



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 Discover<sup>SM</sup>**



## 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

Mitzi Baker	Rochester-Olmsted Planning Department
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



## CONTENTS

---

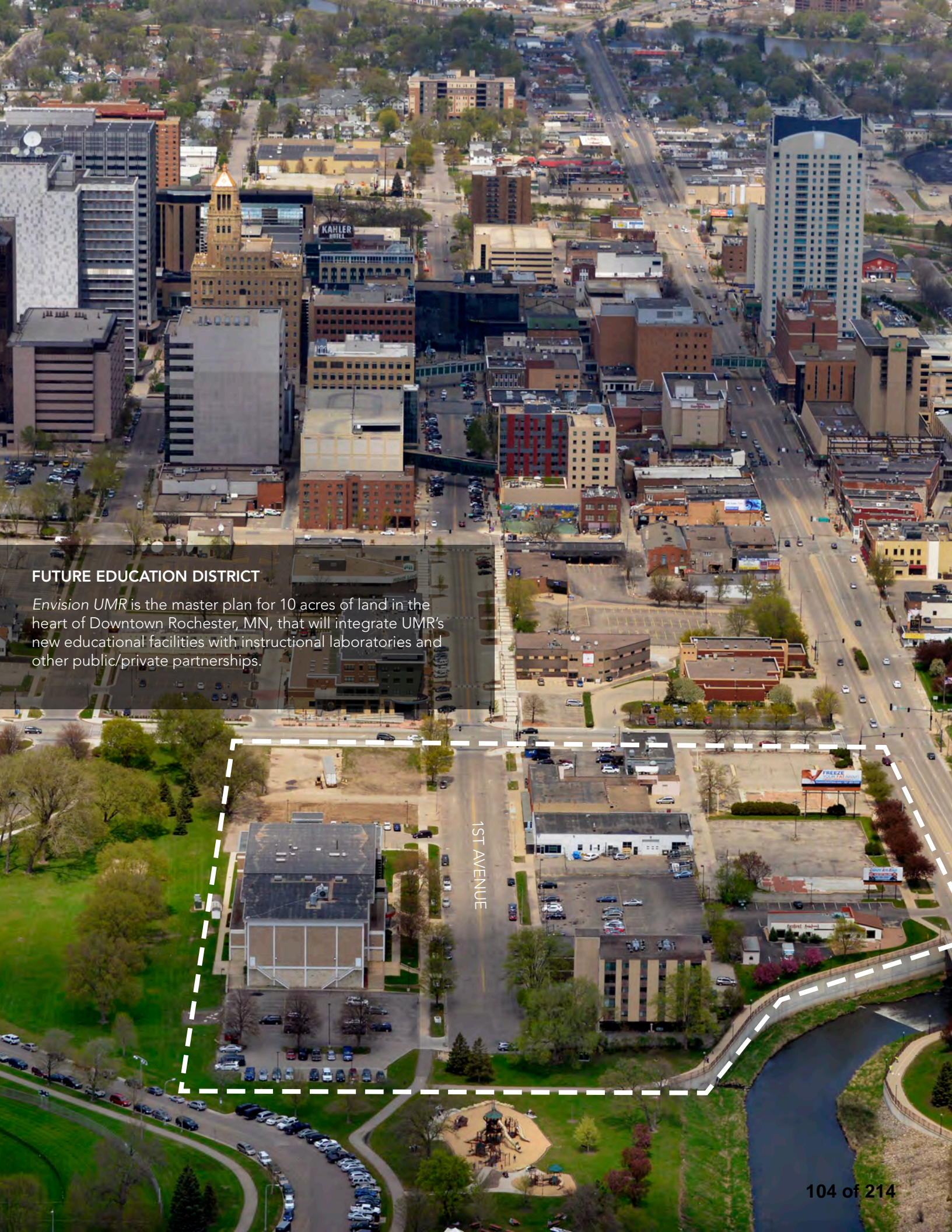
<b>1</b>	<b>INTRODUCTION</b>	<b>6</b>
	<ul style="list-style-type: none"><li>– overview</li><li>– master plan process</li><li>– the community campus model</li><li>– master plan vision and principles</li></ul>	
<b>2</b>	<b>MASTER PLAN</b>	<b>16</b>
	<ul style="list-style-type: none"><li>– master plan framework</li><li>– development capacity</li><li>– urban design guidelines</li><li>– open space framework</li><li>– pedestrian framework</li><li>– bicycle framework</li><li>– transit framework</li><li>– vehicular access and parking</li><li>– infrastructure</li><li>– partnerships</li></ul>	
<b>3</b>	<b>IMPLEMENTATION</b>	<b>50</b>
	<ul style="list-style-type: none"><li>– land assembly</li><li>– phasing</li></ul>	
<b>4</b>	<b>UMR-1 PROGRAM</b>	<b>60</b>
	<ul style="list-style-type: none"><li>– enrollment</li><li>– program</li><li>– active learning classrooms</li><li>– open plan office space</li><li>– flexible spaces</li><li>– circulation spaces</li><li>– ground floor uses</li></ul>	
<b>5</b>	<b>APPENDIX</b>	<b>78</b>
	<ul style="list-style-type: none"><li>– alternative development scenarios</li><li>– MyUMR survey</li><li>– site analysis</li><li>– university-wide program</li></ul>	

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.



## 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.”<sup>1</sup>

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.”<sup>2</sup>

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,”<sup>3</sup> 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

