village" with mixed-use buildings; inviting streets with commercial storefronts; and improved connectivity. Mayo Clinic's 2011 *Five-Year Plan Update* projects major expansion of lab, clinic, and support space in this district. The *Envision UMR* plan leverages the location of the future campus to make a critical link between Rochester's downtown, with its businesses and medical/research facilities, and the park, with its adjacent residential neighborhoods. Year-round, residents and visitors will experience the campus as a welcoming place, extending Rochester's walkable character with plazas, green open spaces, and other amenities.

The new UMR campus is designed to accommodate anticipated enrollment growth to a total of approximately 1,400 students over the next 10 years. Even as new buildings are designed and built, UMR intends to retain some of the existing facilities in University Square, which have received significant investment. In the master plan, space in University Square continues to support limited administration, partnership programs and some academic support functions.

The master plan assumes no displacement of the existing Rochester Area Family YMCA, and does not rely on acquisition of any City park land. Both neighbors are important to the success of UMR in this site.

This physical plan illustrates seven principals that will guide UMR's physical and institutional growth:

1. Leverage public-private partnerships to build capital projects, deliver educational programs, and create research opportunities.
2. Establish a "front door" opening from downtown Rochester into the Education District, and a gateway from the Education District to Soldiers Memorial Field Park.
3. Maintain transparent and active ground floor uses.
4. Maintain a connected and pedestrian-friendly district throughout.
5. Create a strong architectural identity along South Broadway and 6th Street SW.
6. Encourage walking, cycling, transit use, and other alternatives to private vehicles.
7. With all capital projects, meet the University's "B-3" sustainability guidelines (Building, Benchmarks and Beyond).

Background Information

Board of Regents Policy: *Reservation and Delegation of Authority*, section VIII, subdivision 5, states "The Board of Regents reserves to itself authority to approve campus master plans and amendments thereto."

In 1992 the Chair of the Board and the President of the University appointed a Master Planning Steering Committee to "design and recommend a set of principles which will discipline and inspire

the development of a master planning process.” In 1993 the Board adopted the following four campus master planning principles as developed by that committee:

1. Creating and maintaining a distinctive and aspiring vision for the physical development of each campus.
2. Enriching the experience of all who come to the campus.
3. Maximizing the value of existing physical assets while responding to emerging/changing physical needs.
4. An inclusive, accountable, and timely process for creating and implementing a master plan vision.

In 1996, the Board adopted a resolution directing the campus master plans reviewed earlier in the year to be used to “guide the future development of the campuses in accordance with the four planning principles and the policies, procedures, and strategies therein will be the basis for all future master planning decisions.”

Beginning in October 2013, and throughout the planning process, University of Minnesota Capital Planning and Project Management (CPPM) staff worked with the UMR Chancellor’s office to develop and sustain engagement with key partners such as the Rochester Area Family YMCA, Mayo Clinic, and the City of Rochester. Such outreach was necessary, as the goal was to envision not only a completely new campus, but an entirely new district in the City with its attendant infrastructure. By building dialogue and trust among participants, the stage was set for a productive consultant-led planning process.

In February 2014, UMR contracted with Sasaki Associates to undertake this master plan. Four workshops were conducted, augmented by internal working sessions. Parallel planning efforts were leveraged to extend outreach, most notably the City’s vision for Soldiers Field Memorial Park; the UMR team met with the parks planning team several times to ensure alignment. The UMR consultant team also hosted focus groups with students, faculty, and staff, and a conducted survey called “My UMR,” which informed the plan by garnering significant participation from the UMR community. Finally, material that became the draft *Envision UMR* master plan was presented at community meetings and shared among the UMR community for comment.

The resulting *Envision UMR* master plan extends previous planning work, incorporates stakeholder input and reflects guidance from committees comprising individuals with deep collective knowledge of University policy as well as local issues and priorities:

UMR and UMTC:

- Stephen Lehmkuhle, Chancellor
- Gail Sauter, Associate Vice Chancellor for Finance and Operations
- Jay Hesley, Assistant Vice Chancellor for Institutional Advancement
- Andrew Caddock, ASLA, CPPM
- Lisa Babbs, CPPM

Campus Planning Advisory Committee:

- Mitzi Baker, Director, Rochester-Olmsted Planning Department
- Andrew Caddock, ASLA, CPPM
- Don DeCramer, Mayo Clinic, Div. of Arch./Eng. Design Svcs.
- Jay Hesley, Assistant Vice Chancellor for Institutional Advancement

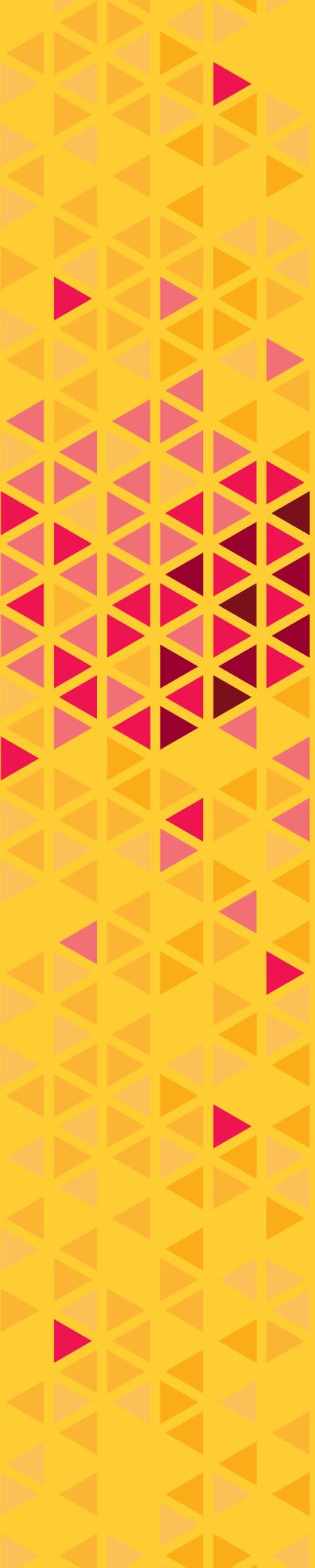
- Douglas Holtan, Mayo Clinic, Vice Chair, Dept. of Facilities and Services
- Doug Knott, City of Rochester Development Administrator
- Gail Sauter, Associate Vice Chancellor for Finance and Operations
- Timothy Seigfried, Mayo Clinic, Facilities Project Services

City of Rochester and Olmsted County:

- Mitzi Baker, Director, Rochester-Olmsted Planning Department
- Doug Knott, City of Rochester
- Mike Nigbur, ASLA, AICP, Interim Director, Rochester Parks and Recreation
- Douglas Rovang, PE, Rochester Public Utilities
- Richard Freese, PE, Rochester Public Works

Consultant Team:

- Bill Angerman, PE, Engineer, WHKS
- Caroline Braga, ASLA, Landscape Architect, Sasaki Associates
- Lan Ge, Urban Designer, Sasaki Associates
- Dan Kenney, AIA, AICP, Principal-in-charge, Sasaki Associates
- Mary Anne Ocampo, Urban Designer, Sasaki Associates
- Marc Partridge, AIA, Architect, RSP Architects
- Allen Penniman, AICP, Project Manager, Sasaki Associates
- Brandon Theobald, PE, Engineer, RSP WHKS



envision
umr

A CAMPUS
MASTER PLAN
FOR THE
NEXT CHAPTER
OF GROWTH

Prepared for the University of Minnesota Board of Regents | September 2014



UNIVERSITY OF MINNESOTA ROCHESTER

Driven to DiscoverSM

ACKNOWLEDGMENTS

UMR AND UM LEADERSHIP

Dr. Stephen Lehmkuhle	UMR Chancellor
Gail Sauter	UMR Associate Vice Chancellor for Finance and Operations
Jay Hesley	UMR Assistant Vice Chancellor for Institutional Advancement
Andrew Caddock, ASLA	UM Capital Planning and Project Management
Lisa Babbs	UM Capital Planning and Project Management

CAMPUS PLANNING ADVISORY COMMITTEE

Mitzi Baker	Rochester-Olmsted Planning Department
Andrew Caddock, ASLA	Univ. of Minnesota Capital Planning and Project Management
Don DeCramer	Mayo Clinic, Div. of Architectural/Engineering Design Services
Jay Hesley	Assistant Vice Chancellor for Institutional Advancement
Douglas Holtan	Mayo Clinic, Vice Chair, Dept. of Facilities and Support Services
Doug Knott	City of Rochester
Gail Sauter	Associate Vice Chancellor for Finance and Operations
Timothy Seigfried	Mayo Clinic, Facilities Project Services

CITY OF ROCHESTER AND OLMSTED COUNTY

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Doug Knott	City of Rochester
Mike Nigbur, LA, AICP	Rochester Parks and Recreation
Douglas Rovang, PE	Rochester Public Utilities
Richard Freese, PE	Rochester Public Works

CONSULTANT TEAM

Bill Angerman, PE	Engineer, WHKS
Caroline Braga, ASLA	Landscape Architect, Sasaki Associates
Lan Ge	Urban designer, Sasaki Associates
Dan Kenney, AIA, AICP	Urban planner/designer, principal-in-charge, Sasaki Associates
Mary Anne Ocampo	Urban designer, Sasaki Associates
Marc Partridge, AIA	Architect, RSP Architects
Allen Penniman, AICP	Urban planner/designer, project manager, Sasaki Associates
Brandon Theobald, PE	Engineer, RSP WHKS

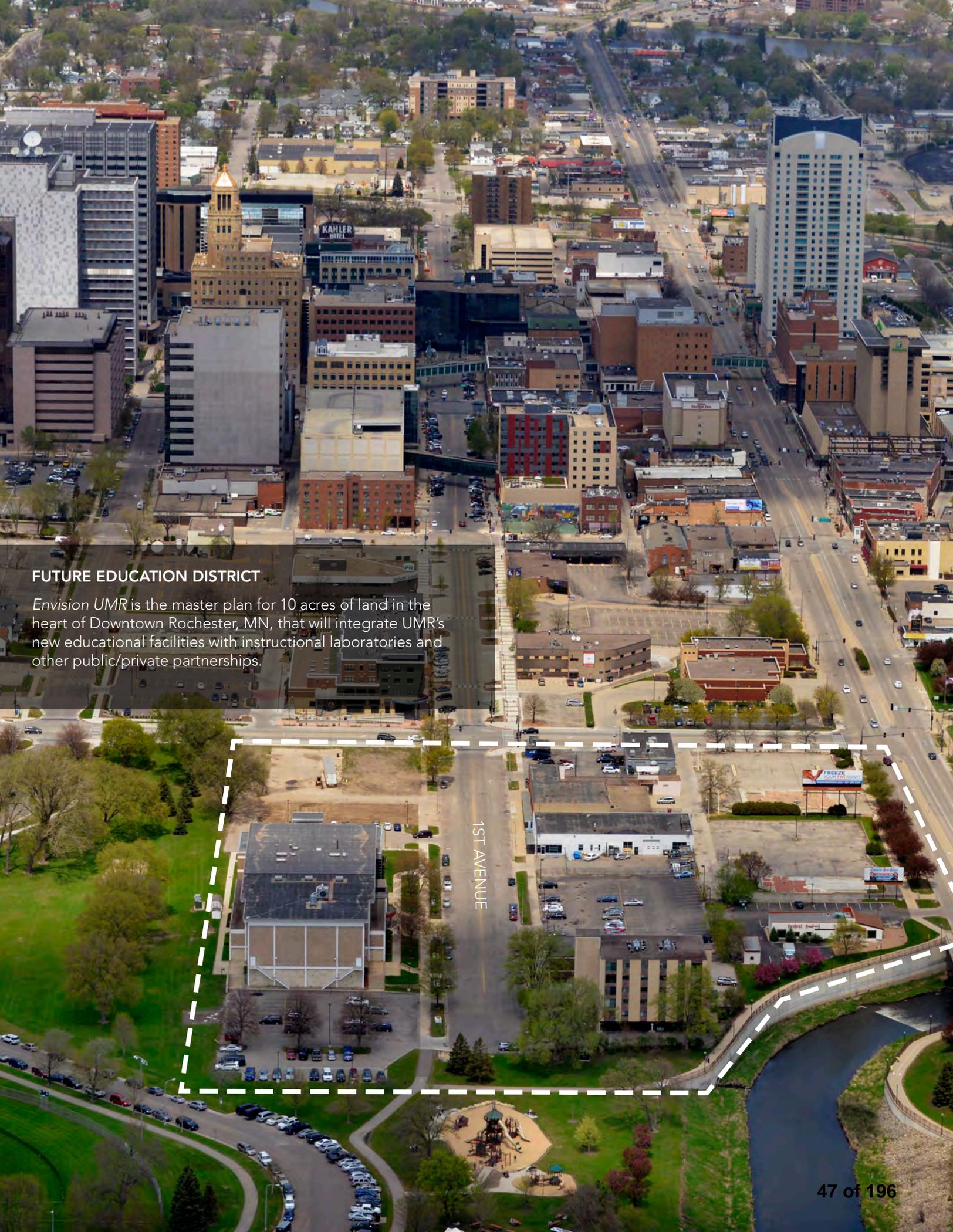
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1



INTRODUCTION



FUTURE EDUCATION DISTRICT

Envision UMR is the master plan for 10 acres of land in the heart of Downtown Rochester, MN, that will integrate UMR's new educational facilities with instructional laboratories and other public/private partnerships.

1ST AVENUE

OVERVIEW

The University of Minnesota Rochester (UMR), the newest campus in the University of Minnesota system, is focused on the innovative delivery of health science and biotechnology education. Innovating the curricular design, structure of coursework, deployment of faculty talent, and interlacing the campus into the community, according to author, Robert Zemsky, “and that ultimately is why UMR is such a harbinger of a better, more productive and responsive future for American higher education.”¹

In its foundational years, UMR forged partnerships with the Mayo Clinic and other institutions to offer distinctive health sciences and biosciences education that prepares students for a broad spectrum of current and emerging careers, ranging from patient care to pure and applied research. UMR matriculated its first class in 2009 and currently serves approximately eight hundred undergraduate and graduate students.

In 2009, UMR prepared a master plan that envisioned an “Education District” in downtown Rochester that would foster collaborations in learning, research, and industry; and in the process contribute to the regeneration of downtown through the campus’ physical design and successful integration with the city.

In addition to envisioning an Education District, the ‘09 UMR Plan called for the creation of a “comprehensive plan for downtown Rochester that contemplates the University’s presence, its need for partners in facilities, and its potential impact in stimulating demand for more retail and residential development.”²

Acting upon that recommendation, local leaders from the City of Rochester, Olmsted County, the Mayo Clinic, UMR, and other stakeholder organizations spearheaded the 2010 Downtown Rochester Master Plan (‘10 Downtown Plan); which recognized and endorsed an emergent “Educational District” at the south end of downtown along 1st Avenue.

The shared vision of the ‘09 UMR Plan and the ‘10 Downtown Plan is the basis for *Envision UMR*, the plan that will guide UMR’s campus development over the next ten years as well as set a vision for the University’s long-term growth. The goals of *Envision UMR* are threefold:

1. A physical plan will situate a new UMR campus within the Education District, organizing buildings, open spaces and key connections to be developed by UMR and its partners.
2. The plan will identify a strategy for inclusion of partnerships within the Education District.
3. An implementation plan will lay out a timeline with key roles and next-steps.

Three other planning initiatives began in 2014 and ran concurrently with *Envision UMR*, each of which involved significant collaboration between the initiatives’ project teams. Destination Medical Center (DMC), which is described as “an innovative economic development initiative to secure Minnesota’s status as a global medical destination now and in the future,”³ is a six billion dollar initiative that could potentially fund myriad capital projects throughout downtown

Rochester. Second, the Rochester Parks Department began a master plan for Soldiers Field Memorial Park, Rochester’s primary downtown city park and

is located at the edge of the Education District. Third, the City of Rochester began the task of updating its comprehensive plan, which will set the City’s strategic direction and potentially lead to revisions to the City’s zoning code in support of strategic objectives.

These efforts, alongside *Envision UMR*, are poised to take the Education District from vision to reality. UMR has set a goal to construct its first academic building in the Educational District within six to eight years. This building will be the first phase of a dramatic regeneration of the site and a showcase of innovation in American higher education.

“Bigger is not better. If we focus on the better, the bigger will follow”

- Chancellor Stephen Lehmkuhle

1 Zemsky, Robert. *Checklist for Change: Making American Higher Education a Sustainable Enterprise*. Rutgers University Press, 2013,125.

2 University of Minnesota Rochester: Master Plan Report. Sasaki Associates, 2009, 41.

3 <http://dmc.mn/about-dmc/what-is-dmc-.php> Retrieved June 2014



Chancellor Lehmkuhle leads the consultant team on a site walk of the UMR campus.

PROJECT TIMELINE

FEBRUARY/MARCH

Project kick-off, stakeholder interviews, site reconnaissance, launch of MyUMR survey

APRIL/MAY

Conceptual design formulation, public forum, ongoing stakeholder meetings

JUNE/JULY

Preparation of final master plan



MASTER PLAN PROCESS

Envision UMR is the product of a six-month engagement process beginning in February 2014. Stakeholders from the general public, the City of Rochester, Olmsted County, Mayo Clinic and other institutional partners, UM administration, the UMR community, and many others contributed knowledge, ideas, opinions, and other valuable input. Engagement and outreach included:

- A web-based survey of UMR students, faculty, and staff was conducted to better understand community engagement, lifestyle preferences, and other factors that influenced the physical design of the Education District. Nearly a quarter of the UMR community participated.
- Numerous meetings were held with key Rochester institutions; including the Mayo Clinic, the Rochester Area Family Y, Destination Medical Center, and others.
- The consultant team worked closely with UMR's Campus Planning Advisory Committee, which provided guidance throughout the master planning process.
- Three open forums were held for the UMR community, and a town hall meeting was held in May 2014.

For more detail on the outreach efforts undertaken under the planning process, please refer to Chapter 5.

AUGUST/SEPTEMBER

Submission of master plan to
University of Minnesota Board of
Regents



Central Park

Mayo Clinic

University Square

Broadway Hall

318 Commons

Education District

YMCA

Food Coop

Soldiers Memorial Field Park

Zumbro River

Mayo Civic Center

Government Center

LEGEND

- Existing UMR Building
- Partnership Building
- Pedestrian Connection
- UMR Properties

CENTER ST

1ST ST SW

2ND ST SW

3RD ST SW

4TH ST SW

5TH AVE SW

4TH AVE SW

3RD AVE SW

2ND AVE SW

1ST AVE SW

S BROADWAY

3RD AVE SE

5TH ST SW

6TH ST SW

7TH ST SW

CIVIC CENTER DRIVE NE

THE COMMUNITY CAMPUS MODEL

From its founding, UMR has embraced a “community campus” model of physical and programmatic integration with the Rochester community. Beginning with University Square and continuing with Broadway Hall and 318 Commons, UMR has leased space in mixed-use buildings in a distributed pattern. The individual buildings vertically integrate UMR and non-UMR uses (e.g. classrooms above ground-floor retail). The streets and skyways act as conduits where UMR students, faculty, and staff intermix

with the downtown community. UMR students often remark how they value rubbing shoulders with Mayo Clinic employees in the skyways. Neighboring organizations within and outside of these buildings contribute to the UMR experience even if not directly affiliated with the institution.

The distributed campus model was established as the preferred model under the 2009 UMR plan and will continue to guide the development of the Education District going forward.

“Seeing Mayo Clinic employees in the skyways is an inspiration for my career ambitions”

- UMR student



The master plan organizes the community campus model under three themes:

Campus in the City

Integrating UMR’s physical campus with the fabric of the city and creating synergistic relationships with partnership organizations

Campus on the Park

Envisioning the Education District as an open space link between downtown Rochester and Soldiers Memorial Field Park

Campus Connectivity

Providing access and multiple modes of transportation connecting UMR with its urban context



CONCEPTUAL RENDERING OF THE EDUCATION DISTRICT AT FULL-BUILDOUT

MASTER PLAN VISION AND PRINCIPLES

The University of Minnesota Rochester promotes learning and development through personalized education in a technology-enhanced environment. The University of Minnesota Rochester empowers undergraduate and graduate students to be responsible for their own learning and provides appropriate support to prepare them to succeed in a global and multicultural society. The University of Minnesota Rochester serves

as a conduit and catalyst for leveraging intellectual and economic

resources in Rochester and southeastern Minnesota through its signature academic, research, and public engagement programs in collaboration with other campuses of the University of Minnesota, other higher education institutions throughout the state and nation, governmental and non-profit organizations, and private enterprise.

UMR serves as a conduit and catalyst for leveraging intellectual and economic resource in Rochester and southeastern Minnesota

UMR is graduating students and is acquiring property in the Education District. It is poised to begin its next chapter of growth. Under *Envision UMR*, the University will grow to be a 1,400-student institution, it will construct its first building, and it will establish a master plan for the subsequent phases of the Education District's development. Achieving this vision will require the establishment of strategic partnerships with

public and private entities and the City of Rochester. These partnerships will be structured to

benefit all parties and contribute to the vitality of downtown Rochester.

UMR has articulated several principles that have guided the planning for the Education District, and that will continue to guide implementation of the master plan vision going forward. These principles are listed below:

PRINCIPLES

1. LEVERAGE PUBLIC-PRIVATE PARTNERSHIPS TO BUILD CAPITAL PROJECTS, DELIVER EDUCATIONAL PROGRAMS, AND CREATE RESEARCH OPPORTUNITIES
2. ESTABLISH A "FRONT DOOR" OPENING FROM DOWNTOWN ROCHESTER INTO THE EDUCATION DISTRICT AND A GATEWAY FROM THE EDUCATION DISTRICT TO SOLDIERS MEMORIAL FIELD PARK
3. MAINTAIN TRANSPARENT AND ACTIVE GROUND FLOOR USES
4. MAINTAIN A CONNECTED AND PEDESTRIAN-FRIENDLY DISTRICT THROUGHOUT
5. CREATE A STRONG ARCHITECTURAL IDENTITY ALONG BROADWAY AND 6TH STREET
6. ENCOURAGE WALKING, CYCLING, TRANSIT USE, AND OTHER ALTERNATIVES TO PRIVATE VEHICLES
7. HOLD ALL CAPITAL PROJECTS TO UM'S B3 SUSTAINABILITY GUIDELINES

2



MASTER PLAN



PEOPLE'S
FOOD
COOP

FIRE
STATION

6TH ST SW

2ND AVE SW

1ST AVE SW

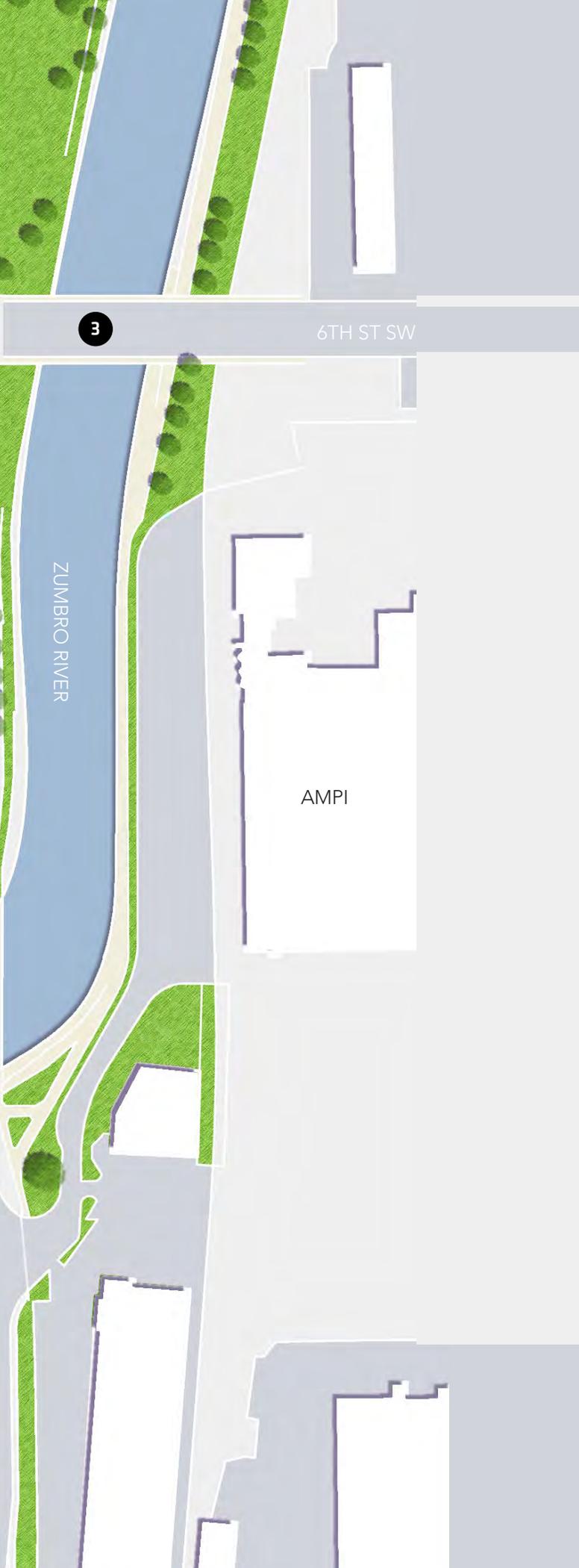
BROADWAY

ZUMBRO
LUTHERAN
CHURCH

YMCA

SOLDIERS FIELD
MEMORIAL PARK

BROADWAY



MASTER PLAN FRAMEWORK

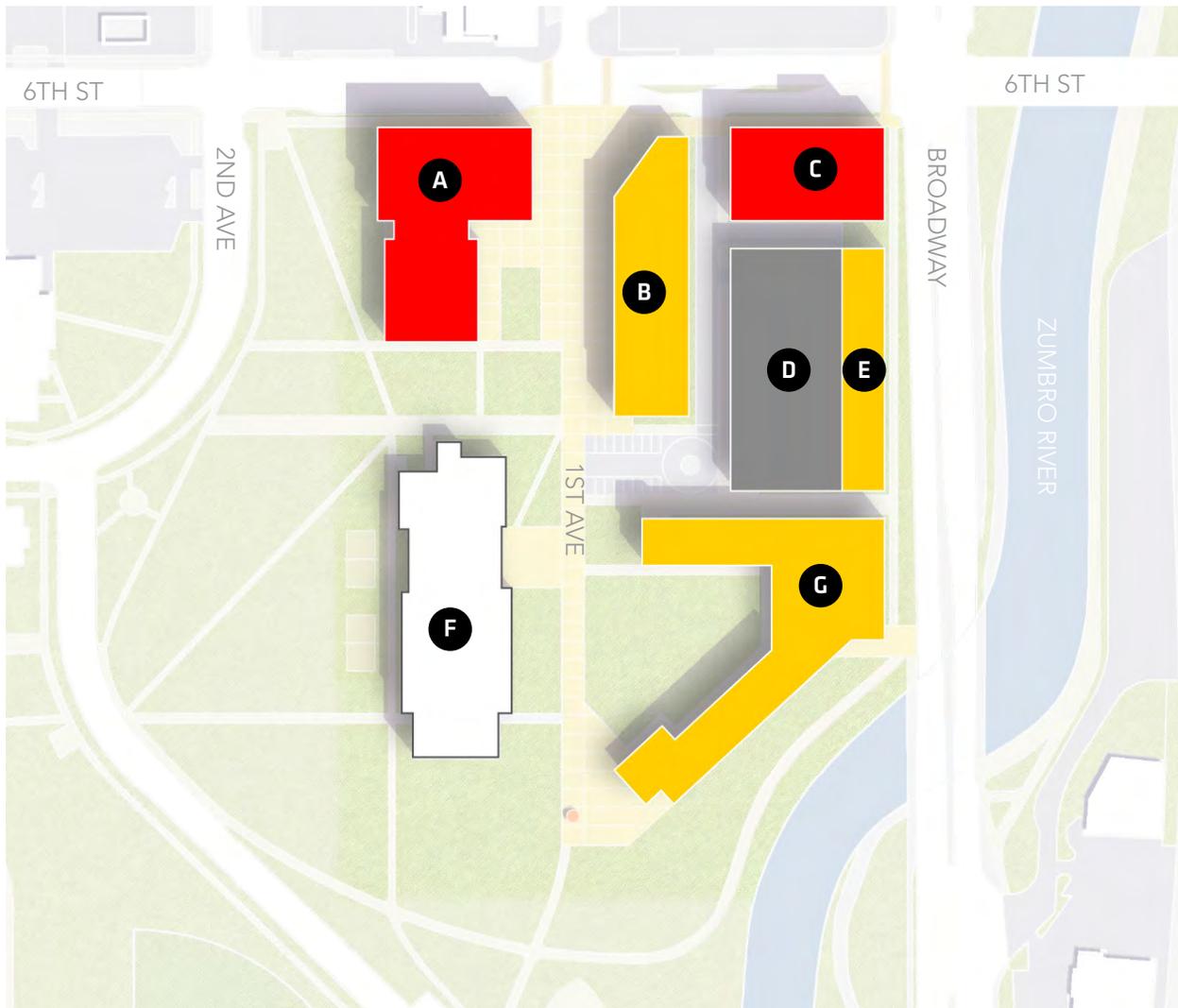
The Education District is poised to be Rochester’s hub of learning, research, and collaboration. The master plan envisions a district that fosters synergies between UMR and its partners by bringing students together with the institutional and industry leaders of the medical health professions. Through physical proximity to organizations like the Mayo Clinic and through direct collaborative programs with its partners, UMR and its new facilities in the Education District stand to enhance the total learning environment provided to students both inside and outside the classroom. The Education District—urban and integrated into the downtown fabric—is designed specifically to facilitate this type of educational experience.

