



Finance & Operations Committee

September 2023

September 7, 2023

1:00 p.m.

Boardroom, McNamara Alumni Center

FIN - SEP 2023

1. 2023-24 Committee Work Plan

Docket Item Summary - 5

2023-24 Committee Work Plan - 7

2. Interim President's Recommended 2023 Six-Year Capital Plan and 2024 State Capital Request – Review

Docket Item Summary - 10

Resolution: 2023 Six-Year Capital Plan - 16

Resolution: 2024 State Capital Request - 17

Project Report - 18

Presentation Materials - 30

3. Interim President's Recommended Supplemental FY 2025 State Budget Request – Review

Docket Item Summary - 51

Resolution - 54

Presentation Materials - 56

4. Overview of University Budget Model

Docket Item Summary - 63

Presentation Materials - 65

5. Real Estate Transactions – Review/Action

Docket Item Summary - 87

Transaction Narrative - 88

Map - 92

Presentation Materials - 93

6. Duluth Campus Plan – Review

Docket Item Summary - 100

Narrative - 101

UMD Campus Plan - 109

UMD Climate Action Plan - 215

Presentation Materials - 271

7. Consent Report – Review/Action

Docket Item Summary - 310

Purchase of Goods and Services \$1,000,000 and Over - 313

Approval of Use of UMore Park Funds

Narrative - 322

Map - 324

2009 Resolution - 325

2015 Resolution - 332

Capital Budget Amendments

Main Production Kitchen Renovation, Residence Dining Center, Duluth campus

Narrative - 339

Map and Visuals - 341

Middlebrook Dining Renovation, West Bank, Twin Cities campus

Narrative - 342

Map and Visuals - 344

Employment Agreement, Dean of the School of Public Health, Twin Cities campus

Personnel Appointment Summary - 345

Employment Agreement - 347

Real Estate Transactions

Land exchange for properties on 350th Avenue and State Highway 14, Waseca

Narrative - 352

Map - 354

Purchase of 160 acres in Mower County for FAARM

Narrative - 355

Map - 358

Lease of office space for the Learning Abroad Center's program in Montpellier, France

Narrative - 359

Map - 361

Schematic Designs

Cedar Creek Classroom Expansion, Cedar Creek Reserve, Twin Cities campus

Narrative - 362

Map and Visuals - 364

Shepherd Lab Renovation, Twin Cities campus

Narrative - 365

Map and Visuals - 367

Women's Gymnastics Building, Twin Cities campus

Narrative - 368

Map and Visuals - 370

8. Information Items

Docket Item Summary - 371

Central Reserves General Contingency Allocations - 373

Capital Financing & Debt Management Report - 374

Strategic Facilities & Real Estate Report - 387



BOARD OF REGENTS DOCKET ITEM SUMMARY

Finance & Operations

September 7, 2023

AGENDA ITEM: 2023-24 Committee Work Plan

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Regent Douglas A. Huebsch
Myron Frans, Senior Vice President

PURPOSE & KEY POINTS

The purpose of this item is to review and discuss the 2023-24 committee work plan.

BACKGROUND INFORMATION

Board of Regents Policy: *Board Operations and Agenda Guidelines* describes the role of the Finance & Operations Committee as follows:

The Finance & Operations Committee oversees and makes recommendations to the Board related to the University’s operations, fiscal stability, physical assets (e.g., land, buildings, infrastructure, technology, and equipment), and long-term economic health. The committee also advises the administration on faculty and staff compensation strategy, benefits, recruitment, and engagement.

Specifically, this committee recommends to the Board:

- appointments reserved to the Board as defined by Board of Regents Policy: *Reservation and Delegation of Authority* Article I, Section IV.
- budgetary, financial, and investment matters reserved to the Board as defined by Board of Regents Policy: *Reservation and Delegation of Authority* Article I, Section VII.
- property, facilities, and capital budgets reserved to the Board as defined by Board of Regents Policy: *Reservation and Delegation of Authority* Article I, Section VIII.
- employment and labor relations matters reserved to the Board as defined by Board of Regents Policy: *Reservation and Delegation of Authority* Article I, Section XI.

This committee provides oversight of:

- long-range financial planning strategies, including total indebtedness of the University and investment portfolio;

- the financial relationship between the University and its partners, including affiliated foundations, clinical operations, and external entities;
- potential risks within University finance and operations;
- long-range physical asset planning strategies, including technology infrastructure;
- public safety and emergency preparedness;
- operational services such as housing, parking, transportation, and dining;
- faculty and staff employment, compensation and benefits policy, including senior leader compensation, benchmarking, and terms of employment; and
- employee engagement and workforce development.

This committee also reviews:

- the annual central reserves fund report;
- the annual capital financing and debt management report;
- annual strategic facilities and real estate report, which includes updates on the University's facilities condition assessment and space utilization, real estate transactions from the past fiscal year, and capital project management updates for projects in process that have been approved in the annual capital improvement budget and have a value equal to or greater than \$1,000,000;
- exceptions to a competitive bid process for purchases requiring Board approval;
- annual asset management report;
- the annual financial report;
- selected financial metrics that measure the University's fiscal condition;
- periodic updates on future facilities projects;
- design guidelines when a project design represents an exception to adopted campus master plans; and
- other financial reports, employment reports, and facilities management reports and significant issues.

**Finance & Operations Committee
2023-24 Work Plan**

Date	Topics
2023	
September 7-8	<ul style="list-style-type: none"> • 2023-24 Committee Work Plan • Interim President’s Recommended 2023 Six-Year Capital Plan and 2024 State Capital Request – Review • Interim President’s Recommended Supplemental FY 2025 State Budget Request - Review • Overview of University Budget Model This item will provide an overview of the University’s budget model. The discussion will explain fundamental elements of the model, including resource responsibility centers, cost pools, and how the model functions. • Duluth Campus Plan – Review The committee will review the proposed Duluth Campus Plan. The presentation will include an overview of the plan, how the campus plan interacts with the Climate Action Plan framework, and provide the committee with an opportunity to provide feedback. • Real Estate Transaction – Review/Action • Consent Report • Information Items <ul style="list-style-type: none"> ○ [Central Reserves General Contingency Allocations] ○ Capital Finance & Debt Management Report ○ Strategic Facilities & Real Estate Report
October 12-13	<ul style="list-style-type: none"> • Interim President’s Recommended 2023 Six-Year Capital Plan and 2024 State Capital Request – Action • Interim President’s Recommended Supplemental FY 2025 State Budget Request – Action • Duluth Campus Plan – Action • University Job Structures: Past, Present & Future This item will provide an overview of the University’s job structures and how they have changed over time. It will describe the importance of job structures within human resource disciplines and define the University’s various employee groups and how they utilize different job structures. • Consent Report • Information Items <ul style="list-style-type: none"> ○ [Central Reserves General Contingency Allocations] ○ Annual Asset Management Report ○ Debt Management Advisory Committee Update ○ Investment Advisory Committee Update ○ Permanent University Fund Report ○ Systemwide Annual Security and Fire Safety Report

December 7-8	<ul style="list-style-type: none"> • FY 2025 Budget Variables & Levers The committee will engage in a policy discussion regarding the preliminary budget planning assumptions for the FY 2025 annual operating budget. • PEAK Implementation Update The committee will receive an update on and discuss the implementation of the PEAK Initiative. The update will provide a summary of Phase 1 implementation and outline planning for Phase 2. • Annual Report on Targeted Business, Community Economic Development, and Small Business Programs This item will provide the annual report on Targeted Business, Community Economic Development, and Small Business Programs. The committee will engage with the report and hear about the University’s work to increase supplier diversity. • Consent Report • Information Items <ul style="list-style-type: none"> ○ [Central Reserves General Contingency Allocations] ○ FY 2023 Annual Financial Report ○ Investment Advisory Committee Update ○ MPact 2025 Progress - Finance and Operations
2024	
February 8-9	<ul style="list-style-type: none"> • FY 2025 Annual Operating Budget Framework The committee will review and provide input on a draft framework for the FY 2025 Annual Operating Budget. • Evolution of the University’s Employment Structure This item will build on the October discussion and provide the committee with a summary of how the University’s employment structure has changed over time. The committee will engage with data showing changes in headcount, shifts in job family, and factors that have influenced those changes. • Strategic Property Update This item will summarize the work being done by the Strategic Property Planning Workgroup to review the University’s real estate portfolio systemwide. • Consent Report • Information Items <ul style="list-style-type: none"> ○ [Central Reserves General Contingency Allocations]
May 9-10	<ul style="list-style-type: none"> • Interim President’s Recommended FY 2025 Annual Capital Improvement Budget – Review • Interim President’s Recommended FY 2025 Annual Operating Budget – Review • Annual Workforce & Human Resources Strategy Report The committee will engage with key strategic initiatives underway within the Office of Human Resources. Included with the report is annual compensation and benefits data. • MPact 2025 – Sustainability Update This item will outline current steps being taken to meet the University’s sustainability goals and include the annual Progress Report on Sustainability & Energy Efficiency Targets and Standards. • Consent Report

May 9-10	<ul style="list-style-type: none"> • Information Items <ul style="list-style-type: none"> ○ [Central Reserves General Contingency Allocations] ○ Investment Advisory Committee Update
June 13-14	<ul style="list-style-type: none"> • Interim President’s Recommended FY 2025 Annual Capital Improvement Budget - Action • Interim President’s Recommended FY 2025 Annual Operating Budget - Action • PEAK Implementation Update This item will outline progress made by the implementation of the PEAK Initiative during Phase 2. The item will also preview Phases 3 and 4 and the areas of the University that will be the focus of those phases. • Rochester Campus Plan - Review The committee will review the proposed Rochester Campus Plan. The presentation will include an overview of the plan, how the campus plan interacts with the Climate Action Plan framework, and provide the committee with an opportunity to provide feedback. • Consent Report • Information Items <ul style="list-style-type: none"> ○ [Central Reserves General Contingency Allocations] ○ Investment Advisory Committee Update



BOARD OF REGENTS DOCKET ITEM SUMMARY

Finance & Operations

September 7, 2023

AGENDA ITEM: Interim President’s Recommended 2023 Six-Year Capital Plan and 2024 State Capital Request

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Interim President Jeff Ettinger
Myron Frans, Senior Vice President
Alice Roberts-Davis, Vice President, University Services

PURPOSE & KEY POINTS

The purpose of this item is to review the Interim President’s Recommended 2023 Six-Year Capital Plan and 2024 State Capital Request.

The Interim President’s Recommended 2023 Six-Year Capital Plan (Plan) includes major capital improvements planned for calendar years 2024 through 2029. The Plan includes projects to be funded with State of Minnesota (State) capital bonding as well as major projects funded by the University through a combination of debt, local unit resources, fundraising, and public/private partnerships.

2024 State Capital Request

The 2024 State Capital Request outlines the submission the University will make to the State for consideration during the 2024 legislative session. The submission consists of a \$500 million request for asset preservation, known as Higher Education Asset Preservation and Replacement (HEAPR) funds. This request aligns with the University’s MPact 2025 Systemwide Strategic Plan (MPact 2025) and the priority to preserve our existing physical assets through renovation and capital renewal projects to support the University’s mission.

The request emphasizes reinvestment into the University’s existing infrastructure. Growing deferred renewal backlog has widespread impacts on the student experience, academic programs, research initiatives, and general competitiveness. Asset preservation continues to be the smartest, most cost-effective investment that protects and extends the useful life of investments made by the taxpayers through capital bonding, by students who pay tuition, and by donors who give to support the University’s vision.

2023 Six-Year Capital Plan

The format of the 2023 Six-Year Capital Plan has been updated to reflect the reality of how the University plans capital projects based on the funding status (additional information on the change is included in the background information). The attached report reflects the updated format and indicates three years of state capital requests (2024-2026), several 'projects in development' without specific years indicated, and a third section that lists emerging projects, most still in early planning stages, called 'under consideration.'

The Plan is based on a set of enduring institutional priorities aimed at realizing measurable, tangible benefits for students, for the State, for recruiting and retaining Minnesota talent, and for creating compelling reasons for students, staff, and faculty to choose the University as their academic and employment home. These desired outcomes direct many smaller decisions about prioritization for capital investment. Each priority is discussed below, with specific examples related to the projects listed in the Plan report.

1. Renew high-priority buildings and right-size the overall amount of campus space

The Plan puts the most significant emphasis on fixing or replacing some of the University's worst buildings. High-priority projects reinforce the commitments made in MPact 2025 by complementing institutional values and optimizing how resources are used across the campus system. HEAPR funding remains at the core of this strategy with investments in projects like renewal of the heating plant equipment and critical utility infrastructure at the Crookston campus.

The Facility Condition Assessment (FCA) identifies buildings' physical condition and their needs across the enterprise. This process identifies deferred, non-recurring, and projected renewal needs to determine a facility condition needs index (FCNI). The FCNI (the ten-year projected needs, divided by the estimated replacement value) determines where a building is rated on a scale that starts at 0.0 (excellent) and extends to 1.0 (critical). The table below is updated annually to monitor progress toward reducing poor and critical space.

CAMPUS	TOTAL GSF ¹	ESTIMATED REPLACEMENT VALUE ²	PROJECTED 10-YEAR NEEDS ²	10-YEAR NEEDS / REPLACEMENT VALUE (FCNI)	GSF POOR / CRITICAL
Twin Cities	25,183,826	\$13,066,424,466	\$4,995,271,164	0.38	7,605,765
Duluth	3,388,417	\$1,449,171,780	\$532,028,099	0.37	588,330
Morris	1,000,464	\$524,089,731	\$218,499,881	0.42	481,564
Crookston	726,565	\$425,823,548	\$117,845,574	0.28	106,981
ROCs	1,718,286	\$382,516,509	\$132,013,217	0.35	130,992
TOTALS	32,017,558	\$15,848,026,034	\$5,995,657,935	0.38	8,913,632

¹ Total Gross Square Feet from UM Analytics. Excludes Rochester Campus and parking ramp decks.

² Figures include formally assessed facilities plus actual or modeled values for non-assessed facilities less than 10 years old.

³ Increase of approximately 1% from previous reporting year.

The Plan additionally places a strong emphasis on strategic projects that will enable the University to right-size the overall amount of campus space through geographic or building consolidations for colleges and academic units to improve programmatic alignment, space assignment changes in response to increased hybrid officing, and strategic redesign of poor/critical space when space moves are made possible through a domino-effect of projects. Further details on space reduction targets will be developed in this fiscal year.