CENTER ST

1<sup>ST</sup> ST SW

2<sup>ND</sup> ST SW

3<sup>RD</sup> ST SW

4<sup>TH</sup> ST SW

5<sup>TH</sup> AVE SW

4<sup>TH</sup> AVE SW

3<sup>RD</sup> AVE SW

2<sup>ND</sup> AVE SW

1<sup>ST</sup> AVE SW

S BROADWAY

3<sup>RD</sup> AVE SE

5<sup>TH</sup> ST SW

6<sup>TH</sup> ST SW

7<sup>TH</sup> ST SW

Food Coop

YMCA

Soldiers Memorial Field Park

University Square

Broadway Hall

318 Commons

Education District

CIVIC CENTER DRIVE NE

Mayo Civic Center

Government Center

Zumbro River

**LEGEND**

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

## 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

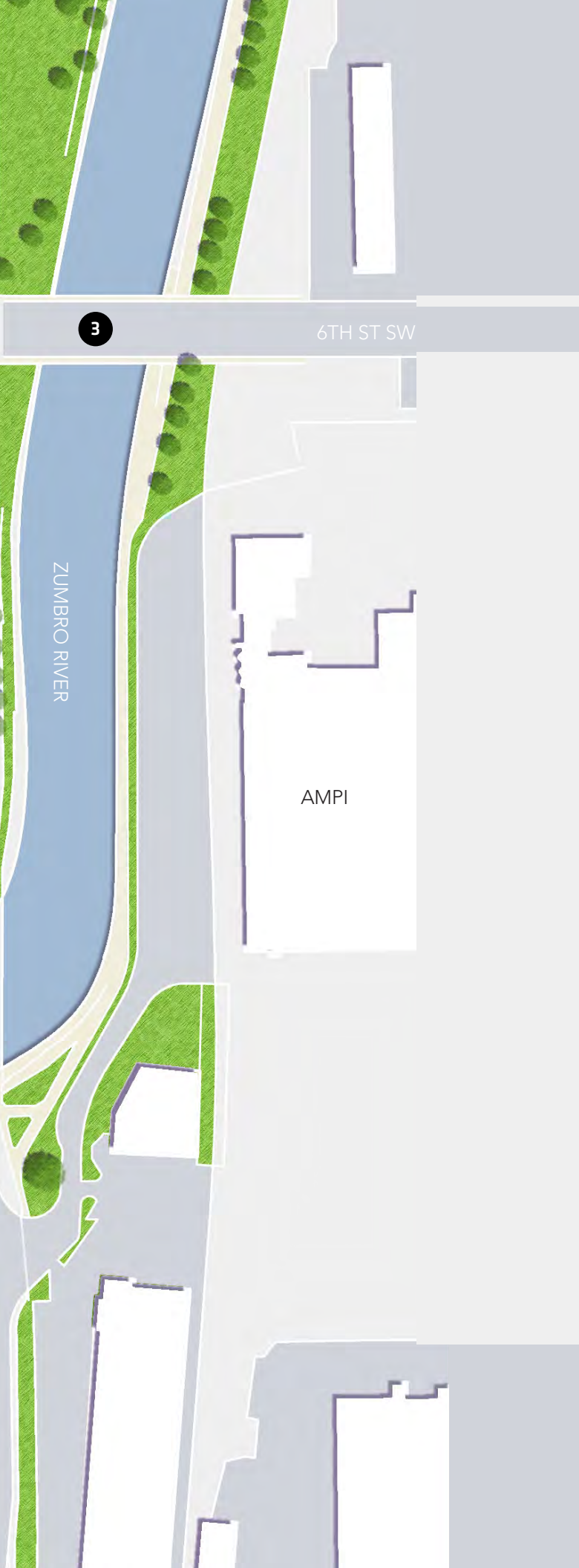
BROADWAY

ZUMBRO  
LUTHERAN  
CHURCH

YMCA

SOLDIERS FIELD  
MEMORIAL PARK

BROADWAY



## MASTER PLAN FRAMEWORK

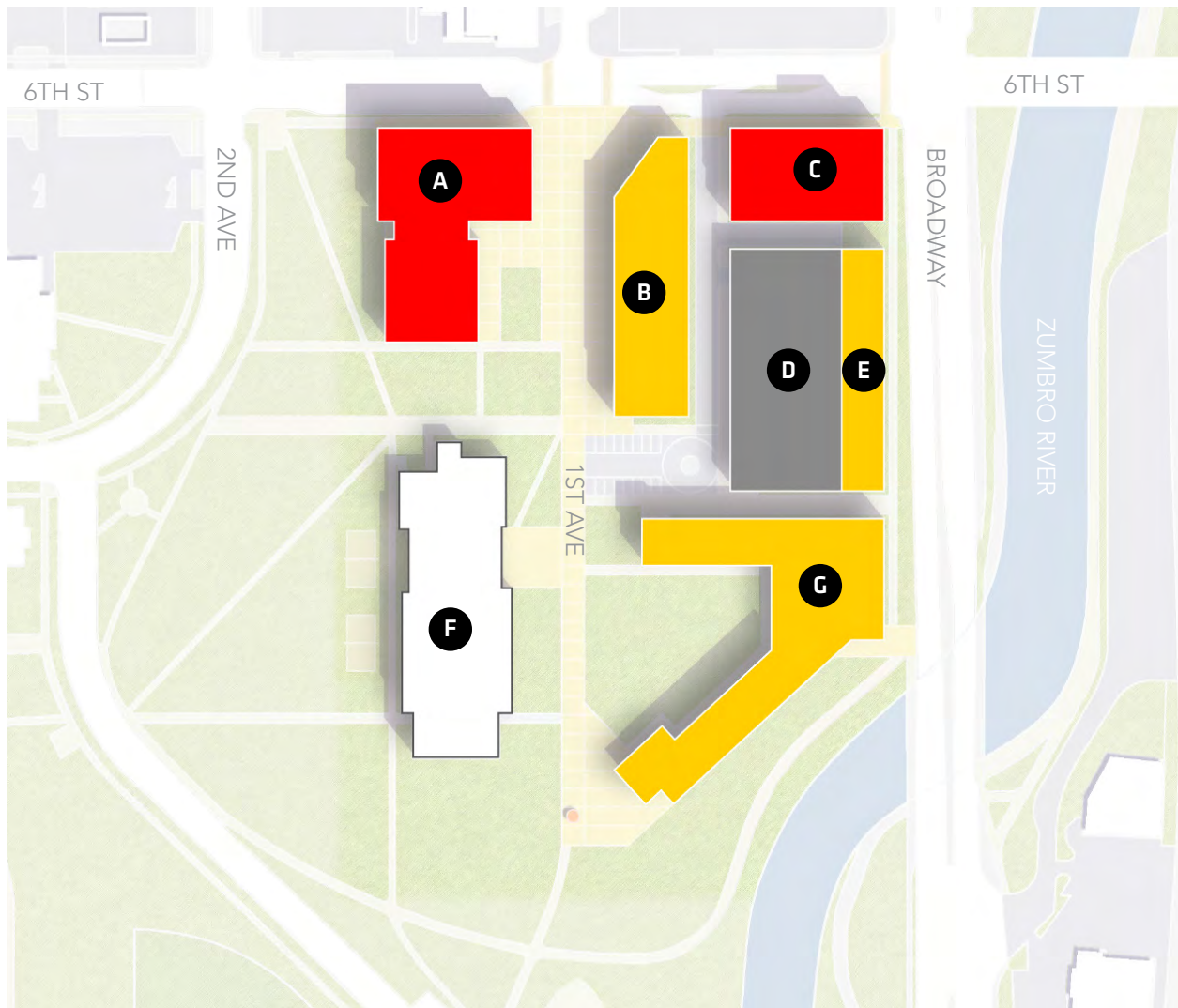
The Education District is poised to be Rochester’s hub of learning, research, and collaboration. The master plan envisions a district that fosters synergies between UMR and its partners by bringing students together with the institutional and industry leaders of the medical health professions. Through 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

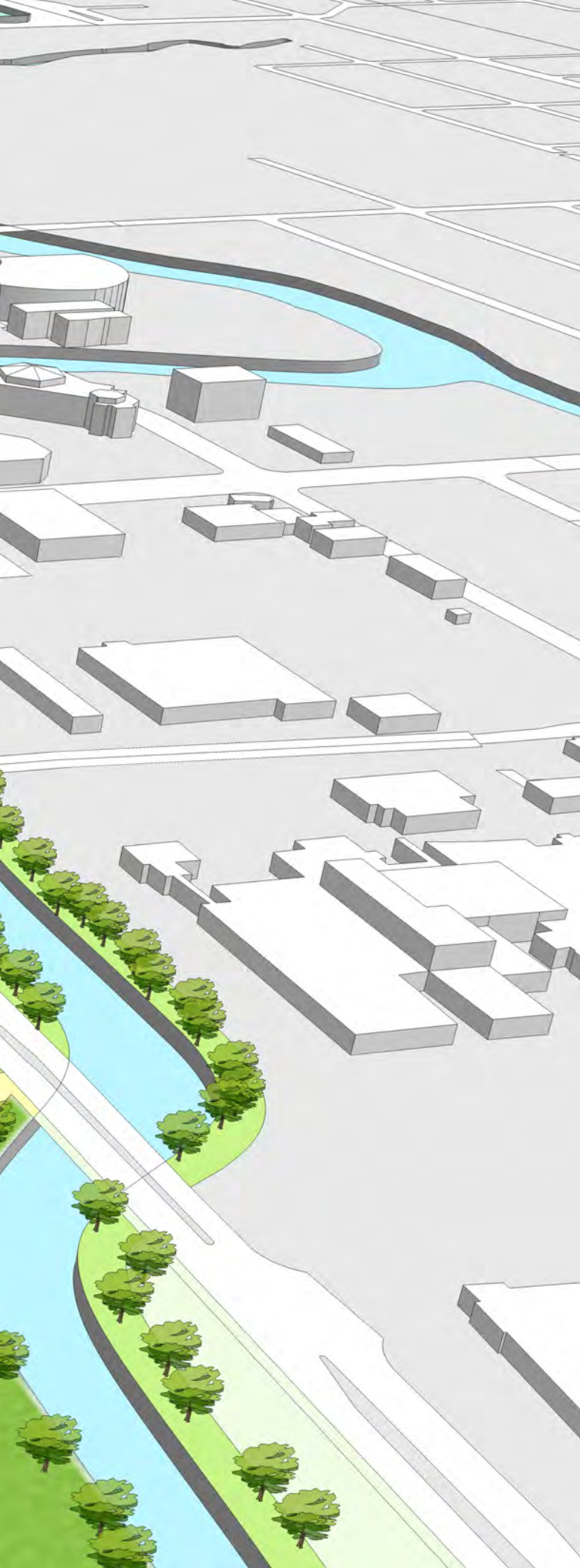
will connect a succession of green spaces and plazas. A new campus green, located south of Development Site A, will connect 1st Avenue to Soldiers Field Memorial Park. And a large open space will be incorporated into the partnership building planned for the site adjacent to the Zumbro River (G).