1st Avenue will be the spine of this new district. The ‘10 Downtown Plan recommended the cultivation of 1st Avenue as Rochester’s “main street.” This notion will be extended into the Education District by orienting the district along First Avenue, closing the street to vehicular traffic, and enhancing it with various pedestrian-oriented amenities.

In addition, a series of new open spaces will provide a supplementary organizing framework. These spaces—both plaza and park—will serve as the fabric of the district, tying together and organizing the buildings so that the district imbues a unified sense of place.

LEGEND

1. UMR-1
2. UMR-2
3. 6th Street bridge connection
4. Spill-out plaza
5. Partnership building
6. Campus lawn
7. 1st Avenue pedestrianization
8. Parking ramp
9. Partnership building
10. Bus drop-off and handicap parking
11. Campus open space
12. Partnership building
13. Gateway plaza
14. Stormwater landscape



SITE PROFILE

Metric	Unit
Education District land area	9.8 acres
Total development	587,000 GSF
Floor/Area Ratio	1.4
Parking capacity	280 stalls
Increase in open space	5.1 acres

DEVELOPMENT SITES

Site	Use	Floor Area (GSF)	Floors (#)
A	UMR-1	120,000	4-7
B	Partnership	114,000	4-6
C	UMR 2	97,000	4-8
D	Parking	n/a	4
E	Partnership	47,000	4
F	YMCA	~82,000	3
G	Partnership	127,000	4
		587,000	

DEVELOPMENT CAPACITY

At full buildout, the 10-acre Education District can accommodate more than a half million gross square feet of development. This level of development is in keeping with the urban design guidelines of the '10 Downtown Plan, which called for seven-to-eight story buildings along 6th Street stepping down to three-to-four story buildings adjacent to Soldiers Memorial Field Park. This proposed massing, along with new campus open spaces, will yield a 1.4 floor-to-area ratio (FAR). FAR is a measure of density that compares the total floor area of all buildings within a district to the surface area of that district. By way of comparison, the FAR of the main quad at UM Twin Cities' is 1.5, and the FAR of the Mayo Clinic campus is 7.0.

In addition to new buildings, 5.1 acres of new open space will be created. 1st Avenue will be transformed into a pedestrian street that

will connect a succession of green spaces and plazas. A new campus green, located south of Development Site A, will connect 1st Avenue to Soldiers Field Memorial Park. And a large open space will be incorporated into the partnership building planned for the site adjacent to the Zumbro River (G).

A parking garage (D) is planned for the Education District to support the new development and replace existing surface parking. At two bays and four stories, the capacity of the garage will be approximately 280 spaces. The garage could be expanded to include a third bay of parking by replacing the adjacent partnership building (E), yielding a capacity of roughly 500 spaces.



At full buildout, the Education District can accommodate approximately 587,000 gross square feet of development





URBAN DESIGN GUIDELINES

The purpose of Education District urban design guidelines is to capture the design intent of the master plan and provide urban design guidance as new buildings and public spaces are developed over time.

The four principles listed below describe the broad goals for the built environment that will comprise the Education District. These principles are intended to guide the design of individual buildings and landscapes toward a cohesive and distinctive sense of place for the district as a whole. They are consciously structured to support UMR's mission and reinforce the '10 Downtown Plan.

PRINCIPLE 1: URBAN DENSITY

MAXIMIZE DEVELOPMENT POTENTIAL TO CREATE A VIBRANT URBAN DISTRICT WHILE MAINTAINING A HUMAN-SCALED AND HIGH-QUALITY PUBLIC REALM.

PRINCIPLE 2: PUBLIC REALM

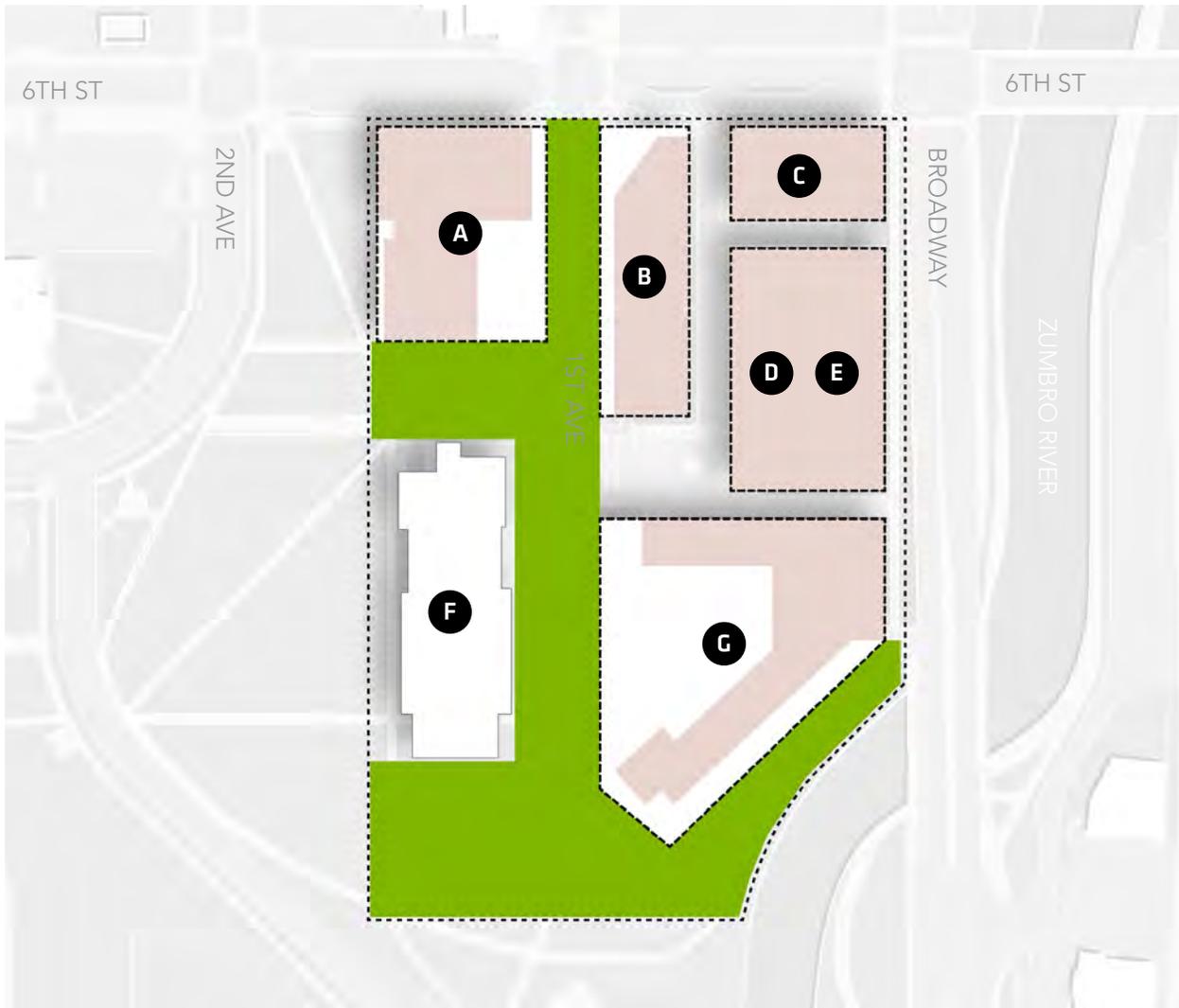
DESIGN BUILDINGS TO CREATE WELL-DEFINED EDGES THAT FRAME STREETS, PLAZAS, AND OPEN SPACES AND ESTABLISH A COMFORTABLE, HUMAN-SCALED, AND CONNECTED PUBLIC REALM.

PRINCIPLE 3: FUNCTIONALITY

BALANCE PEDESTRIAN NEEDS WITH FUNCTIONAL NEEDS OF DROP-OFF, SERVICE, EMERGENCY, AND VEHICULAR REQUIREMENTS WITHIN THE DISTRICT.

PRINCIPLE 4: QUALITY OF PLACE

DESIGN WITH A PALETTE OF LANDSCAPE ELEMENTS, GROUND-FLOOR TREATMENTS AND EQUIPMENT-SCREENING TECHNIQUES TO GIVE THE DISTRICT A SENSE OF PLACE.



SITE PROFILE

Metric	Unit
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E	Partnership	47,000	4
F	YMCA	~82,000	3
G	Partnership	127,000	4
		587,000	

PRINCIPLE 1: URBAN DENSITY

Maximize development potential to create a vibrant urban district, while maintaining a human-scaled and high-quality public realm.

Development Sites

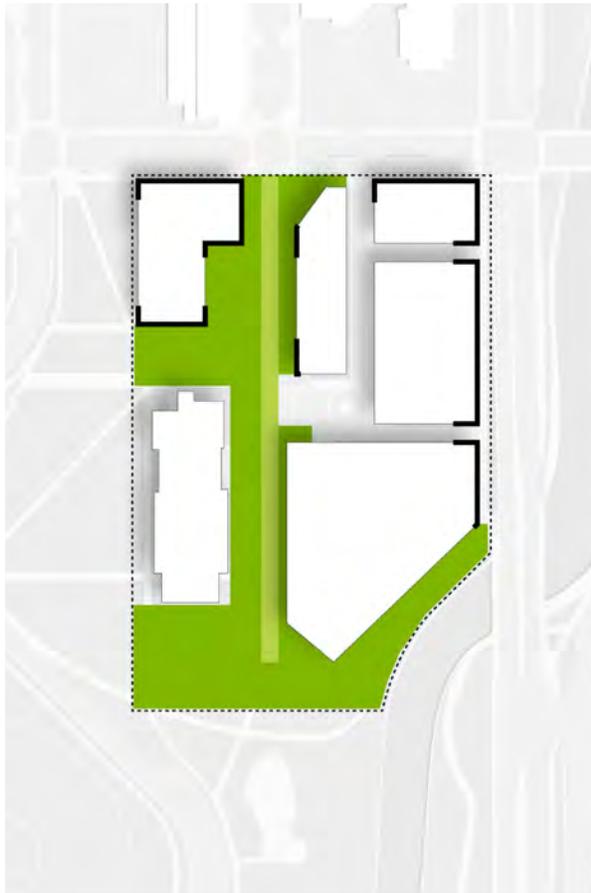
The urban design framework for the Education District aspires to utilize the Rochester urban grid within the district and to create a strong pedestrian network with connections to Soldiers Memorial Field Park.

Scale and Building Heights

The Education District's development should be responsive to its surrounding context with a building height transition from downtown Rochester to Soldiers Memorial Field Park. As a goal, the establishment of a height of no more than four stories before a step-back will give the district an overall human-scaled pedestrian quality. Building heights that step back along 6th Street should be no more than eight stories and should transition to four stories when adjacent to Soldiers Memorial Field Park. To ensure a human scale, large expanses of uniform façade treatment (especially top to bottom) should be avoided in favor of more responsiveness to context and building function.

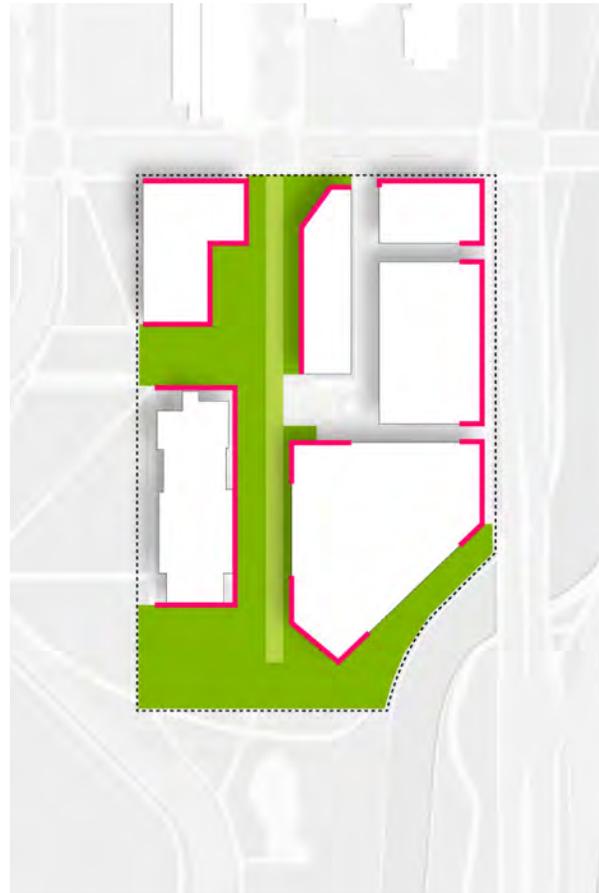
Building Orientation

Buildings in the district should be oriented in alignment with the Rochester street grid strengthening the urban realm of streets, plazas, and open spaces. Where possible, buildings should be oriented with the long axis east-west to limit east- and west-facing façade areas and maximize north- and south-facing façades. This will limit exposure to the most intense solar heat gain, assuming south facing façades incorporate sun shading or other technologies. When a building's long façade needs to face east or west to meet program requirements and/or reinforce a street edge or public space, sunshades and other architectural devices should be used to limit solar gain.



PROPOSED BUILD-TO LINES

-  BUILD-TO LINE
-  DEVELOPMENT BLOCK
-  OPEN SPACE



PROPOSED ACTIVE EDGES

-  ACTIVE EDGE
-  DEVELOPMENT BLOCK
-  OPEN SPACE

PRINCIPLE 2: PUBLIC REALM

Design buildings to create well-defined edges that frame streets, plazas, and open spaces and establish a comfortable, human-scaled, and connected public realm.

Build-to-Lines

Several build-to-lines, where buildings come right to the edge of the street or public space, are recommended to create a strong sense of enclosure in certain areas of the district. Buildings along 6th Street and Broadway should reinforce the street, providing an urban street wall from downtown Rochester to the district. Buildings should allow for a minimum of fourteen-foot sidewalks to accommodate tree plantings, seating, and transit shelters. Generally, ground-level treatment along these edges should be transparent, with visual access to active uses and commercial uses.

Setbacks and Step-backs

In some instances, setbacks from the property line will allow for a more generous entry court at the public entrances to buildings. For example, the strategic partnership building located at 1st Avenue and 6th Street may be setback to accommodate a more generous entry plaza area along the district's "Main Street" corridor.

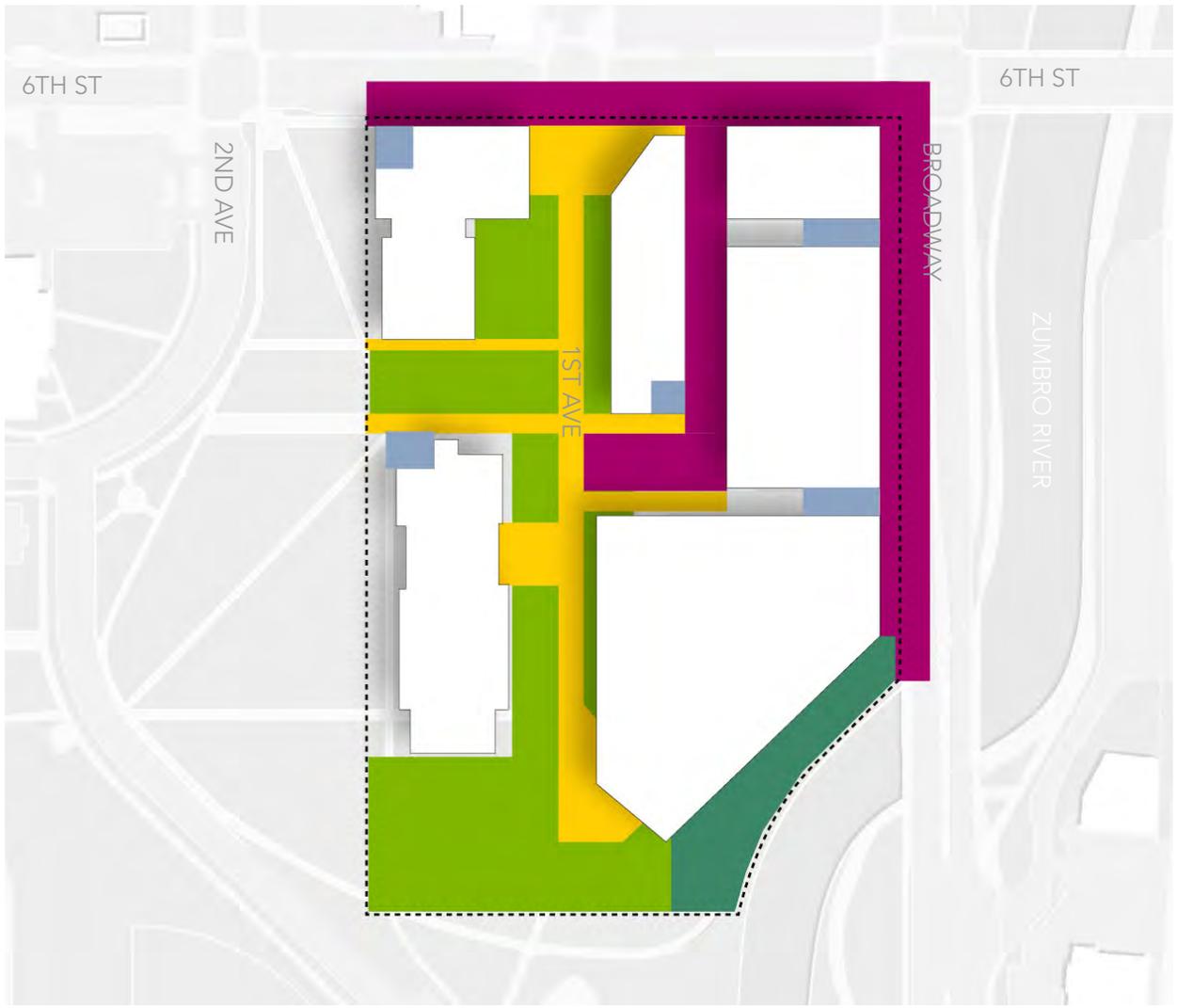
In general, throughout the district, a ten- to fifteen-foot step-back at a four-story building height along active streets and other public places is recommended to ensure a pedestrian scale.

Walkability

"A combination of the cold Minnesota climate and the operational needs of a medical center have resulted in the proliferation of a subway and skyway system throughout the downtown Rochester core. While this system of underground tunnels and above grade enclosed bridges offers pedestrians shelter from an often harsh climate and from difficult or congested street crossings, it also has the unfortunate side effect of drawing energy and vitality from the exterior street level, a zone that – in most cities – is the main opportunity for the chance encounters that lend excitement and interest to the urban experience."¹

As recommended in the 2010 Downtown Rochester Master Plan, the urban design of the UMR Education District creates a vibrant, accessible public realm at street level. Building on the Downtown Master Plan's identification of 1st Avenue as an important mixed-use spine, UMR community-oriented and active uses are clustered along the 1st Avenue pedestrian "main street", as well as along 6th Street and Broadway frontages to enliven walking along these streets. Rather than privatizing and hiding community-oriented facilities in the upper levels of buildings, cafes, study commons, and retail are located at the ground level; building facades are designed to be as transparent as possible to reveal the activities within; outdoor gathering spaces are located adjacent to these indoor activity nodes to allow spill-out in temperate seasons and a beautiful view to the outdoors in winter; and buildings are located close together and joined into a coherent, navigable campus fabric by green spaces designed to enhance walking and offer users an opportunity to connect with the natural environment.

1 Downtown Rochester Master Plan. Sasaki Associates, 2010.



FUNCTIONALITY ZONES

- PEDESTRIAN
- OPEN SPACE
- ZUMBRO RIVER AREA
- SERVICE
- SHARED

PRINCIPLE 3: FUNCTIONALITY

Balance pedestrian needs with functional needs of drop-off, service, emergency, and vehicular requirements within the district.

Functionality Zones

The Education District must function with a network of pedestrian, emergency, and service needs all intertwined within the same compact geography. The success of the district relies on the careful and distinct design of specific zones and the coordination of pedestrian and vehicular movements within and between them.

The diagram to the left illustrates three zones: pedestrian, shared, and service. The following describes the design recommendations for each zone:

Pedestrian zones should have extensive shade throughout to create a cooler, more comfortable microclimate for people walking in the district. Pathways, seating areas, pedestrian lighting, and other pedestrian amenities should be carefully located within the pedestrian zones of the district. Ground floors of buildings facing onto the pedestrian zones to the extent possible should be transparent and accommodate a range of active uses.

Shared zones, areas for pedestrian and vehicular movement, should provide shaded sidewalks. Curbs, bollards, and special paving should be used to delineate pedestrian zones that are safe and well protected from vehicular traffic and service vehicles. It is highly recommended that an operational system to schedule delivery and pick up trips be coordinated to regulate and limit the number of large vehicles driving in the district during peak pedestrian times.

Within the shared zone, special attention should be paid to shepherding pedestrians to specific points of crossing. Critical to the functionality of the Education District is the creation of well-defined and safe areas where pedestrian and vehicle paths cross. Bus drop-off for district stakeholders should be studied to accommodate proper turning radii and an appropriate size for the drop-off area.

Service zones need to provide optimized functionality for service and emergency vehicles as well as for access to loading docks. Roadways need to have proper width and turning radii for large service trucks to access loading docks. Loading areas should accommodate all of the service, storage, trash, and recycling needs of the district facilities. Ensuring that the operational needs of the users in the district are met is critical to its long-term success and functionality.



Race Street Pier | Philadelphia, USA (above)
Stationsstraat | Sint-Niklaas by Grontmij, Belgium (below)

PRINCIPLE 4: QUALITY OF PLACE

Design with a palette of landscape elements, ground-floor treatments and equipment-screening techniques to give the district a sense of place.

Shady Streets and Open Spaces

The Education District's site location provides an exciting opportunity to reinforce Rochester's streetscape improvements and to create open spaces that connect to Soldiers Memorial Field Park.

Extensive planting of shade trees both on streets and in plazas and quads is an important recommendation for the district. The urban design principles of urban density and public realm will ensure that buildings are organized within the grid of streets and pathways to create significant shade. Trees should be planted to supplement and provide continuous shade in pedestrian areas.

Providing open spaces in the district will greatly enhance the quality of place. Forty to fifty percent of the overall district should be devoted to open space. The southeast area of the district, between "Main Street" and Broadway, provides an opportunity for the district to engage the Zumbro River and create a vibrant green space. This southeast area should be developed as fifty to sixty percent open space.

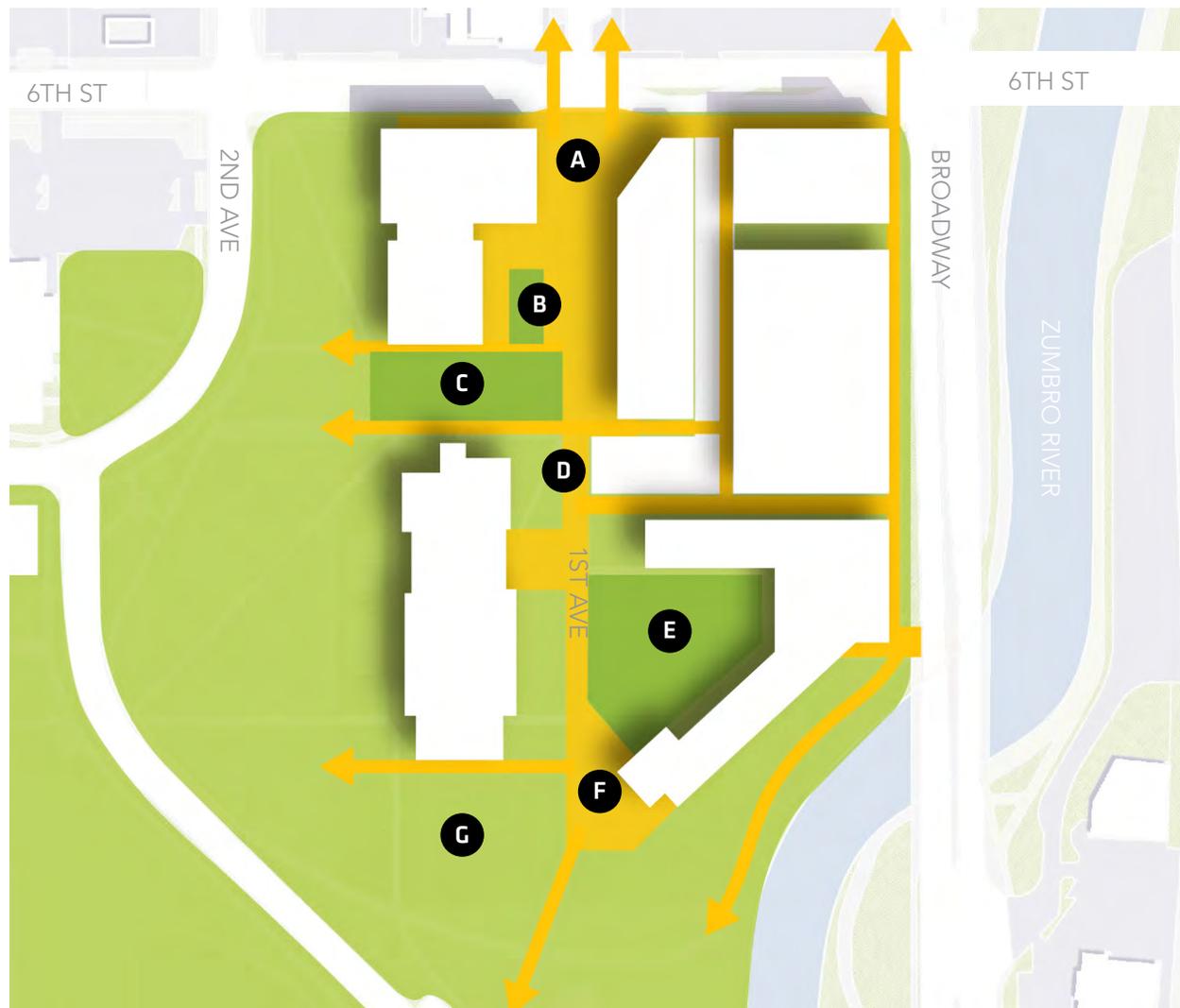
Ground Level Treatment and Building Entrances

It is critical to the vibrancy of the new district that the streets and public spaces are activated by the uses in the ground level of buildings. Retail, food and beverage, and other active and visually interesting uses should face the streets and public spaces as indicated in the attached "Active Edges" diagram. Activating "Main Street" by providing visual transparency and vibrant uses is an opportunity to extend Rochester's 1st Avenue into the district as an animate promenade. Wherever possible, primary building entrances should face onto the active edges to contribute to the animation of these key public spaces in the district.

Screening of Equipment

Critical to the success of a compact, urban district is the careful screening of the extensive utility and service equipment and infrastructure that will be required to service its buildings and users. Service areas and outdoor equipment must be screened from public view using architectural walls, screens, and hedges where possible. Street entrances to loading areas should be screened.

OPEN SPACE FRAMEWORK



More than five acres of new open space is planned for the Education District. The 1st Avenue pedestrian street (D) will become a spine connecting new open spaces and serving as the “main street” of the district. A gateway plaza (A) will provide a flexible space for farmers’ markets, food trucks, a pop-up skating rink, and other uses. A shaded plaza (B) will transition from the busy entrance to UMR-1 to 1st Avenue. The University’s main campus green (C) will be located just south of UMR-1. This will be the signature green space for UMR and an important connection to Soldiers Memorial Field Park. A second green space (E) will take the form of a flexible lawn and be incorporated into the development of the partnership site adjacent the Zumbro River. A rain garden (G), a planted depression that attenuates and treats stormwater, will be incorporated into the landscape south of the Y. Finally, a second gateway plaza (F) will mark the seam between the Education District and Soldiers Memorial Field Park.