2. Invest in high-demand academic programs and mission-support facilities

This priority supports the renewal of facilities that support research, teaching and learning, and scholarship across disciplines. High-demand academic programs have an established record of consistent enrollment and academic success. Proposed investments include the Duluth campus Science Building renewal, and on the Twin Cities campus, the Carlson School revitalization and the renovation of the Mondale Hall courtrooms used for teaching. HEAPR investments in projects such as Heller Hall on the Duluth campus as well as Food Science and Nutrition, Moos Tower, and the Biological Science Center on the Twin Cities campus, will optimize existing facilities and infrastructure to support teaching and research.

Strategic placeholders in the plan are targeted toward capital renewal prioritized based on high-demand academic programs. Future research improvements will result in investments in research infrastructure that support the University as an important contributor to Minnesota's economy, knowledge base, and workforce development.

3. Advance innovation in health sciences, agriculture, biotechnology, and MNtersections

This priority promotes a long-term investment strategy into core areas of research and scholarship specifically dedicated to improving human potential and the natural, physical, and social world. Representative projects include the agricultural research and education complex project (also known as FAARM), strategic research facility investments, and key lab renovation projects to support systemwide research. Clinical research and care across multiple health sciences disciplines are also part of this group of project targets.

4. Enhance student-facing facilities and services

To enhance the student experience, wellness, and success, aging facilities require medium to large-scale renewal to respond to a range of pressing needs, including libraries, unions, recreation, wellness, student counseling, and academic support. Project examples include a new Saint Paul campus center on the Twin Cities campus, improving student dining facilities on the Duluth and Twin Cities campuses, and renovating Griggs residence hall on the Duluth campus.

5. Create spaces and places that make campuses more inclusive, accessible, and welcoming

This priority focuses on how change to the physical campus can make University campuses more welcoming, foster a sense of belonging, and improve accessibility related to daily life. For example, projects might address Americans with Disabilities Act (ADA) accessibility on all campuses, the renewal of important public spaces and landscapes, the ability to provide identity space indoors or outdoors, and wayfinding systems, including how campus entry points are treated. This priority will also guide plans to balance the level of investment in specialized-use facilities while considering equity and diversity. HEAPR investments in projects such as the Multi-Ethnic Resource Center on the Morris campus will improve building accessibility for all.

BACKGROUND INFORMATION

Board of Regents Policy: *Board Operations and Agenda Guidelines* require a Six-Year Capital Plan that sets priorities and direction for ongoing academic and capital planning efforts. This policy specifically directs the administration to conduct capital planning with a “six-year time horizon, updated annually.” It is the University’s primary capital investment planning tool.

Six-Year Capital Plan Format Updates

The format of the 2023 Six-Year Capital Plan has been updated and incorporates two primary changes to reflect the reality of how the University plans capital projects based on the funding status.

The first change includes showing three sessions of the State Request section, instead of six. The previous format was used when the Minnesota Legislature provided capital funding during even number years and projects were funded in a more predictable manner. As funding from the State for capital projects became less predictable, the latter years of the Six-Year Plan became placeholders. This new plan format includes the next three years, which is sufficient time to conduct the necessary planning and predesign work while not raising expectations for projects that are unlikely to be funded in the six-year planning horizon.

The second format change groups the University-funded projects currently in development together rather than having them assigned to specific years. The exact timing of projects has proven hard to predict without specific funding information. The new format still shows the major projects that are likely to advance to the Annual Capital Budget in the next six years.

These two changes now provide a more accurate and concise view of the capital planning activities currently underway.

Consultation - Summer 2023

Over the course of three meetings between late June and early August, a broadly representative systemwide group including academic leadership, staff, faculty, student governance and administration, were convened to address possible changes to the University’s operating and capital budget strategies. General information presented by staff framed the institution’s key challenges in pursuing goals and strategies under MPact 2025. The majority opinion from these discussions is that success in appeals to the state for support depends on the University’s ability to demonstrate its value to legislators as a place that attracts and retains Minnesota talent right out of high school and develops the future workforce. From this discussion about strategy for capital requests, the following capital priorities summarize the feedback received in these sessions:

- Focus investments where students heavily use facilities (learning, student life) to improve their experience.
- Prioritize reinvestment to existing buildings and facilities that support student life, teaching and learning, research and scholarship.
- Pursue strategic redesign of obsolete and poor-condition buildings and change how space is utilized to reduce overall growth in space. Develop multi-year plans that tie investment in asset preservation to specific goals on space utilization and consolidation.
- Increase funding to meet building energy standards and invest in energy infrastructure systems to achieve climate action goals across the system.
- Advance projects that will support excellence in the University’s core mission (teaching/ learning, R-1 research, outreach)

Senior staff and leadership participated in these discussions and incorporated the feedback into shaping the Plan and State Capital Request.

Developing the Six-Year Plan

The Plan is shaped by University leadership, including the Executive Vice President and Provost, the Senior Vice President for Finance and Operations, and the Vice Presidents for Clinical Affairs, Equity and Diversity, Research, University Relations, and University Services. Projects at all stages of planning are included, reflecting the stages below as part of the typical University capital improvement planning process. This effort results in a draft plan for the Interim President’s consideration and ultimate recommendation to the Board.

Stage 1 Proposal	Stage 2 Planning and Feasibility	Stage 3 Predesign	Stage 4 Resource Acquisition	Stage 5 Implementation
Define the problem or opportunity. <ul style="list-style-type: none"> • Programmatic needs • Facility conditions • Financial resources assessment 	Evaluate scope, scale, and alternatives. <ul style="list-style-type: none"> • Strategic positioning • Academic priorities • Financial constraints • Space needs 	Advance the optimal scenario. <ul style="list-style-type: none"> • Project scope • Project budget • Project schedule 	Confirm source and availability of funds. <ul style="list-style-type: none"> • Financial impact • Debt capacity 	Deliver Project <ul style="list-style-type: none"> • Schematic design and GMP approval by the Board.
Chancellors, vice presidents, and deans submit proposals.	Budget 6/Capital Strategy Group authorizes proposals for feasibility.	The Six-Year Plan authorizes projects eligible to begin to predesign.	Predesign completion authorizes resource acquisition to begin.	Board of Regents authorize projects >\$1 million to commence.

Although many projects have academic and organizational value, the projects that demonstrate both a programmatic urgency and implementation readiness are advanced for further analysis in the six-year timeframe, either as named candidates for future state requests or as projects in development intended to progress through the named stages. Other factors considered before projects are placed in the Plan include:

- *Financial parameters* such as state economic forecasts, state debt capacity, past trends, University debt capacity, and project-specific fundraising potential.
- *Operating budget impacts* such as the ability to fund the incremental operating (facility and programmatic) and debt costs associated with proposed projects and assumed by the proposing unit, college, or campus.
- *Timing and sequencing of projects* to complete a sequence of related projects in process or other capital project “dominoes.”
- *Impact on programs (both research and instructional)* to manage the level of disruption while still maintaining research and teaching functions.
- *Health, safety, and regulatory requirements* result in issues that require some projects to be included in the plan.
- *Geographic distribution* recognizes the University as a system and balances investment across the state.
- *Alignment with MPact 2025 Systemwide Strategic Plan objectives.*

Project Costs

Projects in the Plan that show a TBD in the cost magnitude column were not specific enough to define project costs for. Costs for projects in the feasibility or planning stage are sometimes supported by order-of-magnitude estimates if a feasibility study has been recently completed. Predesign studies are prepared as funding strategies have been better defined and operating costs understood to determine more accurate cost values. However, the time horizon to advance the

project may have a significant effect on project cost and could change significantly depending on conditions, location, and type of development. Total project costs and funding are confirmed for each project prior to inclusion in a state capital request.

INTERIM PRESIDENT'S RECOMMENDATION

The Interim President recommends approval of the resolution related to the 2023 Six-Year Capital Plan and the resolution related to the 2024 State Capital Request.



REGENTS OF THE UNIVERSITY OF MINNESOTA

RESOLUTION RELATED TO

The 2023 Six-Year Capital Plan

WHEREAS, preserving the University of Minnesota (University) campuses through stewardship of public investments that have been made over 165 years is a commitment the Board of Regents (Board) has made to the State of Minnesota (State); and

WHEREAS, advancing key academic priorities is critical for the University to achieve and maintain excellence; and

WHEREAS, continuing investment in research infrastructure is essential for the future competitiveness of the University and the State; and

WHEREAS, enhancing the student experience for both undergraduate education and graduate and professional education is required as the core of its mission in order to generate and disseminate knowledge; and

WHEREAS, improving outreach and engagement is necessary in order to transform State communities, fuel the State economy, address State social issues, and improve the State's health; and

WHEREAS, the administration has developed a capital-planning framework designed to focus its capital planning efforts toward projects that support the University's institutional priorities within a financial strategy that is responsible.

NOW, THEREFORE, BE IT RESOLVED that the Board approves the 2023 Six-Year Capital Plan in order to create and maintain facilities that serve as tools for accomplishing the University's threefold mission of education, research, and outreach.



REGENTS OF THE UNIVERSITY OF MINNESOTA

RESOLUTION RELATED TO

2024 State Capital Request

WHEREAS, the Board of Regents (Board) has directed the administration to annually submit a six-year capital plan and a capital improvement budget in support of the University of Minnesota's (University) strategic priorities; and

WHEREAS, the Board recognizes the importance of sustaining and improving the University's facilities in support of teaching, research, and outreach; and

WHEREAS, the administration has developed a capital planning framework designed to focus its capital planning efforts on projects that support the University's institutional priorities within a financial strategy that is realistic.

NOW THEREFORE, BE IT RESOLVED that the Board of Regents approves the University's 2024 State Capital Request for presentation to the State of Minnesota (State) in the amount of \$500,000,000 consisting of \$500,000,000 from the State and \$0 from the University.

University of Minnesota

2024 - 2029 Six-Year Capital Plan

University of Minnesota

2024 - 2029 Six-Year Capital Plan

State Capital Request

State Capital Request projects are shown below in order of priority for the next three years.

Project costs included in the Six Year Capital Plan are order-of-magnitude estimates. Project costs and funding will be verified prior to consideration for the Annual Capital Budget.

State Capital Request		Total Funds	State Funds	University Funds	Project Description
2024					
Project	Higher Education Asset Preservation and Replacement				This project will maximize the effectiveness and life of the University's 30 million square feet of facilities and infrastructure. The University allocates HEAPR funding system wide for health, safety and accessibility; building systems; utility infrastructure; and energy efficiency.
Campus	Systemwide				
Unit	Systemwide	\$500,000	\$500,000	\$0	
	Total:	\$500,000	\$500,000	\$0	
	Running Total:	\$500,000	\$500,000	\$0	

University of Minnesota

2024 - 2029 Six-Year Capital Plan

State Capital Request		Total Funds	State Funds	University Funds	Project Description
2025					
Project	Higher Education Asset Preservation and Replacement				
Campus	Systemwide				
Unit	Systemwide	\$300,000	\$300,000	\$0	This project will maximize the effectiveness and life of the University's 30 million square feet of facilities and infrastructure. The University allocates HEAPR funding system wide for health, safety and accessibility; building systems; utility infrastructure; and energy efficiency.
Project	Agricultural Research and Education Complex (FAARM)				
Campus	ROCs & Stations				
Unit	College of Food, Agricultural & Natural Resource Sciences	\$225,000	\$150,000	\$75,000	The Agricultural Research and Education Complex project will create sites for the 'Future of Advanced Agricultural Research in Minnesota' (FAARM) for innovative solutions in food systems that will lead the evolution of regenerative, systems-based agriculture.
Project	Strategic Space Consolidation and Decommissioning				
Campus	Twin Cities				
Unit	University Services	\$45,000	\$30,000	\$15,000	This project will consolidate space in response to increased hybrid officing. Objectives include improved programmatic alignment and overall space reductions.
	Total:	\$570,000	\$480,000	\$90,000	
	Running Total:	\$1,070,000	\$980,000	\$90,000	

University of Minnesota

2024 - 2029 Six-Year Capital Plan

State Capital Request		Total Funds	State Funds	University Funds	Project Description
2026					
Project	Higher Education Asset Preservation and Replacement				
Campus	Systemwide				
Unit	Systemwide	\$300,000	\$300,000	\$0	This project will maximize the effectiveness and life of the University's 30 million square feet of facilities and infrastructure. The University allocates HEAPR funding system wide for health, safety and accessibility; building systems; utility infrastructure; and energy efficiency.
Project	Academic Health Center Duluth - Design				
Campus	Duluth				
Unit	Academic Clinical Affairs, Ofc	\$22,500	\$15,000	\$7,500	This project will construct a new academic health facility for the College of Pharmacy and the School of Medicine to be located in the Duluth Medical District.
Project	Strategic Research Investment; Duluth				
Campus	Duluth				
Unit	Research	\$60,000	\$40,000	\$20,000	This project will make a strategic investment to advance research on the Duluth Campus.
Project	Strategic Research Investment; Systemwide				
Campus	Systemwide				
Unit	Research	\$60,000	\$40,000	\$20,000	This project will make a strategic investment to advance research in the University system.
Total:		\$442,500	\$395,000	\$47,500	
Running Total:		\$1,512,500	\$1,375,000	\$137,500	

University of Minnesota

2024 - 2029 Six-Year Capital Plan

Projects in Development

The Projects in Development list identifies potential projects which may proceed in the Six Year Plan reporting period. Projects in development in future years are not prioritized. They are shown in order by project phase (from most to least definition) and then alphabetically by project name.

Projects must complete predesign, obtain necessary funds, and receive approval in the Annual Capital Budget to proceed with design and construction.

* **Projects with asterisk indicate potential future State Capital Request items.**

Projects in Development 2024 - 2029		Project Phase	Cost Magnitude	Project Description
Project Campus Unit	Carlson School Revitalization Twin Cities Carlson School of Management	Design	>\$20,000	This project will improve space in CSOM and Hanson Hall to better meet the needs of students, faculty, staff and external partners, maximize existing space resources, and support current teaching methods and technologies.
Project Campus Unit	MCPF - First Floor Improvements Twin Cities Research	Design	>\$20,000	This project will provide improvements to undesignated first floor space to accommodate the expansion of advanced research, training, and support in biotechnology. [This building on St Paul Campus is presently called the Microbial Cell Production Facility (MCPF), however an official building name is TBD.]
Project Campus Unit	Middlebrook Hall Dining Renovation Twin Cities Auxiliary Services	Design	\$5,000 - \$20,000	This project will renovate all areas of Middlebrook Hall dining areas including the kitchen servery, dining room, offices, and storage areas.
Project Campus Unit	Middlebrook Hall HVAC Renovation Twin Cities Auxiliary Services	Design	\$5,000 - \$20,000	This project will modernize the heating, ventilation, and air conditioning system throughout Middlebrook Hall for safety, reliability and efficiency.
Project Campus Unit	Molecular Cellular Biology - Tunnel Washer Replacement Twin Cities Research	Design	\$1,000 - \$5,000	This project will replace the built-in tunnel washer and address any related code issues.
Project Campus Unit	3M Arena at Mariucci and Ridder Arena Centennial Improvements - Phase 2 Twin Cities Intercollegiate Athletics	Predesign	\$5,000 - \$20,000	This project will update fan amenities including seating, concessions, and branding in both facilities, and Improve team spaces in Ridder to include locker room, training room and coaching area for the women's hockey program. Phase 1 was authorized in the FY23 capital budget to replace ice refrigerant systems in both arenas.
Project Campus Unit	Advance Operations Center Twin Cities Information Technology	Predesign	>\$20,000	This project will design and construct a replacement facility to replace the Office of Information Technology's Network Operations Center currently located in the Information Technology Building. Partial funding was authorized in the FY24 capital budget for ongoing design efforts and procurement of long lead time equipment and materials.