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**

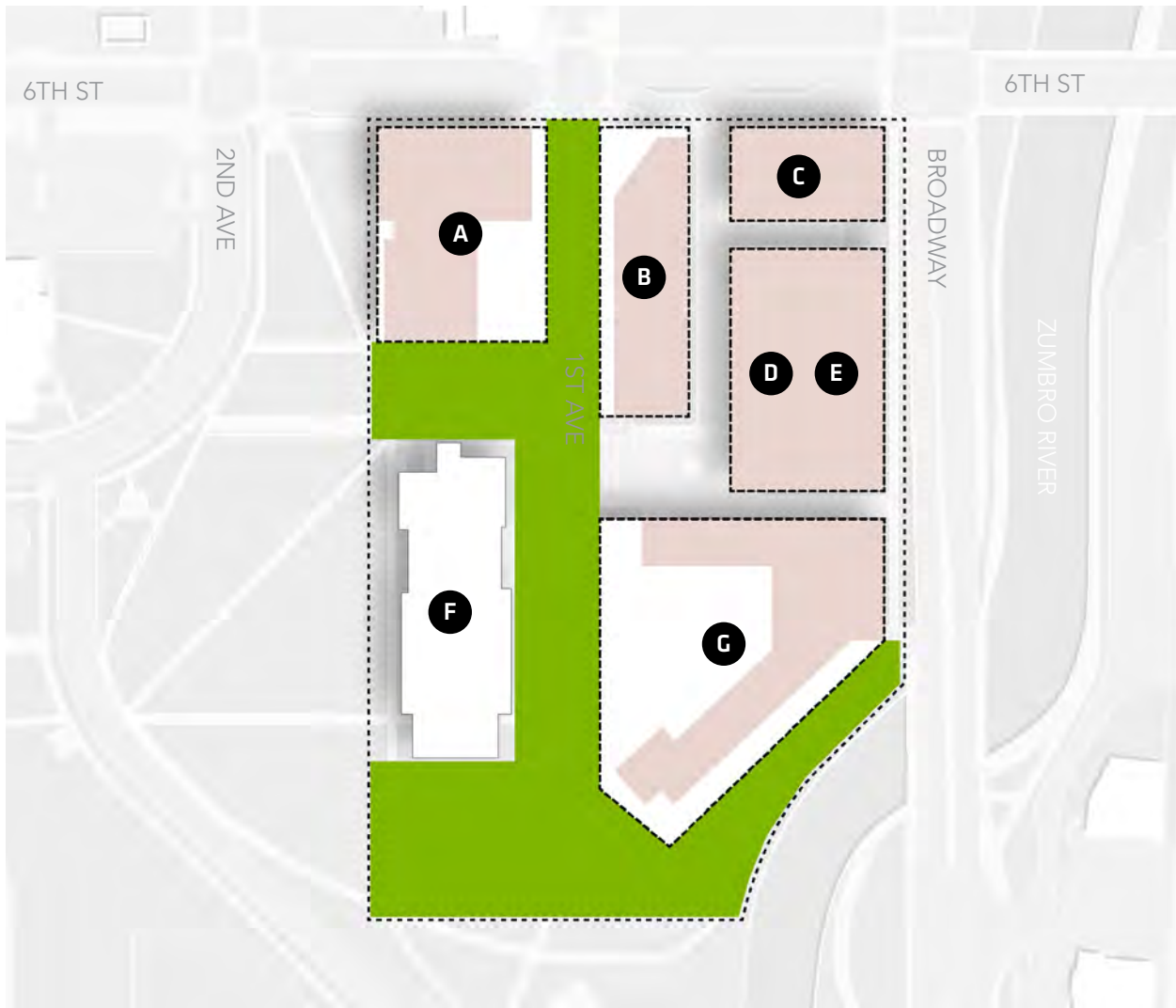
DESIGN BUILDINGS TO CREATE WELL-DEFINED EDGES THAT FRAME STREETS, PLAZAS, AND OPEN SPACES AND ESTABLISH A COMFORTABLE, HUMAN-SCALED, AND CONNECTED PUBLIC REALM.

### **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
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	



## 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

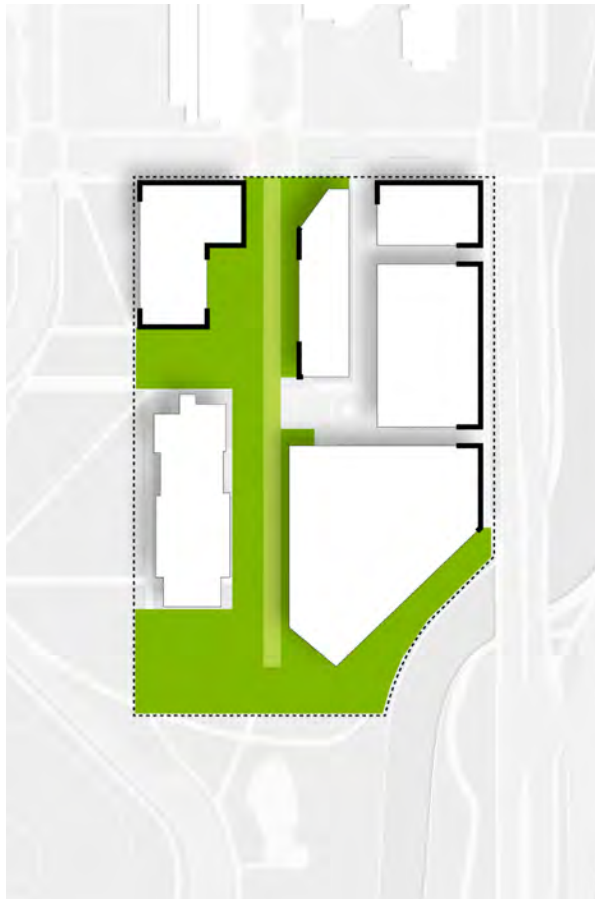
The urban design framework for the Education District aspires to utilize the Rochester urban grid within the district and to create a strong pedestrian network with connections to Soldiers Memorial Field Park.

### 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.

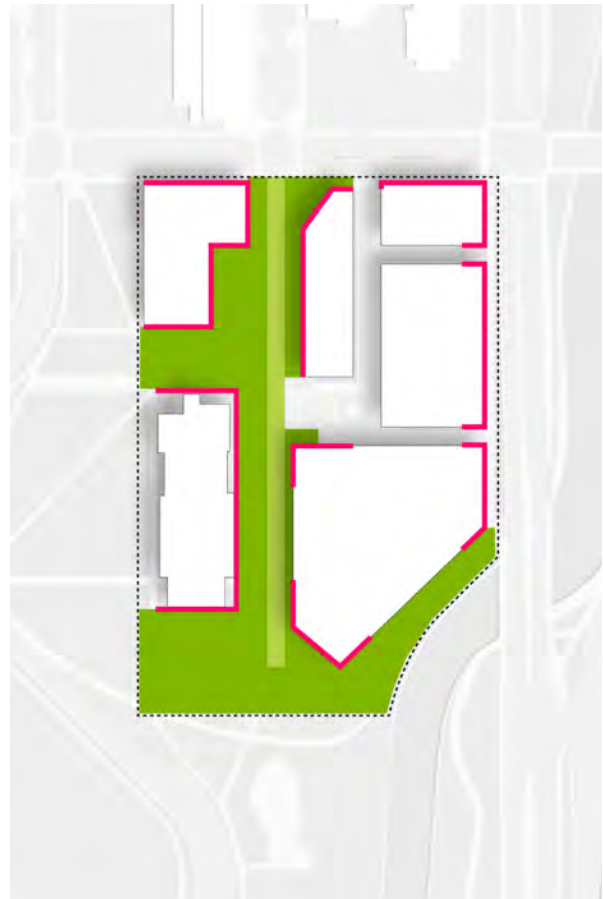
### Building Orientation

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.

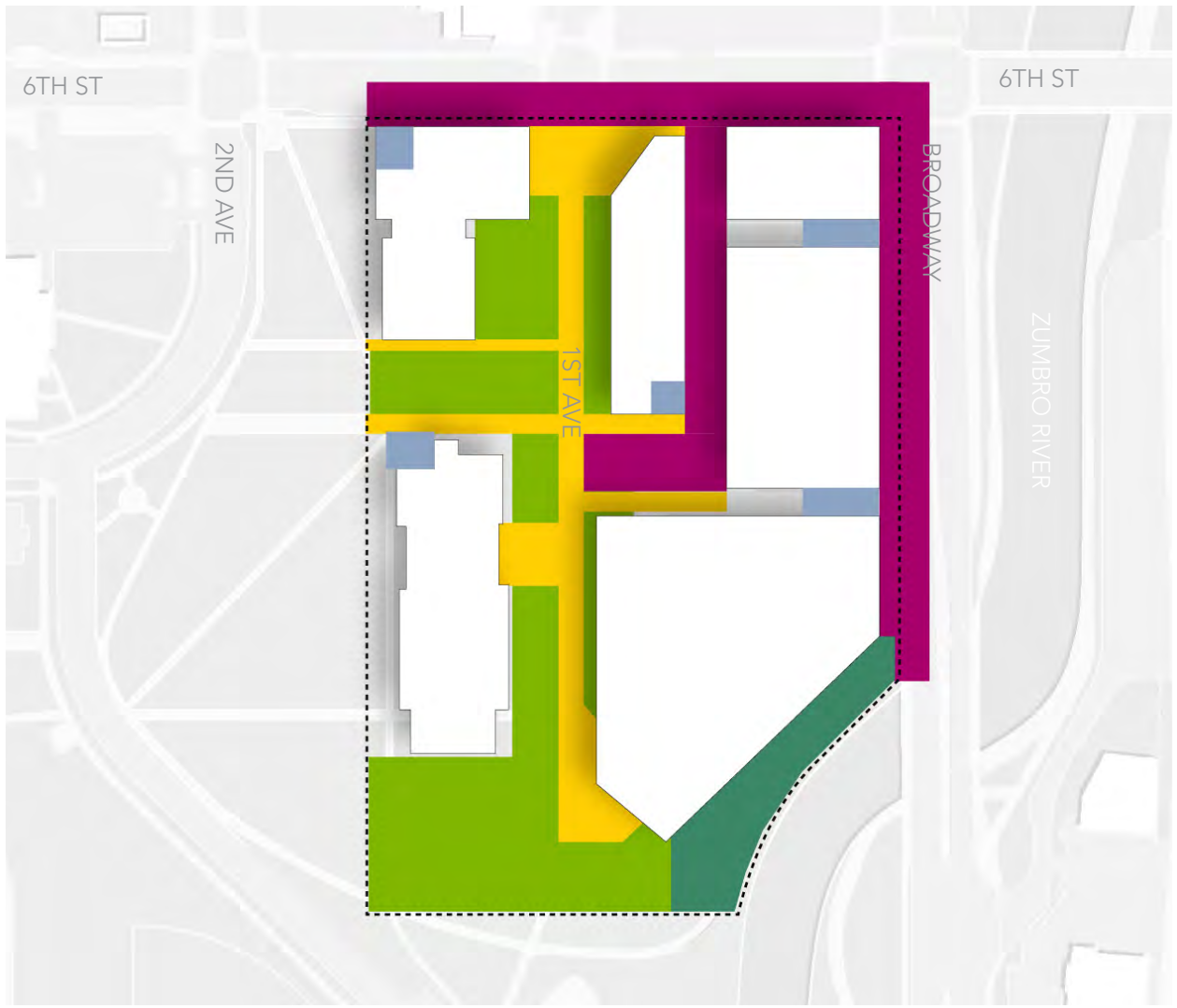
In general, throughout the district, a ten- to fifteen-foot step-back at a four-story building height along active streets and other public places is recommended to ensure a pedestrian scale.