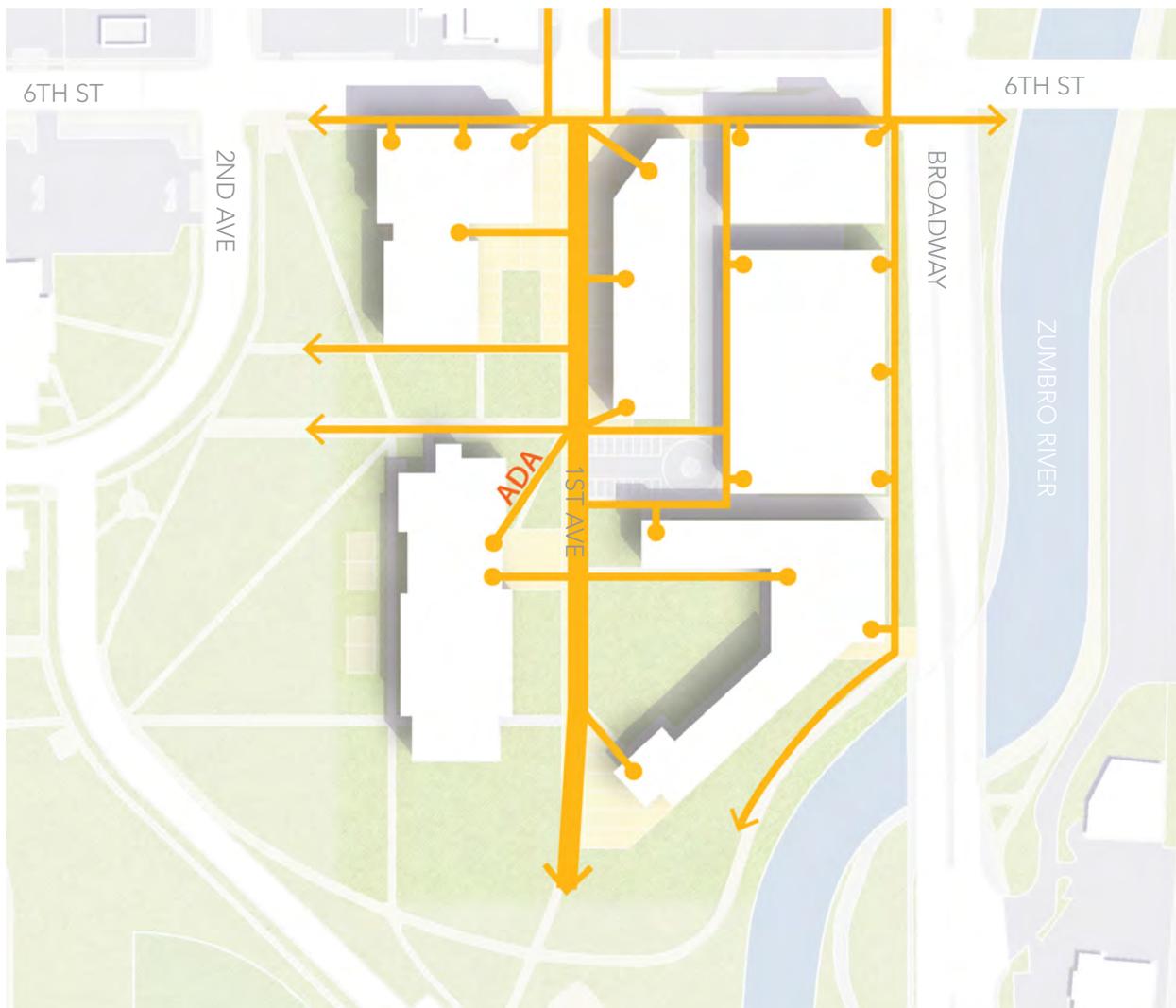
LEGEND

- A. Gateway plaza
- B. “Spill out” plaza/grove
- C. Campus green
- D. Pedestrian “Main Street”
- E. Flexible lawn
- F. Gateway plaza
- G. Rain garden



The Plaza at Harvard University | Cambridge, USA (above)
PPG Place | Pittsburg, PA (left)

PEDESTRIAN FRAMEWORK



Stakeholder input, both anecdotal and through the MyUMR survey, indicated a strong desire for a walkable campus. Over 47 percent of survey respondents identified walking as their preferred means of getting around, more than any other mode (including driving). In response, the Education District has been designed for pedestrians. Building upon the '10 Downtown Plan's concept of extending the "main street" character of 1st Avenue south into the Education District, 1st Avenue (south of 6th Street) will be transformed into a pedestrian street lined with trees and framed by active ground-floor uses. It will link together the various components of the district and connect it to Soldiers Memorial Field Park and downtown Rochester.

LEGEND

- Pedestrian Path
- Building Entrance

Walking was the most-desired way to get around: 47% of respondents indicated walking was their preferred mode



The 1st Avenue pedestrian street will be designed with features that encourage walking, people-watching, and other pedestrian activities. Shade, outdoor furniture, and special pavers are some of the design components that can be used to create a great walking environment for this district "main street."

The street will be wide enough that cyclists and pedestrians can share the street without conflict. Emergency vehicles, deliveries, and other limited vehicular activity will also be accommodated.

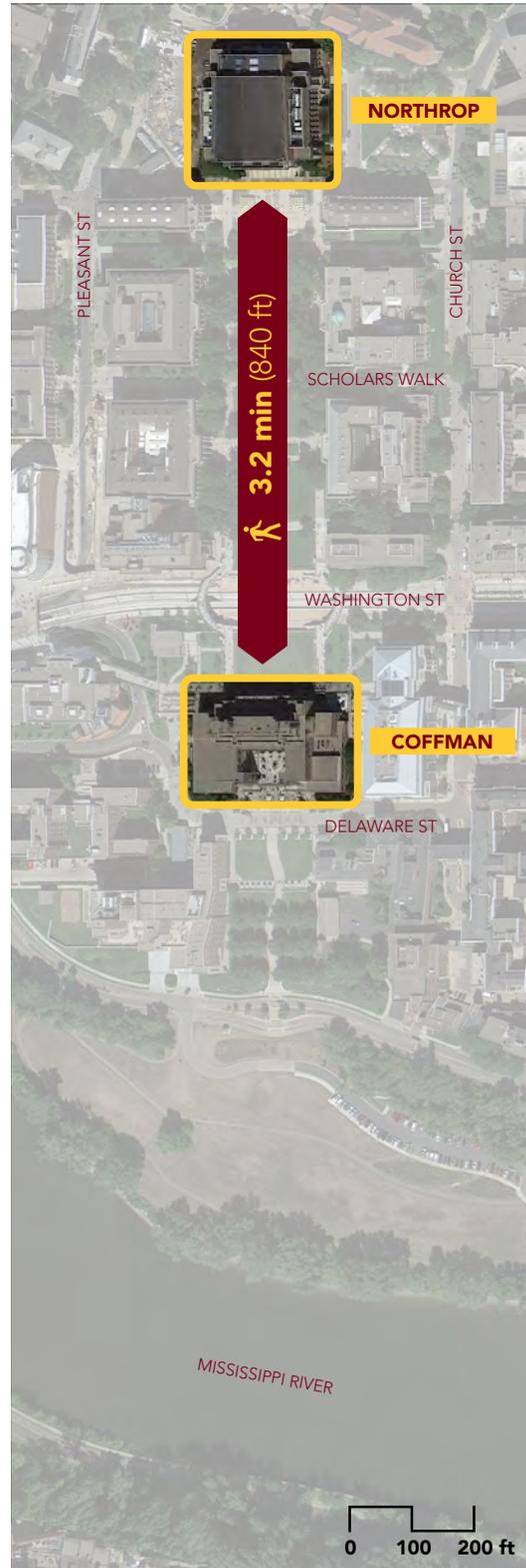
As the primary connection between the Education District, 318 Commons, and University Square; the quality of the public realm from a pedestrian's perspective will be vital.

Stationsstraat | Sint-Niklaas by Grontmij, Belgium

COMPARATIVE WALK DISTANCES



UM Rochester



UM Twin Cities

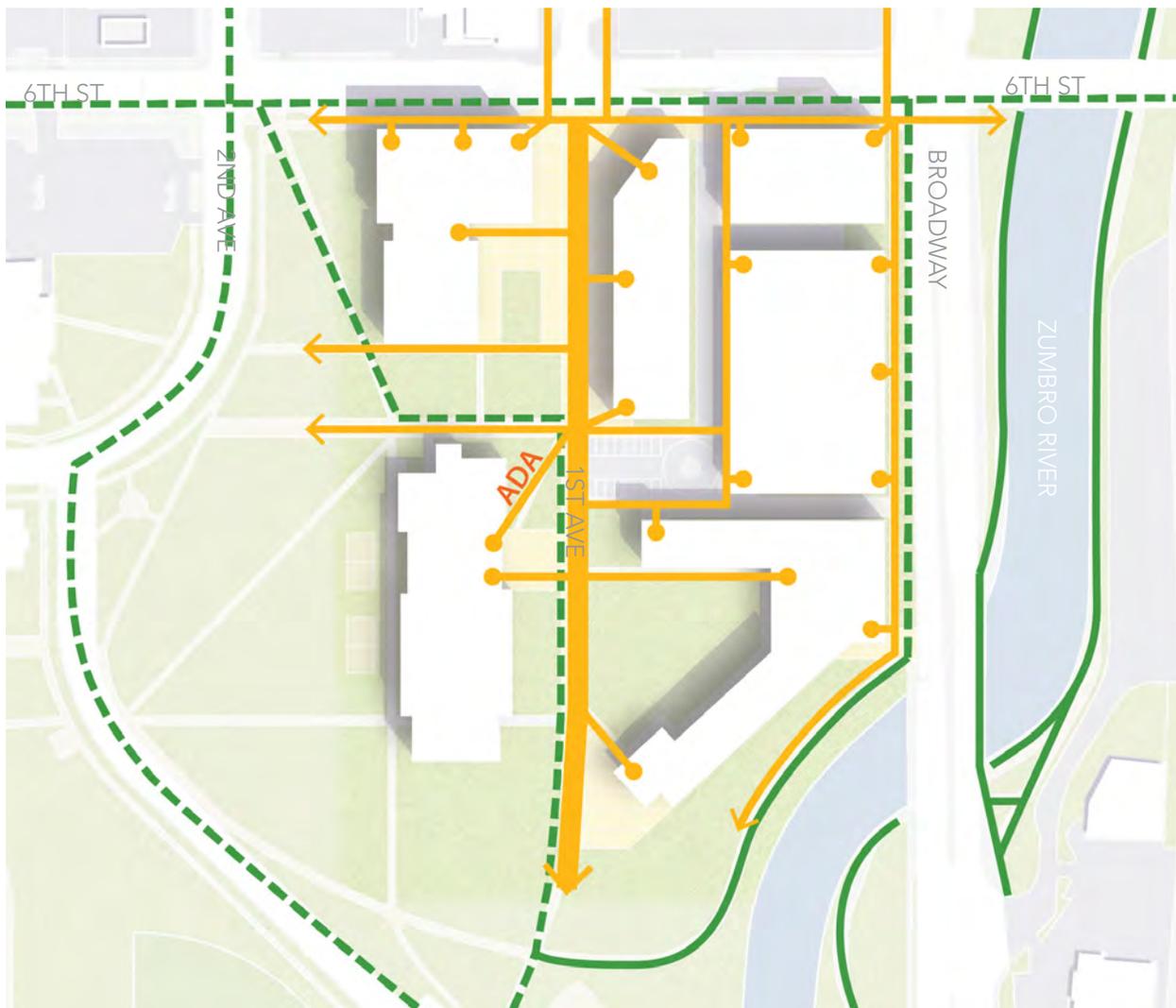
PEDESTRIAN FRAMEWORK (CONT).

All corners of UMR's campus—University Square, 318 Commons, and the Education District—are within easy walking distance of each other. Able-bodied humans walk at a pace of roughly three miles per hour. At that rate, University Square and 318 Commons are roughly 3.4 minutes apart. 318 Commons and the Education District are roughly 2.8 minutes apart.

These walk times are comparable to the time it takes to walk the main quad at UM Twin Cities. There, it takes 3.2 minutes to walk from the Northrop Auditorium to the Coffman Union.

A combination of short distances between buildings and the pedestrian-oriented streetscape improvements described previously stand to create a high level of walkability at UMR.

BICYCLE FRAMEWORK



Over the past decade, bicycle use in the United States has increased significantly and has been embraced as a practical, reliable, and economical mode of transportation. Across the United States, bicycle culture is strongest in college towns. In Davis, California, bicycles account for 19.1 percent of journeys to work (or school). Minneapolis is also a leader in the bicycle movement. It ranks second nationally in share of bicycle commuters, behind only bicycle haven, Portland, OR. Moreover, ridership in Minneapolis has grown 179 percent since 1990.¹

LEGEND

- Existing Bike Routes
- - - Proposed Bike Routes
- Pedestrian Path

Interest in cycling is strong at UMR as well: 26 percent of MyUMR respondents identified cycling as their first or second most desired means of getting around. The Education District is positioned well to receive the demand given its location on the Zumbro River ped/bike path, an important route in metro Rochester's regional path network. The provision of bicycle infrastructure within the Education District is planned to improve the safety and convenience of bicycle commuting.

¹ *Where We Ride: Analysis of Bicycling in American Cities*. The League of American Bicyclists. 2012.

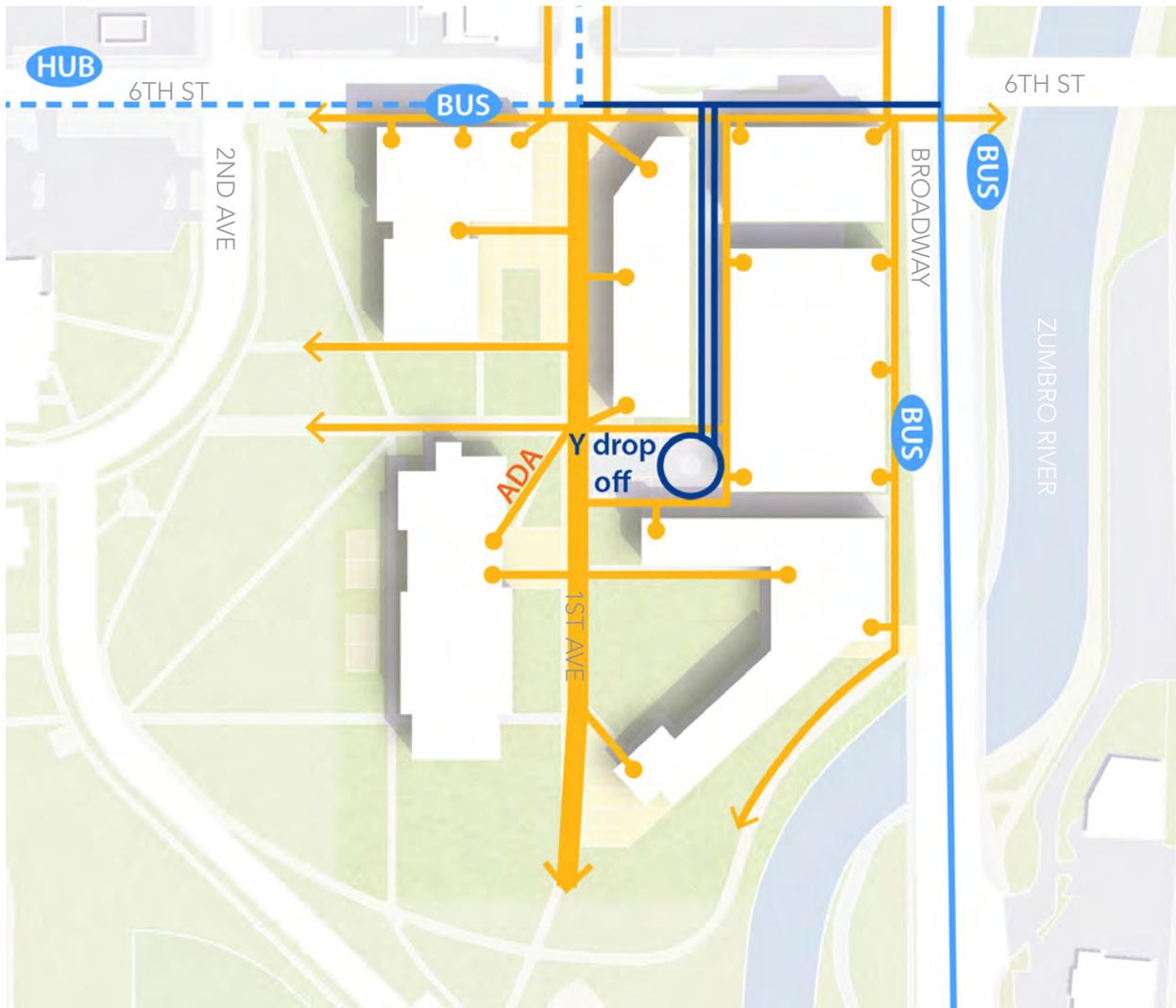


Pier 6 | Brooklyn, USA (above)



Nice Ride bicycle station, Minneapolis, USA (left)

TRANSIT FRAMEWORK

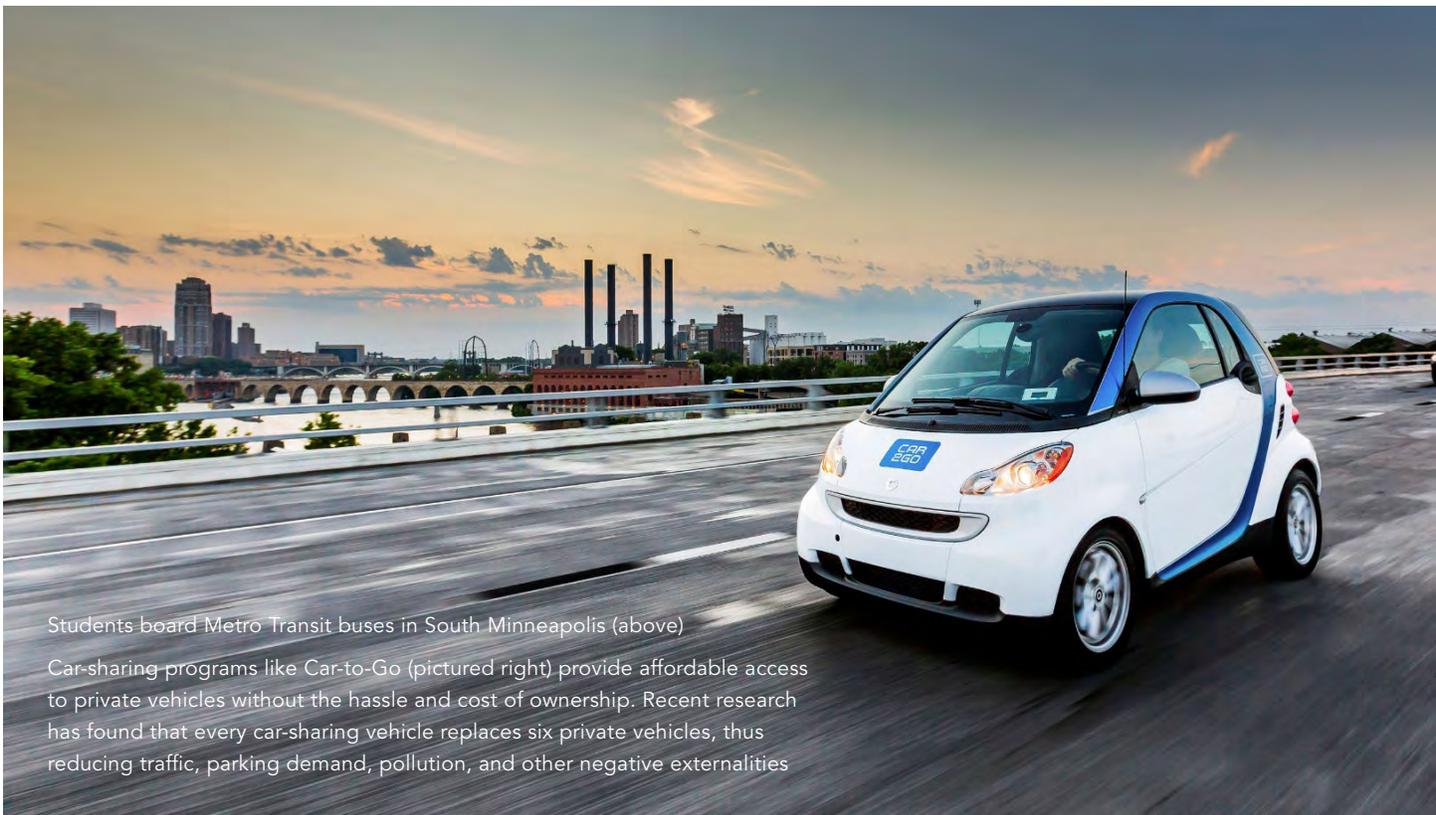


A sizeable portion (17%) of MyUMR survey respondents identified transit as their first or second most preferred means of getting around. UMR offers discounted transit passes to UMR students, which boosts ridership. However, the Rochester's transit system is currently designed around professional commuters rather than students. Buses have limited service in the evenings, limited Saturday service, no service on Sundays, and they do not go to several destinations important to students.

LEGEND

- Existing Public Bus Route
- - Recommended Public Bus Route
- Recommended Public Bus Stop
- Recommended Future Transit Hub
- Y Bus Drop Off

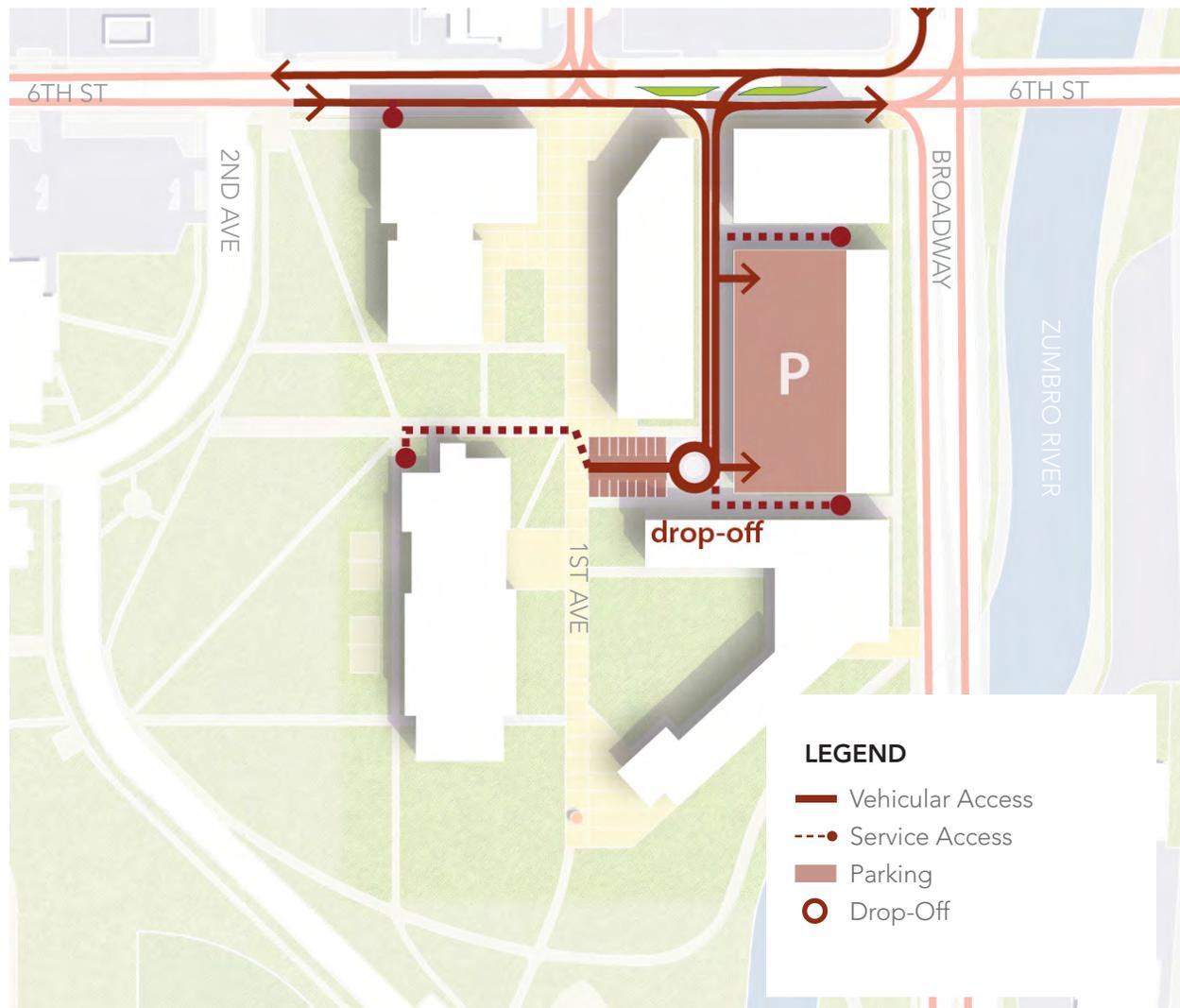
While addressing the City's transit system's shortcomings is outside the scope of *Envision UMR*, discussions are taking place on how to make improvements. A new transit hub is being considered for 6th Street adjacent to the Education District. This, and a new bus stop on Broadway would greatly improve the utility of the bus network from UMR's perspective.



Students board Metro Transit buses in South Minneapolis (above)

Car-sharing programs like Car-to-Go (pictured right) provide affordable access to private vehicles without the hassle and cost of ownership. Recent research has found that every car-sharing vehicle replaces six private vehicles, thus reducing traffic, parking demand, pollution, and other negative externalities

VEHICULAR ACCESS AND PARKING



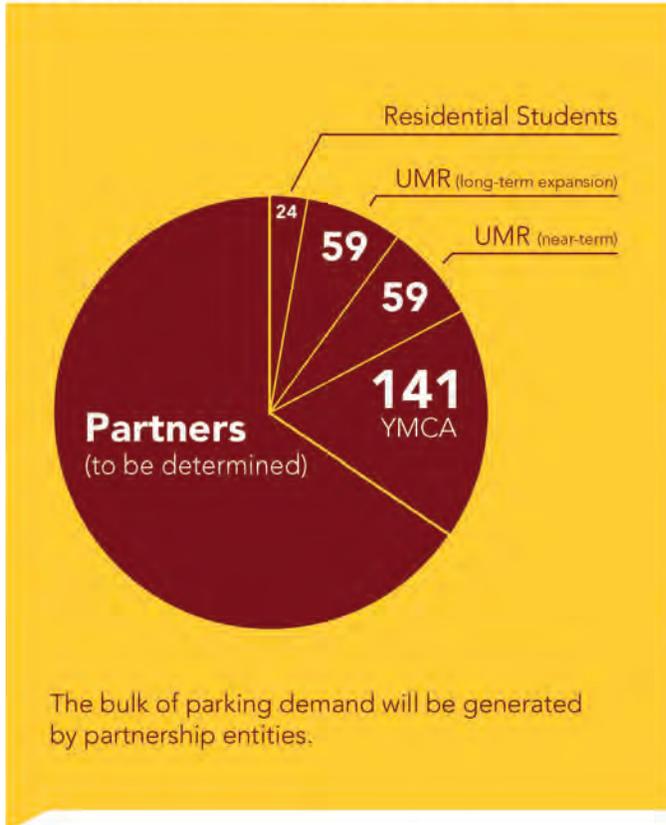
The car is the dominant mode of transport in Rochester, and the UMR community by-and-large relies on the private automobile to access the existing campus. While the Education District has been planned to prioritize pedestrians, convenient car access has been built into the design.

An interior street will be located behind the buildings lining 1st Avenue and Broadway. Motorists will be able to access a drop-off loop, handicap parking, and a 280-space parking garage off of this street. Service and emergency access will be accommodated through the new interior street and the 1st Avenue pedestrian street.

An analysis of both demand-side and supply-side parking economics was conducted to determine an appropriate supply of parking for the Education District. Although it is conventional to study only the supply-side, understanding the generators of parking demand is an important part of the equation.

UMR has promising potential to reduce car-dependency by reducing the need to drive in the first place. Of MyUMR respondents, 72 percent indicated that they prefer to live downtown or in downtown-adjacent neighborhoods that are within walking or cycling distance to the Education District. Moreover, 47 percent of respondents ranked walking as their preferred

EDUCATION DISTRICT PARKING DEMAND FORECAST



Sources:
 Transportation Research Board. TCRP Report 108. Washington, 2005
 University of Minnesota Rochester data and forecasts
 American Planning Association. Planning and Urban Design Standards. Hoboken, 2006

CURRENT UMR PARKING DEMAND



PARKING DEMAND MANAGEMENT

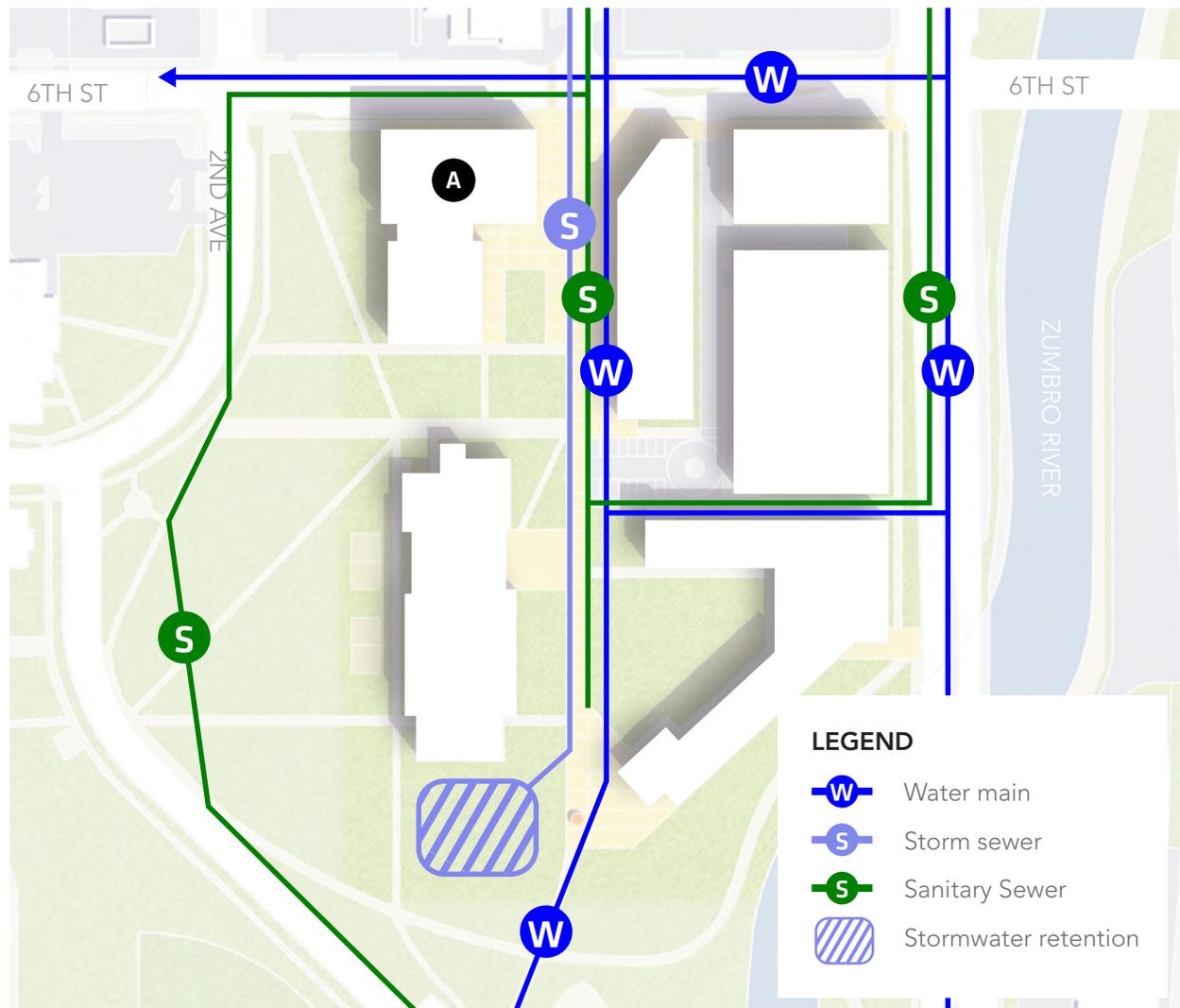


primary means of transportation (driving was second with 42 percent). These preferences are already evident in parking utilization, particularly among students. UMR leases just one parking space for every 8.2 students, evidence that students are choosing car-free or car-limited lifestyles.