University of Minnesota 2024 - 2029

Six-Year Capital Plan

Projects in Development 2024 - 2029		Project Phase	Cost Magnitude	Project Description
Project Campus Unit	Griggs Hall Renovation Duluth UMN Duluth	Predesign	\$5,000 - \$20,000	This project will improve residence hall space by completing code upgrades, new interiors, and re-roofing, in a series of phases.
Project Campus Unit	Labovitz School of Business Sales Center Renovation Duluth UMN Duluth	Predesign	\$5,000 - \$20,000	This project will renovate the second floor of the Library Annex into an adaptable, state of the art Labovitz School of Business and Economics (LSBE) sales center of excellence to be heavily utilized by students, staff, and community members.
Project Campus Unit	Molecular Cellular Biology 3rd Floor Repurposing Twin Cities Medical School	Predesign	\$1,000 - \$5,000	This project will convert vacated teaching labs to research labs.
Project Campus Unit	Molecular Cellular Biology 5th Floor Lab Repurposing Twin Cities Medical School	Predesign	\$1,000 - \$5,000	This project will repurpose space to accommodate the relocation of Institute of Translational Neuroscience labs from Wallin Medical Biosciences Building.
Project Campus Unit	Mondale Hall Courtroom Renovation Twin Cities Law School	Predesign	\$1,000 - \$5,000	This project will renovate existing courtrooms used for teaching and adjacent spaces.
Project Campus Unit	Pattee Hall Interior Refresh Twin Cities College of Liberal Arts	Predesign	\$1,000 - \$5,000	This project will refresh interior finishes and office systems to accommodate new occupants.
Project Campus Unit	Poultry Teaching and Research Facility Partial HVAC Renewal Twin Cities College of Food, Agricultural & Natural Resource Sciences	Predesign	\$1,000 - \$5,000	This project will replace all heating, ventilation, air conditioning, mechanical exhaust and lighting to support year-round research use.
Project Campus Unit	Residence Dining Center Kitchen Renovation Duluth UMN Duluth	Predesign	>\$20,000	This project will renovate the Residence Dining Center's main production kitchen in order to meet safety requirements, increase capacity to satisfy demand, and achieve operational efficiency.
Project Campus Unit	St Paul Campus Center Twin Cities Student Affairs	Predesign	>\$20,000	This project will create replacement space for the St Paul Student Center.

University of Minnesota

2024 - 2029 Six-Year Capital Plan

Projects in Development		Project Phase	Cost Magnitude	Project Description
2024 - 2029				
Project	UMD Science Building Renewal*			
Campus	Duluth			
Unit	UMN Duluth	Pre-design	>\$20,000	This project will provide students and faculty in the Swenson College of Science and Engineering with spaces for learning, active learning classrooms, laboratories, and research spaces.
Project	WMBB Diverse Microbial Exposures Facility Expansion			
Campus	Twin Cities			
Unit	Medical School	Pre-design	\$5,000 - \$20,000	This project will create a Diverse Microbial Exposures Facility in the Wallin Medical Biosciences Building.

University of Minnesota

2024 - 2029 Six-Year Capital Plan

Under Consideration List

Proposals included on the Under Consideration list have been identified as priorities by the responsible unit and are recommended to complete further assessment to support decision making. Under Consideration projects are not prioritized. They are shown alphabetically by project name.

* Projects with asterisk indicate potential future State Capital Request items.

Under Consideration List 2024 - 2029		Project Phase	Cost Magnitude	Project Description
Project Campus Unit	Anderson Caverns Fire Protection Twin Cities University Libraries	Predesign	\$1,000 - \$5,000	This project will implement an enhanced fire hazard remediation solution in the collections storage area once the under-construction Collections Facility is complete.
Project Campus Unit	Arboretum Apple House ROCs & Stations College of Food, Agricultural & Natural Resource Sciences	Proposal	\$5,000 - \$20,000	This project will construct a new Apple House retail location near the intersection of Minnewashta Parkway and Arboretum Boulevard.
Project Campus Unit	Arboretum: Chinese Garden Phase III ROCs & Stations College of Food, Agricultural & Natural Resource Sciences	Proposal	TBD	This project will create a new Chinese Garden that incorporates various existing features including Centerpiece Pond, Moon Gate, Pond Overlook Deck, Peony Pavilion and donated Massive Boulders from Qinling Mountains.
Project Campus Unit	Athletic Facilities Targeted Improvement Projects Systemwide Systemwide	Feasibility	TBD	This project will implement targeted investments to improve gender equity in Athletics facilities across the University system.
Project Campus Unit	Briggs Library Capital Renewal* Morris UMN Morris	Predesign	>\$20,000	This project will renovate the existing library and construct a new east link/entry addition and west entry. Improvements will include full replacement of building systems, technology infrastructure, new elevator, and ADA/Code compliant restrooms.
Project Campus Unit	Coffman Program and Retail Renovation Twin Cities Student Affairs	Feasibility	\$5,000 - \$20,000	This project will renovate portions of Coffman Memorial Union including upgrades to retail facilities.
Project Campus Unit	Combined Softball Hitting and Baseball Pitching Lab Twin Cities Intercollegiate Athletics	Predesign	\$1,000 - \$5,000	This project will construct a dedicated softball hitting facility adjacent to the pitching bullpen at Siebert Field. The shared facility will also include a baseball pitching lab with dedicated biomechanic feedback and arm strengthening resources for pitcher development.

University of Minnesota

2024 - 2029 Six-Year Capital Plan

Under Consideration List 2024 - 2029		Project Phase	Cost Magnitude	Project Description
Project Campus Unit	Comstock Hall Dining Renovation Twin Cities Auxiliary Services	Proposal	\$5,000 - \$20,000	This project will renovate all dining areas in Comstock Hall.
Project Campus Unit	CUHCC Clinic Renewal Twin Cities Academic Clinical Affairs, Ofc	Feasibility	TBD	This project will construct a replacement facility for the Community University Health Care Center.
Project Campus Unit	Dentistry Remodel* Twin Cities School of Dentistry	Feasibility	>\$20,000	This project will renovate the 4th floor to accommodate access to simulation teaching and learning spaces for all student groups, and redesign the 8th floor to improve clinical workflow and patient care.
Project Campus Unit	Eddy Hall Capital Renewal* Twin Cities Academic Affairs and Provost	Proposal	\$5,000 - \$20,000	This project will preserve and renew historic Eddy Hall, the oldest building on UMTC campus, decommissioned in 2011.
Project Campus Unit	Glensheen Welcome Center Duluth UMN Duluth	Proposal	TBD	This project will better define a clear arrival experience into the historic property and provide an enhanced visitor experience.
Project Campus Unit	Gortner Avenue Reconstruction Twin Cities Auxiliary Services	Proposal	\$1,000 - \$5,000	This project will reconstruct Gortner Avenue between Folwell Avenue and Commonwealth Avenue on the St Paul Campus due to curb, gutter and pavement failures including subgrade issues.
Project Campus Unit	Large Animal Clinical Area and Isolation Consolidation Twin Cities College of Veterinary Medicine	Proposal	TBD	This project will consolidate all large animal care, related clinical teaching, and large animal isolation into a single facility, allowing decommissioning of the large animal hospital in Vet Med Center South.
Project Campus Unit	Large Lakes Observatory* Duluth UMN Duluth	Proposal	>\$20,000	This project will develop a research facility in the Duluth harbor area with City of Duluth and private sector partners.
Project Campus Unit	Minnesota Bioluminescence Center Systemwide Research	Proposal	TBD	This project will advance development of the Bioluminescence Center at Hormel Institute.

University of Minnesota

2024 - 2029 Six-Year Capital Plan

Under Consideration List 2024 - 2029		Project Phase	Cost Magnitude	Project Description
Project Campus Unit	Morrill Hall Renewal Twin Cities Office of the President	Feasibility	TBD	This project will renovate Morrill Hall.
Project Campus Unit	Natural Resources Research Institute (NRRI) Building Improvements* Duluth UMN Duluth	Feasibility	TBD	This project will replace outdated building systems and upgrade research areas to allow for the integration of new capabilities and keep pace with projected research growth.
Project Campus Unit	Onsite Solar Phase 1 Twin Cities University Services	Proposal	TBD	This project will install solar technologies to achieve the University's Climate Action Plan goal to reach 6 megawatts of solar renewable energy on the Twin Cities campus by 2030.
Project Campus Unit	Parking Lot Development - St Paul Campus Twin Cities Auxiliary Services	Proposal	\$1,000 - \$5,000	This project will make improvements to the existing surface parking along Upper Buford Circle in St Paul.
Project Campus Unit	Public Health Consolidation - Phase 1 Twin Cities School of Public Health	Proposal	TBD	This project will move the School of Public Health out of the West Bank Office Building (WBOB) and onto the East Bank.
Project Campus Unit	Public Health Consolidation - Phase 2 Twin Cities School of Public Health	Proposal	>\$20,000	This project will consolidate the School of Public Health and its four divisions into a new building or into contiguous space to improve programmatic and administrative effectiveness.
Project Campus Unit	Renovation for College of Design Consolidation* Twin Cities College of Design	Proposal	TBD	This project will consolidate the majority of the academic units from McNeal Hall on the St Paul Campus to sites in and around Rapson Hall.
Project Campus Unit	Research Data Facility Twin Cities Research	Proposal	TBD	This project will create a specialized research facility to enable computational analysis and secured research.
Project Campus Unit	Research Support Infrastructure Renewal Twin Cities Research	Feasibility	TBD	This project will improve research support resources based on operational and research priorities to support growing and forward-looking areas of research.

University of Minnesota

2024 - 2029 Six-Year Capital Plan

Under Consideration List 2024 - 2029		Project Phase	Cost Magnitude	Project Description
Project Campus Unit	Ruttan Space Refresh for Hybrid Work Twin Cities College of Continuing & Professional Studies	Proposal	\$1,000 - \$5,000	This project will refurbish suite 20 in Ruttan Hall to accommodate flexible and hybrid work.
Project Campus Unit	Small Animal Hospital Addition in Vet Med Center North Twin Cities College of Veterinary Medicine	Proposal	TBD	This project will expand the small animal hospital to allow for new treatment areas, clinical teaching spaces, rounds rooms and new small animal isolation spaces. The scope would also include improvements to HVAC, backup power, and security for the existing hospital.
Project Campus Unit	Soil Science Building Space Consolidation Twin Cities College of Food, Agricultural & Natural Resource Sciences	Proposal	\$1,000 - \$5,000	This project will make strategic renewal investments in College of Food, Agriculture and Natural Resource Science (CFANS) buildings in St Paul to consolidate labs out of the Soil Science building.
Project Campus Unit	Specialized Research Support Facility Twin Cities Research	Feasibility	TBD	This project will expand existing specialized research support space to accommodate expanded capacity due to growth in activity.
Project Campus Unit	Strategic Campus Development Rochester UMN Rochester	Proposal	>\$20,000	The project will create academic space for the growing UMR student community
Project Campus Unit	Strategic Land Acquisitions Twin Cities Planning, Space, and Real Estate	Proposal	>\$20,000	This item is noted to reflect the routine opportunities for strategic land and asset acquisitions that support University mission.
Project Campus Unit	Strategic Plan Renewal; East Bank* Twin Cities Academic Affairs and Provost	Proposal	>\$20,000	This project will enhance facilities along upper Church Street. Possible outcomes include capital renewal in one or more of the following facilities: 10 Church Street (former Bell Museum), Armory, and Nolte.
Project Campus Unit	Systemwide Climate Action Plan Implementation Twin Cities University Services	Proposal	TBD	This project will implement systemwide investments to achieve Climate Action Plan goals.
Project Campus Unit	Washington Avenue Bridge Pedestrian Deck Structure Replacement Twin Cities University Services	Proposal	\$5,000 - \$20,000	This project will rehabilitate a deteriorated campus icon by providing a safe and welcoming structure, addressing heating and ventilation issues contributing to accelerated deterioration, and renewing routes for major utility infrastructure spanning the bridge.

University of Minnesota

2024 - 2029 Six-Year Capital Plan

Under Consideration List		Project Phase	Cost Magnitude	Project Description
2024 - 2029				
Project	Wilkins Hall HVAC Renovation			
Campus	Twin Cities			
Unit	Auxiliary Services	Proposal	\$5,000 - \$20,000	This project will modernize building systems throughout Wilkins Hall for user comfort, safety, reliability and efficiency.
Project	Wilson Library - Contemporary Learning*			
Campus	Twin Cities			
Unit	University Libraries	Predesign	>\$20,000	This project will renovate Wilson Library to better support contemporary learning and scholarship with services focused on enabling new discovery, interaction with digital media and technology tools, community engagement, teaching, and study areas.