#### **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."<sup>1</sup>

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.

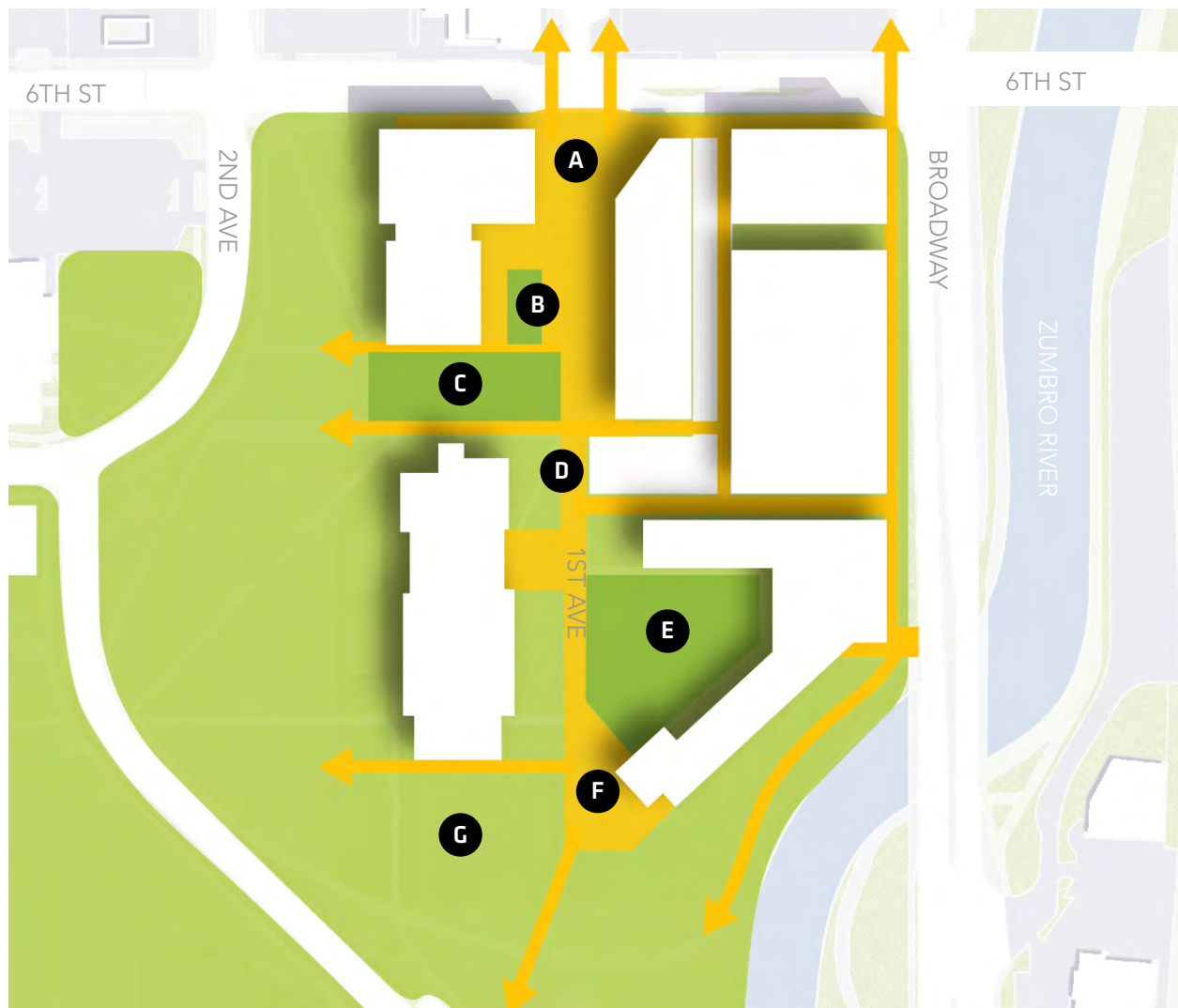
#### **Ground Level Treatment and Building Entrances**

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

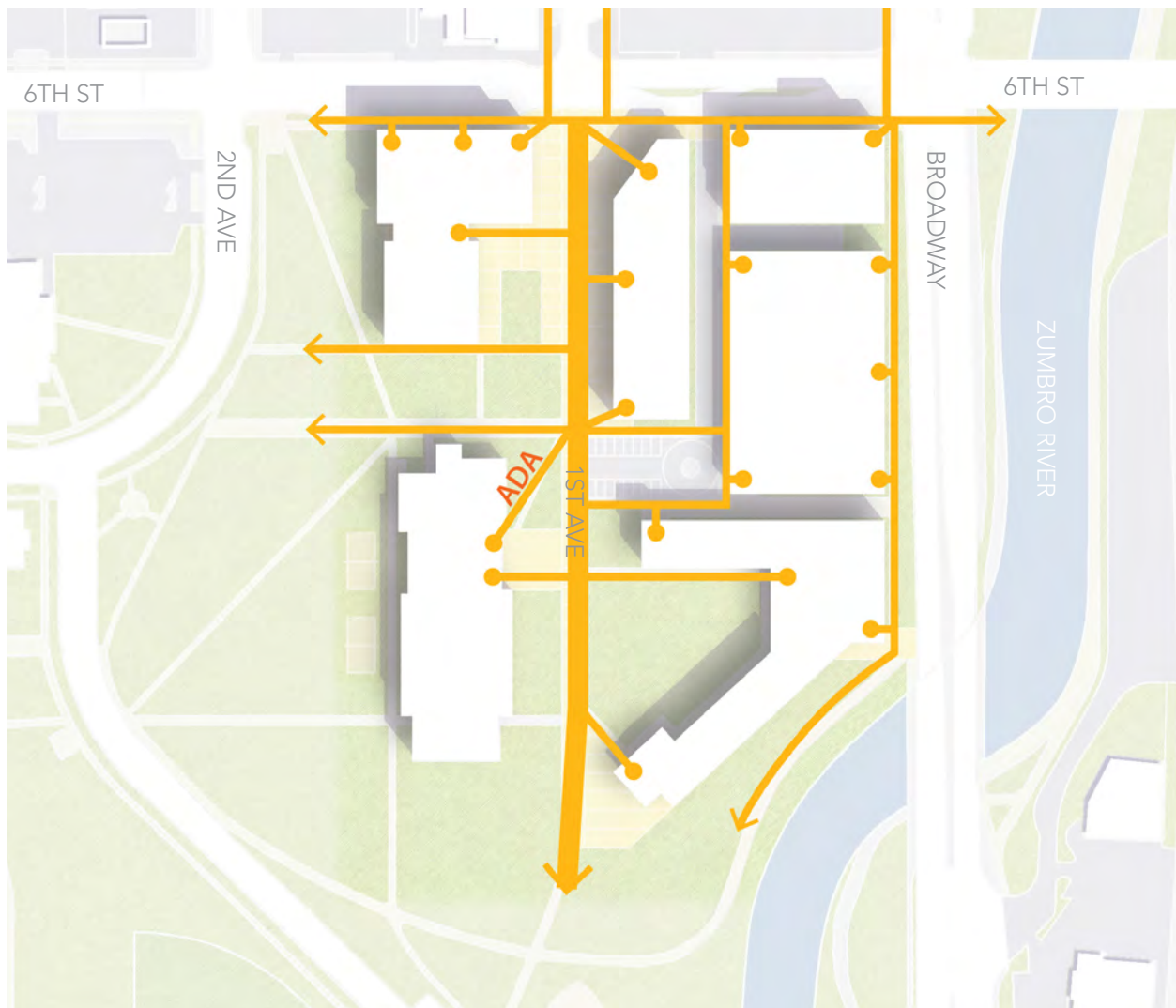
- A. Gateway plaza
- B. “Spill out” plaza/grove
- C. Campus green
- D. Pedestrian “Main Street”
- E. Flexible lawn
- F. Gateway plaza
- G. Rain garden





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.