In addition, shared parking is expected within the district, which will further reduce demand. For example, a UMR student may patronize district retail and attend class in a UMR building, but will only park once. Users visiting district retail, as well as YMCA users, are not storing their cars on-site all day - YMCA and retail-oriented parking will have a high turnover rate.

If existing patterns of driving behavior continue, UMR will initially generate demand for less than 60 parking spaces. The bulk of parking demand will be generated by partnership entities. That partnership parking demand will depend on a number of variables not known at this time including: type of use, amount of space built, and availability of parking near the Education District.

INFRASTRUCTURE



The University of Minnesota’s sustainability guidelines—Buildings, Benchmarks, and Beyond (B3)—set standards for capital projects throughout the UM system. Among the B3 standards, the University calls for Best Management Practices (BMPs) for storm water runoff rate control, volume control, and water quality that will apply to campus development. The BMPs include; green roofs, permeable pavements, rain water harvest, rain gardens, underground detention, and ponds. These BMPs will be used to develop the UMR Storm Water Management Plan.

The City is updating its storm water management policies similar to B3 standards. The City policies

are changed periodically, so UMR development must be flexible to adapt to the City’s changing policies.

Storm Water Fee

The City charges a monthly fee based on a property’s impervious surface area. A lump sum charge is also required when impervious surface area is added during construction.

UMR will be converting existing impervious surface area into interim green space (pervious area) as properties are acquired in the campus planning area. UMR will determine the most cost-effective method to benchmark current



Como Zoo Visitor Center | St. Paul, USA (top left)
 SW 12th Street | Portland, USA (top right)
 Rain garden at UConn | Storrs, USA (top left)

Five acres of hardscape will be reclaimed as pervious surfaces that will attenuate stormwater flow during major storm events and filter out harmful pollutants

impervious areas so that future development is not penalized. Through any method, UMR development will result in a reduction to the existing impervious surface area.

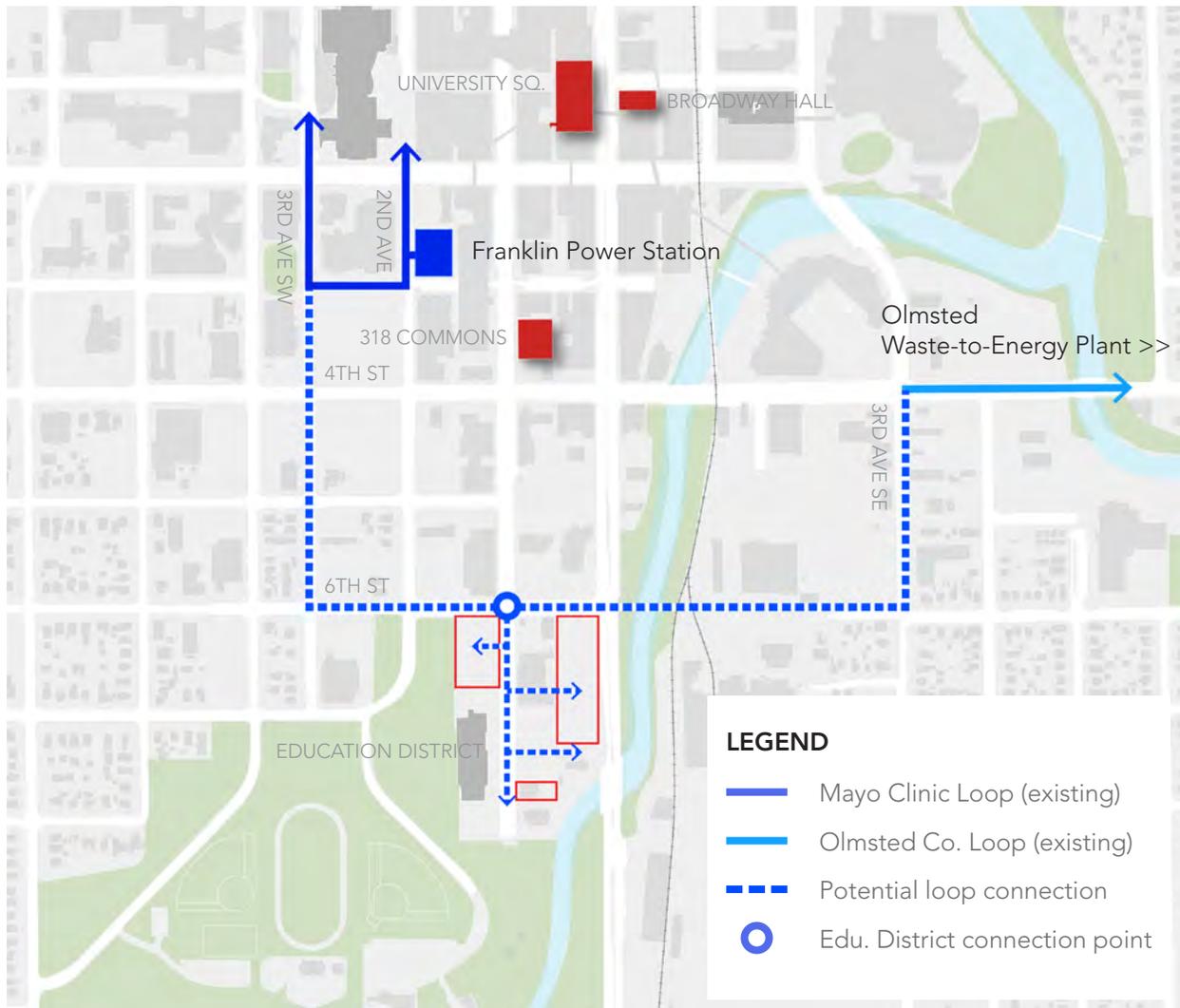
Water Main

The City’s distribution system is capable of providing for the domestic and fire protection needs for the UMR Campus. As the UMR campus is developed the replacement of the 1st Avenue SW water Main will be required.

Sanitary Sewer

In anticipation of UMR development the City constructed a relief line to the west of the proposed campus. As development occurs the replacement of the existing sanitary sewers located within the UMR campus will be required.

INFRASTRUCTURE (CONT.)



District Energy

Generating and distributing energy at a district scale rather than building-by-building greatly improves energy efficiency, reduces carbon emissions, and decreases life-cycle costs among other benefits. District energy systems produce steam, and/or hot or chilled water at a central plant; then pipe it underground to individual buildings for space heating, domestic hot water, heating, and air conditioning.¹

There are two district energy systems in place in Rochester: one maintained by Olmsted County, the other by Mayo Clinic. The Education District lies between the two systems and could potentially link them together.

Olmsted County's system extends to the intersection of 4th St. SE and 3rd Ave SE. A proposal to extend it across the Zumbro River

1 What is District Energy? *International District Energy Association*. Web. 5 Aug, 2014.

2 Carbon Sink. *Wikipedia*, Jul 2014. Web. 5 Aug, 2014.

is in the planning stage. The County's system generates energy from a waste-to-energy plant two miles east of downtown. This system provides significant environmental benefits given the plant qualifies as a carbon sink: a reservoir that accumulates and stores carbon-containing compounds through the process of carbon sequestration.²

The Mayo Clinic also maintains a district energy system, which extends to the intersection of 3rd St SW and 3rd Avenue SW. The institution's long-term expansion plans call for approximately ten million square feet of new development, mostly southwest of downtown (as depicted in the '10 Downtown Plan). Extending the district energy system to serve this development will bring it to the extents of the County system as well as the Education District.

It is here that UMR can plug into the dichotomous systems. This will require minimal investment on the part of UMR (which does not intend to own any district energy infrastructure in Rochester). Other than underground distribution lines, no dedicated district energy facilities are required within the Education District. Individual buildings can simply plug into the distribution lines.

Expanding and linking the County and Mayo clinic distribution networks will require significant investment and coordination, possibly in conjunction with transportation infrastructure projects. For example, the 6th Street Bridge as proposed under the '10 Downtown Plan is the optimal connection point between the County's network east of the Zumbro River, Mayo Clinic's planned expansion, and the Education District.

UMR will continue to coordinate with its public and institutional partners around district energy.



**BUILDINGS,
BENCHMARKS & BEYOND
(B3) GUIDELINES**
VERSION 2.2

THE B3 GUIDELINES ARE APPLIED TO THE DESIGN OF NEW BUILDINGS OR RENOVATIONS TO MEET SUSTAINABILITY GOALS FOR SITE, WATER, ENERGY, INDOOR ENVIRONMENT, MATERIALS AND WASTE. THE B3 GUIDELINES ARE REQUIRED ON ALL PROJECTS THAT RECEIVE GENERAL OBLIGATION BOND FUNDING FROM THE STATE OF MINNESOTA.³ ALL PROJECTS IN THE EDUCATION DISTRICT WILL MEET THE B3 GUIDELINES, WHICH INCLUDE:

PERFORMANCE MANAGEMENT

- P.0 Guideline Management
- P.1 General Project Data
- P.2 Planning for Conservation
- P.3 Integrated Design Process
- P.4 Design and Construction Commissioning
- P.5 Operations Commissioning
- P.6 Lowest Life Cycle Cost

SITE & WATER

- S.1 Identification and Avoidance of Critical Sites
- S.2 Stormwater Management
- S.3 Soil Management
- S.4 Sustainable Vegetation Design
- S.5 Light Pollution Reduction
- S.6 Erosion and Sedimentation Control during Construction During Construction
- S.7 Landscape Water Efficiency
- S.8 Building Water Efficiency
- S.9 Appropriate Location and Development Pattern
- S.10 Brownfield Redevelopment
- S.11 Heat Island Reduction
- S.12 Transportation Impacts Reduction
- S.13 Wastewater Management
- S.14 Bird-Safe Building

ENERGY & ATMOSPHERE

- E.1 Energy Efficiency
- E.2 Renewable Energy
- E.3 Efficient Equipment and Appliances
- E.4 Atmospheric Protection

INDOOR ENVIRONMENTAL QUALITY

- I.1 Restrict Environmental Tobacco Smoke
- I.2 Specify Low-emitting Materials
- I.3 Moisture Control
- I.4 Ventilation Design
- I.5 Thermal Comfort
- I.6 Quality Lighting
- I.7 Effective Acoustics
- I.8 Reduce Vibration in Buildings
- I.9 Daylight
- I.10 View Space and Window Access
- I.11 Personal Control of IEQ Conditions and Impacts
- I.12 Encourage Healthful Physical Activity

MATERIALS & WASTE

- M.1 Life Cycle Assessment of Materials
- M.2 Environmentally Preferable Materials
- M.3 Waste Reduction and Management

³ n.p. Minnesota B3 Guidelines. Regents of the University of Minnesota, 2013. Web. 24 Jul. 2014.



318 Commons | Rochester, USA

PARTNERSHIP EVALUATION CRITERIA

1. MUST BE AN EXISTING, FINANCIALLY-SOLVENT ENTITY
2. MUST HAVE A COMMUNITY-BASED CONSTITUENCY
3. STRENGTH AND RELEVANCE OF BRAND IDENTITY
4. INTEREST IN SHARED/FLEX SPACE
5. SYNERGY POTENTIAL
6. FULFILLMENT OF THE "PROXIMITY PRINCIPLE"

PARTNERSHIPS

Through partnerships with metro Rochester institutions, organizations, and the city itself; UMR can leverage its resources to deliver a high-quality educational experience to its students while simultaneously contributing to the economic growth of downtown Rochester.

UMR already has active partnerships in place. In an educational collaboration with the Mayo Clinic School of Health Sciences, UMR offers a B.S. in Health Professions whose curriculum focuses on the science foundations, liberal education, and prerequisite courses selected to meet the need for deeper academic preparation in health professions.

UMR maintains space in 318 Commons, a privately-developed mixed used building. Within the building UMR maintains faculty office space, study space, classrooms and laboratories, and six floors of apartments. These uses are intermixed with non-affiliated uses, including restaurants and retail at the ground level and a health clinic at the skyway level.

The health clinic in 318 Commons is another active partnership. UMR contracts with the Olmsted Medical Center to provide medical services to UMR students.

UMR partners with the Rochester Area Family Y to provide sport and recreation amenities to students through student service fees. These partnerships allow UMR to provide amenities and opportunities to its community that it would not otherwise have the resources or student customer base to support independently. They are examples of the community campus model in action.

In selecting future partner organizations, two prerequisite criteria must be met. The organization: must be an existing, financially-solvent entity, and it must have a community-based constituency. Once these conditions are met, the organization should be evaluated on: the strength and relevance of its brand identity; its interest in shared/flex space; its synergy potential; and its fulfillment of the “proximity principle,” i.e. the degree to which the partner organization’s presence strengthens UMR’s mission to prepare students for their lives and future health-related careers.

“Higher education can no longer stand apart, but must be collaborative and partnership-driven.”

- 2009 UMR Plan

3



IMPLEMENTATION



BROADWAY PARCEL

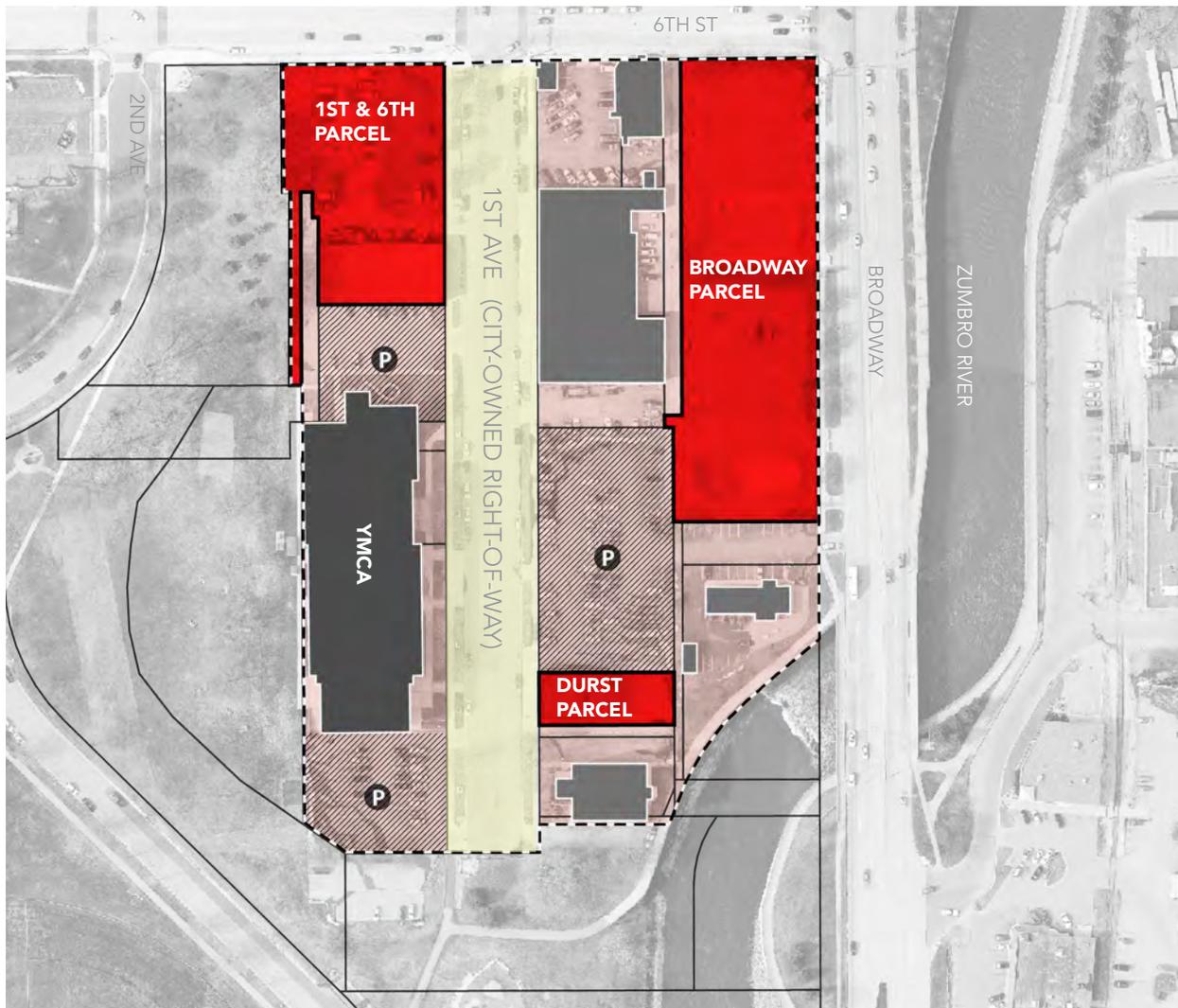


1ST & 6TH PARCEL



DURST PARCEL

LAND ASSEMBLY



UMR is in the incremental process of purchasing the properties that comprise the Education District. It currently owns 2.7 acres and the Y owns another 2.7. Together they control over half (55%) of the 9.8-acre district. The University's intention to acquire a contiguous tract of land for its planned expansion is intentionally public and transparent.

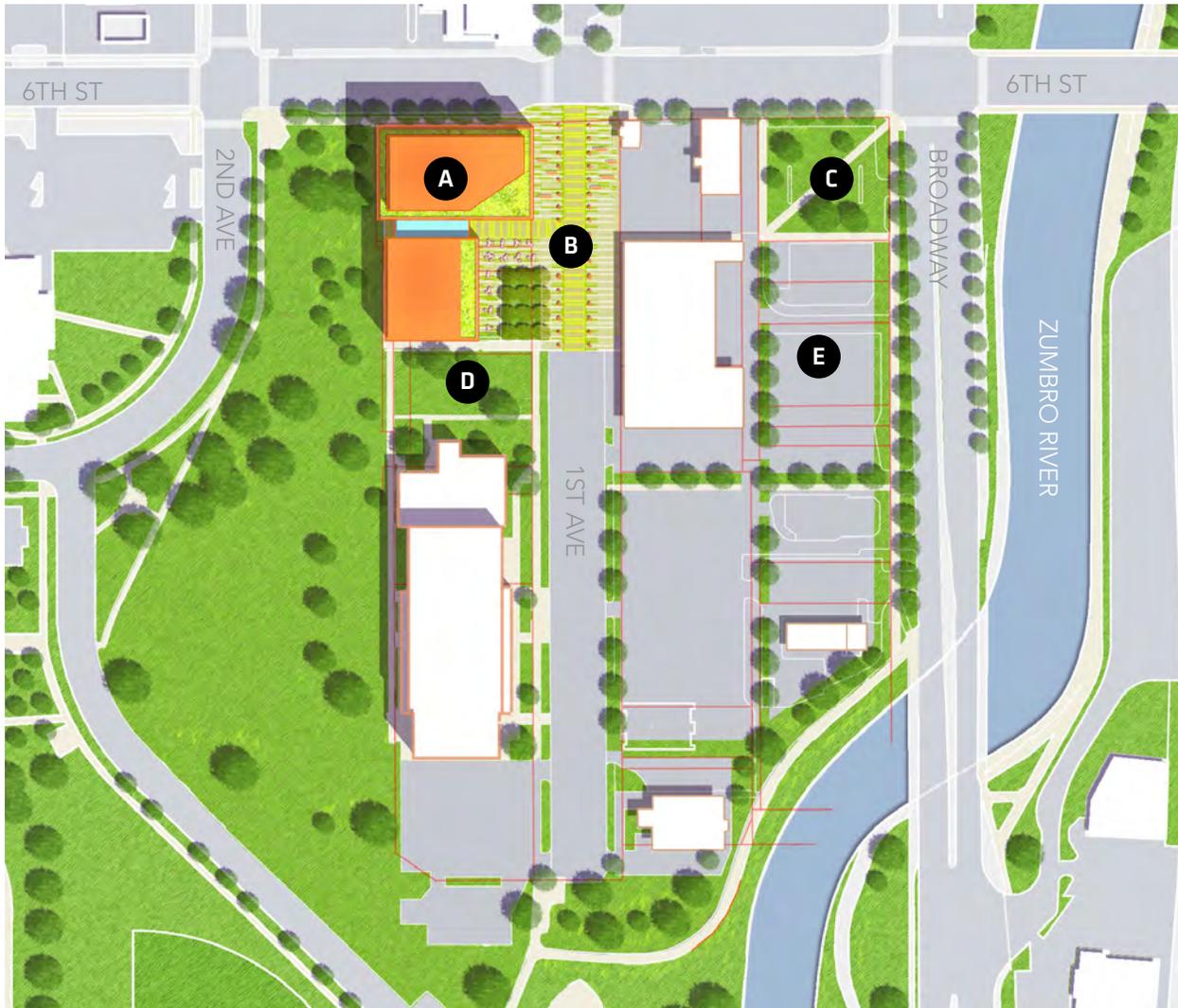
The parcels that the Y building occupies will remain Y-owned. UMR's vision for the Education District respects the current boundaries of Soldiers Memorial Field Park.

LAND OWNERSHIP AS OF JULY 1, 2014

- UMR-owned property
- Existing building
- YMCA-owned parking lot

Property	Acreage
UMR holdings	2.65
YMCA holdings	2.74
City-owned R-O-W	1.8
Other privately-held parcels	2.58
Education District total	9.77

PHASING



Project	Description
A	Conduct site testing and analysis to inform decisions about structure types, and environmental conditions. Construct UMR-1, a mixed use building containing classrooms, labs, office space, study/gathering space, and partnership space.
B	Complete first section of 1st Avenue pedestrianization. Coordinate with the City and local property owners to ensure access, including service and emergency vehicles. If necessary, these improvements could be designed and constructed separately from UMR-1.
C	Adjust Broadway parcel to meet future needs for parking
D	Complete UMR campus green. Verify parking needs, UMR-1 construction staging and park programming as part of the design of the campus green.
E	Construct interim parking facilities as needed to serve UMR-1 pending future phases. Coordinate street access with City.

PHASE 1

The buildout of the Education District can begin at the corner of 1st Avenue and 6th Street on land currently owned by UMR. This location has been identified for UMR-1: the University's first purpose-built facility. UMR-1 and associated site improvements are anticipated to be designed and constructed within approximately six to eight years of this plan, but the actual implementation schedule will depend on funding, enrollment growth and local partnerships.

The pedestrianization of 1st Avenue can also begin during Phase 1. Since the street will always be accessible to certain vehicles (i.e. service and emergency vehicles), during interim phases general traffic can be permitted to enter. This will not interfere with planned public realm improvements.

Once parking is redistributed, the campus green (D) can be completed under Phase 1. Minor site improvements to UMR's Broadway parcels may be required to ready them for parking purposes.



Project	Description
A	Construct UMR-2, a mixed-use building for the long-term expansion of the University. Consult with CPPM and local partners to determine building program and space needs.
B	Create a temporary open space. Evaluate interim parking needs prior to site improvements. Remove or abandon existing water main if feasible. Several easements cross the site, particularly between Broadway and 1st Avenue SW. Prior to redevelopment, these should be resolved with the relevant parties, including Rochester Public Utilities and the City
C	Complete second section of 1st Avenue pedestrianization while maintaining access to parking and buildings on south end of site

PHASE 2

Phase 2 involves the construction of UMR-2: the University's second purpose-built facility. UMR-2 is envisioned as mixed-used building that accommodates the long-term expansion of the University and space for to-be-determined partnerships.

The second section of the 1st Avenue pedestrianization project can also be completed during Phase 2. Pending land acquisition, a temporary open space can be created to connect UMR-1, UMR-2, the Y, and Soldiers Memorial Field Park.

The timing of UMR-2 and other Phase 2 projects has not yet been determined and will depend on property acquisition, enrollment growth and local partnerships.

PHASE 3



Project	Description
A	Complete interior street and vehicular drop-off. Consult with transit providers and local alternative-transportation programs to identify appropriate street design.
B	Construct parking garage. Consult with the City and other partners to determine space needs, technical and regulatory factors (such as flood zone ordinances) and potential cost-sharing. The design should consider access from Broadway as well as the potential for adding levels to the parking structure as a future phase.
C	Construct mixed-use partnership building containing ground-floor retail and/or food and beverage, with office and flex space above
D	Complete the third and final section of 1st Avenue pedestrianization
E	Create temporary open spaces at the YMCA and Condominium sites

PHASES 4 + 5



Project	Description
A	Construct a mixed-use partnership building for the long-term expansion of the University and partner uses
B	Construct a partnership building for a to-be-determined program

4

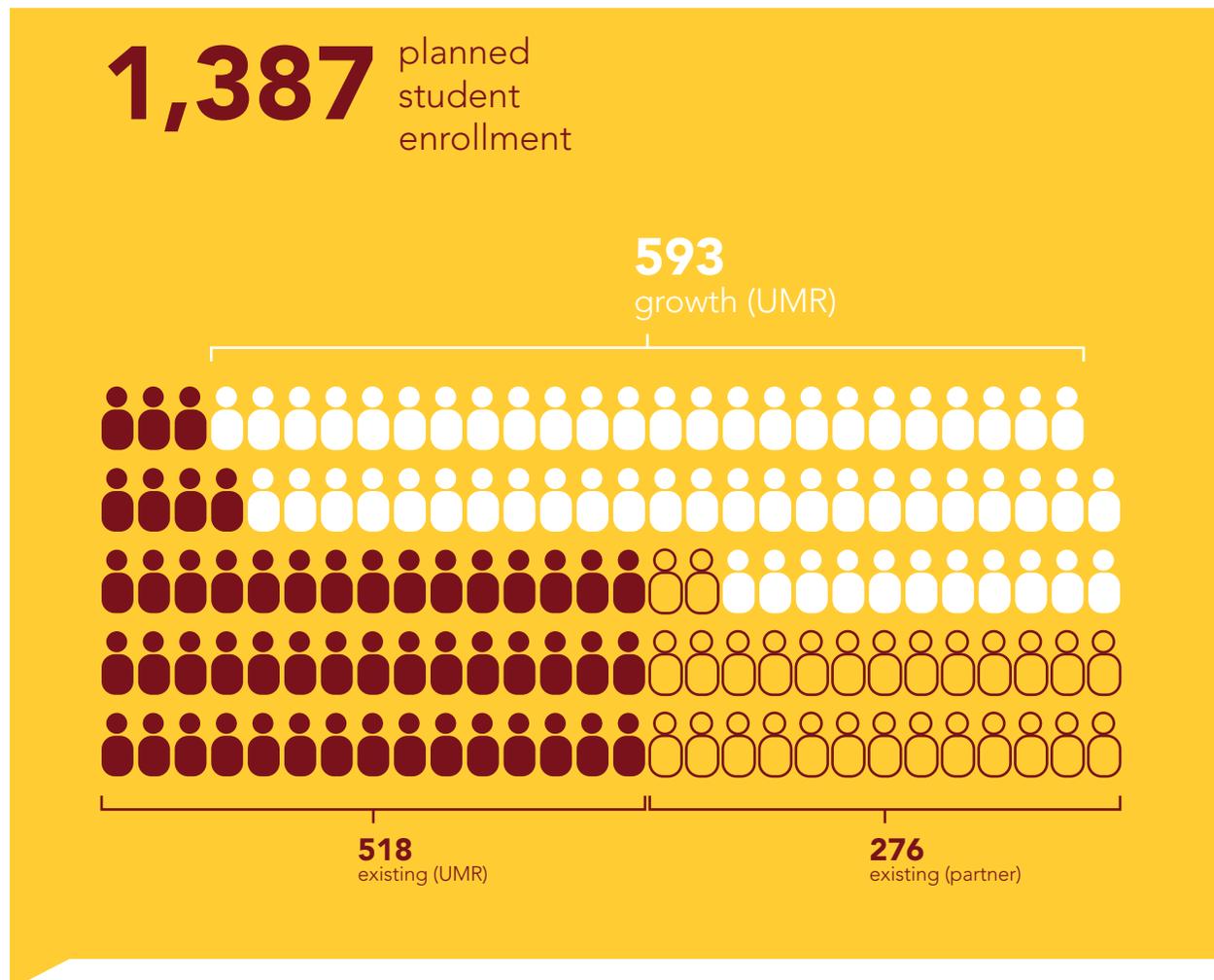


UMR-1 PROGRAM

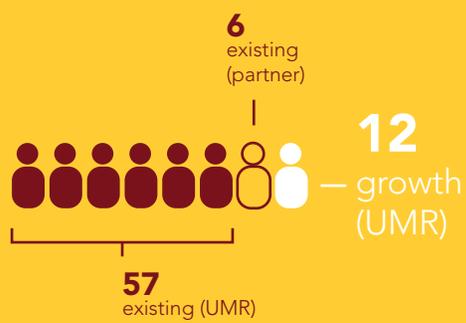
ENROLLMENT

Planned enrollment growth is the main driver of UMR expansion into the Education District. Over ten years, enrollment will grow to approximately 1,400 from today's enrollment of 794. The entirety of that growth will come from UMR programs. Enrollment in partner programs, which currently accounts for 35 percent of the UMR student body, will remain steady.