Interim President's Recommended 2023 Six-Year Capital Plan and 2024 State Capital Request

Interim President Jeff Ettinger
Myron Frans, Senior Vice President
Alice Roberts-Davis, Vice President, University Services

Finance & Operations Committee

September 7, 2023

SENIOR VICE PRESIDENT FOR FINANCE AND OPERATIONS

World Class Services for a World Class University



University Services
We Make the University Work

Two items for review

**Six-Year
Capital Plan**



**2024 State
Capital Request**



Six-Year Capital Plan

- Prescribed in Board Policy
- Primary long-range capital planning tool
- Aligned with MPact 2025 Systemwide Strategic Plan
- Reflects the University's highest priorities
- Foundation for state requests and annual capital budget
- Organized into categories (new format)
 - Projects for state requests
 - University projects in development
 - University projects under consideration



Six-Year Plan Priorities

1. Renew high-priority buildings and right-size amount of campus space
2. Invest in high-demand academic programs and mission-support facilities
3. Advance innovation in health sciences, agriculture, biotechnology, and other research priorities (Intersections)
4. Enhance student-facing facilities and services, including libraries, unions, recreation, wellness, academic support, and student counseling facilities
5. Create spaces and places that make campuses more inclusive, accessible, and welcoming



State Capital Budget Request

Setting the stage - 2023 bonding bill

What we requested

- \$200.0 M Asset Preservation (HEAPR), systemwide
- \$92.6 M Chemistry Undergrad Teaching Lab, Twin Cities
- \$60.0 M FAARM, systemwide
- \$12.0 M Academic Health Sciences, Duluth
- \$3.3 M Heating Plant and Utility, Morris
- \$3.3 M Multi-Ethnic Resource Center, Crookston

What we received

- \$43.4 M Asset Preservation (HEAPR), systemwide
- \$92.6 M Chemistry Undergrad Teaching Lab, Twin Cities



State Capital Funding: Irregular and Insufficient

dollar values shown in millions

Year	Requested	Received	Percent (%)
2014	\$ 233	\$ 119	51%
2015	\$ 77	\$ 27	34%
2016	\$ 236	\$ 0	0%
2017	\$ 245	\$ 120	49%
2018	\$ 239	\$ 79	33%
2019	\$ 232	\$ 0	0%
2020	\$ 317	\$ 75	24%
2021	\$ 264	\$ 0	0%
2022	\$ 686	\$ 0	0%
2023	\$ 371	\$ 136	37%
10-year	\$ 2,900	\$ 557	19%



What we need

\$500 million for asset preservation (HEAPR) across the system to preserve and maintain what we have. We typically allocate funds using a formula based on facility condition and campus size:

- \$10 million - Crookston, 2%
- \$45 million - Duluth, 9%
- \$15 million - Morris, 3%
- \$13 million - Research and Field Stations, 2.5%
- \$417 million - Twin Cities, 83.5%



Why all asset preservation?

The University's greatest need is regular and reliable funding dedicated to renewing its existing buildings and infrastructure

- The 10-year facility renewal need has grown to \$6 billion
- A quarter (8.8 million square feet) of all facility space (~33.4 million square feet) is in poor or critical condition
- Buildings in poor and critical condition are inefficient and expensive to operate
- Projects become more expensive as facilities deteriorate and age
- Smart investments increase our sustainability



Students, faculty, staff want better facilities

- 3 summer operating and capital budget planning meetings
- Key themes from the conversations:
 - The student experience and research competitiveness need to be at the center of our capital investment strategy
 - Need a long-term solution to asset preservation
 - Strategic redesign of space and infrastructure
 - Integrate climate action/sustainability into capital planning



The University's commitment to excellence and the future

With \$500 million for asset preservation, we will:

- Enhance student-facing facilities and services, including libraries, unions, recreation, wellness, academic support, and student counseling facilities
- Invest in high-demand academic programs and mission-support facilities
- Right-size the overall amount of campus space
- Advance innovation in health sciences, agriculture, biotechnology, and other research priorities (MNtersections)
- Ensure updates support inclusive, accessible, and welcoming campuses



Examples of what we will accomplish
with \$500M asset preservation

Crookston asset preservation needs

\$118 million 10-year Facility Condition need

This request funds 11 projects across 8 campus buildings

Examples

- The Heating Plant (built in 1911) provides heat and hot water to the entire campus. Electrical gear is obsolete, the interior lining of the tank continues to deteriorate, and the boiler stack needs immediate repair.
- Owen Hall (built in 1908) is the oldest classroom and lab on campus. Needs critical fire, life safety, and code upgrades, including a building fire suppression system.



Duluth asset preservation needs

\$532 million 10-Year Facility Condition need

This request funds 12 projects across 10 campus buildings

Examples

- Heller Hall and the Humanities Building need extensive reinvestment to address code/life safety issues and modernize HVAC, electrical, and plumbing systems to support programming.



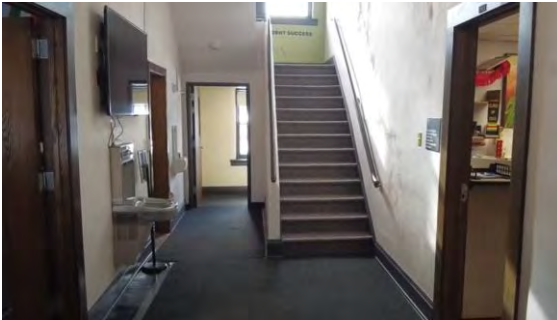
Morris asset preservation needs

\$218 million 10-year Facility Condition need

This request funds more than 20 projects across 13 campus buildings

Example

- Multi-Ethnic Resource Center was built in 1899 and lacks basic accessibility for students, faculty and staff. Funding will add an elevator, make restrooms accessible, and update HVAC systems.



Research, outreach, and field station asset preservation needs

\$132 million 10-year Facility Condition need

This request will fund more than 50 projects across 30+ buildings

Examples

- Replace roofs, windows, etc. in 20+ buildings
- Upgrade primary electrical and plumbing systems in many buildings
- Address code and accessibility deficiencies



Twin Cities asset preservation needs

\$5 billion 10-year Facility Condition need

This request funds more than 100 projects across 60 buildings

Examples

- Food Science and Nutrition: Renovate the 1950s facility to create a modern teaching and research facility
- Eddy Hall: Built in 1899, it is the oldest building on campus and is presently uninhabitable due to structural and code deficiencies
- Washington Avenue Pedestrian Bridge is a campus icon with major signs of deterioration including roof and wall leaks, rot, and rust



Space consolidation is essential

- Strategic space sequencing requires a multi-year strategy
- Remote/hybrid work has changed the type and quantity of space needed
- Space utilization projects underway or proposed include:
 - Office of the Vice President for Research and Innovation space consolidation
 - Women's gymnastics is first step to demolish Peik Gym
 - Eddy Hall renovation is first step to demolish Peik Hall
 - Donhowe Building planned for Hybrid Workplace Administrative Hub



\$500 million asset preservation outcomes

- Improved student experience on all campuses
- Trained talent and workforce development to meet Minnesota business needs
- Economic growth through research and innovation
- Increased sustainability through energy-efficient, sustainable construction, and operating practices
- Extended building lifespans and reduced operating costs
- Preservation of historic campus architecture
- Cost avoidance on even more expensive future renovation or replacement work



Timeline

- Ongoing
- October 12-13, 2023
- October 13, 2023
- February 12, 2024

Bonding tours by MMB, House, and Senate
Board action: State Capital Request
State Capital Request due to MMB
2024 Legislative Session begins





UNIVERSITY OF MINNESOTA

Driven to Discover®

Crookston Duluth Morris Rochester Twin Cities

The University of Minnesota is an equal opportunity educator and employer.



BOARD OF REGENTS DOCKET ITEM SUMMARY

Finance & Operations

September 7, 2023

AGENDA ITEM: Interim President’s Recommended Supplemental FY 2025 State Budget Request

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

This is a report required by Board policy.

PRESENTERS: Interim President Jeff Ettinger
Myron Frans, Senior Vice President
Julie Tonneson, Vice President and Budget Director

PURPOSE & KEY POINTS

The purpose of this item is to review the University’s FY 2025 Supplemental Budget Request to the State of Minnesota.

As a part of the State of Minnesota’s FY 2024-25 Biennial Budget request process, the University requested recurring Operations and Maintenance (O&M) funding for its core mission activities of an incremental \$45,000,000 beginning in FY 2024 and an additional \$45,000,000 recurring beginning in FY 2025. This request was based on an expectation that the University would raise tuition moderately and continue to internally reallocate funding to pay for cost increases associated with:

- expanded services and service levels to support the needs of University students across all campuses;
- growth in research activities and associated infrastructure costs;
- the labor market – additional costs to attract and retain talented faculty and staff who are critical for delivering the University’s education, research, and outreach missions; and
- inflation on purchased goods and services.

Toward that portion of the request, combined with the need to address the FY 2023 tuition revenue shortfall compared to budget, the State of Minnesota generously provided \$50,000,000 recurring in FY 2024, and the University, as promised, utilized its reallocation process and kept tuition increases to modest levels for its students (the increase was 3.5 percent for the Twin Cities campus and 1.0 percent for the greater Minnesota campuses) to balance the FY 2024 budget. The final bill did not include an appropriation increase for core mission activities in FY 2025.

As the University moves into its internal FY 2025 budgeting process this fall, it continues to face the same challenges it faced a year ago – limited resources and increased projected costs. With this in mind, the University proposes to resubmit its FY 2025 request for \$45,000,000 recurring – to help address a portion of those cost increases and keep costs lower for students by leveraging only modest increases in tuition. The University again plans to cover a portion of projected cost

increases through its reallocation methodology, which involves reducing expenses in one area of its budget to fund required framework cost increases elsewhere (most often accomplished through efficiencies, targeted scope reductions, reorganizations, and restructuring of operations). The University cannot maintain the depth and breadth of its programming and impact by limiting tuition increases to low or modest levels and cutting to a balanced budget: additional state support is needed to fill the gap.

Of the University's \$4.5 billion revenue budget for FY 2024 (excluding internal sales), the majority (~60 percent) is restricted to use by the source of the funds or is directly related to sales and other miscellaneous revenue generating activity where the revenues pay for the direct costs of the associated goods and services. For that portion of the budget, revenue must grow to cover cost increases, or decisions must be made to reduce spending. Only on rare occasions can those funds be used to support cost increases in state and tuition-funded activities. Therefore, the remaining 40 percent of University revenues from the unrestricted Operations and Maintenance (O&M) appropriation and tuition must be directed to increasing core mission costs and pressing needs as well as the necessary infrastructure. The only way these general operating revenues grow is through enrollment growth, increasing tuition rates, or a decision by the state to increase the University's O&M appropriation.

The Request Items

As noted above, the University's request includes a recurring increase in its general fund O&M appropriation by \$45,000,000 beginning in FY 2025.

Core Mission: Maintaining Student Success, Research, and Outreach

This supplemental budget request is focused on maintaining the University's strong national and international reputation for educating students, driving innovation across all disciplines, and connecting with Minnesota communities while simultaneously keeping costs low for students. Each year, the University faces inflationary cost increases for programs, services, and infrastructure to:

- educate learners across a broad spectrum of ages and education levels (from youth programs such as 4-H through Ph.D. candidates);
- maintain student support services, such as academic planning, health and wellbeing services, disability resources, career development, etc.;
- drive economic growth in Minnesota and beyond through cutting-edge research, innovation, and industry partnerships across all sectors; and
- provide services to people and communities across the state through clinical care for patients and animals, MN Extension, public health efforts, research and outreach centers, library services, etc.

The \$45,000,000 recurring request will be used in combination with internal reallocations to keep cost increases low for University of Minnesota students and fund a portion of what is needed to address:

- salary and fringe increases for faculty, educators, student services staff, research technicians, trades and other bargaining unit employees, student employees, and many others. The University employs approximately 27,000 people who live and work in communities in every corner of the state, over 52 percent of whom earn less than \$63,640, which is the annual mean wage for all occupations in Minnesota, according to the Bureau of Labor Statistics ([May 2022 State Occupational Employment and Wage Estimates](#));

- inflation on supplies, equipment, and other non-capital operating expenses for current programs and services (including library materials, lab supplies, instructional technology, restroom supplies, cleaning agents, etc.);
- facility operating costs and capital expenses, including utilities, building and landscape operations, debt service, leases, etc.; and
- cost increases for current technology licenses and maintenance agreements.

An additional \$45,000,000 recurring in FY 2025 represents a 1 percent increase in the University's total revenues (excluding internal sales) and a 5.8 percent increase in its Operations and Maintenance and State Specials funding. Although the University is working to keep costs down for its students, this request assumes that a moderate tuition increase for all students across all campuses will still be necessary to cover the University's FY 2025 costs.

An increase in general fund support at this level would allow the University to continue to work towards achieving its mission-driven goals and priorities while practicing sound fiscal stewardship through ensuring average student debt for those who borrow is below the national average, increasing on-campus employment opportunities for students; targeting student aid; promoting operational efficiencies by maintaining spending on administration; and reporting on continuous improvement processes – all Commitment 5, Fiscal Stewardship goals, as identified in the [MPact 2025 Systemwide Strategic Plan](#). Specific allocation of the additional \$45 million in recurring base appropriation would be implemented consistent with those systemwide strategic priorities and determined through the annual internal budget development process.

BACKGROUND INFORMATION

The Board discussed its FY 2024-205 biennial budget request to the State of Minnesota at two Finance & Operations Committee meetings in September 2022 and October 2022 and the Full Board meeting in March 2023:

- March 2023: *Amendments to the FY 2024-25 Biennial Budget Request – Review/Action*
- October 2022: *President's Recommended FY 2024-25 Biennial Budget Request – Action*
- September 2022: *President's Recommended FY 2024-25 Biennial Budget Request – Review*

Board of Regents Policy: *Reservation and Delegation of Authority* reserves to the Board the authority to approve all requests for appropriations from the State of Minnesota.

INTERIM PRESIDENT'S RECOMMENDATION

The Interim President recommends approval of the resolution related to the Supplemental FY 2025 Budget Request to the State of Minnesota.



REGENTS OF THE UNIVERSITY OF MINNESOTA

RESOLUTION RELATED TO

Supplemental FY 2025 Budget Request to the State of Minnesota

WHEREAS, the University of Minnesota (University), the State of Minnesota's (State) only public, land-grant university, is charged with the responsibility to pursue knowledge through research and discovery, apply this knowledge through teaching and learning, and outreach and public engagement; and

WHEREAS, the University is committed to a continuous process of reevaluating priorities and increasing the efficiency and effectiveness of both direct mission and support activities, reinvesting budget savings into mission-critical strategies; and

WHEREAS, the University, in partnership with the State, can better support financial access and affordability to postsecondary education for Minnesota students and families; and

WHEREAS, the University is committed to supporting students through services that enhance their educational experience and by equitably reducing financial barriers to student achievement; and

WHEREAS, the University has an economic impact on the State by educating the State's workforce, developing new technologies, partnering with business and industry, and delivering outreach programs in partnership with local communities; and

WHEREAS, the University's annual budget process is designed to surface and act on the most pressing priorities each year to maintain excellence across its three missions, including compensation, compliance with federal and state regulations, research and technology infrastructure, facility maintenance, and student support; and

WHEREAS, the University recognizes the many competing priorities for State general fund support.

NOW, THEREFORE, BE IT RESOLVED that the Board of Regents approves the supplemental budget request for FY 2025 for presentation to the State, which includes an increase of \$45,000,000 to the operations and maintenance appropriation from the general fund for a total operations and

maintenance appropriation of \$721,294,000 in fiscal year 2025 and a biennial total of \$1,407,852,000.