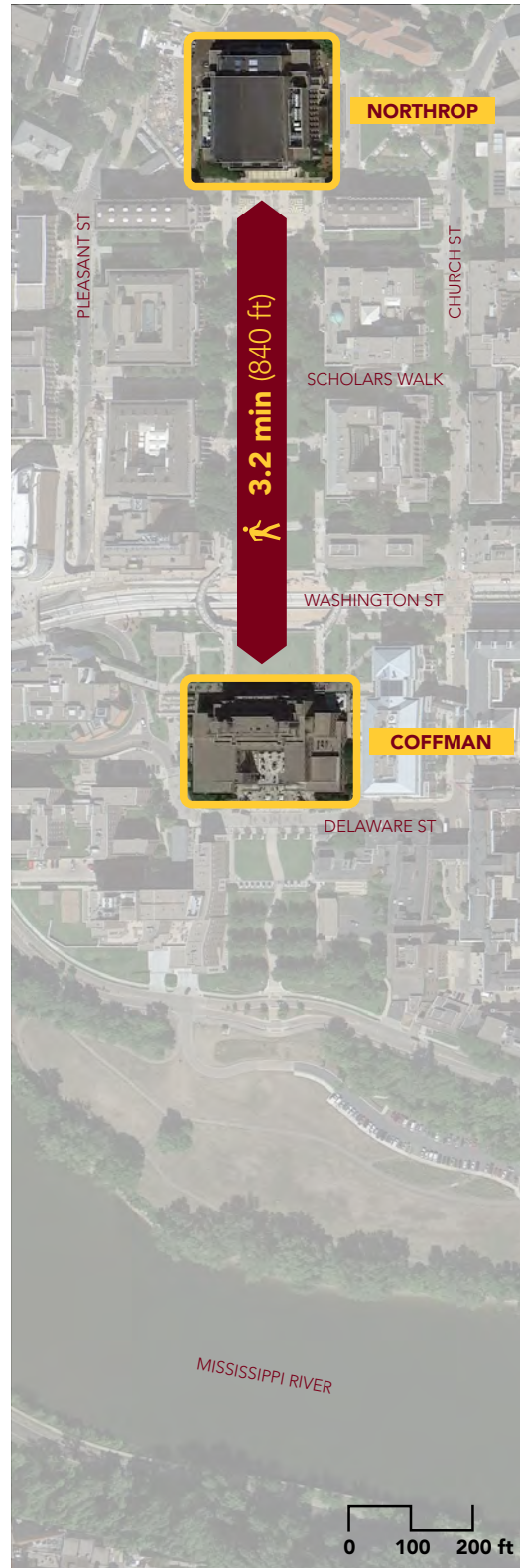
As the primary connection between the Education District, 318 Commons, and University Square; the quality of the public realm from a pedestrian's perspective will be vital.

Stationsstraat | Sint-Niklaas by Grontmij, Belgium

COMPARATIVE WALK DISTANCES



UM Rochester



UM Twin Cities

## PEDESTRIAN FRAMEWORK (CONT).

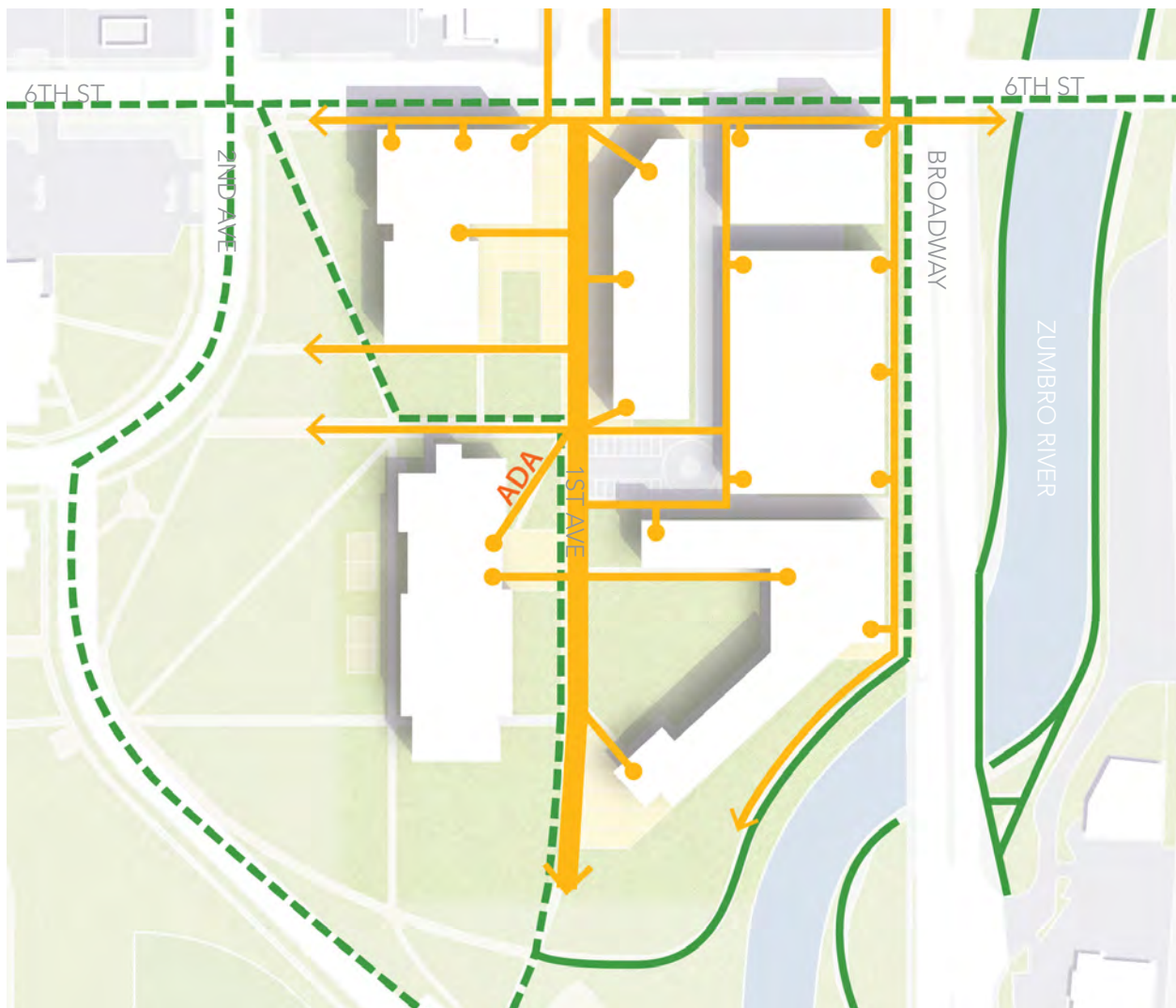
---

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.<sup>1</sup>

### 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.

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

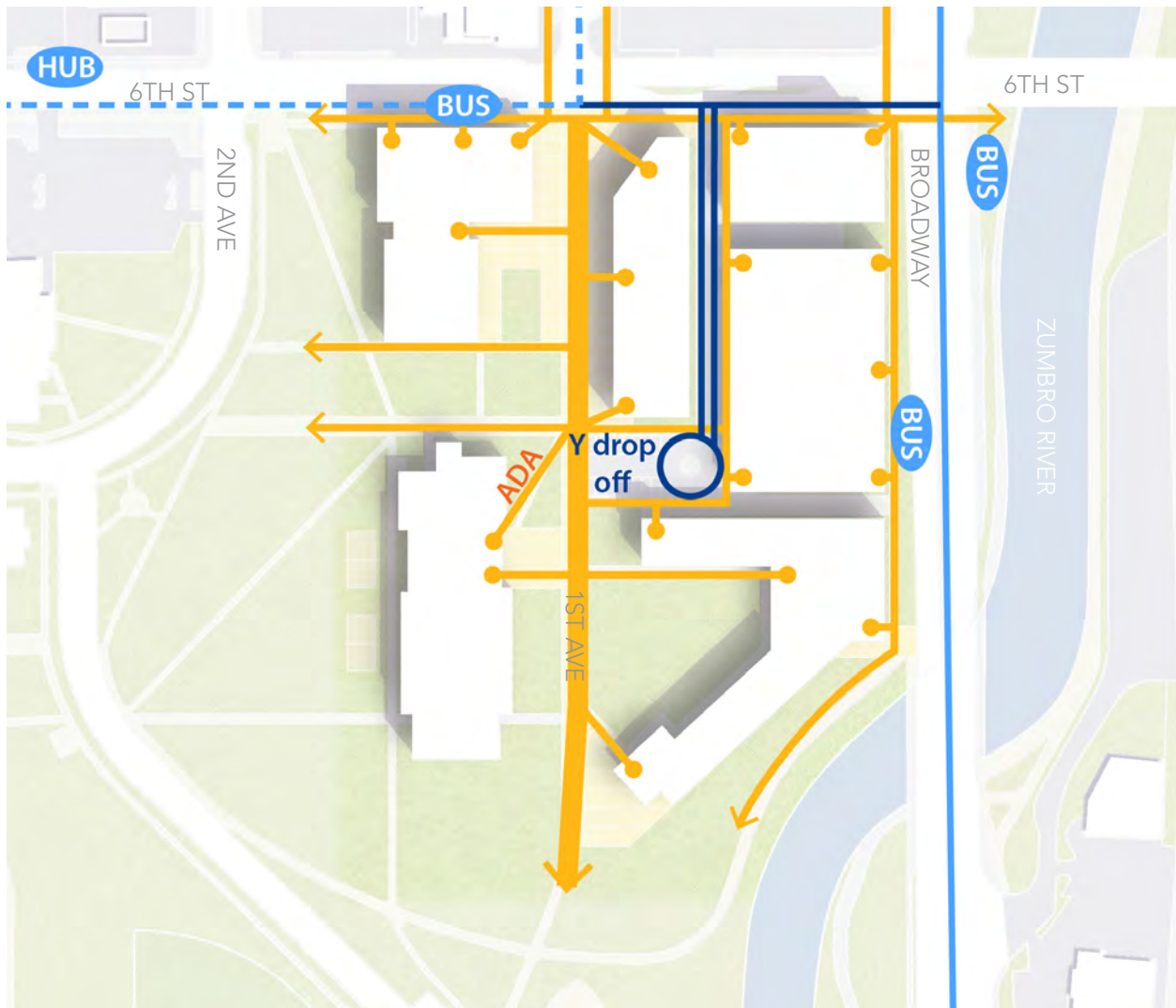


Pier 6 | Brooklyn, USA (above)