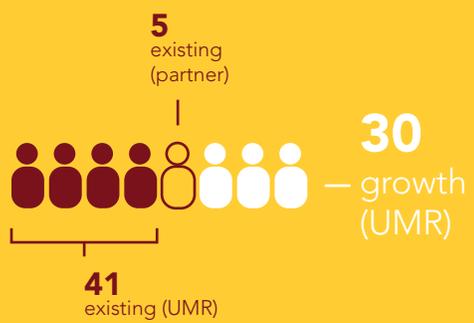
Approximately 30 faculty and 12 staff will be hired to accommodate the influx of students, bringing the total faculty headcount to 76 and the total staff headcount to 75.



75 planned staff headcount



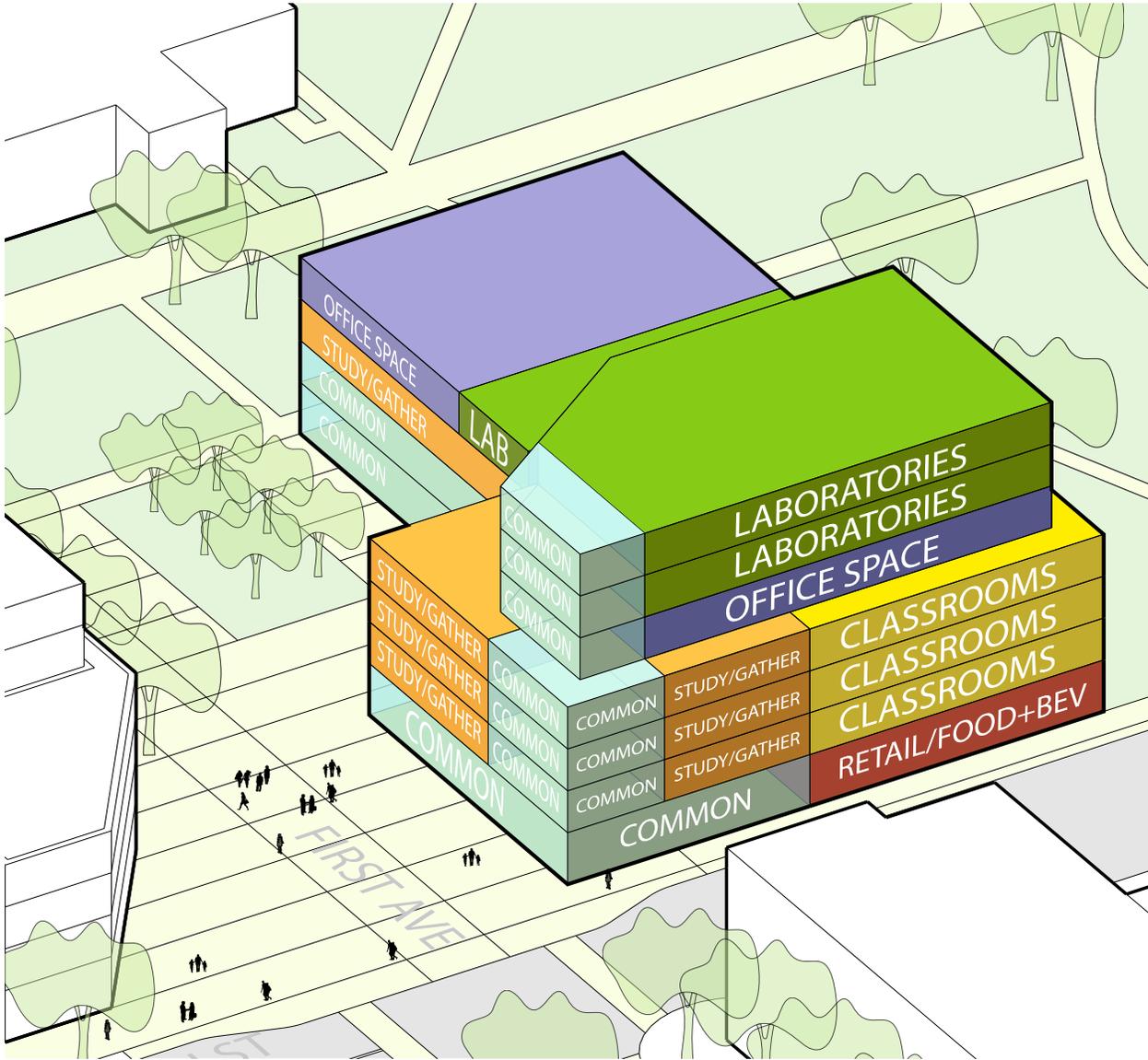
76 planned faculty headcount



 **UMR [existing]**
headcount x10

 **UMR [forecasted]**
headcount growth x10

 **PARTNER [existing]**
headcount x10



UMR-1: PLANNED INTERIOR SPACE

Program type	Floor Area
Classroom	18,500
Instructional Laboratory	13,000
Study/gathering	29,000
Faculty office and support space	10,500
Staff office and support space	4,500
Retail/food & beverage	10,000
Net assignable square footage	85,500
Gross square footage	120,000

UMR-1 PROGRAM

Approximately 85,500 net assignable square feet of new space will be necessary to accommodate UMR's planned enrollment growth. This space—a mix of classrooms, laboratories, study spaces, office space, and other types of space—will generate the program for the first newly-constructed building in the Education District: UMR-1.

UMR-1 is intentionally planned as a mixed-use building. Active uses that are open to the public will fill the ground floor, like at 318 Commons, where ground floor uses include retail and food/beverage venues. Specific tenants should be appropriate and synergistic to the UMR educational experience.

The next three floors will include a mix of classrooms and study/gathering spaces. Classrooms should be located on lower floors to avoid elevator queuing during class change periods.

The upper three floors will include faculty and staff office space with instructional laboratories above. Office space should be located on upper floors because it generates relatively little foot traffic. Labs should be located on the top floor(s) to minimize the length of ducting necessary to reach ventilation outfalls on the roof.

Approximately 85,500 net assignable square feet of new space will be necessary to accommodate UMR's planned enrollment growth.

The new space in UMR-1 will not replace all of the University's existing space. Assignable square feet will be maintained in existing facilities to support administration, partnership programs, and some academic support functions. Downtown locations will remain important, especially for partnership programs and connectivity to the Mayo Clinic.





FUTURE GATEWAY TO THE EDUCATION DISTRICT

1st Avenue and 6th Street (pictured above) will be the signature gateway to the Education District. UMR will construct the institution's first dedicated building at this important intersection. The building will announce the institution and welcome the city with an active ground floor that is accessible to the public.

ACTIVE LEARNING CLASSROOMS



Classroom design influences student outcomes, student engagement, creativity and faculty interest in teaching in an active format. Classroom design impacts the efficiency and effectiveness of the educational process. Both efficiency and effectiveness are elements that define UMR efforts to innovate undergraduate education. The spaces in UMR-1 will accommodate many different activities, but the classrooms for undergraduate education will support a proven design for active learning classrooms. Within these classrooms technology will further enhance the student experience and bolster academic outcomes.

Active learning classroom in University Square (above)
Open plan office space in 318 Commons (opposite)

OPEN PLAN OFFICE SPACE



Seventy percent of American office workers work in open plan office space.¹ Research on the effects of open plan offices frequently cite improved staff communication, idea flow, and camaraderie. Moreover, open plan office space is more space-efficient than private office plans.

To reduce the impact of noise on productivity, flexible spaces are typically provided away from workstations for impromptu and informal collaboration. Office hoteling can also be employed to

provide quiet space for times when solitary focus is needed.

MyUMR survey respondents reported that students found the open plan office space in 318 Commons to render faculty more accessible than the private offices in Broadway Hall.

“The faculty offices at 318 Commons are great for student interaction. This is the model.”

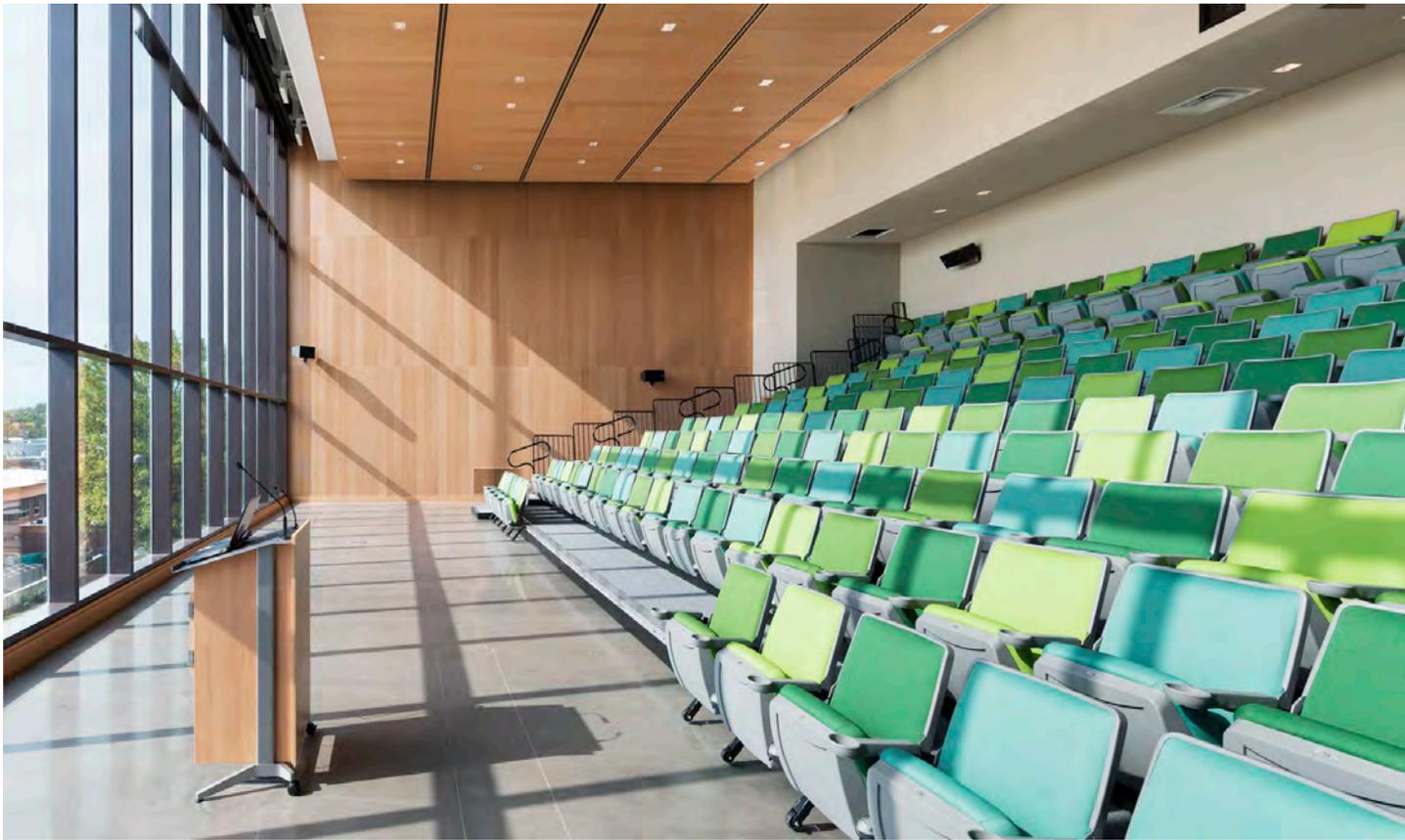
- MyUMR Survey respondent

1 International Management Facility Association



Slippery Rock University | Slippery Rock, USA

FLEXIBLE SPACES



UMR-1's interior spaces should be designed with flexibility in mind. Flexible spaces allow for greater utilization than single-purpose spaces, and they are more adaptable to future changes in pedagogy. For example, large assembly spaces are used only on occasion. If tiered seating is designed to be collapsible, the assembly space can double as a classroom.



UC Santa Barbara | Santa Barbara, USA (above)
Moray College | Elgin, Scotland (left)
University of Copenhagen | Copenhagen, Denmark (opposite)

CIRCULATION SPACE



To enhance engagement on campus, circulation space should be designed to be more than simple hallways. Circulation space is where people mix, and it should be designed to facilitate interaction. Informal gatherings, classroom spill-out, light study, and other activities thrive in circulation space when furniture and layout allow for them. A student and professor may want to revisit a topic after class, or a student may be early for a lecture and choose to review notes with a fellow student. These types of activities are best-suited for circulation space, and they contribute to the vitality of public spaces on campus.



Slippery Rock University | Slippery Rock, USA (above)
Harvard University | Cambridge, USA (opposite)

GROUND FLOOR USES



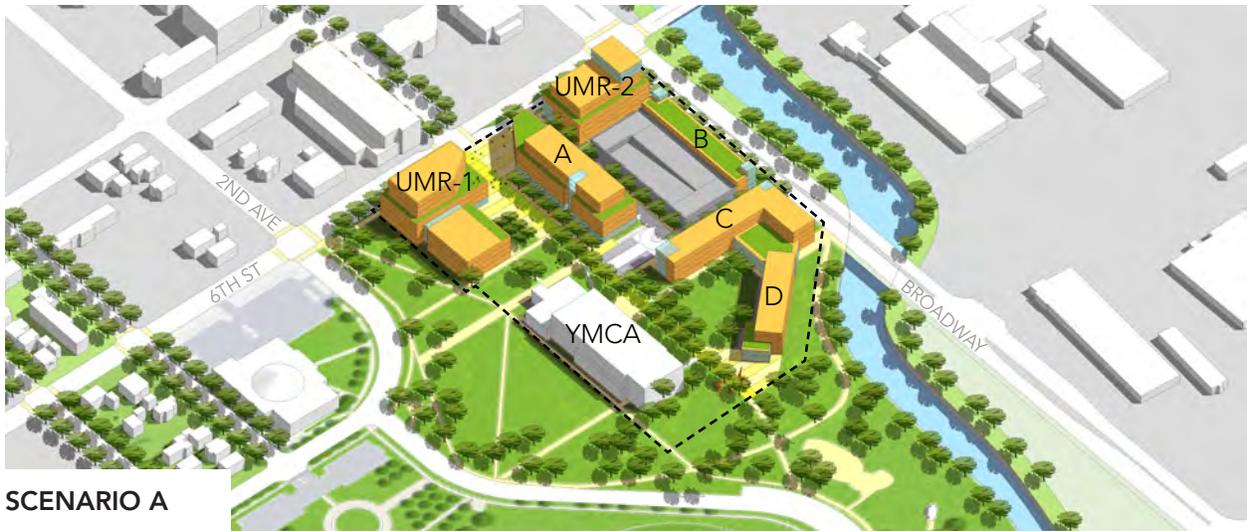
In accordance with the '09 UMR Plan and the '10 Downtown Plan, the ground floor of UMR-1 should contain active and publicly-accessible uses. These types of uses activate the street and strengthen the vitality of the surrounding neighborhood. As an institution that is integrated into the fabric of the city, UMR has an opportunity to program its buildings to be positive contributors to the urban life of downtown Rochester.

Retail, food and beverage, and exhibition space are a few examples of active uses that would be appropriate in UMR-1. Tenants should be evaluated on how relevant, appropriate, and affordable their goods and services are to the UMR community.

5



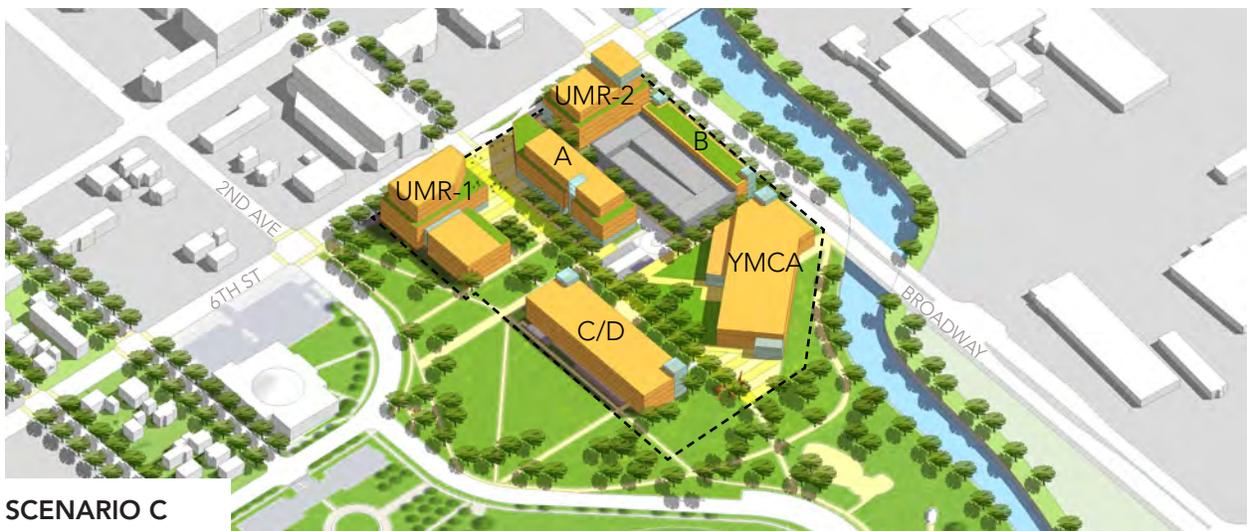
APPENDIX



SCENARIO A



SCENARIO B



SCENARIO C

ALTERNATIVE DEVELOPMENT SCENARIOS

The *Envision UMR* planning process was intentionally structured to allow for the evaluation of alternative development scenarios. During the planning process, two major variables were in play that would affect the way the district would be built out.

First, the Rochester Area Family Y was in the midst of a strategic planning process that, among other directives, would determine whether it would pursue construction of a new facility or renovate in place. The design of the Education District as it has been described in the preceding pages of this document considers a baseline scenario (Scenario A) wherein the Y chose the latter option. However, if the Y chooses to develop anew, Scenario C could take place wherein the new Y building is located along the Zumbro River and a partnership building is constructed at the current Y site.

Second, the Rochester Department of Parks & Recreation was in the midst of a master plan for Soldiers Memorial Field Park. The prospect of a land swap was discussed, wherein land could be reallocated toward the mutual benefit of park, campus, and city; so long as resulting parkland was net positive in terms of acreage. If this were to come to pass, a configuration as shown in Scenario B is most likely. A UMR/partnership building would be constructed at 2nd Avenue and 6th Street while new parkland would be opened up along the Zumbro River.

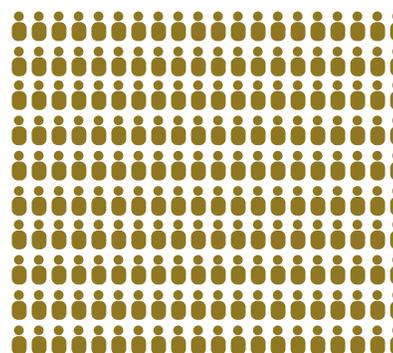
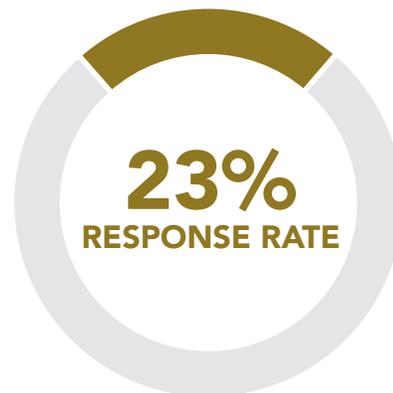
MYUMR SURVEY

An anonymous, web-based survey of UMR students, faculty, and staff was conducted in February and March 2014 to: 1) better-understand the important issues, values, priorities as seen by the UMR community; and 2) to map how the UMR community currently interacts with the campus and the City of Rochester.

Over 23 percent of UMR's 906 students, faculty, and staff responded to the survey, which was sufficient to produce statistically significant observations at a 6.1 percent margin of error. To encourage participation, prizes were raffled to student respondents only. An iPad Mini was given as a grand prize and six \$10 iTunes gift cards were given as runner-up prizes.

Respondents were asked to map indicators of their behavior patterns: things such as their transportation routes, favorite study spots, preferred meeting venues, and so on. They were also asked to rank their preference for things like transportation mode, type and location of residence, campus qualities, and so on.

The results informed a set of alternative design concepts for the Education District that were presented back to the UMR community at an open forum in March 2014; and ultimately the final master plan as depicted in the preceding pages.



209
RESPONDENTS

KEY LESSONS FROM MYUMR SURVEY



STUDENTS PREFERRED URBAN-STYLE HOUSING. FACULTY AND STAFF PREFERRED DETACHED SINGLE FAMILY HOUSING, BUT WITH PROCLIVITY TOWARD DOWNTOWN-ADJACENT HOUSING.



MOST STUDYING AND SOCIALIZING WAS HAPPENING IN UMR BUILDINGS, BUT A FEW "OFF-CAMPUS" LOCATIONS WITHIN THE BROADWAY/1ST AVE/3RD ST BLOCKS WERE POPULAR TOO.



THE INTERIOR DESIGN OF UMR BUILDINGS WAS THE MOST VALUED CAMPUS FEATURE



RESPONDENTS PREFERRED WALKING OVER OTHER MODES, BUT SOME DESTINATIONS (E.G. AN AFFORDABLE GROCER) APPEAR UNREACHABLE ON FOOT.

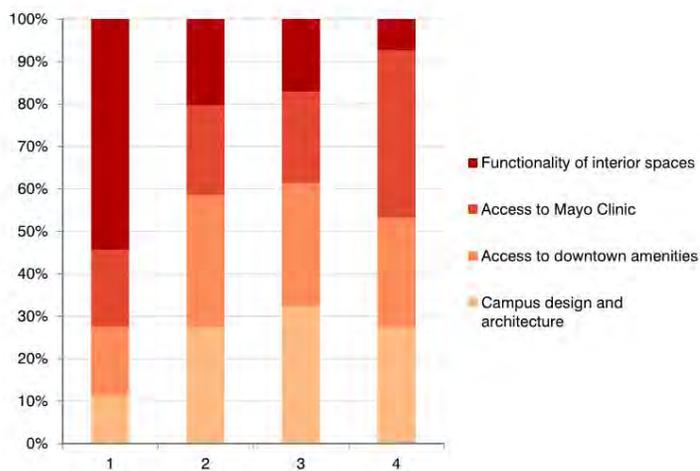


SEVERAL DATA INDICATED A SENTIMENT THAT THE CITY OF ROCHESTER SHUTS DOWN TOO EARLY, BOTH IN TERMS OF NIGHTLIFE AND TRANSIT.

MyUMR Survey

Most valued campus qualities

n = 906
e = 6.1%
response rate = 23%



All respondents

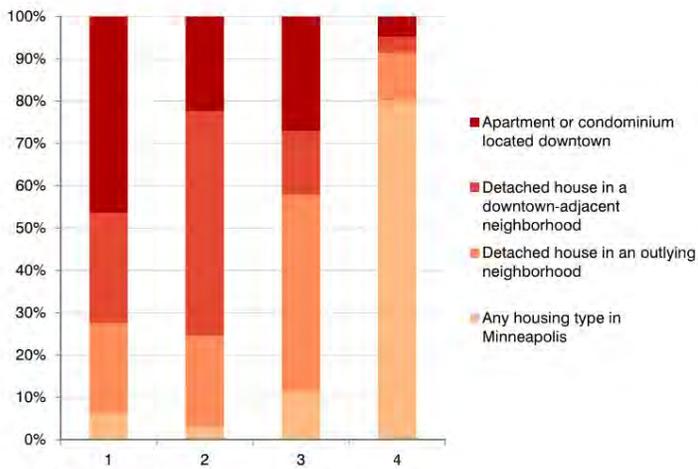
1 = most valued

Observation: interior design, not access to Mayo, is most valued campus quality

MyUMR Survey

Preferred housing type

n = 906
e = 6.1%
response rate = 23%



All respondents

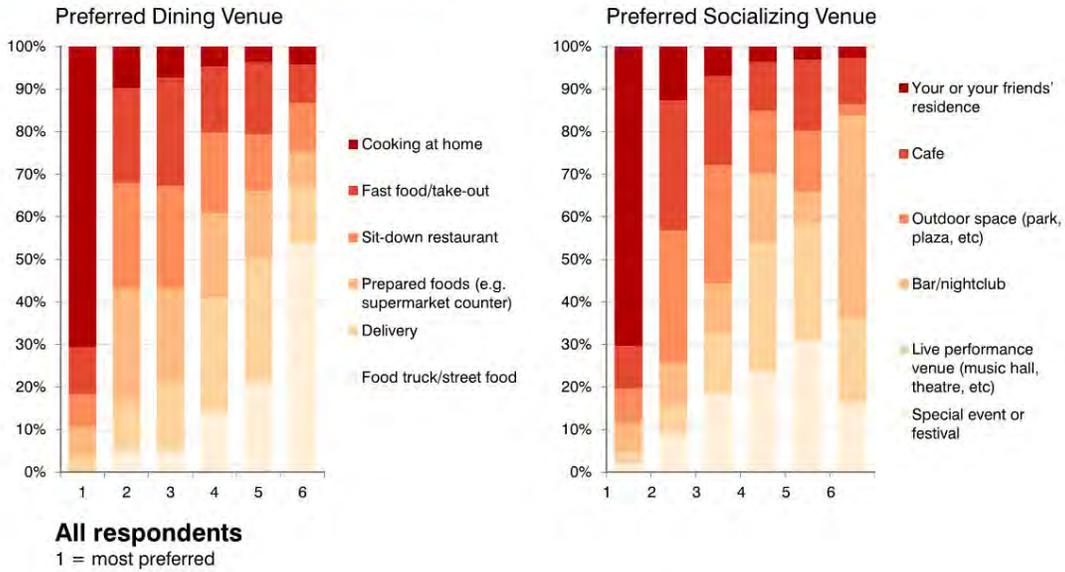
1 = most preferred

Observation: strong desire for urban living

MyUMR Survey

Dining and socializing preferences

n = 906
e = 6.1%
response rate = 23%

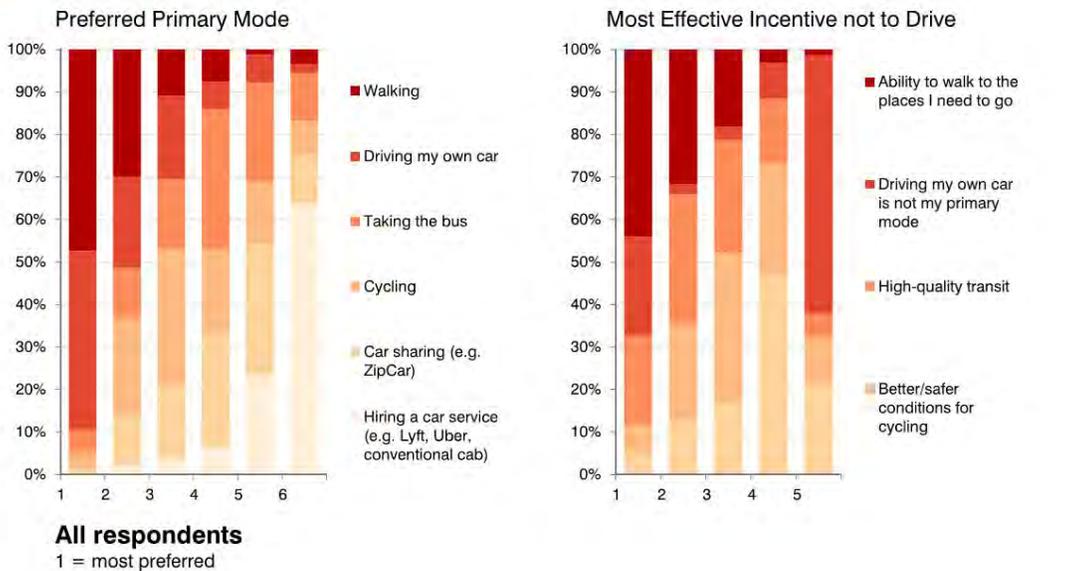


Observation: strong inclination toward domestic life

MyUMR Survey

Mobility Preferences

n = 906
e = 6.1%
response rate = 23%



Observation: strong desire to walk, and walkability can be improved

MyUMR Survey

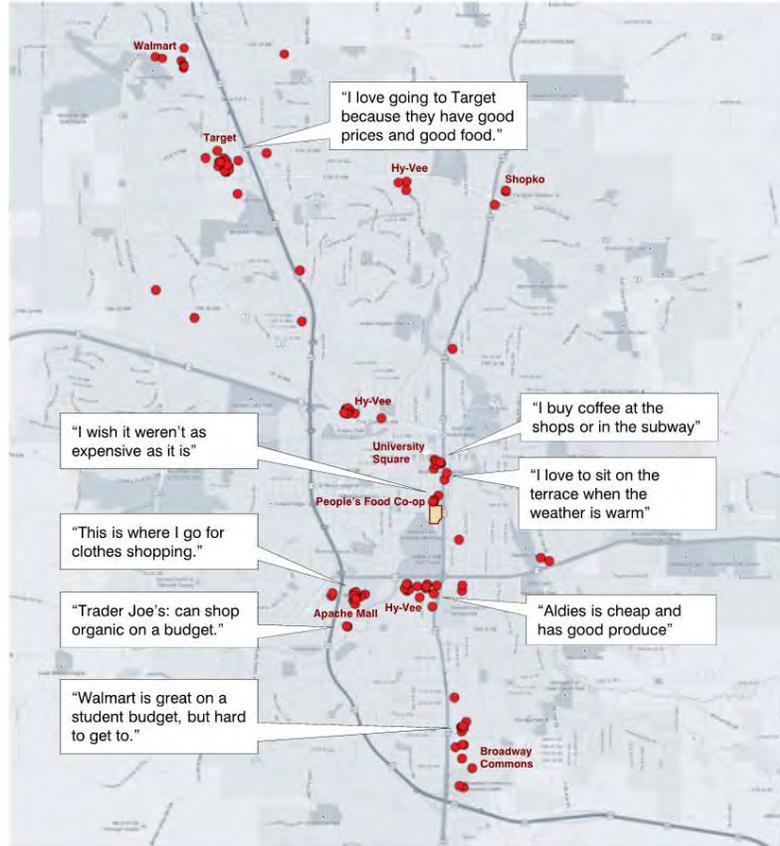
Goods + Services

Observation:

Several outlying shopping plazas as popular as downtown retail

Implication:

Consider providing transportation access via car-sharing and/or form partnerships to bring more competitive retail downtown



MyUMR Survey

Living

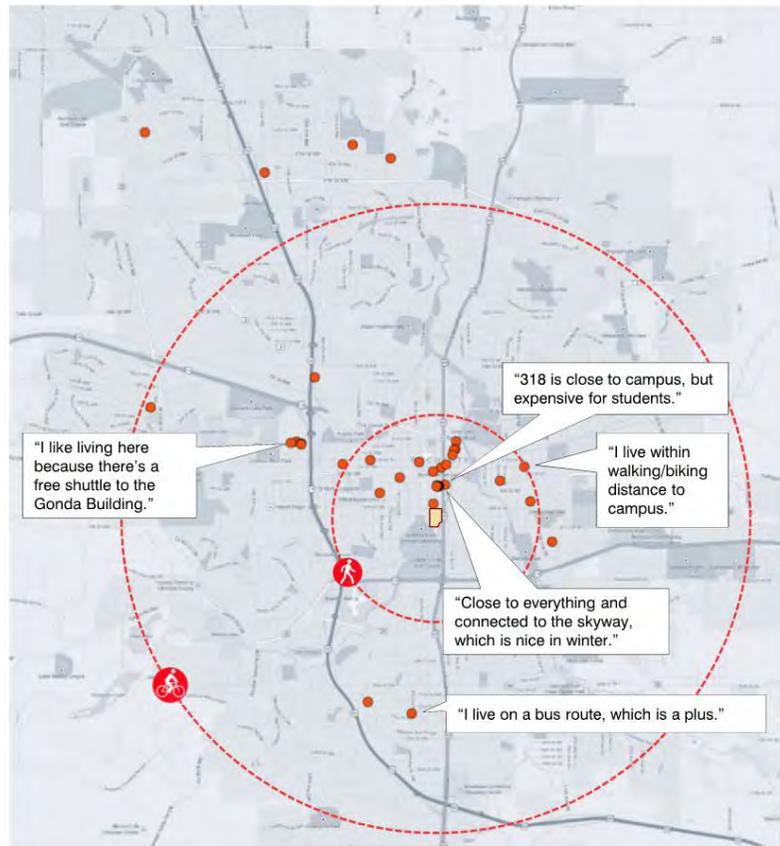
Observation:

47% of respondents live within walking distance (20-min walk)

69% of respondents live within cycling distance (3 miles)

Implication:

Strong potential to reduce dependency on cars for commuting



MyUMR Survey

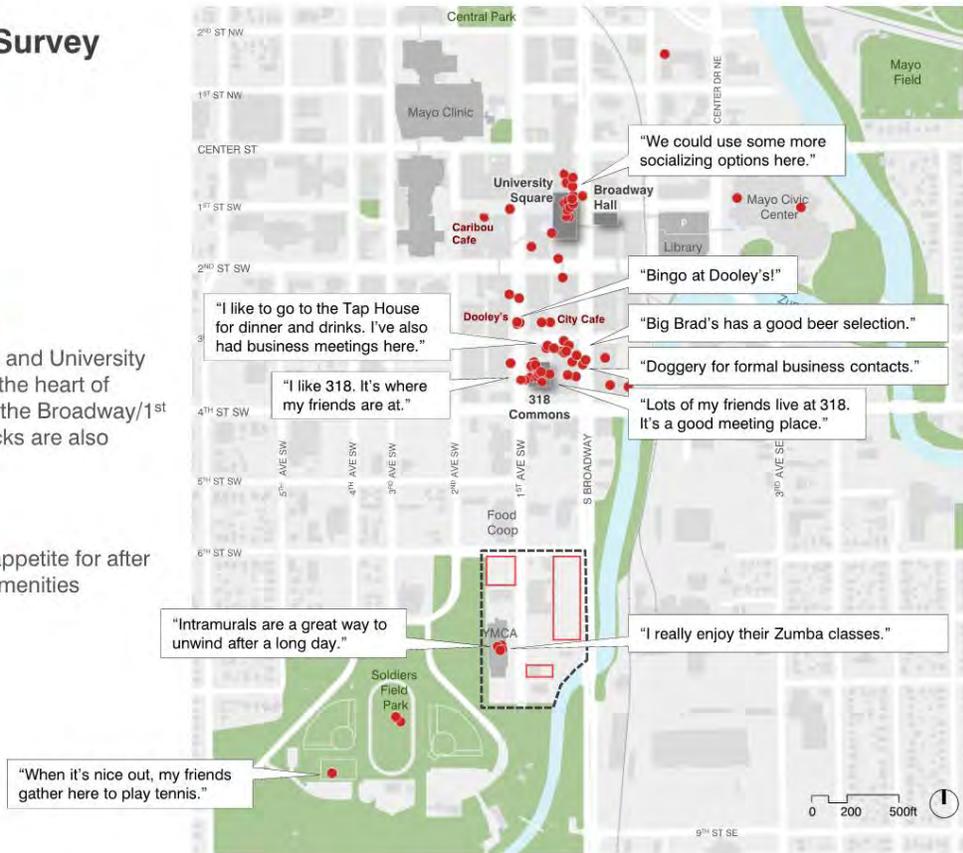
Socializing

Observation:

318 commons and University Square are at the heart of social life, but the Broadway/1st Ave/3rd St blocks are also integral

Implication:

Seems to be appetite for after hours urban amenities



MyUMR Survey

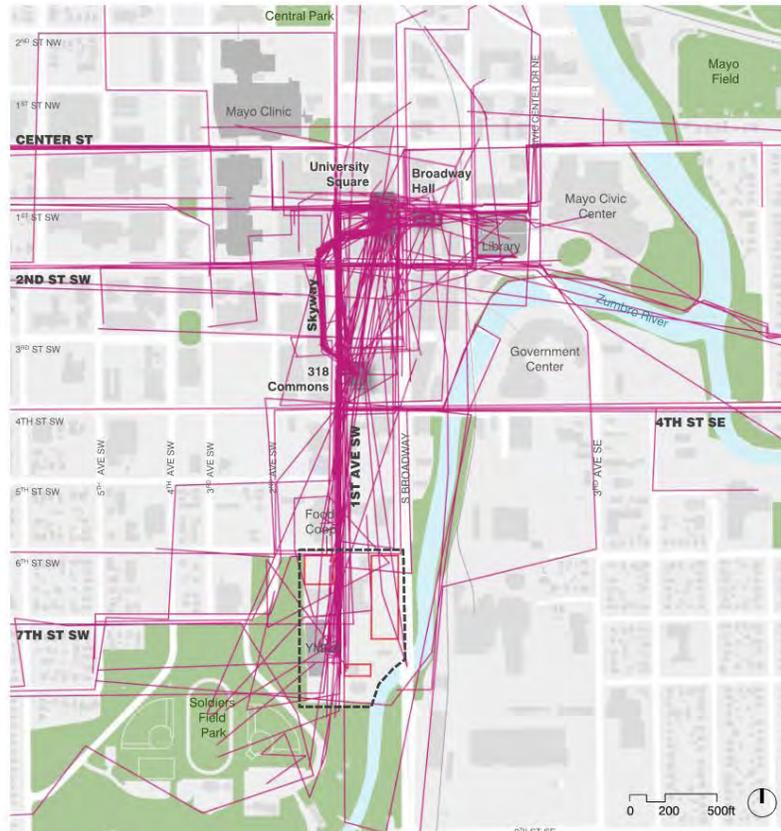
Primary Pedestrian Routes

Observation:

1st Avenue and the Skyways are the most trafficked routes. Others are important too, including: W Center St, 1st St SW, 2nd St SW, 4th St SE, and 7th St SW

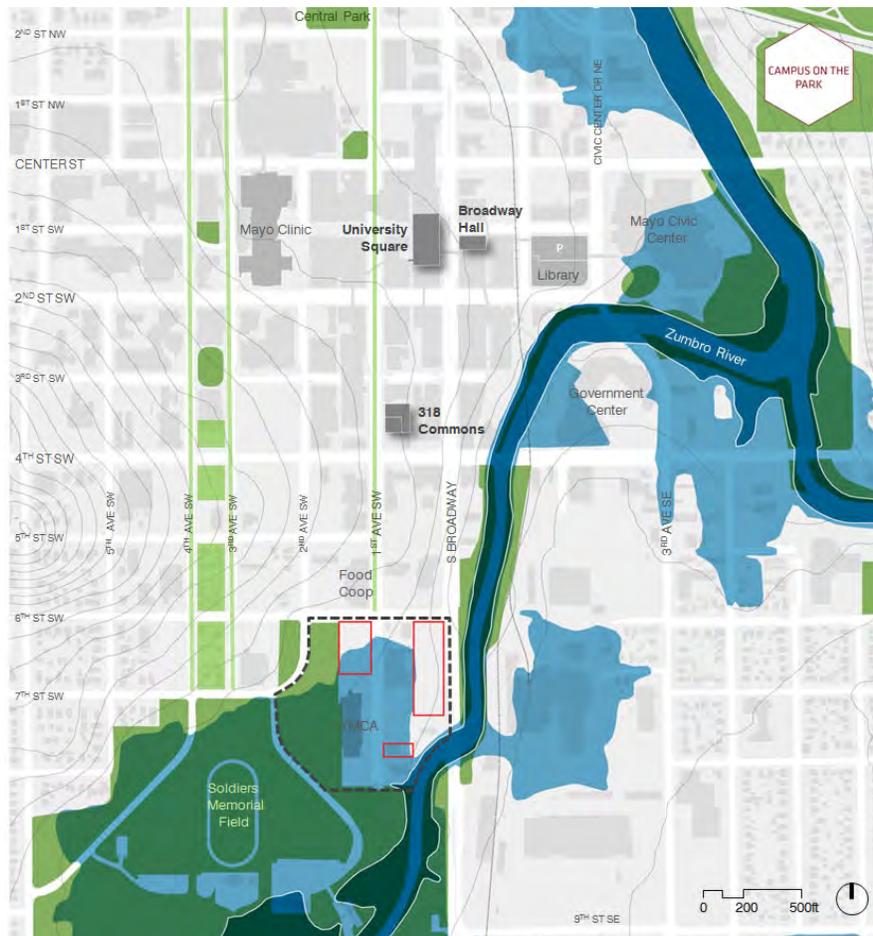
Implication:

Consider partnering with the City of Rochester to improve walkability along key routes



OPEN SPACE NETWORK Analysis

- The education district has the potential to act as a portal between downtown Rochester and Soldiers Memorial Field.
- The district's pedestrian ways and open spaces will be shared between UMR campus users and the larger Rochester community.
- There are great opportunities to bring a park-like character into areas of the education district to help integrate the park and the city.



PROPERTY	MASTER PLAN PHASE	ENVIRONMENTAL EXPLORATION	GEOTECHNICAL EXPLORATION	CURRENT MPCA STATUS
617 S. Broadway (Rico Mex)	Phase 2	Phase I and II ESA		Enrolled in VIC; NAD letter on file
701 S. Broadway (China Dynasty)	Phase 2	Phase I and II ESA		Enrolled in VIC; NAD letter on file
601 First Ave. SW (KTTC)	Phase 1	Phase I ESA	2009	None
609 First Ave. SW (Sand)	Phase 1	Phase I ESA	2009	None
615 First Ave. SW (O'Connor)	Phase 1	Phase I ESA		None
724 First Ave. SW (Durst)	Phase 2	Phase I ESA	2014	None
114 6th St. SW (Stillman)	Phase 1	Phase I ESA	2009	None

SITE ANALYSIS

Prior to developing alternative design concepts, an analysis of the site and its urban context was conducted. Physiography, open space, mobility, infrastructure, and property ownership among other themes were studied.

The analysis informed understanding of the development capacity of the site, strategies for managing stormwater during storm events (the site lies within a FEMA-designated 500-year flood zone), and the relationship the site has with downtown Rochester and Soldiers Memorial Field Park.

The outcomes of this analysis produced a body of intelligence that was combined with other areas of study to inform alternative design concepts for the Education District. As noted previously, these “alternatives” were presented to and critiqued by the UMR community in March. Ultimately, they evolved into the final master plan.

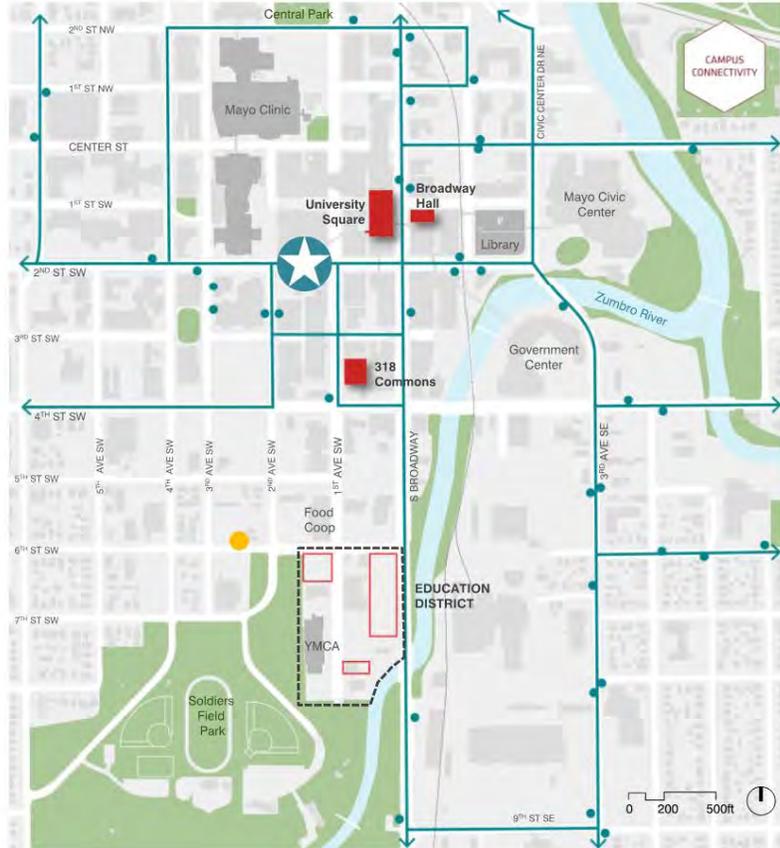
Environmental and geotechnical explorations completed to-date suggest that site conditions in the Education District present some challenges to development. The area was formerly used as a mill district and a landfill, and prior to development was crossed by meanders of the Zumbro River. As a result, subsurface conditions are variable, with deposits of organic material, silt, urban fill and other soils. Groundwater in some areas of the district is known to be approximately 20 feet below surface elevation. Early design phases should commission further exploration and analysis to determine the best approach for excavations, foundations and structural systems.

PUBLIC TRANSIT

Analysis Existing Conditions

- Rochester public transit is a “hub and spoke” bus system
- Limited transportation after 6 pm and on weekends
- Downtown Core and existing UMR facilities are well-served by existing bus network
- Education district may be served by future bus stops along 1st Avenue and South Broadway
- The 2010 Downtown Rochester Master Plan’s suggested moving to a “grid” vs “hub & spoke” bus network to provide multiple transfer opportunities and cross-town service
- Potential future transportation hub located close to UMR’s new campus

- POTENTIAL FUTURE TRANSIT HUB
- ★ DOWNTOWN TRANSFER STATION
- BUS STOPS
- TRANSIT LINES
- UMR NEW PROPERTIES
- EDUCATION DISTRICT

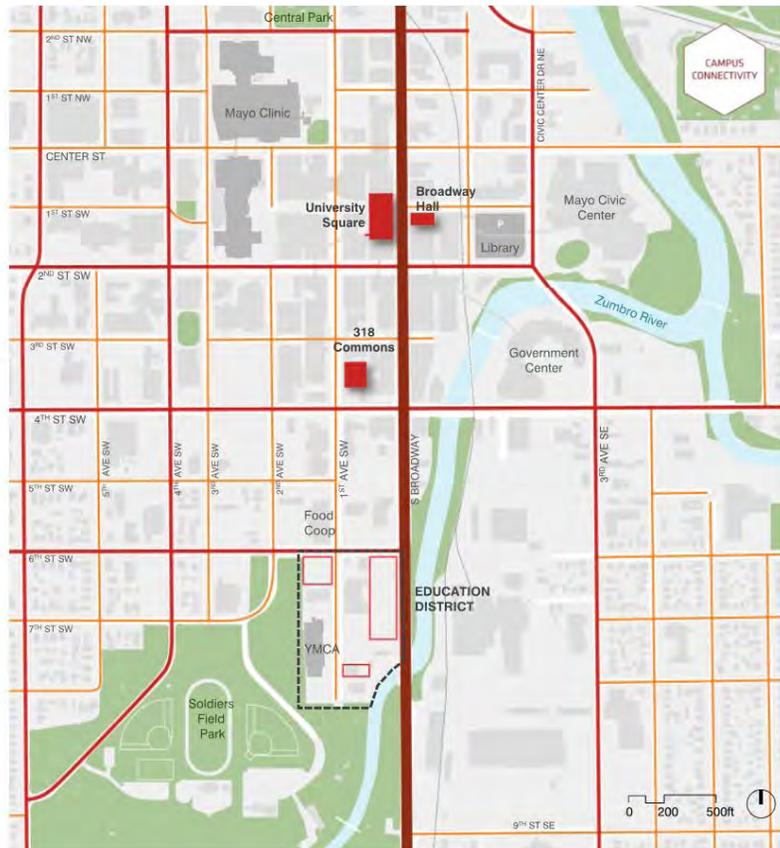


VEHICULAR CIRCULATION

Analysis Existing Conditions

- South Broadway has recently been converted from a state highway to a primary north-south City street. It has recently been improved with pedestrian crossings and signal. Future planned “Complete Streets” improvements include a median and curb bump-outs.
- 6th Street is a major east-west vehicular route to the education district, with a potential future extension to the east, across the Zumbro River.
- 1st Avenue is the “Main Street” of Rochester and a major pedestrian route from University Square to the education district. Recent improvements include wider sidewalks and more street trees. A bike lane will be added in the future.
- 6th Street and 1st Avenue will be major access streets for the education district.

- HIGHWAY
- MAJOR ROAD
- SECONDARY ROAD
- UMR NEW PROPERTIES
- EDUCATION DISTRICT

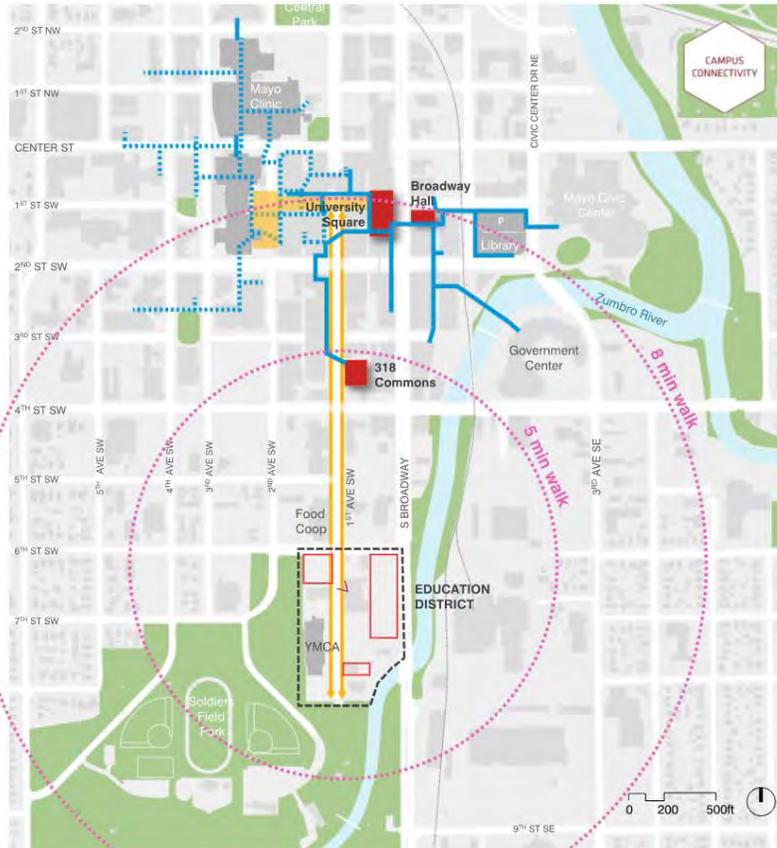


PEDESTRIAN CIRCULATION

Analysis Existing Conditions

- Subways and skywalks are well used and provide shelter for pedestrians from the harsh winter climate and congested street crossings
- Education district is a 5-minute walk from the skyway network and an 8-minute walk from University Square
- Goal will be to reinforce pedestrian activity at street level as part of a vibrant urban campus experience

- WALKING CIRCLE
- SKYWALKS
- SUBWAYS
- FUTURE SUBWAY EXPANSION AREA
- PLAZA
- PEDESTRIAN ROUTE
- NEW UMR PROPERTIES
- EDUCATION DISTRICT

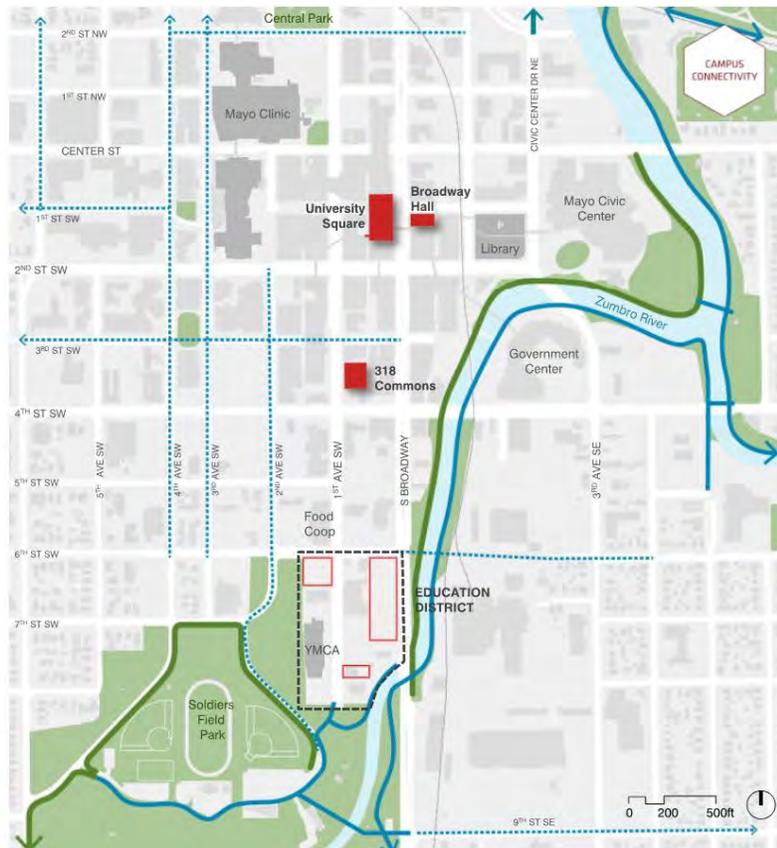


BIKE ROUTES

Analysis Existing Conditions

- The existing Rochester bike and trail network provides connectivity within the city's open space system
- Several of these off-street pathways connect to the education district
- Planned and future bike routes, on 2nd Avenue SW and 6th Street SW, have the potential to help future community campus users commute to the campus.

- PLANNED/POTENTIAL FUTURE BIKE ROUTE
- EXISTING BIKE ROUTE/SHARED USE TRAIL
- PEDESTRIAN WALKWAY
- MAJOR OPEN SPACE
- RIVER
- UMR NEW PROPERTIES
- EDUCATION DISTRICT



Planning and Vision for the Rochester Campus

Board of Regents Facilities and Operations Committee
October 9, 2014



UNIVERSITY OF MINNESOTA

Driven to DiscoverSM



Regents' Direction on Master Planning

- Create and maintain a distinctive and aspiring vision for the physical development of each campus
- Enrich the experience of all who come to the campus
- Maximize the value of existing physical assets while responding to emerging/changing physical needs
- Ensure an inclusive, accountable, and timely process for creating and implementing a master plan vision



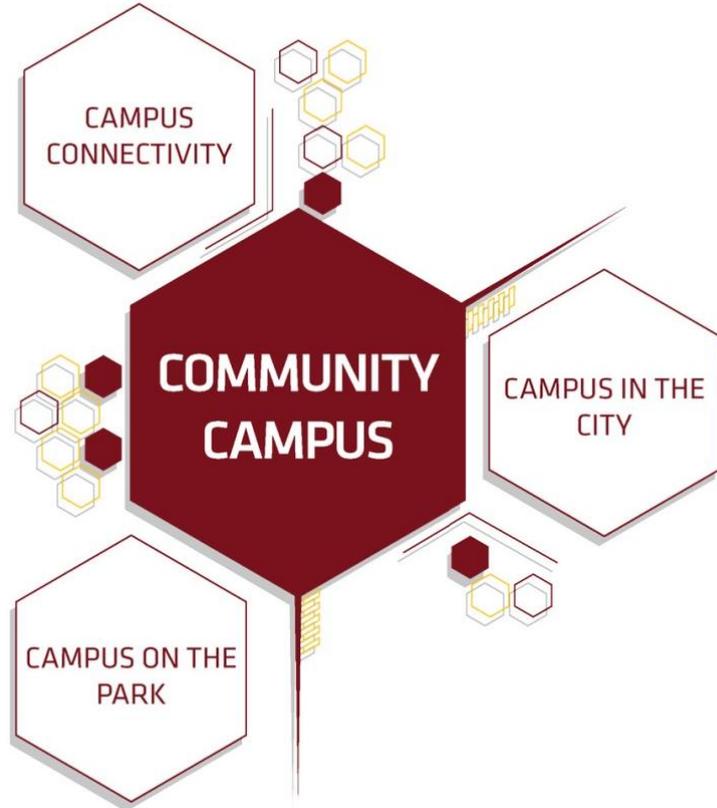
Master Plan Goals

1. A physical plan will situate a new UMR campus within the Education District, organizing buildings, open spaces and key connections to be developed by UMR and its partners
2. The plan will identify a strategy for inclusion of partnerships within the Education District
3. An implementation plan will lay out a timeline with key roles and next-steps





Master Plan Themes



Campus in the City

Integrating UMR's physical campus with the fabric of the city and creating synergistic relationships with partnership organizations

Campus on the Park

Envisioning the Education District as an open space link between downtown Rochester and Soldiers Memorial Field Park

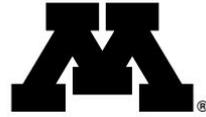
Campus Connectivity

Providing access and multiple modes of transportation connecting UMR with its urban context



Vision: Community Campus





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BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities & Operations

October 9, 2014

Agenda Item: Ensuring a Safe University

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

Presenters: Greg Hestness, University Police Chief
Kathy Waite, Minneapolis Police Inspector
Ross Allanson, Director of Parking and Transportation Services

Purpose & Key Points

Ensuring a Safe University is one of University Services' three strategic objectives. The presentation will update the committee on the status of various safety efforts undertaken in the past year; details on the Green Line's first months of operation; public safety and transportation safety in the surrounding neighborhoods; and initiatives in place and planned for the current academic year.