Interim President's Recommended FY 2025 Supplemental Budget Request

Interim President Jeff Ettinger
Myron Frans, Senior Vice President
Julie Tonneson, Vice President and Budget Director

Finance & Operations Committee

September 7, 2023

SENIOR VICE PRESIDENT FOR FINANCE AND OPERATIONS

World Class Services for a World Class University



UNIVERSITY BUDGET

UNIVERSITY OF MINNESOTA

\$45M gap for FY 25

Description	Request FY24	Final Bill FY24	Request FY25	Final Bill FY25
Core Mission	45,000,000	50,000,000	45,000,000	0
Tuition Shortfall	24,000,000	0	0	0



Supplemental Budget Request: \$45M for Core Mission

State Appropriation	Biennial
Current O&M Recurring Base	\$1,344.6
Core Mission Request - Recurring	\$45.0
Total O&M Recurring Base	\$1,389.6
% change from base	3.3%

(dollars in millions)



Summer Budget Planning Process

- 3 hybrid planning meetings
- Students, faculty, staff
- Presentations, breakouts, homework, discussion
- Themes for supplemental request:
 - Student services
 - Hold student costs down
 - Fair compensation
 - Economic impact for MN

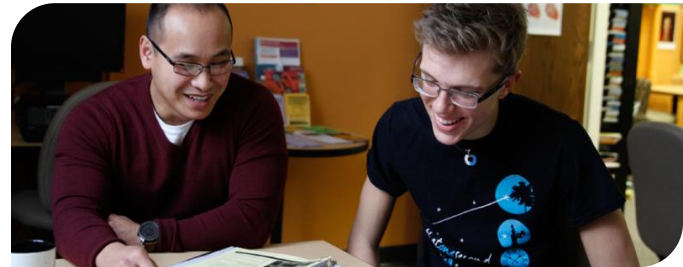


Our Core Services

- Student instruction: in-person and online courses
- Student academic advising/tutoring/career development and planning
- Student safety including mental health and wellness support, emergency and crisis intervention, menstrual equity
- Research and public engagement

Requires us to pay for

- Fair compensation
- Classroom/lab equipment and supplies
- Facility maintenance
- Technology



A \$45M Impact

- Limit tuition increases for students
- Invest in more student services such as counseling, advising, and academic support
- Maintain classrooms and instructional labs for students
- Increase compensation for faculty and staff - retain our talent
- Support research and technology infrastructure
- Preserve and maintain safe, functional, sustainable, and accessible facilities





UNIVERSITY OF MINNESOTA

Driven to Discover®

Crookston Duluth Morris Rochester Twin Cities

The University of Minnesota is an equal opportunity educator and employer.



BOARD OF REGENTS DOCKET ITEM SUMMARY

Finance & Operations

September 7, 2023

AGENDA ITEM: Overview of the University Budget Model

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

This is a report required by Board policy.

PRESENTERS: Julie Tonneson, Vice President and Budget Director

PURPOSE & KEY POINTS

The purpose of this item is to provide the committee with background and contextual information for future discussions on the FY 2025 operating budget. The presentation provides the groundwork for how the recommended operating budget is developed in the months leading up to the Board review in May. Dollar projections, specific challenges, opportunities, or recommendations will not be included in the discussion.

The presentation and discussion will focus on the following:

- Which funds, people, and units are involved in the budget process, and how?
- What is the timeline for developing the budget?
- What is the “Budget Framework,” and how is it used in arriving at a final recommended budget?
- What is a “Responsibility Center Management” (RCM) budget model, and why does the University prefer it?
- What are the components of the University’s budget model?
- How does the budget model support the decision-making process?

Throughout the discussion, examples will be used to help explain these topics.

Budget Process

The University’s budget process is robust. It begins in the fall of each year and involves fifty major budgeting units and the University’s unit-level and system-level leadership working together to understand and address ever-changing financial issues. It culminates the following May or June with a strategic and balanced President’s Recommended Operating Budget. To get to that result, the University’s annual schedule includes individual meetings with each system campus, Twin Cities college, and major support unit where detailed unit-level budget information is discussed. The detailed budget information and discussions facilitate information sharing that is essential to assess budgetary challenges and opportunities for each unit. In addition, consultative meetings with

internal groups are held throughout the year to discuss high-level budget plans and build a shared understanding of issues to be addressed.

Budget Model

The process summarized above benefits from the application of “the budget model,” which is a set of operating decision rules and formulas related to resource and expenditure allocations that serve as a tool for guiding the discussions and determining the impact of various decisions and financial realities.

The RCM budget model in place at the University of Minnesota has evolved over time and began its initial implementation in FY 1998. RCM is a very distributed management model that assigns budget accountability to system campuses, Twin Cities colleges, and major support units, with direction, monitoring, and final authority assigned to the president and their leadership team. It creates incentives and disincentives for various management decisions (e.g., opening course sections, generating external revenues, saving energy) while providing a broad base of financial information to leaders throughout the institution so they can make decisions in the best interest of the University and can better understand the rationale for what is built into the final budget. It is a model based on transparency. The presentation will provide a summary of the rationale for moving to this type of budget model and details about how the model works in practice.

Together, the budget process (materials and meetings) and the budget model (decision rules on resource and expenditure allocations) lead to meaningful discussions, a relevant set of questions to be answered, and final decisions resulting in a recommended annual budget.

Moving Forward

As with any process, best practices include a periodic review of the budget process and model to determine if modifications are warranted. The most recent thorough review was ten years ago. This fiscal year, the administration will begin planning for another review. A committee of individuals that interact directly with various portions of the budget process will be charged with gathering input from across the University, analyzing and reviewing suggestions for change, and making recommendations to the Executive Vice President and Provost and the Senior Vice President for Finance and Operations. For this process to be effective, thoughtful discussions and detailed analysis will be necessary. Any changes resulting from this review will likely occur in FY 2026 or later.

Overview of the University Budget Model and Process

Julie Tonneson, Vice President & Budget Director

Finance & Operations Committee

September 7, 2023

SENIOR VICE PRESIDENT FOR FINANCE AND OPERATIONS

World Class Services for a World Class University



Involved in the Budget Process?

- Funds
- People
- Units

Budget Planning by Fund Group (Non-Sponsored)

Total All-Funds Budget FY24 = \$4.5 billion

Non-Framework Funds

Auxiliary & Internal Sales
Clinical Income
Grants & Contracts
Fed Appropriations
Educational Sales
Fees
Endowment Earnings
Indirect Cost Recovery

University
Level
Actions

- Monitor Status
- Review Projections
- Approve Rates
- Monitor Reallocation
- “Subsidize” when necessary

Framework Funds

State Appropriation – O&M
State Specials
Tuition

- Request State Dollars
- Project Required Cost Increases
- Create Investment Pool
- Set Tuition Rates
- Determine Reallocation
- “Cover” Cost Increases & Investments
- Supplement with other Revenues?



Budget Dependence on State and Tuition Funds:

~40% of University Revenues

Necessary and relied on to support costs of:

- instruction
- student aid
- research
- public service

plus overhead



Annual Budget Process – the People

The Players:	
Interim President	Sets broad goals, strategies, and principles. Directs and delegates the overall process. Receives and acts on recommendations from Budget Committee and delivers final recommended budget to the Board
Budget Committee	Manages the overall budget development process. Interfaces with each unit of the University. Develops recommendations to the President regarding unit allocations and budget-balancing tactics
Chancellors, Deans, VPs	Provides input into broad goals and strategies. Develops unit-level goals and strategies. Responds to compact/budget instructions. Requests funding from Central. Implements final decisions.
Departments	Responds to RRC-level direction regarding the development of departmental goals and strategies. Requests funding from RRC. Responds to internal budget instructions. Implements final decisions.
↓	
Board of Regents	Reviews and acts on annual budget submitted by the President.

Consultation



The Units - 50 University of Minnesota Resource Responsibility Centers

Academic Units – Twin Cities

Academic Clinical Affairs
Agricultural Experiment Station
Carlson School of Management
College of Food, Agricultural, & Natural Resource Sciences
College of Continuing & Professional Studies
College of Design
College of Biological Sciences
College of Education & Human Development
College of Liberal Arts
College of Pharmacy
College of Science and Engineering
College of Veterinary Medicine
Law School
Humphrey Institute of Public Affairs
Medical School
School of Dentistry
School of Nursing
School of Public Health
University of Minnesota Extension Service

Greater MN Campuses

Crookston
Duluth
Morris
Rochester

Support Units

Academic Health Sciences
Associate VP Finance
Athletics*
Audit
Auxiliary Services*
Board of Regents
Capital Project Management
Equity & Diversity
Executive VP and Provost*
Facilities Management
General Counsel
Global Programs & Strategy Alliance*
Graduate School
Human Resources
Information Technology
Planning, Space, Real Estate
President's Office
Public Safety
Senior VP for Finance & Operations
Student Affairs*
Undergraduate Education*
University Health, Safety, and Risk Management
University Libraries
University Relations
University Services
VP Clinical Affairs
VP Research*

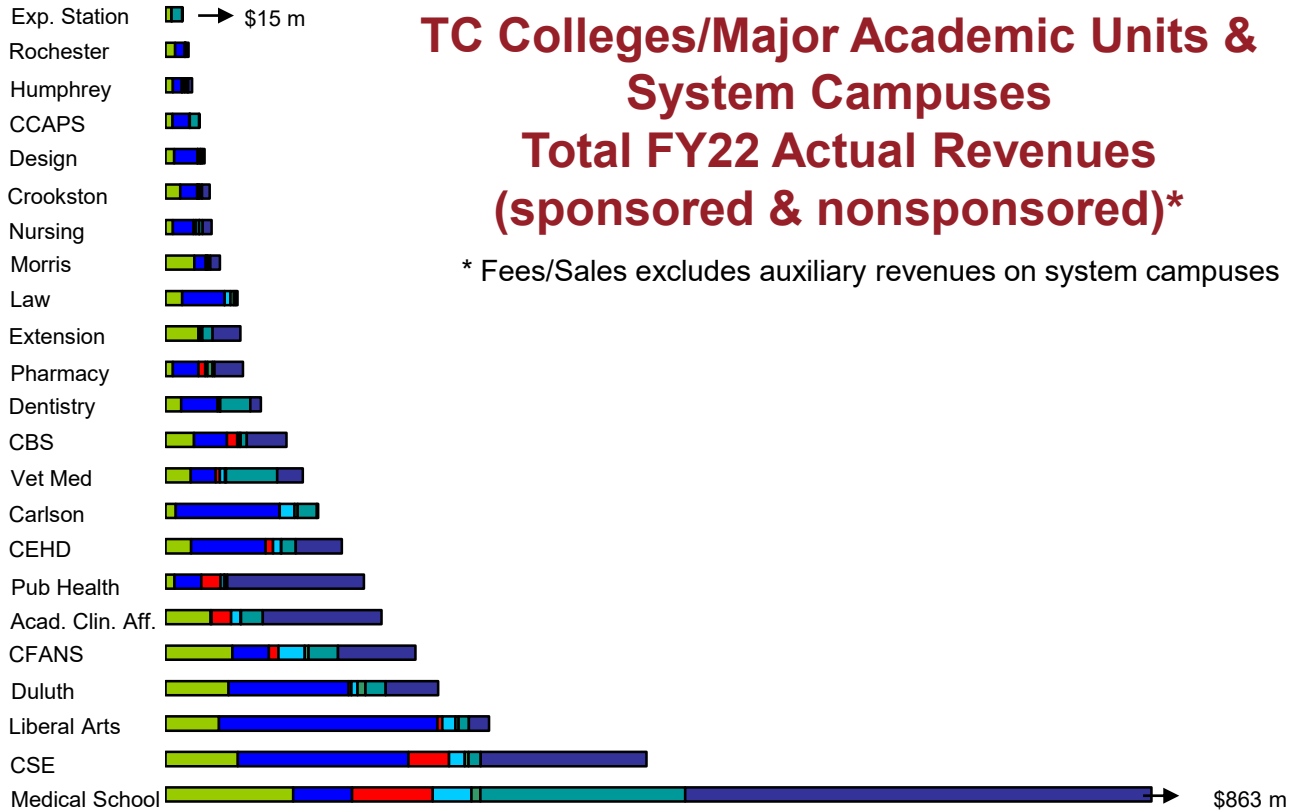
*All or portions of these units
are treated as "academic" in the
budget model.



TC Colleges/Major Academic Units & System Campuses

Total FY22 Actual Revenues (sponsored & nonsponsored)*

* Fees/Sales excludes auxiliary revenues on system campuses



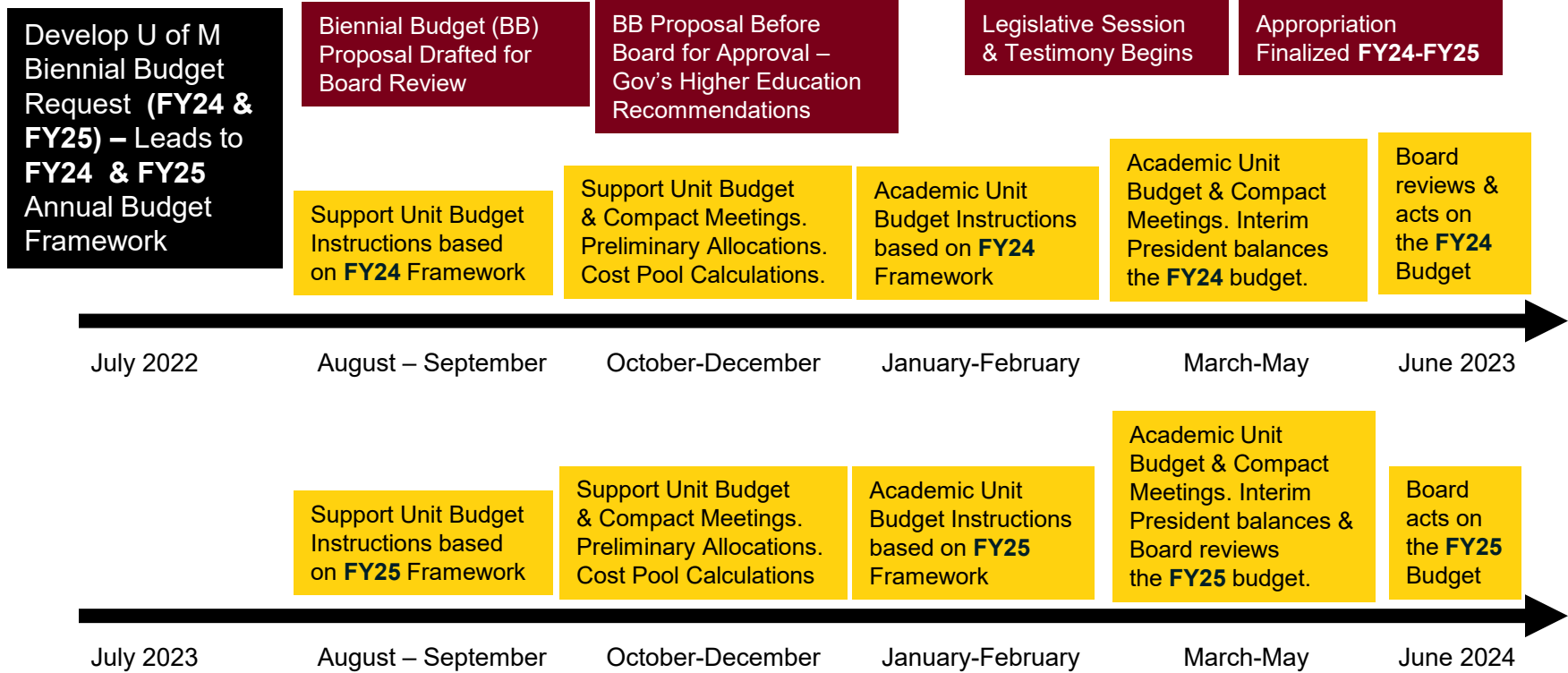
Budget Process Timeline and Framework

Two Operating Budget Processes:

- Biennial Budget Request to the State
 - completed every two years
- Annual Budget Process
 - conducted every year



Timeline - Full Budget Development Cycle



Example: FY20 Budget Framework Mid-Process (December)

Incremental Resources

Tuition – Resident Undergraduate (TC)	\$7,900,000
Tuition – NRNR Undergraduate (TC) net of waivers	6,700,000
Tuition - Grad/Professional	9,900,000
State Appropriation	30,000,000
Planned Reallocation	11,000,000
Other Revenues - TBD	<u>1,000,000</u>
Total	\$66,500,000

Incremental Expenditures

Compensation	\$44,000,000
Facility Operations	1,700,000
Academic Investment/Infrastructure	16,000,000
Mission Support Investment	3,200,000
Technology/Network Infrastructure	<u>1,100,000</u>
Total	\$66,000,000

Balance	\$500,000
---------	-----------



The “Budget Model” as part of the process (Responsibility Center Management)

Strategic Goals and Objectives

Policies/Procedures/Priorities

Institutional
Budget Model

Attribution rules for revenues and expenditures that assist in achieving (but do not determine) the strategic goals and objectives and do not change as policies, priorities, and procedures change in response to the strategic goals and objectives.



Responsibility Center Management (RCM) Budget Model:

a transparent, decentralized, approach to budgeting that engages deans and other mid-level managers in the responsibility and accountability for revenue generation as well as expense management

Initial Move – 1998/99

“Why” Move to RCM?

- Grow out of Budget Problems – State and National Changes
- Improve Transparency Surrounding Decisions
- Align Authority, Accountability and Management of Resources
- Clarify Maze of Cross-Subsidies
- Improve Efficiency of Administrative/Support Operations
- Facilitate Conversations Surrounding Institutional Priorities
- More Clearly Link Performance to Rewards – Incentives to Grow Revenue and Reduce Costs

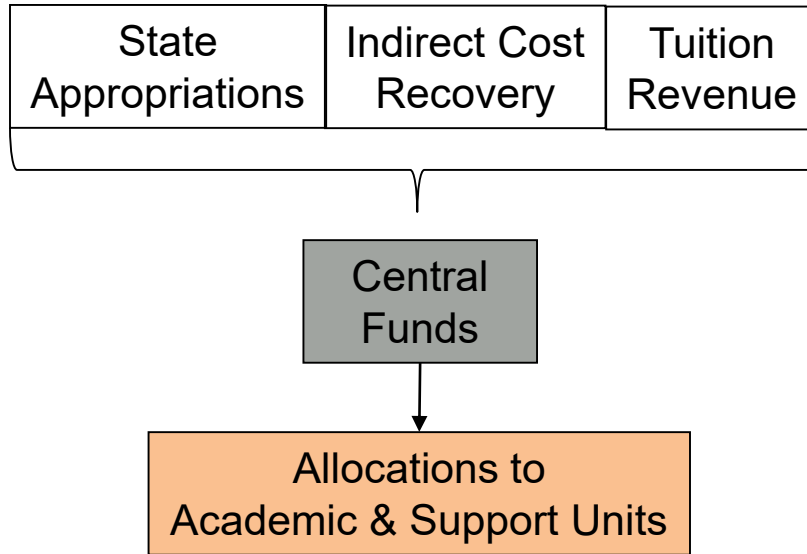


Reforming Resource Allocation

Traditional Higher Ed Model

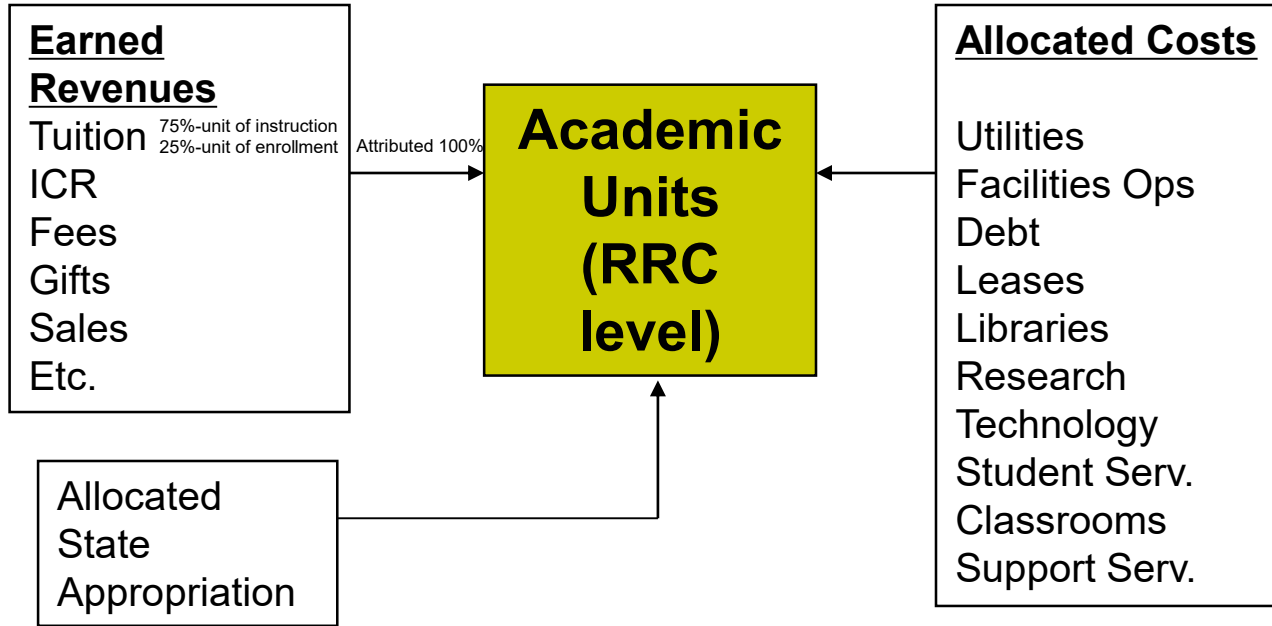


RCM Model at U of MN
(next slide)



Full Revenue and Cost Allocations

THE “BUDGET MODEL”

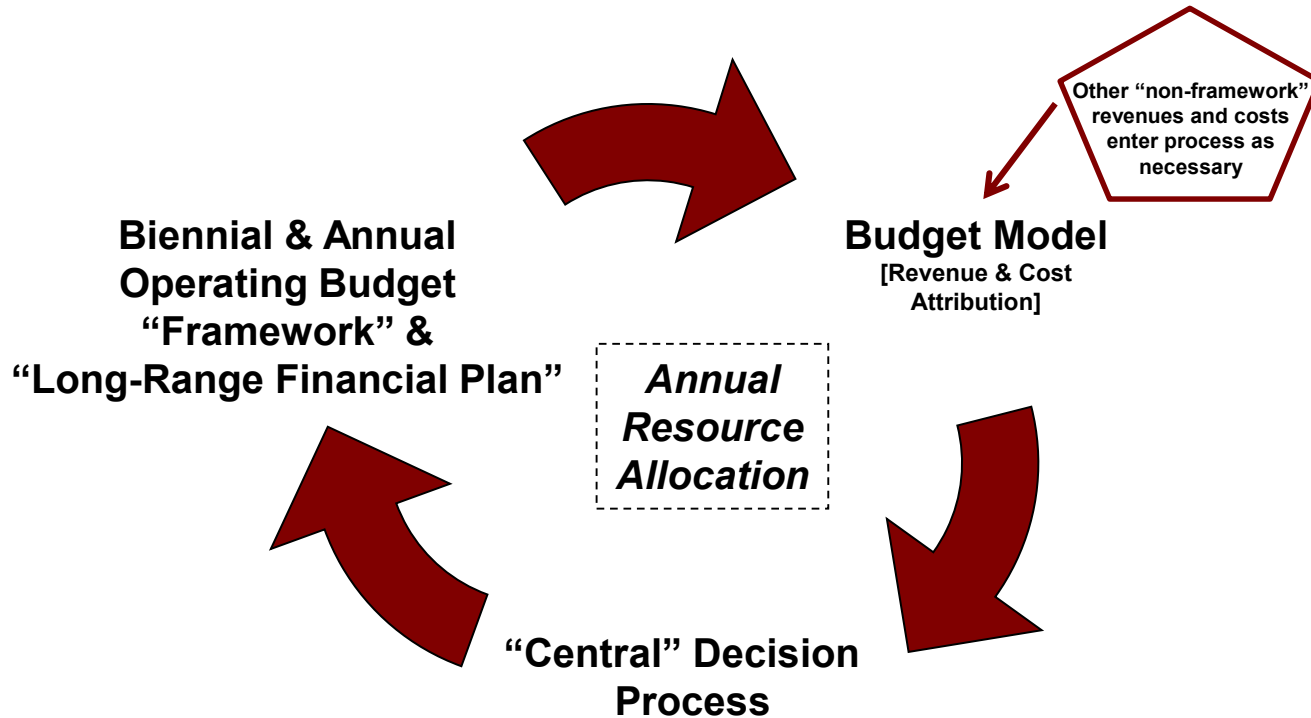


In combination with the “Budget Framework” and the “Decision Making Process” = full Budget Development



Decision Making Process

University of Minnesota Resource & Cost Allocation



Summary – Budget Process

Fall
Budget Decisions - Support Units

Compensation
Strategic Academic Priorities
Infrastructure/Related Costs



Resources & Tools – Budget Decisions

- A. Internal Reallocations
- B. Additional Unit Earned Revenues

C. Approved Budget Items Added to Cost Pool

Winter/Spring
Budget Decisions - Academic Units

Compensation
Strategic Academic Priorities
Infrastructure/Related Costs

• Impact of Cost Pools



Resources & Tools –Budget Decisions

- A. Increased State Appropriation
- B. State Appropriation Reallocated between Academic Units
- C. Additional Unit Earned Revenues
 - Tuition, ICR, Gifts, etc.
- D. Unit Internal Reallocations

All Funds Budget



Example Academic Unit Framework College of Biological Sciences – FY22

1	CBS - College of Biological Sciences	
2		
3	<u>Change in Incremental Resources:</u>	
4	Tuition Revenue Change - 1.5%	543,632
5	Reallocation 2.5%	1,313,000
6	O&M Increase for Budget Neutral Cost Pool Adj.	25,518
7	Total Change in Recognized Resources	1,882,150
8		
9	<u>Costs and Investments Funded from Line 7</u>	
10	Compensation Increase-O&M/State Specials	430,000
11	Cost Pool Increase	357,365
12	Investment in Strategic Plan	997,669
13	FY21 Tuition Revenue Below Budget	97,116
14	Total Costs & Investments	1,882,150



Reallocation Decisions:

- Eliminated Academic Positions
- Eliminated Admin. Support Positions
- Salary Savings – Personnel Changes
- Move Expenses to Growth in Endowment Funds and Grants



U of MN Characteristics that May Make RCM Easier

- Relatively Large Unrestricted State Appropriation
- Autonomy from the State
- Ability to Carry Forward Balances at Year-End
- Leadership that Strongly Supports Distributed Management and Accountability
- Strong Financial Personnel in Each Academic Unit
- Data Systems to Support Analysis and Methodology





UNIVERSITY OF MINNESOTA

Driven to Discover®

Crookston Duluth Morris Rochester Twin Cities

The University of Minnesota is an equal opportunity educator and employer.



BOARD OF REGENTS DOCKET ITEM SUMMARY

Finance & Operations

September 7, 2023

AGENDA ITEM: Real Estate Transactions

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Leslie Krueger, Assistant Vice President for Planning, Space, and Real Estate

PURPOSE & KEY POINTS

The purpose of this item is review and act on the following real estate transactions:

- A. Sale of Approximately 280 Acres in Rosemount (UMore Park)

BACKGROUND INFORMATION

Board of Regents Policy: *Reservation and Delegation of Authority* states that “The Board reserves to itself authority to approve the purchase or sale of real property (a) with a value greater than \$1,000,000; (b) located on or within 2 miles of a University campus; or (c) larger than 10 acres,” and “leases of real property, easements, and other interests in real property if the initial term amount to be paid by or to the University exceeds \$1,000,000.”

INTERIM PRESIDENT’S RECOMMENDATION

The Interim President recommends approval of the following real estate transaction:

- A. Sale of Approximately 280 Acres in Rosemount (UMore Park)

**SALE OF APPROXIMATELY 280 ACRES IN ROSEMOUNT, MN
FOR LIGHT INDUSTRIAL DEVELOPMENT
(UMORE PARK)**

1. Recommended Action

The President recommends that the appropriate administrative officers receive authorization to sell approximately 280 acres at UMore Park for light industrial/business park development.

2. Location and Description of the Property

The subject property consists of approximately 280 acres located in the northeast portion of UMore Park (Property). County Road 42 abuts the Property on the north, the Dakota County Technical College campus is located directly to the west, and Blaine Avenue serves as the Property's eastern boundary. The Property is undeveloped and has been recently re-zoned from Agricultural use to Business Park Planned Unit Development by the City of Rosemount.