Nice Ride bicycle station, Minneapolis, USA (left)

## TRANSIT FRAMEWORK



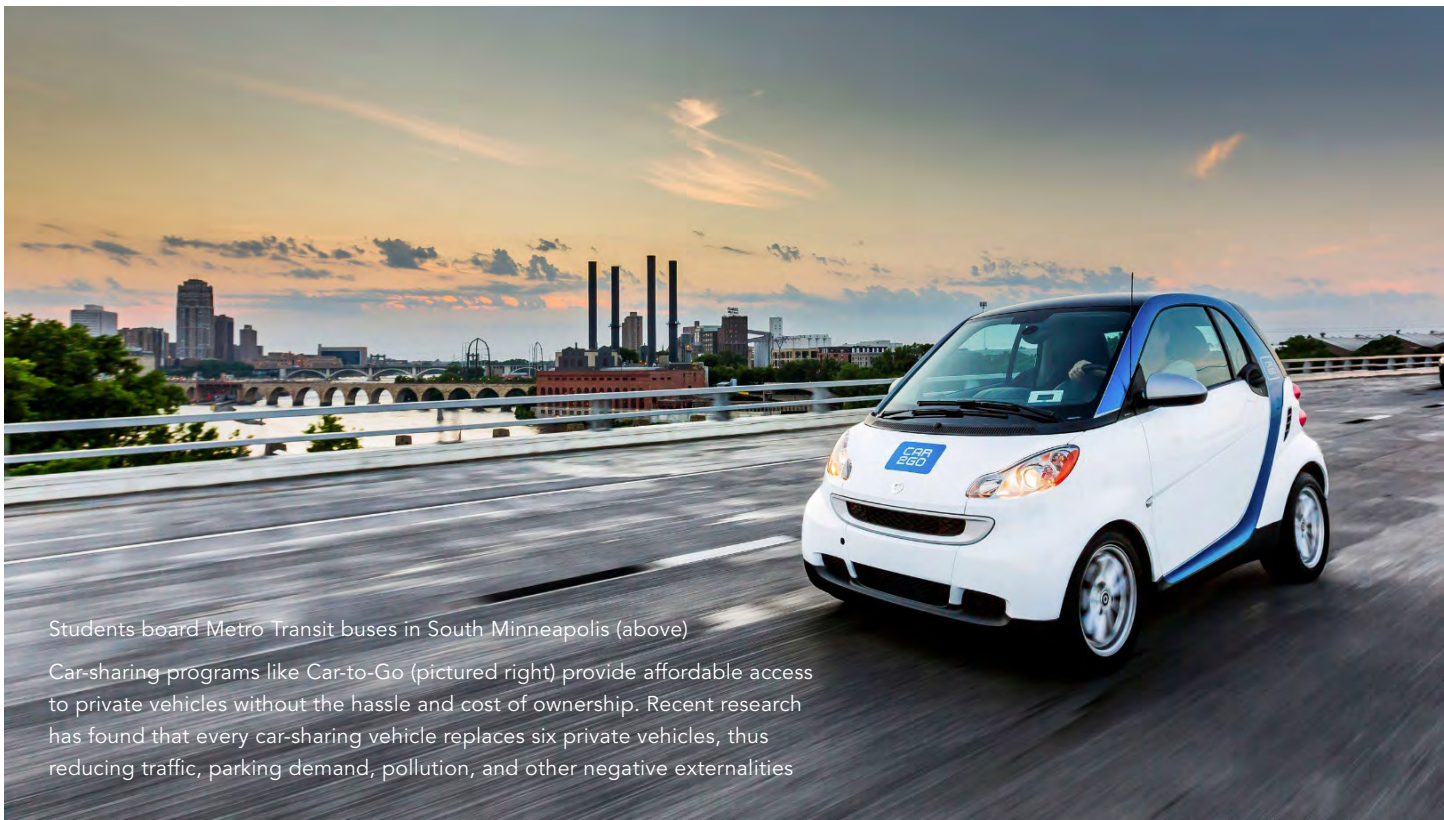
A sizeable portion (17%) of MyUMR survey respondents identified transit as their first or second most preferred means of getting around. UMR offers discounted transit passes to UMR students, which boosts ridership. However, the Rochester's transit system is currently designed around professional commuters 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.

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.

### LEGEND

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





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



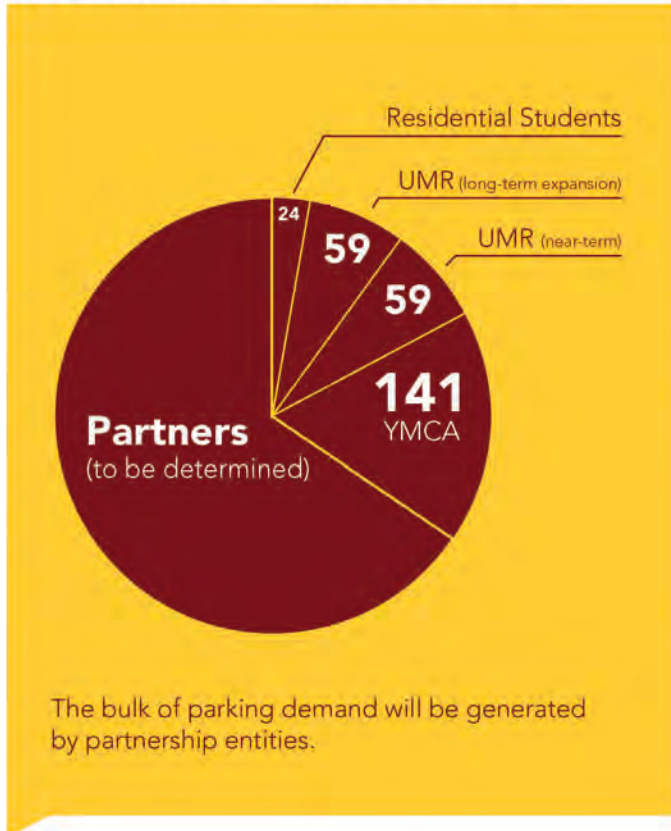
The car is the dominant mode of transport in Rochester, and the UMR community by-and-large relies on the private automobile to access the existing campus. While the Education District has been planned to prioritize pedestrians, convenient car access has been built into the design.