The Minneapolis neighborhoods surrounding the Twin Cities campus saw an increase in certain types of crime during the previous school year. In late fall 2013, the UMPD partnered with the City of Minneapolis, Hennepin County Sheriff, Metro Transit Police, and the State Patrol to coordinate enhanced policing in the Marcy Holmes, Como, Prospect Park, and Cedar-Riverside neighborhoods. University Services instituted a building access program that automated 143 facilities on the Twin Cities campus and reduced the hours those buildings were open to the general public. Additional video cameras were installed on high-traffic pedestrian corridors through and on the perimeter of campus. Street lighting was upgraded where possible and in areas that deficiencies were identified, additional lighting was installed either by the University or in partnership with the City of Minneapolis. Educational efforts were coordinated between the UMPD, Minnesota Student Association, Student Affairs, Greek Life, and Housing and Residential Life.

Beyond the boundaries of campus and nearby neighborhoods, the University was actively engaged in supporting "kill switch" legislation that passed the Minnesota legislature. This new law will require all mobile phones sold in Minnesota to have software that allows the owner to render a stolen device worthless. The UMPD was a key partner with the United States Department of Justice and other agencies in investigating and cracking an organized crime ring in the Twin Cities that was operating a sophisticated international black market for stolen mobile devices. UMPD assisted in the investigation starting back in December 2013 and participated in the metro-wide sting operation this past August. Late in September, a second sting netted devices used to change the electronic serial numbers of stolen phones. The UMPD supported those efforts as well.

Metro Transit's Green Line began operations through the West Bank and East Bank campuses on June 14. The most recent published numbers indicate that an average of 40,445 weekday rides were taken after fall semester was underway. UMPD and the Metro Transit Police worked together with University Relations on a two-week education blitz at the start of the fall semester aimed at raising awareness of the line, reminding people to obey pedestrian and bicycle traffic signals, and to look before crossing. There has been one incident on campus, which was related to a mechanical malfunction on the train itself.

In the coming year the University has committed to expanding transportation options on Thursday, Friday, and Saturday evenings. A new University Avenue circulator bus provides rides to and from campus and into the Marcy-Holmes neighborhood during the late-night hours. The route will work in coordination with the Gopher Chauffeur to provide real-time information to students who call that service requesting rides that the circulator could provide more quickly.

Another major public safety focus this year is the high number of special events. In addition to 10 Vikings games, which each bring 50,000+ people to campus, high-profile guest lecturers (such as former Secretary of State Condoleezza Rice and the President of Somalia) have led to an increase in requests for protest. Such free expression and civil discourse is a cornerstone of the University, and the UMPD is committed to supporting it by ensuring all parties remain safe and respectful. Special event work is staffed through a combination of voluntary overtime, involuntary overtime, and hiring off-duty officers from other police departments. Preparations for these events involve many hours and can include coordination with Minneapolis Police Department, the US Secret Service, or outside entities hosting the event or demonstration.

Background Information

The committee received updates on public safety and transportation in December 2013, February 2014, and May 2014.

Ensuring a Safe University

Board of Regents Facilities and Operations Committee
October 9, 2014



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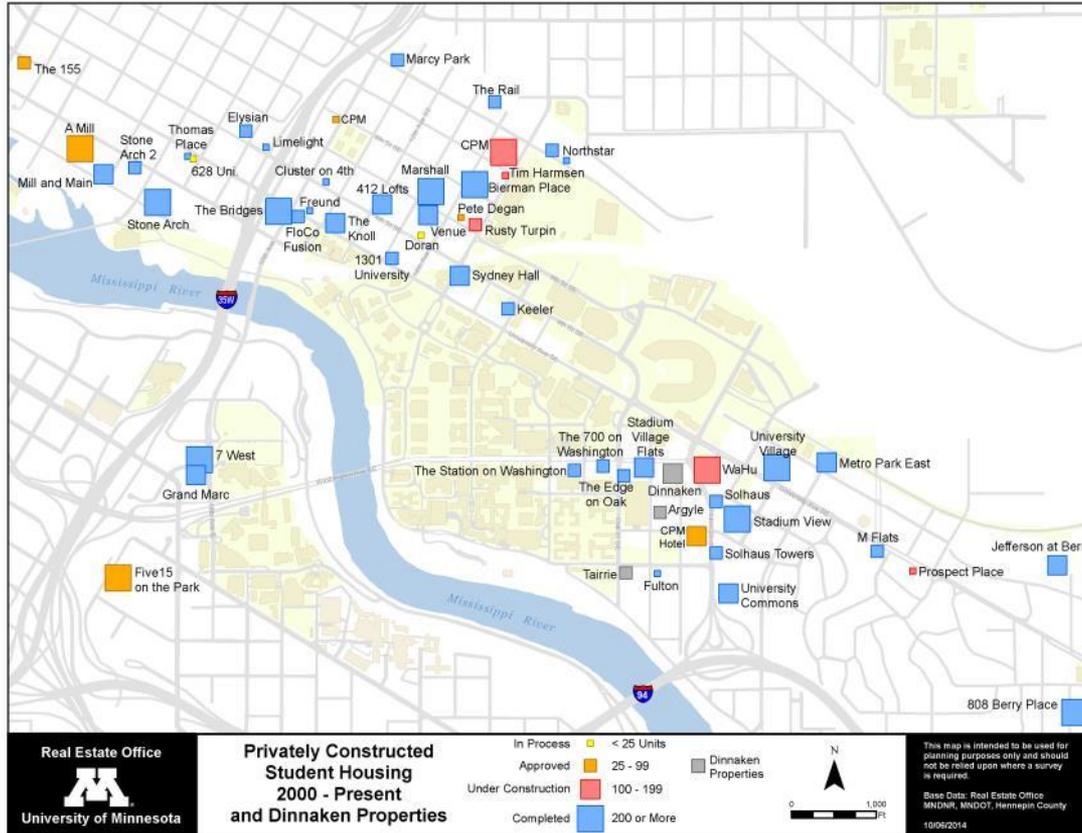


Board of Regents Policy: Health and Safety

Health and safety encompasses personal security; public safety; emergency preparedness; public health; workplace safety; protection of environmental, physical, and monetary resources, and safe and healthful facilities.

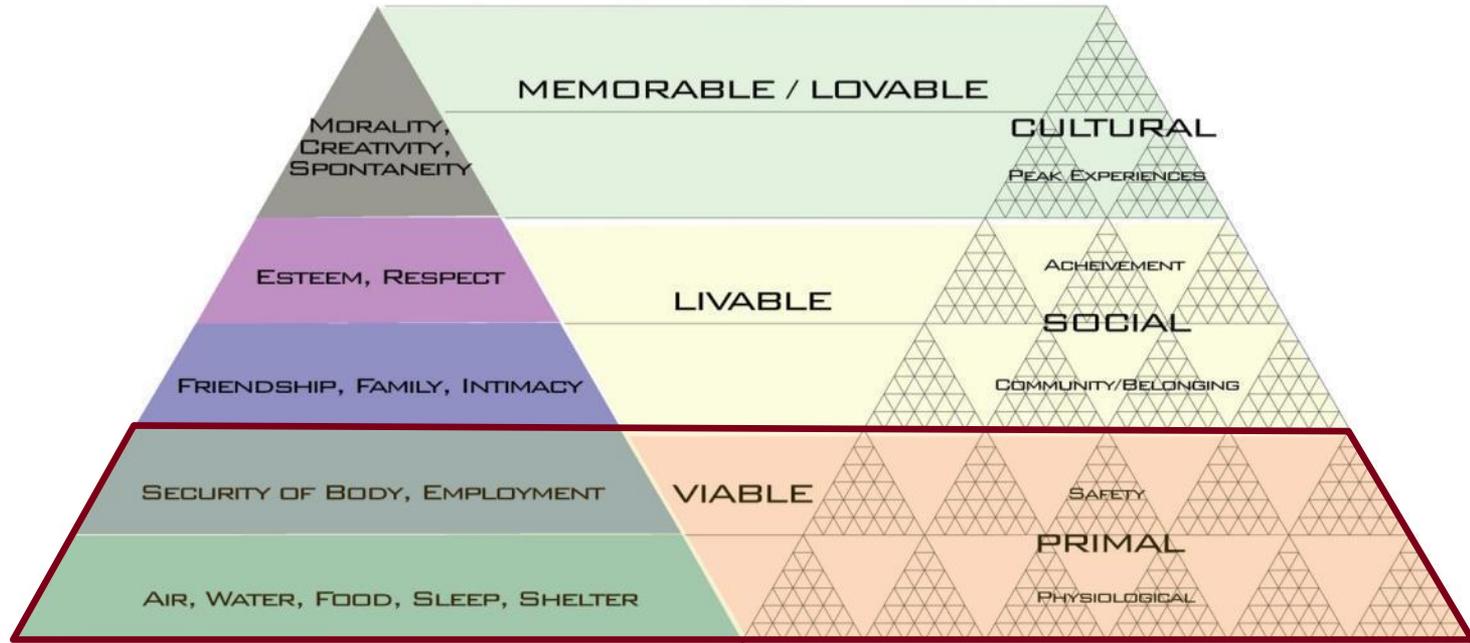


Expansion of Private Student Housing Creating New Transportation Safety and Public Safety Challenges





Strengthening Neighborhood Livability





“Four E’s” for Safety



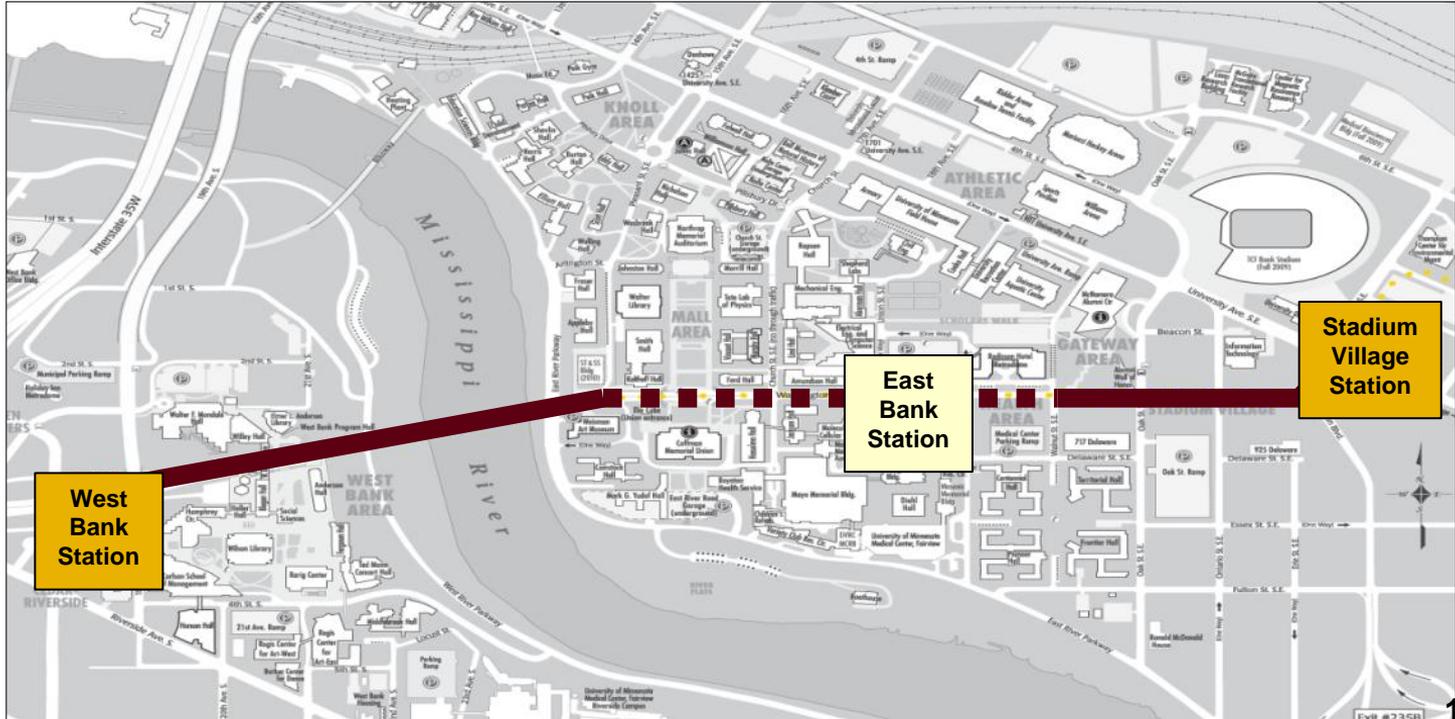


Transportation Safety: 160 Years of Growth Without Plans for Today's Multimodal Transportation





METRO Green Line opened June 14





Green Line Safety: Environment

- Pedestrian Crossings – outstanding issues
- Bike/Emergency Vehicle lane





Green Line Safety: Education/Engagement/Enforcement

- SafeU Campaign
- “Things to do while you wait”
- UMPD/MetroTransit “advising” pedestrians and bicycles

A TRAIN WEIGHS 98 TONS.
YOU DON'T.

Use caution near light rail tracks.



148 of 196



Bike Safety: Environment

Year	Bikes/Day	Change
2014	7,529	-13%
2013	8,524	+13%
2012	7,567	+9%
2011	6,900	+9%
2010	6,343	+4%
2009	6,082	n/a

- Expansion of bike lanes and bike boxes across campus
- Near campus improvements





Bike Safety: Education/Engagement/Enforcement

- Education/Engagement
- Enforcement





Transportation Safety Video Contest



Short and Long Term Strategies: Enforcement

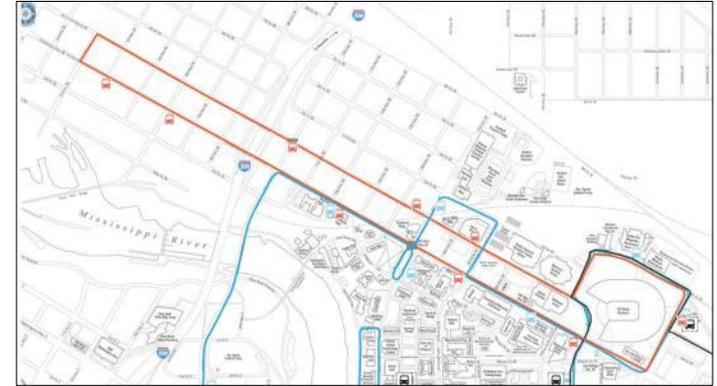
- Expanded Community Response Team capacity
- UMPD participation in mobile phone trafficking sting
- Green Line impact





Short and Long Term Strategies: Environment

- Building access program completed
- Public Safety Emergency Communications Center enhancements
- Expanded transportation options
- Lighting upgrades





Short and Long Term Strategies: Engagement

- “Coffee and Donuts with the Cops,” door knocking, campus conversations, town halls, and student other engagement opportunities
- Outreach to neighborhood businesses, property owners, leaders
- Kill Switch legislation





Short and Long Term Strategies: Education

- Partnering with student government, student groups
- Engaging off-campus housing providers
- SAFE U awareness campaign

Take the Pledge to
be **#StreetSmart**
msa.umn.edu/pledge



SAFETY TIP #41

MAKE THE CALL

If you see someone passed out and unresponsive, call 911 for help.

More safety tips: SafeU.umn.edu

SAFE U



City of Minneapolis Partnership

- Increase patrols
- Doorknocking surrounding neighborhoods
- Liaison with other units and agencies
- Gov Delivery (mass email) and messaging to area neighborhoods and businesses
- Portable cameras
- Addition of permanent cameras



Permanent Cameras Added to the Area



Camera locations in Marcy Holmes and Como

- 4th St / 13th Ave SE
- 5th St / 14th Ave SE
- 8th St / 10th Ave SE
- 5th Ave SE / Rollins Ave SE



City of Minneapolis Partnership

- Reach out to area construction
- CPTED – U of M and City of Minneapolis met to discuss lighting improvements (ongoing)
- Late night businesses
- Neighbors' involvement
- New housing



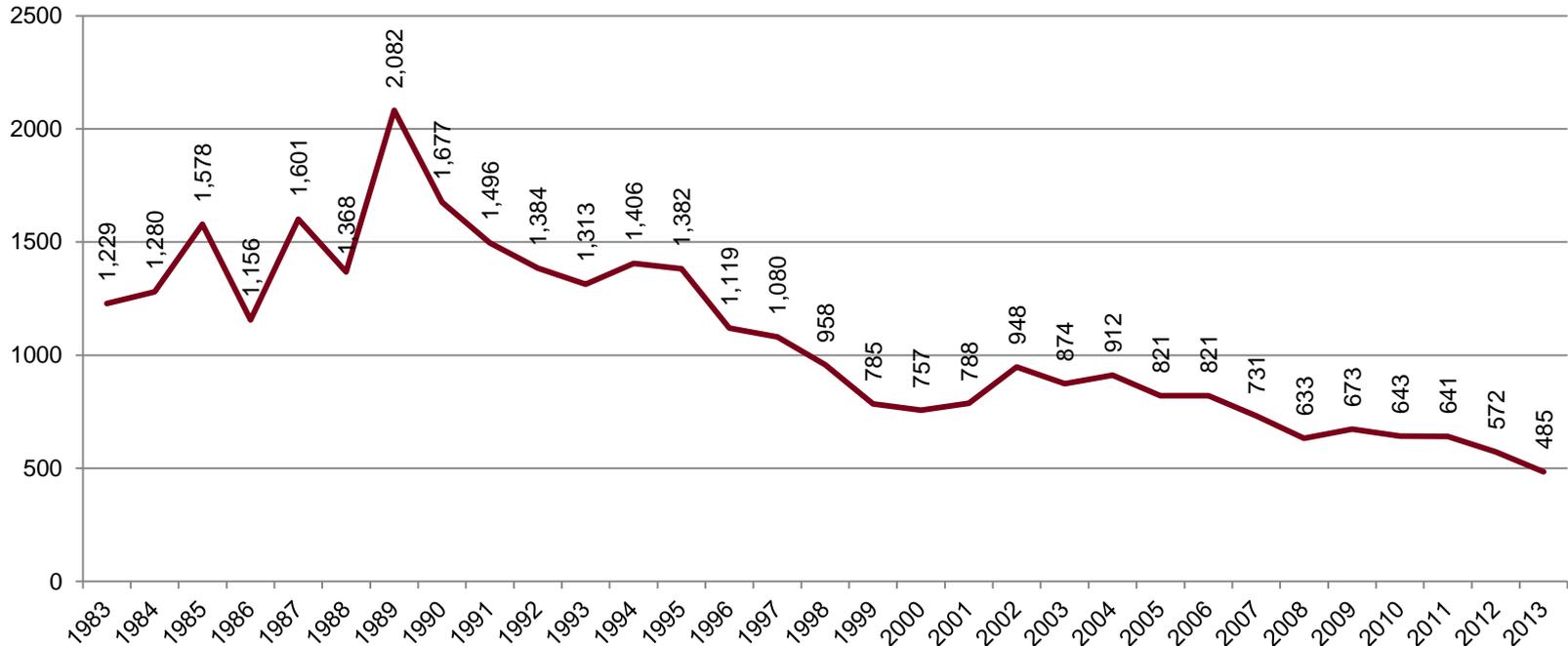
Results: SE Minneapolis / UMN Robbery of Person Patterns by Academic Cycle

	2009-2014 Average	Current YTD 2013-14	
December through February	8.7	9	8 off campus 1 on campus
March through May	10.1	11	10 off campus 1 on campus
June through August	8.8	8	5 off campus 3 on campus
September through November	19.0	7 <small>thru 09/30</small>	6 off campus 1 on campus



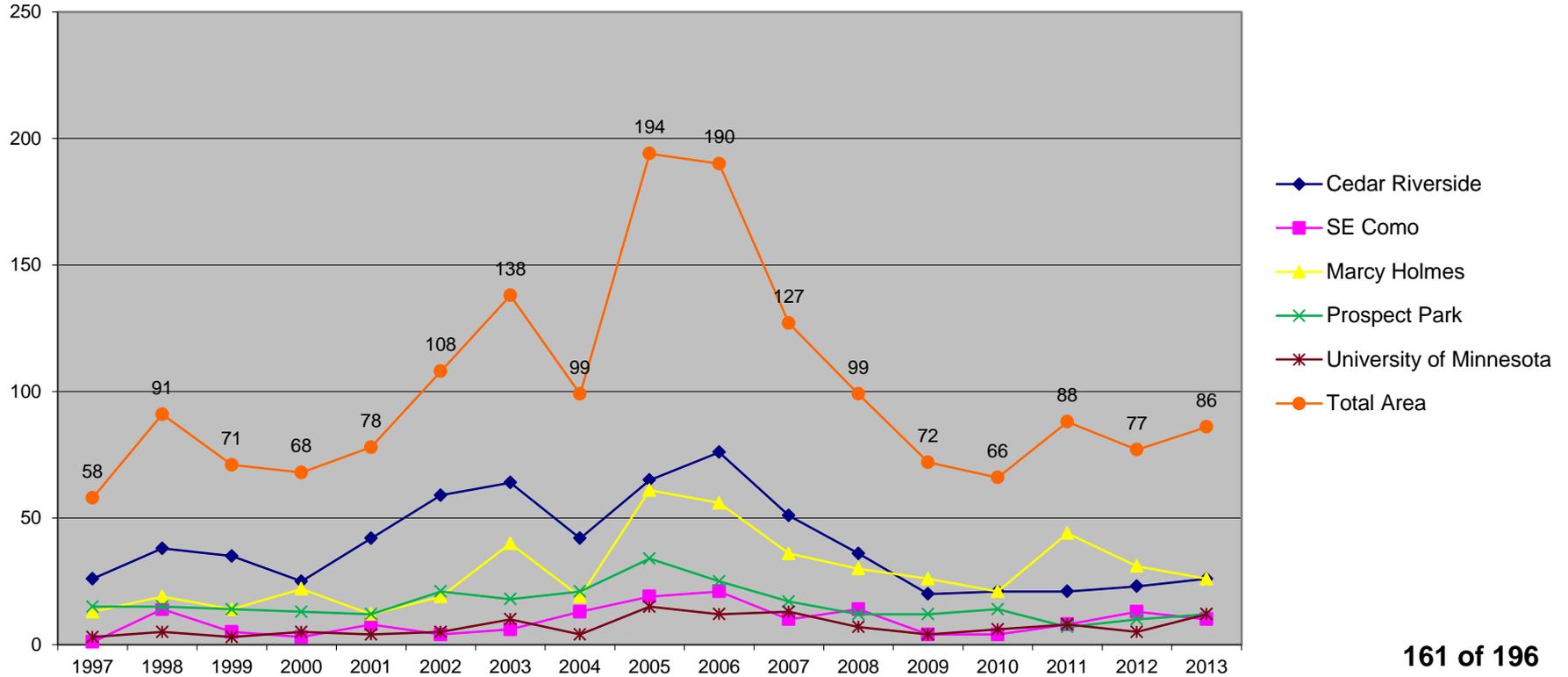


University of Minnesota Crime Statistics: 2013 -- 77% decrease from peak





Robberies Near the University, 1997-2013





Special Events





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BOARD OF REGENTS DOCKET ITEM SUMMARY

Facilities & Operations

October 9, 2014

Agenda Item: Capital Budget Amendment: Combined Heat and Power Plant Project, Twin Cities Campus

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

This is a report required by Board policy.

Presenters: Pamela Wheelock, Vice President, University Services
Michael Berthelsen, Associate Vice President, Facilities Management
Suzanne Smith, Assistant Vice President, Capital Planning and Project Management

Purpose & Key Points

In accordance with the Board of Regents Policy: *Reservation and Delegation of Authority*, review the FY2015 Capital Budget Amendment for the following project:

- *Combined Heat and Power Plant Project, Twin Cities Campus*

The attached Project Data Sheet 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 attached.

Due to the construction of new University buildings requiring steam service and aging boiler equipment on the Twin Cities campus, the University is at risk of a shortage of firm boiler capacity relative to wintertime peak steam demand. The Minneapolis portion of the campus also is at risk for 100% of its steam being generated in a single site and at a distance from campus. New steam boiler equipment that will provide the additional required steam capacity in a second facility needs to be added.

The project consists of installing combined heat and power generation equipment in the Old Main building and providing space for a possible future package boiler and a future chilled water plant to create a multi-function utility facility. In addition, a connection will be made to the Xcel Gopher electrical substation to allow an outlet for any excess power generated at the CHP plant and reliable standby power from Xcel to campus.

The combined heat and power equipment solution was chosen because the added benefit of electrical generation for use on campus provides both a financial hedge for increasing electrical rates and represents the best long-term sustainable solution from an energy use standpoint by reducing the carbon footprint of the University.

Background Information

Combined Heat and Power Plant project funding to initiate design, in the amount of \$18,000,000, was included in the FY 2013 Capital Budget approved by the Board in June 2012. A capital budget amendment in the amount of \$77,881,000 was approved by the Board of Regents in February 2013, concurrent to the schematic design and the selection and procurement of the equipment. A capital budget amendment in the amount of \$17,100,000 is being presented for review in October 2014 and approval in December 2014. This will address known issues with the project site, demolition, facility structure, building systems, and replenish the project contingency.

The cost increases are due to schedule delays in the air permit process, construction market cost escalation, additional complexity to deliver electricity to the campus, and unforeseen conditions. The MPCA air permit is anticipated to be approved in December 2014. Should unspent contingency funds not be sufficient to fully fund the investments needed to reliably distribute electrical services throughout the campus, any remaining needs will be addressed in the annual capital budget process. Construction will begin upon the receipt of the permit.

President's Recommendation

The President recommends approval of the capital budget amendment for the project listed below and of the appropriate administrative officers proceeding with construction once the MPCA air permit is approved, anticipated in December 2014:

- *Combined Heat and Power Plant Project, Twin Cities Campus*

**Combined Heat and Power Plant
Twin Cities Campus
Project No. 01-034-12-1047, Capital Budget No. 3052**

1. Basis for Request:

This project advances all three principles of University Energy Management: Reliability, Sustainability, and Cost Effectiveness.

Reliability:

Due to both the growth of new University buildings requiring steam service and aging boiler equipment on the Twin Cities Minneapolis campus, the University is at risk for a shortage in firm boiler capacity relative to wintertime peak steam demand. The Minneapolis campus also is at risk for 100% of its steam being generated in a single site and at a distance from campus. New steam boiler equipment that will provide the additional required steam capacity needs to be added to the Minneapolis campus at a second site. In addition, the project will produce significant electricity to help protect core portions of campus operations from loss of electrical service. The project is designed to meet future utility needs by preparing space and distribution for additional steam and chilled water service at minimal future cost (effectively just purchasing and installing the boiler or chillers.)

Sustainability:

Combined heat and power technologies are recognized internationally as a ‘green’ technology because each unit of energy is used more than once – to both produce electricity and to provide steam for the campus that can be used to either heat the campus or run steam-driven chillers. Both the State of Minnesota and the Federal government have strongly advocated for the expanded use of this technology for environmental reasons. The operation of this plant will significantly reduce the campus carbon footprint.

Cost Effective:

Combined heat and power technologies were also selected because of their cost saving capacity. By utilizing each unit of energy multiple times the University will be able to significantly reduce the amount of electricity it needs to purchase. This creates savings sufficient to lower overall campus utility costs even after paying for 100% of the project debt service and incremental operating costs. This project also provides the University a hedge against increasing electrical rates which are already being requested.

When presented to the Board of Regents in February 2013, the expected operating savings were \$2 million annually when compared to the FY 2014 budgeted utility rates, and increasing as the debt is paid off. This savings is significantly larger when considering the alternative – adding a traditional peak boiler would only add cost to meet the University reliability needs. Over the expected 30 years of useful life for this equipment the Combined Heat and Power is projected to cost approximately \$170 million less than if the University had proceeded with a traditional boiler.

Though this capital budget amendment will increase debt service payments, the University has been experiencing higher electrical rates than originally anticipated. Projected utility savings will still be close to \$2 million in FY17 when the Old Main Plant becomes operational while also providing a financial hedge against further increasing electrical rates.

Capital Budget Metrics addressed by this project:

Ensure research productivity and impact by:

- Providing research facilities that will allow competitive responses to unique research opportunities aligned with strategic priorities

Protecting public assets and investment by:

- Implementing campus master plans and advancing the University’s sustainability goals
- Leveraging facility investment to advance the academic mission and priorities

- Making infrastructure investments that ensure reliability over the long term, lower energy and operating costs, and advance environmental stewardship

Recognize current extraordinary financial realities by:

- Honoring projects that have an identified source of payment for debt costs
- Leveraging state capital funding opportunities in conjunction with University resources to complete critical projects that serve to improve infrastructure and benefit common good

2. Scope of Project:

The project is the renovation of the Old Main Heating Plant (Old Main) located at 1180 Main Street SE adjacent to the Mississippi river in the Knoll area. Originally constructed in 1912, Old Main has undergone several renovations/additions over the years. It houses seven coal and gas fired boilers, the last of which was shut down for steam production in 2000. Since that time the building's disrepair has accelerated. The building currently houses a steam pipe fitter workshop area and provides key access points to the deep steam tunnels.