The legal description of the Property is as follows:

That part of the South Half of Section 26 and the North Half of Section 35, Township 115 North, Range 19 West, Dakota County, Minnesota described as follows:

Beginning at the northeast corner of said South Half of Section 26; thence North 89 degrees 53 minutes 38 seconds West, an assumed bearing, along the north line of said South Half of Section 26, a distance of 4571.81 feet to the east line of the West 730.00 feet of said South Half of Section 26, also being the east line of the West 730.00 feet of the Southwest Quarter of said Section 26; thence South 00 degrees 30 minutes 08 seconds West along said east line of the West 730.00 feet of the South Half of Section 26, a distance of 137.00 feet to the south line of the North 137.00 feet of said South Half of Section 26, also being the south line of the North 137.00 feet of said Southwest Quarter of Section 26; thence South 89 degrees 53 minutes 38 seconds East along said south line of the North 137.00 feet of the South Half of Section 26, a distance of 478.89 feet; thence South 01 degree 28 minutes 55 seconds West, distance of 538.40 feet; thence southerly 141.25 feet, along a tangential curve, concave to the west, having a central angle of 22 degrees 06 minutes 25 seconds and radius of 366.07 feet; thence southerly 99.48 feet, along a reverse curve, concave to the east having a central angle of 23 degrees 38 minutes 15 seconds and a radius of 241.12 feet; thence South 00 degrees 02 minutes 54 seconds East, tangent to last described curve, a distance of 2031.55 feet to the south line of the North 300.00 feet of said North Half of Section 35; thence North 89 degrees 57 minutes 16 seconds East, along said south line of the North 300.00 feet of the North Half of Section 35, a distance of 4130.41 feet to the east line of said North Half of Section 35; thence North 00 degrees 27 minutes 47 seconds East, along said east line of the North Half of Section 35, a distance of 300.01 feet to the northeast corner of said North Half of Section 35; thence North 00 degrees 31 minutes 30 seconds East, along the east line of said South Half of Section 26, a distance of 2629.74 feet to the point of beginning.

(Abstract Property)

3. Background / Basis for Request

In February 2015, the Board of Regents approved a resolution related to the reorganization of the UMore Park development process that included the following:

- (a) Market-based development of UMore Park led by business, commercial, and residential real estate developers to produce the highest potential financial return to the University over time, incorporating opportunities of the original Concept Master Plan vision when there is private market demand for such elements and such concepts serve to protect or enhance the development value of the remaining site;
- (b) Maximizing financial return to the University by selling land through public processes at competitive prices, benchmarked to market rates;
- (c) Active University engagement with local jurisdictions and private parties to ensure development projects at UMore Park protect and enhance the value of subsequent development stages;
- (d) All land sale proposals to be approved by the Board of Regents; sale and development proposals that are economically sound, compatible with the vision for UMore Park becoming a vibrant, market-driven community for residents and business, reflective of private sector demand, and in alignment with adjacent community needs, desires, and standards to be advanced by the University; and
- (e) Net proceeds derived from land sale transactions to be deposited into the Legacy Endowment as directed by the Board of Regents in 2009.

The Property has been marketed through public processes on the University's behalf by the Minnesota Department of Economic Development and Xcel Energy's Certified Sites program for several years. Since that time, a number of national entities have studied the site for potential development.

4. Summary of Transaction Terms

The buyer for the property is Jimnist LLC, a Delaware limited liability company, and/or its permitted assigns (Jimnist). Jimnist's parent company is Meta Platforms, Inc.

The proposed purchase price is \$39,720,323.78, which equates to approximately \$3.25 per square foot or \$142,000 per acre, which is consistent with the appraisals conducted for the Property. The earnest money and exclusivity payment for this transaction will be applied to the purchase price. The earnest money (\$950,000, which reflects an increase from the original amount of \$750,000 due to Jimnist's extensions of the due diligence period) is refundable if Jimnist terminates the Purchase and Sale Agreement before September 30, 2023. The exclusivity payment (\$300,000,

which reflects an increase from the original amount of \$100,000 due to Jimnist's extensions of the due diligence period) is generally non-refundable (with limited exceptions). Closing is scheduled to occur on or before January 29, 2024.

Jimnist will be solely responsible for the cost of all infrastructure and utilities necessary for development of the Property. However, the University will be responsible for the cost of the relocation of the University's water line that crosses the southwest corner of the Property. In addition, to the extent the Property infrastructure is oversized, expanded, or extended to serve other property, Jimnist will have the right to arrange with the City of Rosemount to cause an equitable share of the cost of such Property infrastructure to be assessed or otherwise payable by the owner(s) of all applicable benefited property. For example, the University will not be obligated to share the costs of a water tower proposed to be constructed by Jimnist on the Property, but may share the cost of water lines to the extent oversized, expanded, or extended to serve other University property in the area.

As part of the University's administrative procedure relating to Real Estate Transactions, the University reserves mineral rights when it disposes of property. As part of the negotiations for the Purchase and Sale Agreement, the administration has waived this provision.

5. Use of the Property

Jimnist or its permitted assignee is acquiring the property for light industrial/business park development, subject to City of Rosemount entitlements. The City of Rosemount approved the Planned Unit Development (PUD) for this use in March 2023. Per the PUD application, this technology campus could be comprised of a couple main function buildings and additional ancillary buildings and support areas. The uses may include servers, administrative spaces, and support equipment in a campus setting of complimentary one-story buildings. The technology-based use would not include distribution or production and would generate proportionally low traffic volumes and low impact to city services such as schools and public safety burden.

The University has developed a Declaration of Covenants (to be recorded on/before the conveyance deed to Jimnist is recorded) and Design Guidelines for light industrial development at UMore Park to ensure the development of the Property will reflect the goals of the University for high-quality development that will the enhance the value of future development of UMore Park. In recognition of this limitation, the University will agree to restrict other property owned by the University as of the Closing Date and located within 1,000 feet of the south, east, and southeast boundaries of the Property from being used for residential and heavy industrial uses in the future.

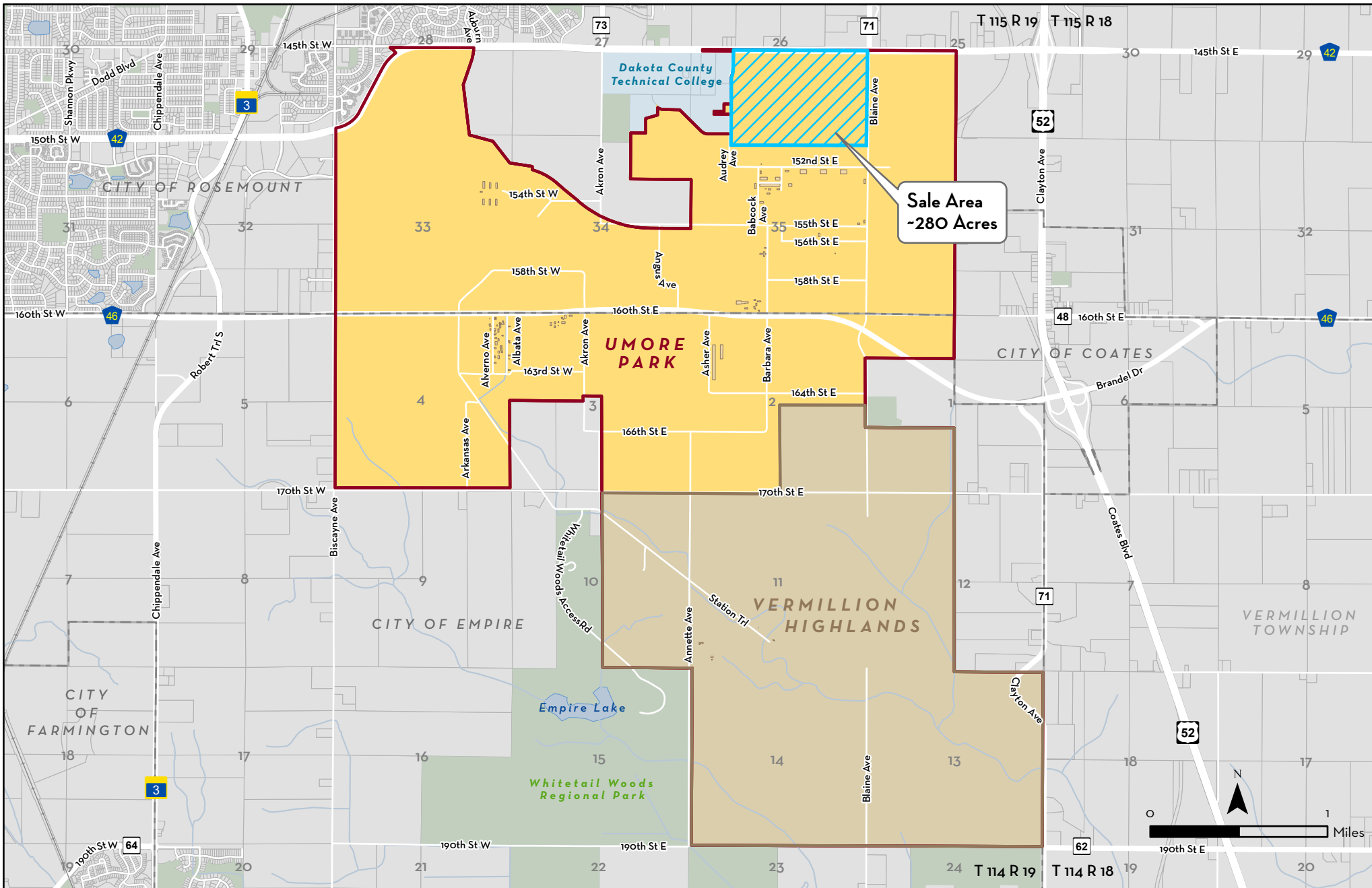
6. Environmental

The Property is being sold "as is / where is" in its present condition, with all faults. The University does not believe there are any environmental issues with the 280 acres and expects that Jimnist has completed any environmental investigation of the property Jimnist deems necessary and

appropriate. Certain environmental provisions in the Purchase and Sale Agreement were negotiated with advice from outside counsel and are unique to this transaction.

7. Uses of Funding


The net proceeds from the sale of the property will be deposited into the UMore Park Legacy Fund as directed by the Regents in 2009.



PLANNING, SPACE,
AND REAL ESTATE

UNIVERSITY OF MINNESOTA
Driven to Discover®

Sale of 280 Acres at UMore Park Rosemount, Dakota County

-  Sale Area
-  UMore Park
-  Vermillion Highlands

As of August 15, 2023

This map is intended to be used for planning purposes only and should not be relied upon where a survey is required.

Base Data: Real Estate Office
University Services GIS, MetroGIS,
MnDNR, MnGeo, Dakota County

Real Estate Transaction: Sale of 280 Acres at UMore Park

Leslie Krueger, Assistant Vice President for Planning, Space, and Real Estate

Finance & Operations Committee

September 7, 2023

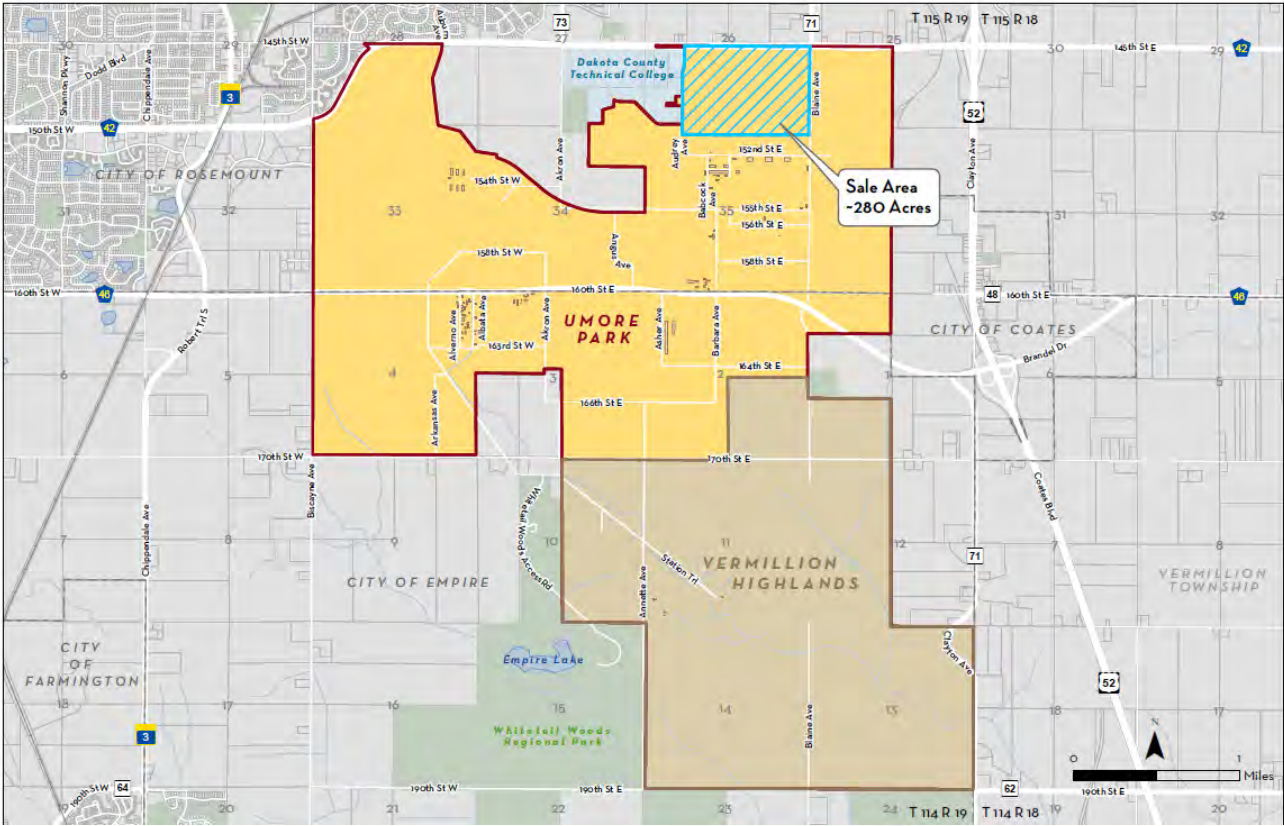
SENIOR VICE PRESIDENT FOR FINANCE AND OPERATIONS

World Class Services for a World Class University



University Services
We Make the University Work

Property Overview



What is the strategic value to the University in disposing of this property?