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

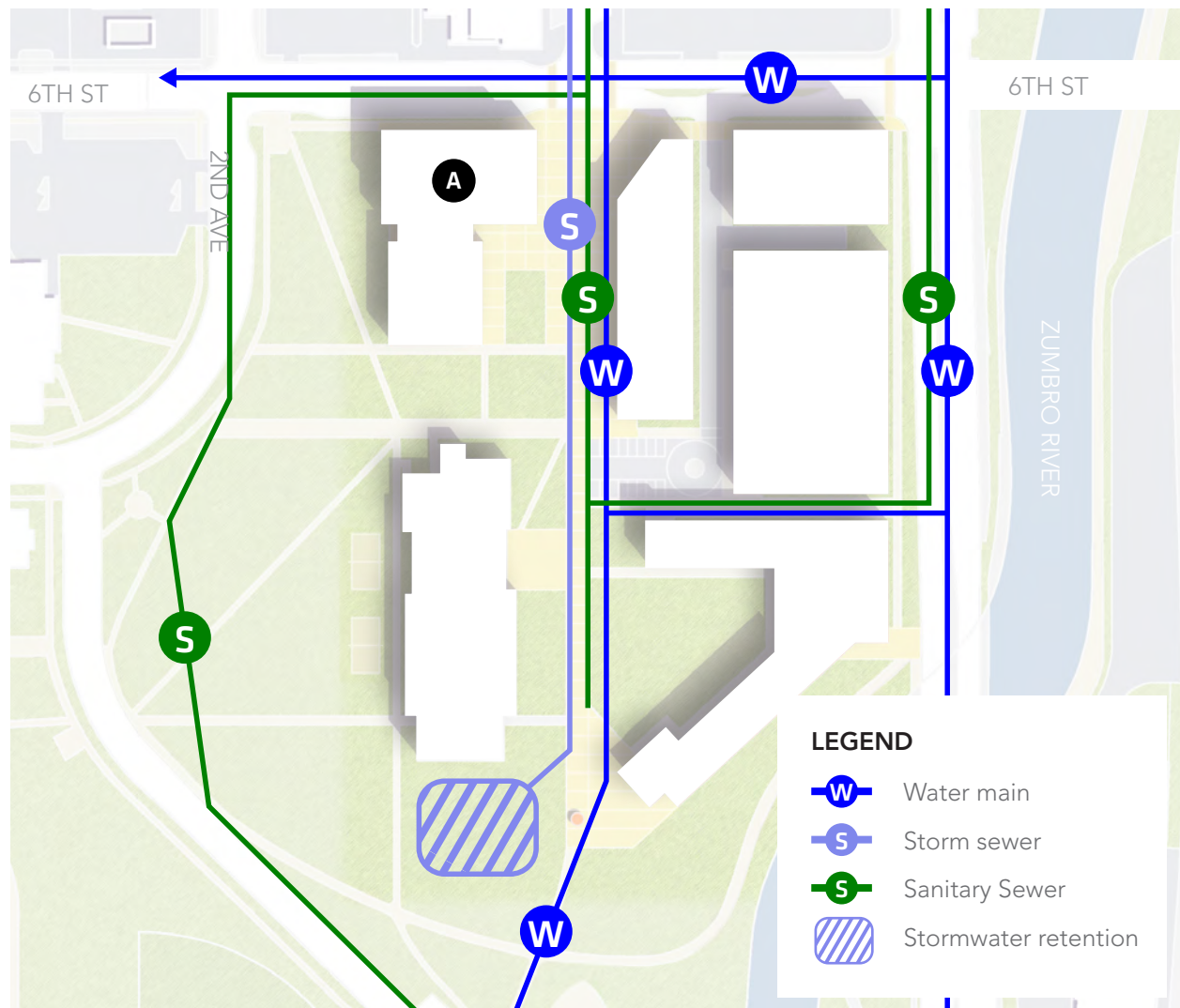


primary means of transportation (driving was second with 42 percent). These preferences are already evident in parking utilization, particularly among students. UMR leases just one parking space for every 8.2 students, evidence that students are choosing car-free or car-limited lifestyles.

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.

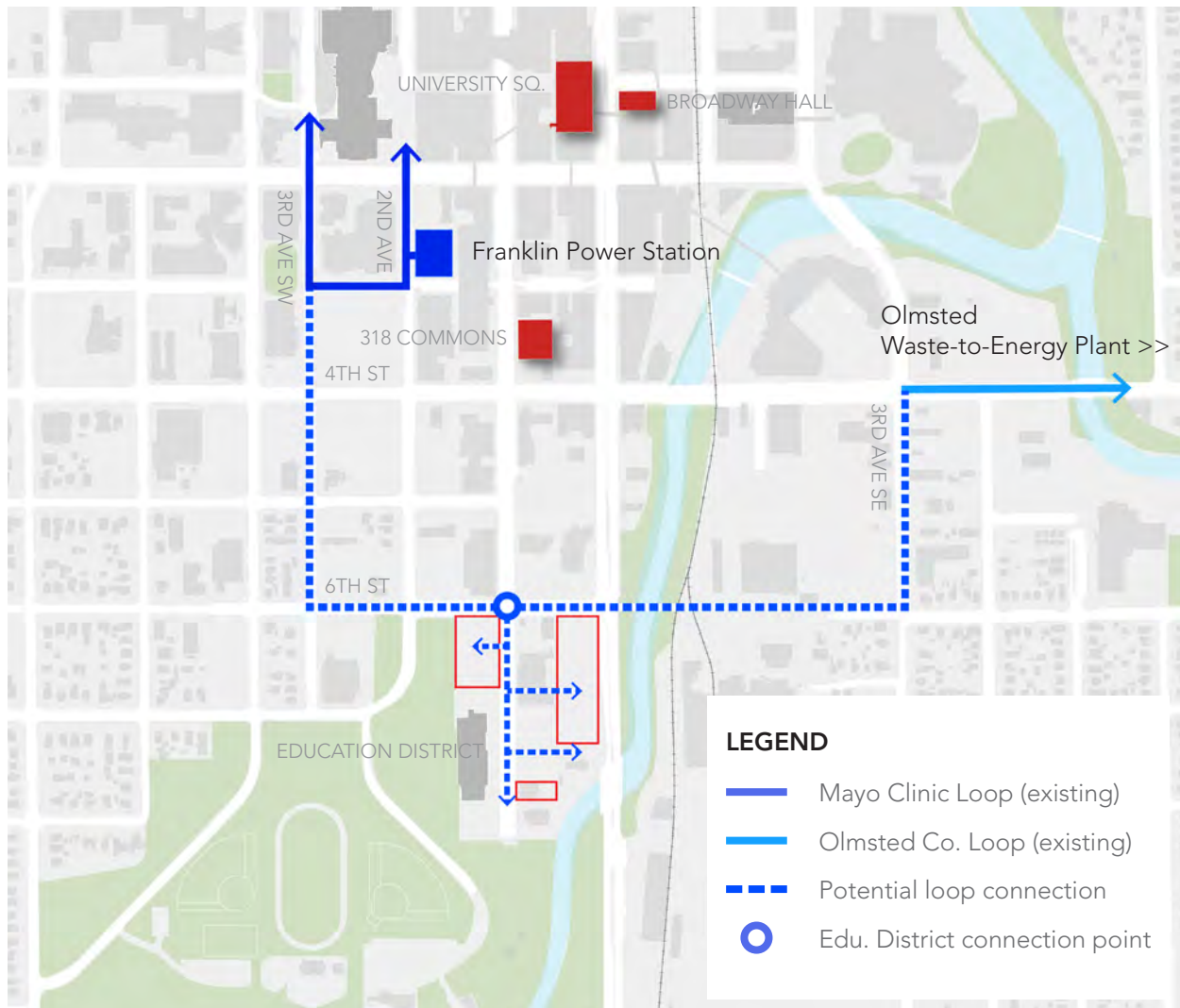
**Water Main**

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.<sup>1</sup>

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.<sup>2</sup>

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.

MINNESOTA



## **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.<sup>3</sup> 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

<sup>3</sup> 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

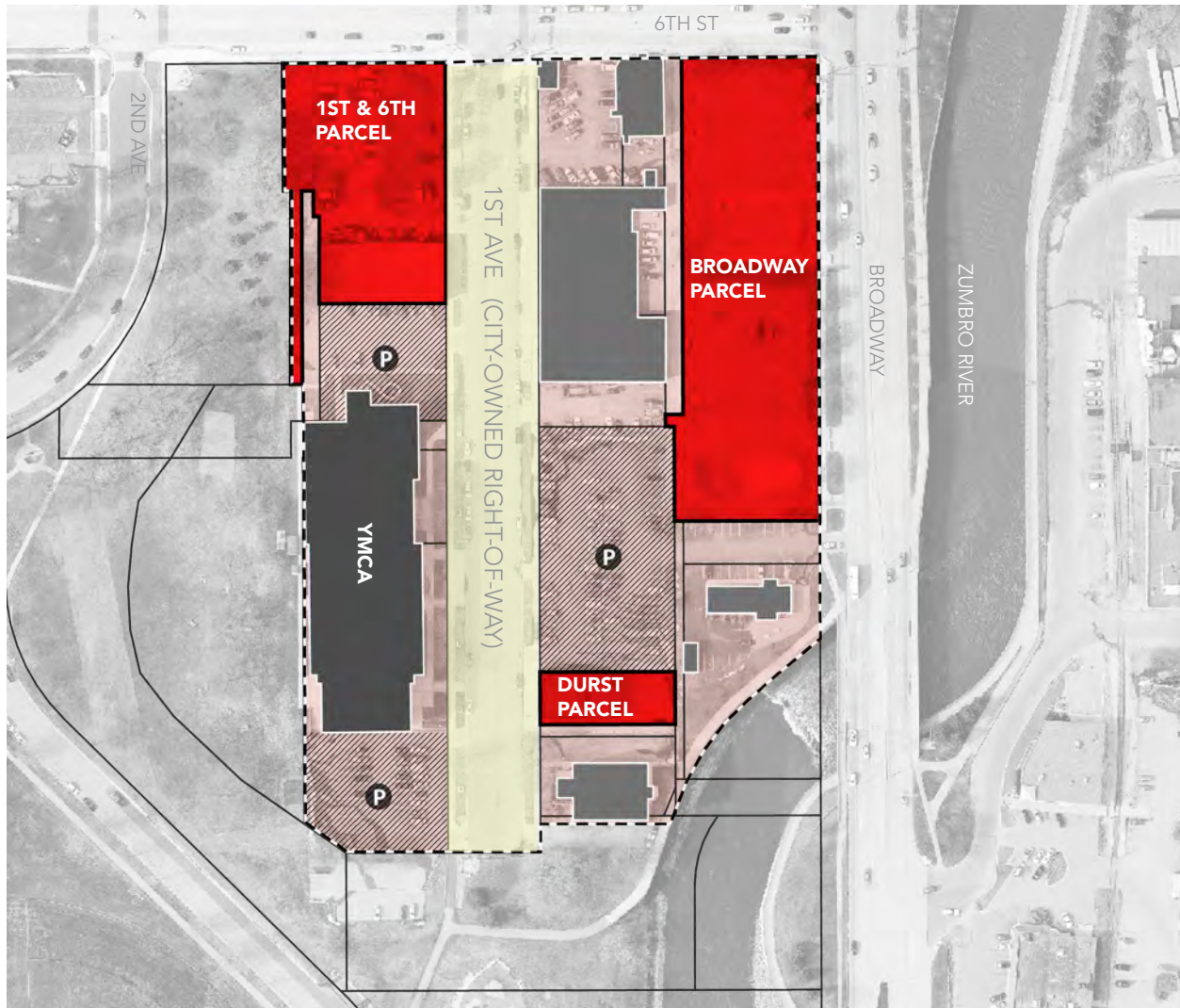


1ST & 6TH PARCEL



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.