The project consists of installing combined heat and power generation equipment in the building and providing space planned for a future package boiler and future chilled water plant equipment to create a multi-function Old Main utility facility. The combined heat and power equipment represents a two-stage configuration. First, a new natural gas fired turbine will generate electricity for use on the Minneapolis campus. Second, a new heat recovery steam generator will recover heat from the combustion gases that are discharged from the turbine to generate the required steam capacity. The combined heat and power equipment solution was chosen because the added benefit of electrical generation for use on campus provides both a financial hedge against increasing electrical rates and represents the best long-term sustainable solution from an energy use standpoint by reducing the carbon footprint of the University.

The plant has also been designed with space allocated for future installation of a packaged boiler as well as two steam turbine-driven chillers, representing an investment in future needs of the campus.

A significant portion of the project budget is devoted to hazardous materials abatement for both Old Main and the adjacent incinerator building, which has been demolished as part of this project. The existing boilers and piping contain significant amounts of asbestos. The building exterior walls are in relatively good shape and will be refurbished where required. The building roof profile will be simplified by removal of the multiple penthouses and a new roof will be installed.

This project is unique in nature. Essentially the project is engineered from the inside out; the process systems and equipment are designed to be housed in an existing building shell. Further, this project lacks program choices to reduce project scope, as typical projects do, in order to reduce costs. The uncertainty of MPCA permitting has further complicated this project. Alternatives were considered (reverting to a traditional boiler or building a new facility in a different site) but were rejected due to their significant costs beyond those of this project and extending the schedule. Though 'first cost' is always a concern, in this case the operating cost and lifecycle costs have a much larger impact to the institution financially so that in spite of the cost increase, this project continues to be a good financial and operating solution for the University.

3. Master Plan:

This project is consistent with following March 2009 Twin Cities Campus Master Plan Guiding Principles:

- Five: Steward historic building and landscapes
- Nine: Optimize the use of campus land and facilities and apply best practices
- Ten: Develop a campus that is environmentally and operationally sustainable

4. Environmental Issues:

Hazardous materials, which include a significant amount of asbestos, will be abated as a part of the project work and budget.

5. Cost Estimate:

Construction Cost		\$101,302,000
Demolition and Abatement	9,768,000	
Building Renovation	23,480,000	
CHPP Equipment / Systems	59,218,000	
Campus Electrical Distribution	8,836,000 (*)	
<u>Non-Construction Cost (Fees)</u>		<u>11,679,000</u>
Total Project Cost		\$112,981,000

(*) Does not include potential electrical distribution increase of up to \$5,600,000 to be funded either through unspent contingency or addressed in a future annual capital budget.

6. Capital Funding:

	<u>Original</u>	<u>Change</u>	<u>Current</u>
2012 State Appropriation	\$10,000,000		\$10,000,000
University Debt	82,881,000	\$17,100,000	99,981,000
Facilities Management			
<u>Repair & Replacement Funds</u>	<u>3,000,000</u>		<u>3,000,000</u>
Total Capital Funding	\$95,881,000	\$17,100,000	\$112,981,000

7. Capital Budget Approvals:

The FY2013 capital budget approved by the Board of Regents in June 2012 included \$18,000,000 for this project.

A capital budget amendment in the amount of \$77,881,000 funded by issuing University debt was approved by the Board of Regents in February 2013, concurrent to the schematic design and the selection and procurement of the equipment.

The capital budget amendment requested at this time, in the amount of \$17,100,000, is planned to be funded by issuing University debt. Should unspent contingency funds not be sufficient to fully fund the investments needed to reliably distribute electrical services throughout the campus, any remaining needs will be addressed in the annual capital budget process.

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

The operation and maintenance cost for this project are built into the business plan and utility rates for the campus. This project is projected to have a net overall annual savings to the University from its baseline utility costs.

9. Time Schedule:

Anticipated MPCA Air Permit Approval	December 2014
Completed Design	August 2014
Anticipated Start of Construction	December 2014
Anticipated Completion Construction	November 2016

10. Architect and Construction Manager:

This project will be delivered using the Construction Manager at Risk Project Delivery Method.

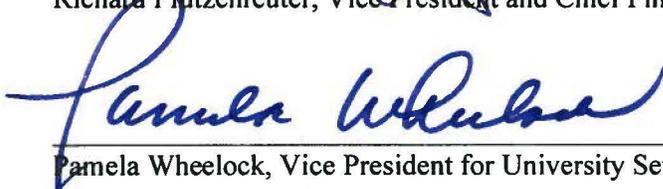
Architect: Jacobs Engineering Group, Inc., Fort Worth, Texas
Construction Manager: Adolfson & Peterson Construction, Minneapolis

11. Recommendation:

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

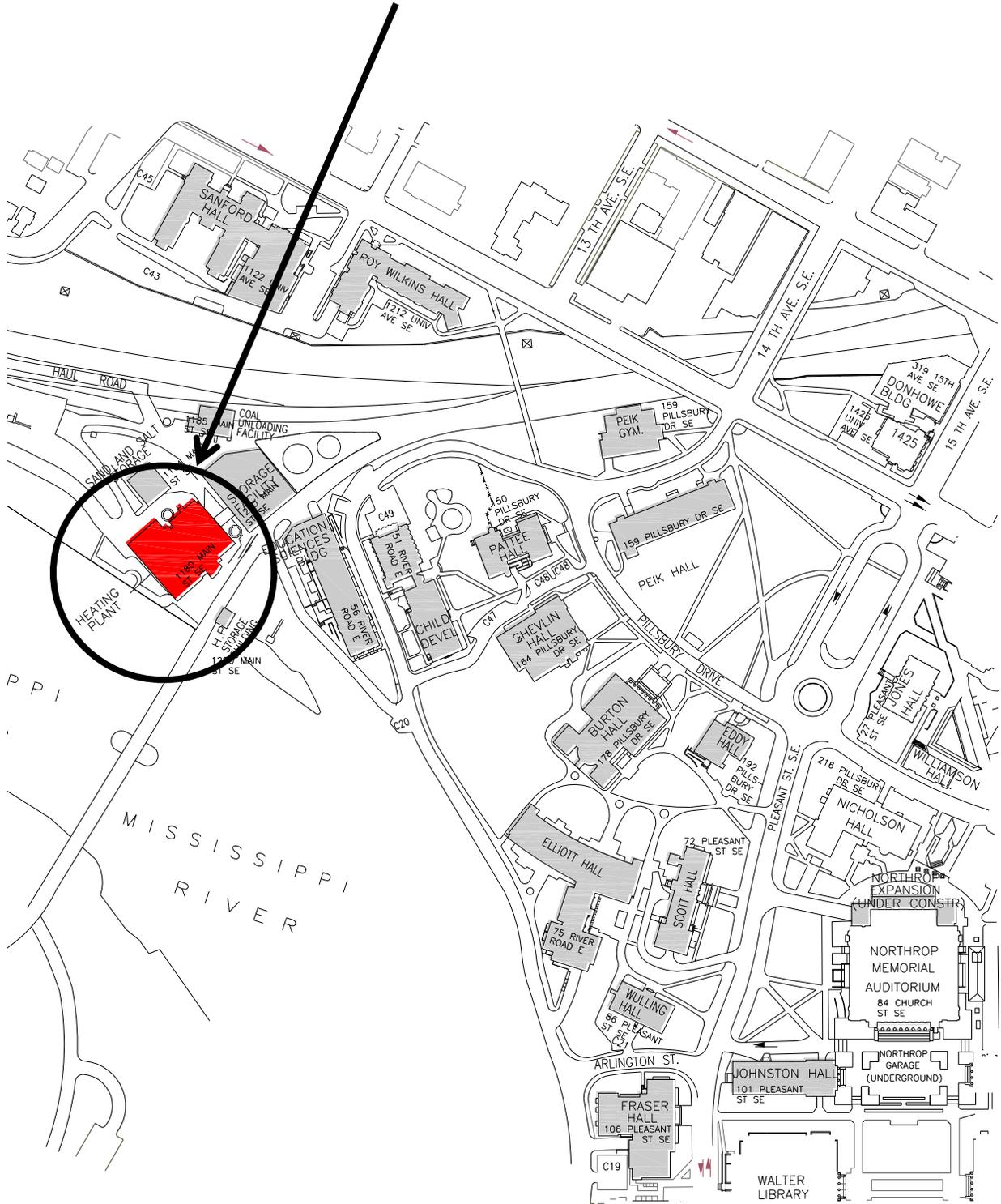


Richard Pfitzenreuter, Vice President and Chief Financial Officer



Pamela Wheelock, Vice President for University Services

COMBINED HEAT AND POWER PLANT PROJECT LOCATION



**UNIVERSITY OF MINNESOTA
TWIN CITIES EAST BANK CAMPUS**



Combined Heat and Power (CHP) Capital Budget Amendment

Board of Regents Facilities and Operations Committee
October 9, 2014



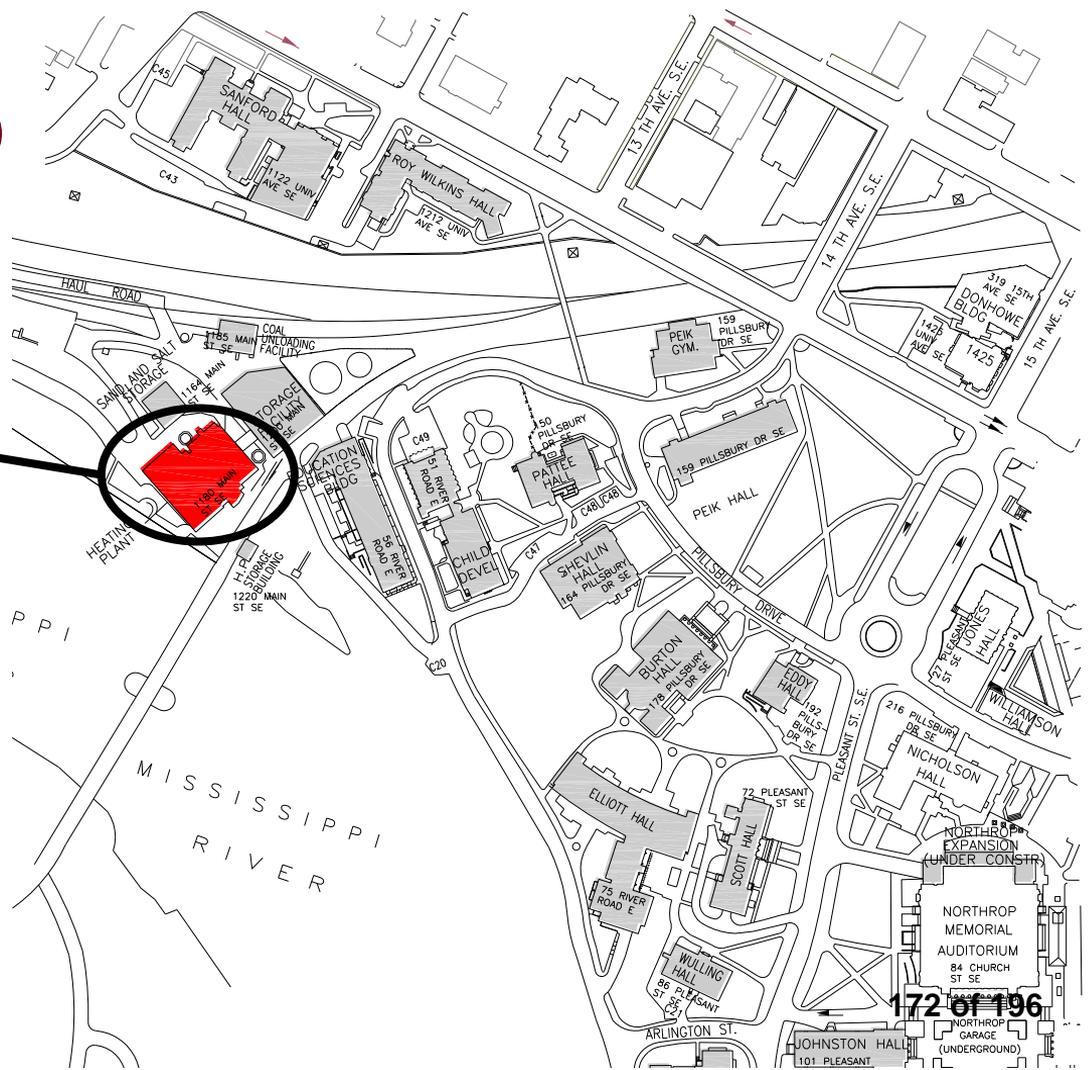
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Location Map

Combined Heat and Power Plant





River Rd E

River Rd E

COAL STORAGE

OLD MAIN HEATING PLANT

INCINERATOR BUILDING

MISSISSIPPI RIVER



Combined Heat and Power Plant Advances Energy Principles

- Reliability
 - Solves projected shortage of ‘firm’ steam capacity by 2016
 - Eliminates risk to research, teaching, and operations caused by having 100% of steam for Minneapolis campus coming through a single tunnel from single off-campus site
- Cost-effective
 - Reduces overall University cost
 - Hedges against purchased electrical cost increases
 - Provides site for next efficient chilled water plant
- Sustainability
 - Reduces carbon footprint

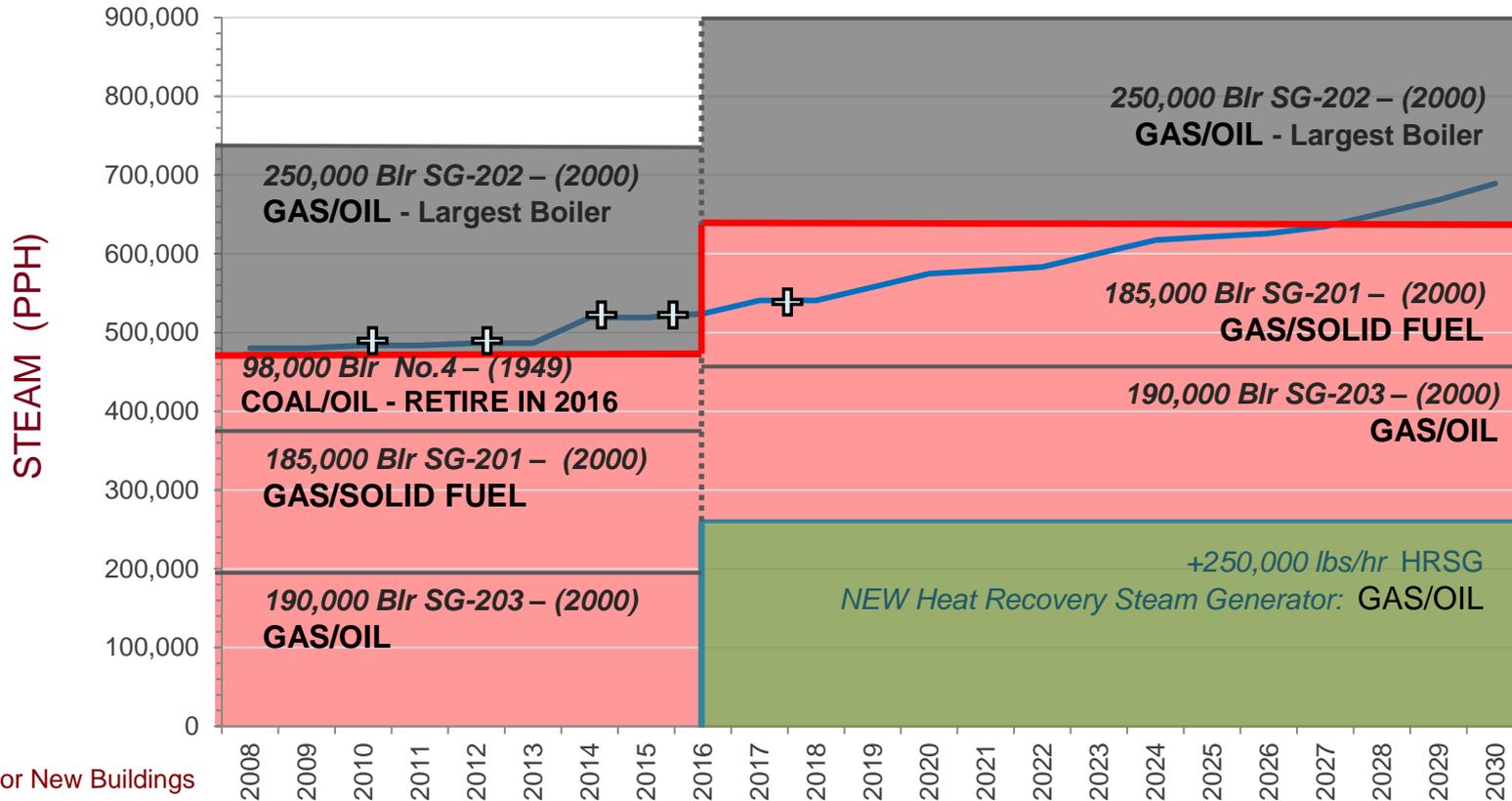


Combined Heat and Power Project

- Build a Combined Heat and Power Plant into Old Main by adding a 25 megawatt combustion turbine with heat recovery steam generator to meet current and projected steam needs (until 2028)
- Provide dedicated space for a future chilled water cluster plant and second package boiler
- Address the building deficiencies in Old Main (left decommissioned in 2000 when SE Plant opened – never cleaned up or addressed)



Proposed Boiler Capacity Provides Reliable (N+1) Supply Until 2028





Energy Plant is a Different Type of Project

- First cost is minimal compared to significant operating savings
- Uncertain external agency permit process impacted schedule
- Project is engineered inside out – process systems and equipment within a building shell
- Requires significant campus infrastructure upgrades
- Lacks program choices to reduce scope/cost
- Early equipment procurement necessary due to long lead time, informed design, and permitting



CHP Project Planning and Design Experts

- Large Industrial Heating and Power Plant Engineers
 - RMF - Master Planning
 - Burns & McDonnell - Feasibility
 - Jacobs Engineering - Design (with input from several area contractors)
- Architectural Firms
 - Miller Dunwiddie - Feasibility
 - Collaborative Design Group Inc. - Design
- Other Consultants
 - Meyer, Borgman, and Johnson, Inc. - Structural Design
 - Breitling Consulting, LLC - Environmental Consultant



Capital Budget Challenge

- Significant budget Increases due to
 - Unforeseen conditions on site
 - Construction market cost increases
 - Additional complexity to deliver electricity to campus
 - Delay costs due to permit process



Updated CHP Budget and Contingency

	February 2013 Approved	October 2014 Revised	Change
Demo / Abatement / Site	5,498,000	9,798,000	4,300,000
Building Renovation	20,010,000	23,410,000	3,400,000
Equipment / Systems	52,118,000	59,218,000	7,100,000
Non-Construction	9,379,000	11,679,000	2,300,000
CHP- Plant Subtotal	87,005,000	104,105,000	17,100,000
Electrical Distribution	8,876,000	8,876,000 - 14,436,000	0 - 5,600,000
TOTAL CHP Project	95,881,000	112,981,000 - 118,581,000	TBD



Capital Budget Approach

- Capital budget amendment for \$17.1 million to cover most of these known issues and replenish contingency
- Potential additional \$5.6 million for electrical distribution funded by unspent contingency and/or future annual capital budget process

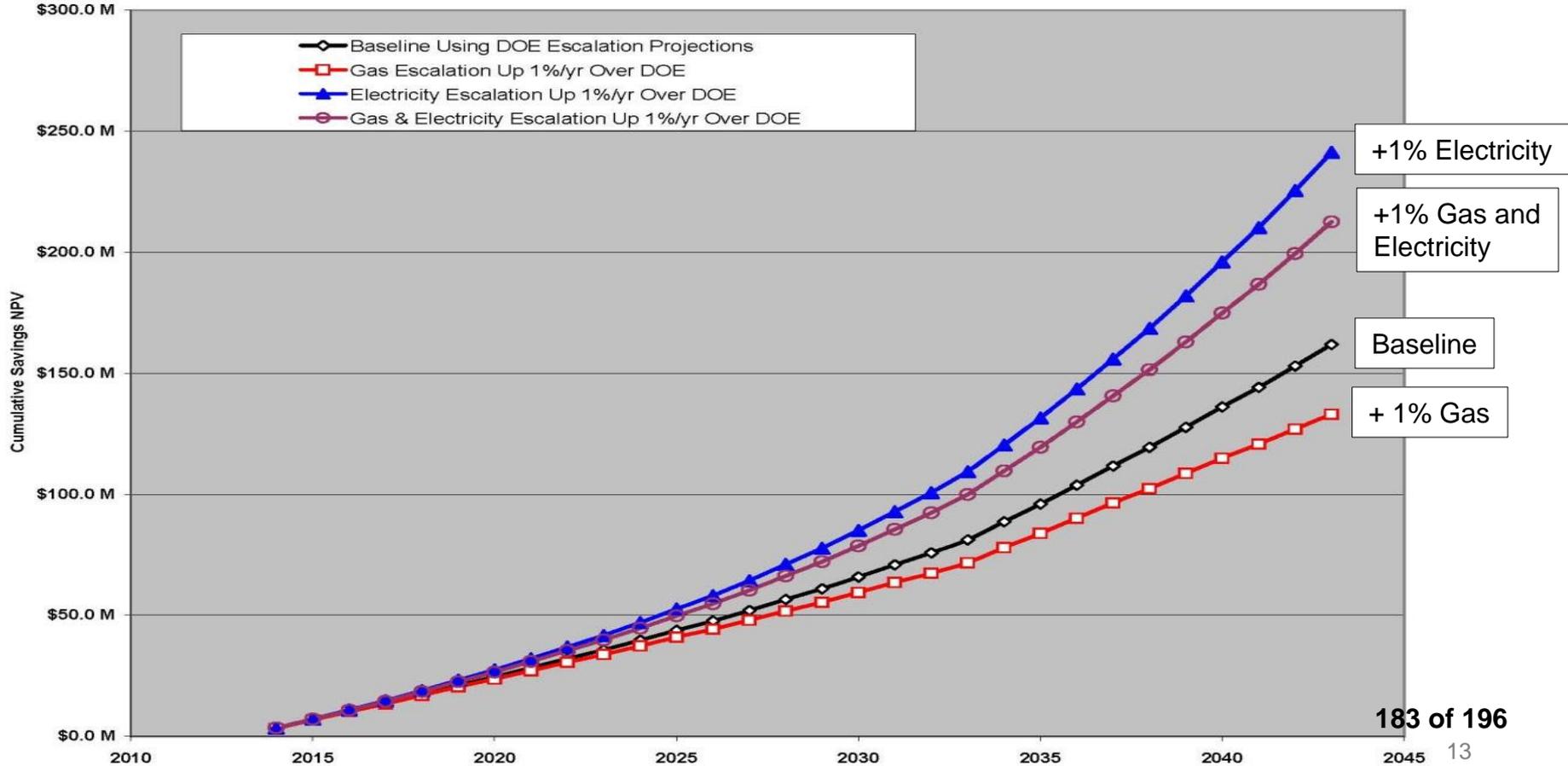


Change in Financial Analysis

	February 2013 Financial Analysis	October 2014 Financial Analysis
First Cost	96,000,000	113,000,000 - 119,000,000
Annual Savings vs. Projected Utility Budgets	2,000,000 vs. FY14 Budget	1,600,000 - 2,000,000 vs. FY17 Projected
30 year Lifecycle Savings (vs. cost of traditional boiler)	176,000,000	161,000,000 - 170,000,000

Feb. 2013 Analysis: Savings Increases as Electrical Costs Increase

UTILITY RATE SENSITIVITY ANALYSIS





Project Description/Schedule

- Schedule Dates
 - Schematic Design Complete
 - Long Lead Equipment Procured
 - Construction Documents Complete
 - Anticipated Air Emissions Permit
 - Construction Start (subject to Permit)
 - Complete Construction
- Engineer of Record
 - Jacobs Engineering Group
- Construction Manager at Risk
 - Adolfson and Peterson Construction

October 2012

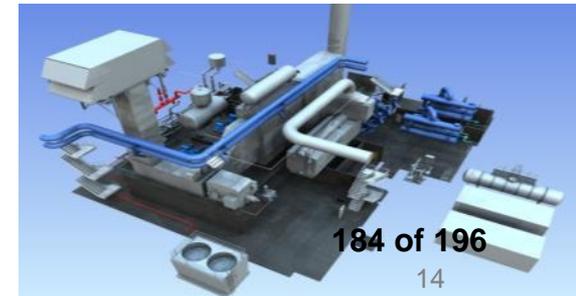
February 2013

August 2014

December 2014

December 2014

November 2016





Revised Project Finances

•	Anticipated Total Final Project Cost		
–	Construction Cost		\$101,302,000
•	Demolition and Abatement	9,798,000	
•	Building Renovation	23,410,000	
•	CHP Equipment/Systems	59,218,000	
•	Campus Electrical Distribution	8,876,000 (*)	
–	Non-construction Cost		<u>11,679,000</u>
–	Total Project Cost		\$112,981,000
•	Capital Funding		
–	2013 Legislative Appropriation (Design)		10,000,000
–	Facilities Management		3,000,000
–	University Debt		<u>99,981,000</u>
–	Total Capital Funding		\$112,981,000

(*) Does not include electrical distribution scope of \$5.6 million, to be funded through unspent contingency or additional resources as project proceeds.



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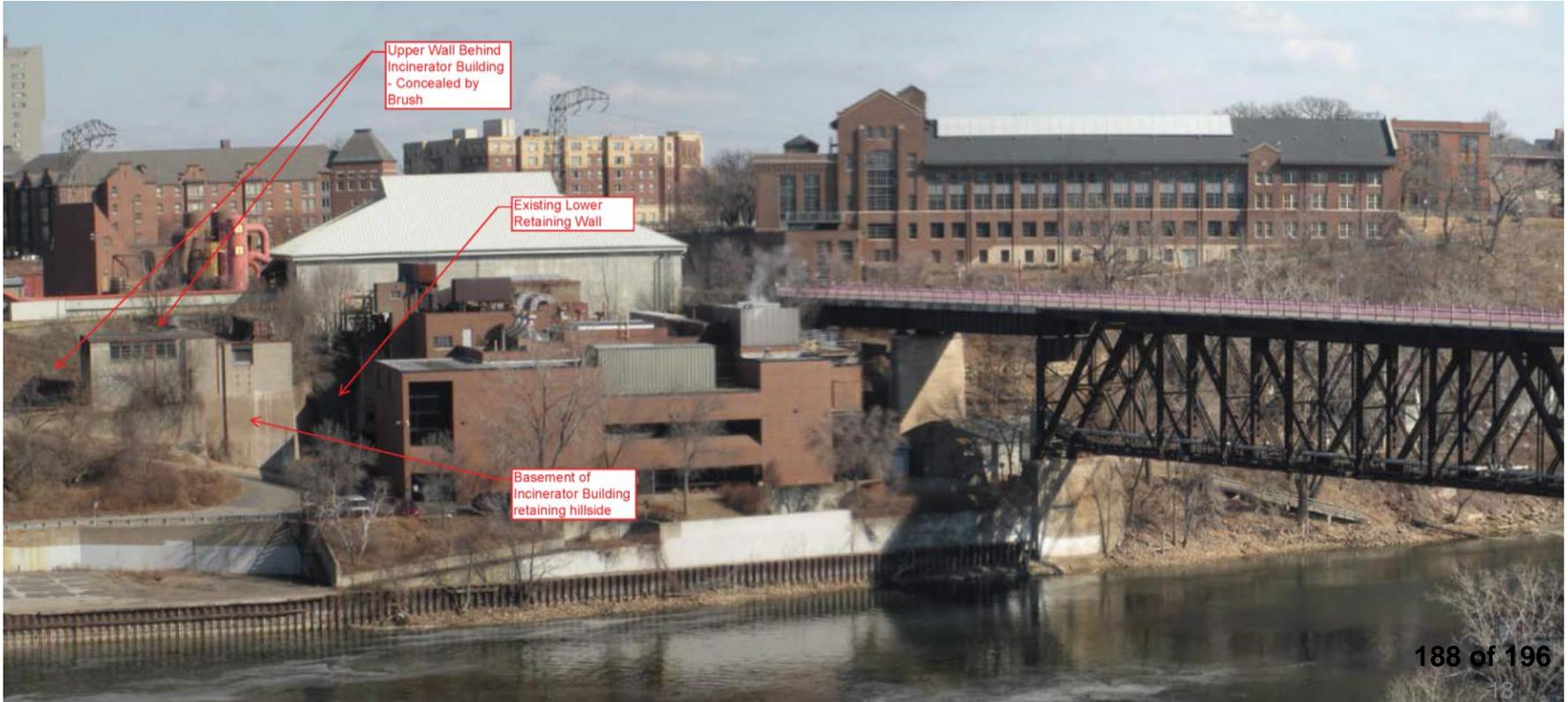


Site





Site





Before Demolition





Before Demolition





Before Demolition





Before Demolition





Demolition





Demolition





Demolition





After Demolition