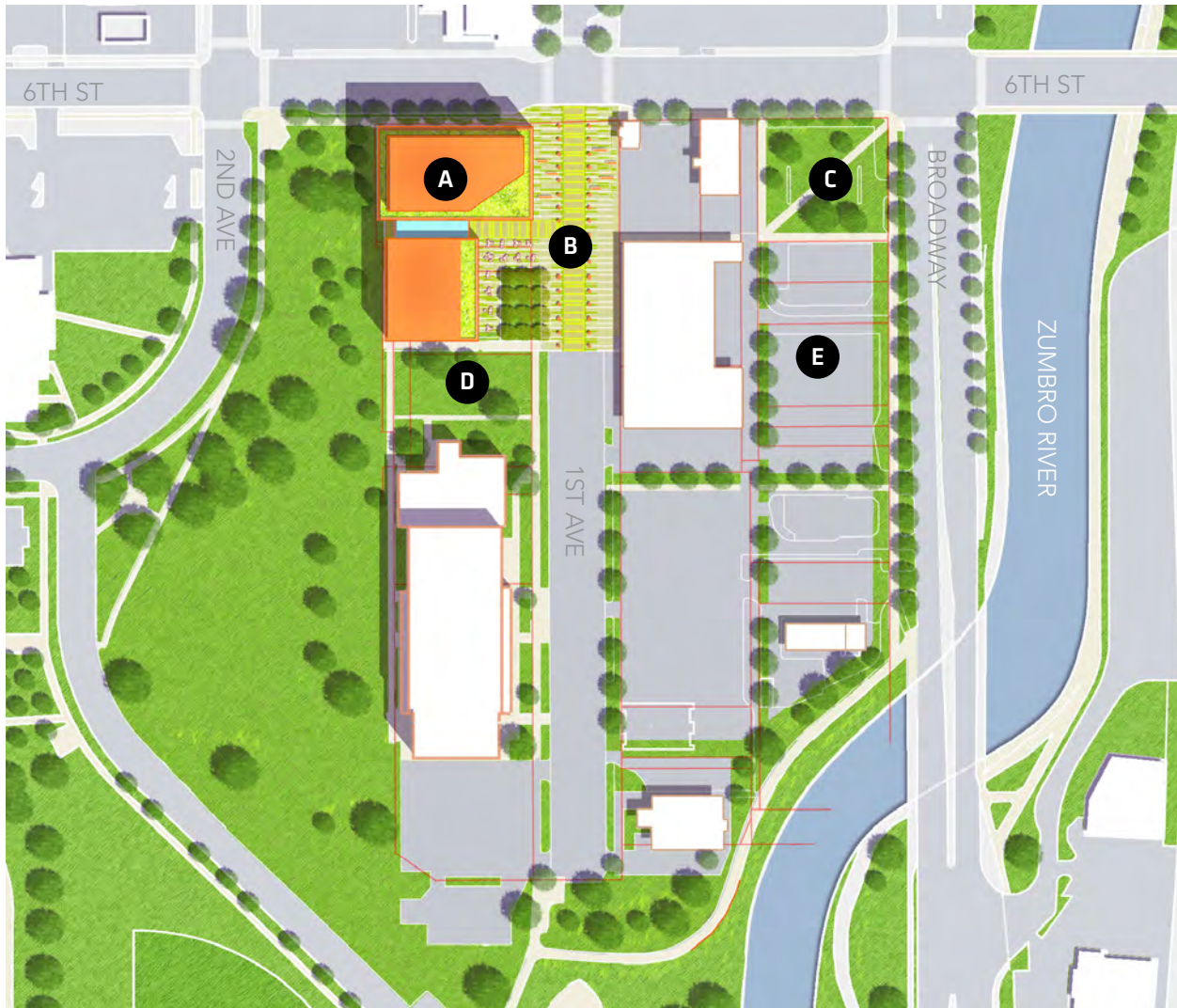
The parcels that the Y building occupies will remain Y-owned. UMR's vision for the Education District respects the current boundaries of Soldiers Memorial Field Park.

### 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
<b>Education District total</b>	<b>9.77</b>

## PHASING



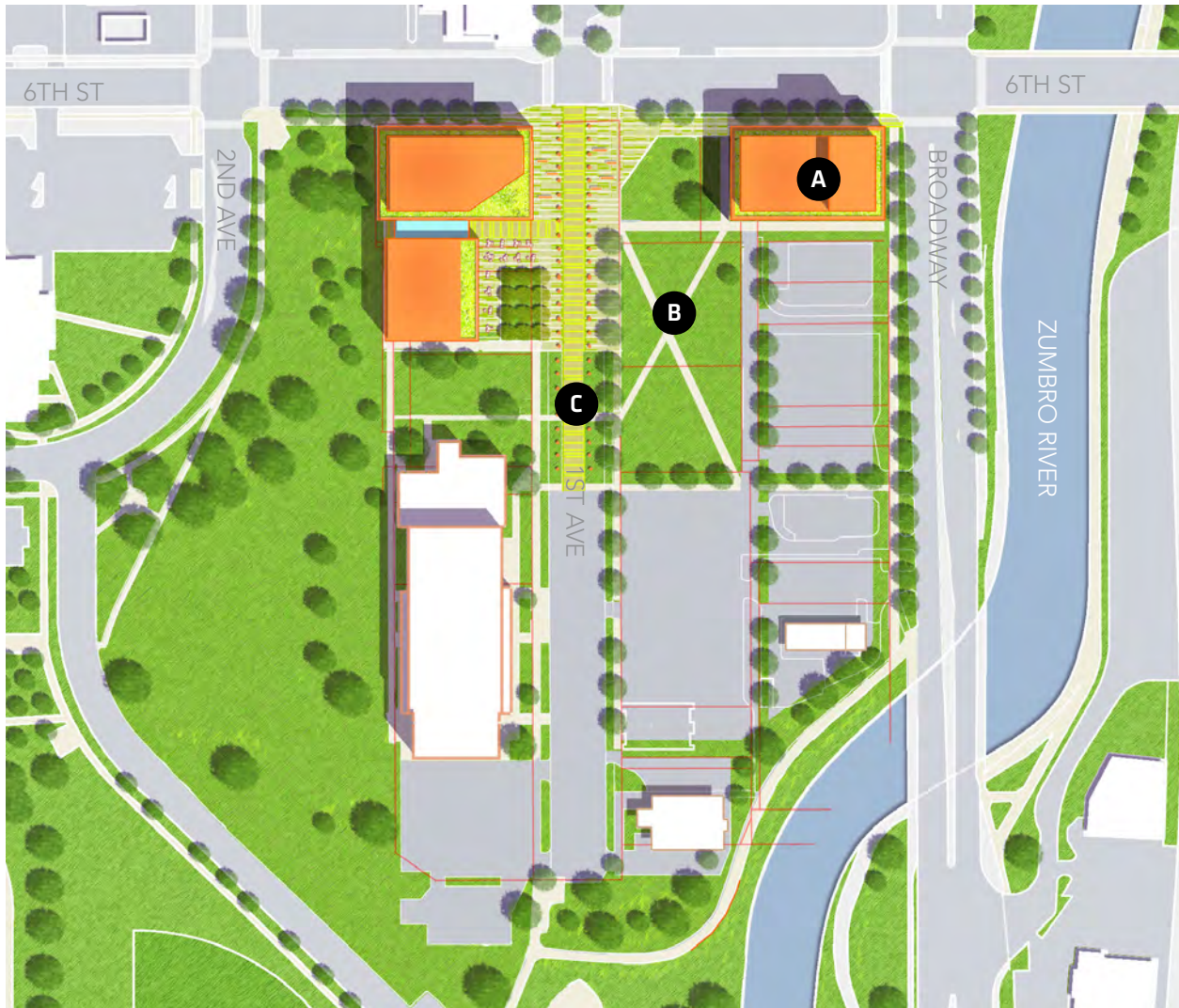
Project	Description
A	Conduct site testing and analysis to inform decisions about structure types, and environmental conditions. Construct UMR-1, a mixed use building containing classrooms, labs, office space, study/gathering space, and partnership space.
B	Complete first section of 1st Avenue pedestrianization. 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