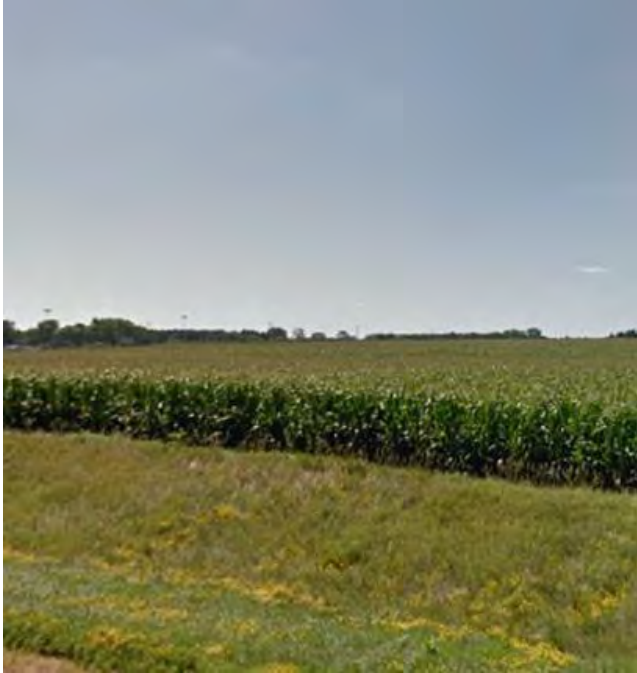
Draft Guiding Principles for Real Estate Transactions	
Support the University's teaching, research, and service mission and align with the MPact 2025 Systemwide Strategic Plan	✓
Align with campus plans	✓
Provide strategic value when balanced against scarce resources and minimize financial liability	✓
Positively impact areas adjacent to the University or limit negative impact	✓

Transaction Overview

- Buyer: Jimnist LLC
- Purchase Price: \$39,720,323
- \$950,000 Earnest Money and \$300,000 exclusivity payment to be applied to the purchase price
- Due Diligence Period expires September 30, 2023
- Closing to occur by the end of January 2024



Transaction Overview



- Jimnist will be responsible for the cost of all infrastructure and utilities necessary for the development of the Property.
- University will be responsible for the cost of relocation of the University's water line that crosses the corner of the Property.
- University will participate in cost-sharing for infrastructure if it is oversized or expanded to support other University properties.
- University will waive the Administrative Policy regarding the reservation of mineral rights.

Transaction Overview

- The development plan will be subject to City entitlements and to the Declaration of Covenants and Design Guidelines developed by the University.
- Property may be developed by Jimnist for use as a technology campus.
- University will restrict other property owned by the University within 1,000 feet from being used for residential or heavy industrial uses.





UNIVERSITY OF MINNESOTA

Driven to Discover®

Crookston Duluth Morris Rochester Twin Cities

The University of Minnesota is an equal opportunity educator and employer.



BOARD OF REGENTS DOCKET ITEM SUMMARY

Finance & Operations

September 7, 2023

AGENDA ITEM: Duluth Campus Plan

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

This is a report required by Board policy.

PRESENTERS: David McMillan, Interim Chancellor, Duluth Campus
Leslie Krueger, Assistant Vice President, Planning, Space, and Real Estate
Monique MacKenzie, Director, Campus Planning
Shane Stennes, Chief Sustainability Officer
Greg Havens, Principal, Sasaki

PURPOSE & KEY POINTS

The purpose of this item is to review the Duluth Campus Plan, the core components of which (Vision, Drivers, Big Ideas, and Recommendations) are included in the docket along with supporting narrative, imagery, and illustrations of future opportunities related to recommendations on the Duluth campus. Supplemental material on the Duluth Climate Action Plan is also provided for reference and in support of the goals of the Campus Plan.

BACKGROUND INFORMATION

Board of Regents Policy: *Reservation and Delegation of Authority*, Article I, Section VIII, Subd. 5 states: "The Board reserves to itself authority to approve campus master plans and amendments thereto." Board engagement on this plan has occurred at several phases of the process:

- June 2023: *Duluth Campus and Climate Plan Framework*, Finance & Operations Committee
- February 2021: *Systemwide Campus Master Planning Principles*, Finance & Operations Committee
- December 2020: *Systemwide Campus Master Planning Principles*, Finance & Operations Committee

UMD Campus Plan

Coordinated Campus and Climate Action Plans

Finance & Operations Committee

September 7, 2023

Overview, Systemwide Coordinated Campus and Climate Action Plans

In 2022, University leadership directed staff to create an integrated, seamless set of plans that will shape the future of each campus in terms of physical changes and the system's climate action commitment. This approach will be pursued sequentially through 2025 as follows: Duluth, Rochester, Crookston, and Morris. This effort follows the Twin Cities Campus Plan Update (approved in December 2021) and the Twin Cities Climate Action Plan (presented in May 2023).

The campus and climate action plans describe key recommendations related to physical changes at UMD over the next 30 years. The plans are developed from primary drivers and reflect the values of the institution at a systemwide and campus-specific level. For campus planning the key questions are related to development and physical changes to buildings, open spaces, and other infrastructure, driven by mission activity. For climate action planning, this work has resulted in a plan to ultimately eliminate greenhouse gas pollution and make the campus more resilient to the effects of climate change.

Both plan documents also serve as a foundation to guide and inform near- and long-term planning for capital investments. Future Six-Year Capital Plans identifying specific projects as well as funding sources are examples of how the campus and climate action plans are implemented.

Response to Regents Questions, June 2023

At the June 2023 Finance & Operations meeting, the Board shared their comments and questions in response to this item, summarized below:

Enrollment and Future Campus Growth

- Knowing the target demographic number of enrolled students can support efforts to make UMD's aspirational vision for the future more achievable. The target of 10,000 students at UMD is the intersection of fiscal health, supportive campus facilities, and capacity.
- Regarding land designated for campus expansion, one area to the northeast of campus has been marked for potential housing acquisition for a horizon beyond this plan. Based on the expectation for steady enrollment of 10,000 students, and an understanding that not all UMD students will be housed on campus, the sites indicated in the 30-year horizon of the plan as replacement for current-day apartments are likely to be sufficient to meet this demand.

Campus Life and Student Experience

- For physical accessibility to and around campus, particularly in winter conditions, operational adjustments due to weather are very important on a daily basis.
- Services such as daycare and places that host student organizations/groups are stretched but also necessary for successful student experience.
- It's understood that new students are interested in opportunities to get outdoors close to campus but they have trouble connecting to trails and green space. Plans need to promote good connections to existing links, help inform people about how to find their way to these destinations, like Bagley Nature Area and other recreation areas close to campus.

Parking and Mobility

- Regents expressed concerns about reducing parking supply on campus, as so many in the campus community come from distant locations and transit is not sufficient, therefore vehicles will be part of the future state of campus for some time. EV vehicle use should continue to be supported but it isn't practical for a majority of people.
- In continuing efforts to make it easier to get to campus without a car, Regents asked if personal transportation such as e-bikes could be subsidized, while acknowledging the unique challenges presented by the combination of Duluth's winter weather and topography.

Climate Action

- Members of the committee proposed that calculating the financial renewal requirements on all energy and buildings as they currently operate, compared to future state, size, and energy systems could support decisions about the order of magnitude of investment.
- This measure could support efforts to make bigger upfront investments as long-term costs of ownership are reduced.

I. UMD Campus Plan

Purpose of Campus Plans

The Board of Regents approved campus planning principles in February 2021. This document establishes expectations that ensure the effectiveness of the process and outcomes, and are the foundation of Regents' review and ultimate approval of each location's campus plans. These have traditionally been known as campus master plans, however, best practices in planning has shifted to less divisive language and reflect a more flexible, adaptable view of guidance towards a desired future state. Accordingly, the systemwide effort has adopted the term 'campus plan.'

Physical plans for each of our campuses address questions of growth, capital renewal, and interaction with the surrounding community, all based on the priorities shaped by the institution's mission of research, learning, and outreach. These principles are a strong foundation for best practices in campus planning, they reflect changes in good planning practice by integrating themes such as sustainability, inclusion, diversity, and innovation in the face of an uncertain future.

Time Horizon for UMD Campus Plan

The near-term horizon for the UMD Coordinated Campus and Climate Action plans is fifteen years, through 2038. Other recommendations for physical change are linked to a long-term horizon of thirty years, to 2053. Geographically, the scope of this effort addresses the core UMD campus, supplemented with information about its facilities located throughout Duluth.

Mission and Vision

For more information on UMD vision and core values, see <https://about.d.umn.edu/mission-and-values>

Physical Setting and Surrounding Geography

UMD contains over 50 buildings located on 250 acres overlooking Lake Superior. Neighboring residential areas have been established since the campus was located at this site in the early 1950s after migrating from the Normal School location on 5th Street, as service offerings to the region were expanded and sites with capacity for growth were considered for the next phase in UMD's evolution.

Other campus facilities removed from the campus core include the Natural Resources Research Institute (NRRI), Research and Field Studies Center (RFSC) aka 'The Farm,' Glensheen Historic Mansion*, Limnology Building*, and Research Laboratory Building* (RLB). Some of these (noted with an * asterisk) are also listed on the National Register of Historic Places, which mandates specific stewardship responsibilities by the University of Minnesota.

Enrollment and Demographics

The plan assumes campus population will remain essentially steady in the near-term horizon (within 10 years). Faculty and staff population will reflect enrollment and supportive services. UMD campus demographics will evolve over time to reflect diversity in the state of Minnesota, within the entering student classes as well as the transfer cohort of students. Including renewal of priority academic buildings and essential investments in campus facilities like dining and health facilities, the campus will have adequate capacity to serve this population. The following assumptions reflect the plan's parameters about future campus population.

- a. Enrollment data for fall 2022 indicated 9,675 students at UMD, including undergraduate, graduate, and UMD Medical School and Pharmacy students as well as other non-degree seeking students.
- b. The systemwide strategic plan (MPact 2025) campus enrollment target is projected at 9,100. Future change on campus as represented in the longest time horizon of this document is a maximum of 10,000 students.

- c. Faculty and staff will be maintained with adjustments as per requirements for teaching and support services
- d. Student, faculty, and staff populations will become more diverse, with an increase in new transfer enrollment from community and Tribal colleges.

Engagement during the Planning Process

Consistent with one of the Regents' approved campus planning principles, the plan was developed around an inclusive, accountable planning process. As in any community of diverse stakeholders, the work used many channels to seek input and direction at every step of the effort.

One of the key tools was to develop an interactive mapping exercise that asked respondents to designate places of significance (live, eat, study, work, and play). In the fall semester, the mapping tool was available for all members of the campus community for three weeks. 671 distinct responses were received. More than 7,700 campus locations were marked, and the mapping collected close to 2,000 individual comments. A report on the respondents affiliation is included in the docket slides for reference.

A series of monthly meetings was held for the campus community from October 2022 through April 2023, with the exception of December 2022. In November 2022 and March 2023 workshops were held in person at UMD, with the remainder being held virtually via Zoom.

A Climate Action Plan (CAP) subcommittee, made up of facilities management and sustainability staff, convened throughout the project to focus on energy systems and UMD infrastructure. Engagement included a meeting with regional and state DNR staff to learn more about recent state projects using geo-exchange and solar technologies.

Supporters and neighbors of UMD were invited to the April 2023 campus-wide plan forum, and a meeting was held with City of Duluth Planning, Transportation, and Sustainability staff in May 2023 to share the Plan and look for partnership opportunities, such as a city-sponsored campus connector trail now under construction can make the most of its alignment adjacent to campus, a great example of common purpose between UMD and the City of Duluth.

Big Ideas: Plan Recommendations

The plan's 'Big Ideas' grew out of the analysis of conditions and feedback received from a range of stakeholders. Together they describe a vision for the future campus that will enhance the distinctive and unique physical attributes of the campus, and represent the potential physical and climate impact transformation:

1. The Sustainability Corridor: Creation of a new green corridor at the heart of campus serves as gathering space for the UMD community with enhanced connections on the north and south boundary of campus to adjacent city neighborhoods and parks. The Sustainability Corridor will enhance the entry experience to campus and strengthen

pedestrian, cycling, and transit use enhanced by a new mobility hub and dining expansion along Kirby Drive. Open space serves a dual purpose as geo-exchange well sites for heating and cooling and passive use recreation areas in the heart of a renewed student housing neighborhood.

2. **The Recreation Park:** Renovation of athletic and recreation fields for greater range of use, enhanced with naturalized areas and pedestrian circulation. The Recreation Park will serve as an amenity and allow for technology to support decarbonized energy systems (geo-exchange and wastewater heat recapture infrastructure) to be introduced to support the eastern edge of campus buildings' energy needs. This new open space will collect stormwater via a new detention pond and green the campus edges by reducing the views of surface parking lots.
3. **Greening the Campus Edge:** The eventual relocation and reconstruction of campus housing from the north side to the west side of campus, with the potential reduction in parking demand, will allow some of the impervious surface (parking lots) to be reforested close to Bagley Nature Area and the northern and southern edges of the core campus. University Drive would serve as the primary vehicular through-street and gateway to campus. Some of the surface parking areas may convert to a parking structure. Reduced impervious surface will enhance experience of travel on foot and by bike, reduce need for snow removal and storage during Duluth's snowy winters, as well as reduce urban heat island effects.
4. **Reinvest in the Campus Core:** Selective renovation of priority academic buildings supports teaching, learning, and outreach missions and will reduce emissions from energy demand. Renovation of the Main Production Kitchen and future dining expansion with creation of a Mobility Hub in the Sustainability Corridor reinforce existing patterns of student and academic life. The conversion of existing, obsolete housing at Vermilion and Burntside to a lively recreation space in the heart of the campus' residential neighborhood is another aspect of this investment in the core. Progressive attention to opening up some key spaces within the connected buildings to allow views and access to courtyards will also reinvest in some of the highest used spaces in the campus core.

Implementation/ Phasing Strategy

The UMD Campus Plan strategies and initiatives are defined in the near term (15 years) and long term (30 years). The campus plan focuses recommendations on changes to land, buildings, mobility, and circulation through the lens of key campus activities in the near and long-time horizons, based on collective thinking and anticipating future conditions.

Near term improvement strategies (15 years)

Campus Life

- Demolition: Vermilion Hall, Burntside Hall, and Health Services Building
- New residence hall to address demand/ student enrollment
- New health center (potential tunnel connection to library)

- Dining Expansion
- Renovation: Alworth, Heller Hall, Old Chemistry, Library Annex, Humanities, and Voss-Kovach (to include exploration of solar roof feasibility)
- Divestment: Research Laboratory Building

Mobility and Circulation

- Mobility hub (paired w/Dining Expansion)
- Campus gateway
- Multi-modal Kirby Drive
- Potential parking structure
- Resolution of Woodland Ave access

Recreation and Open Space

- New linear park
- Reconfigured recreation space
- Multi-modal Kirby Drive
- Ped access to Bagley Nature Area and Chester Park Building
- Reforestation

Long term improvement strategies (30 years):

Campus Life

- Demolition: Oakland Apartments, Goldfine Hall, Heaney Hall, Junction Apartments
- Construct new student housing to west side of campus core with no net loss of beds
- Possible relocation of childcare, pending demand and financial support
- Explore housing acquisition at NE corner of campus

Mobility and Circulation

- More aggressive mode shift to public transportation, pedestrian, and cycling travel to advance sustainability and further reduce dedicated parking
- Long-term mobility shift could reduce permit parking spaces

Recreation and Open Space

- Reforest areas of former parking and housing locations, and augment tree cover at Bagley Nature Area

II. UMD Climate Action Plan

Climate change has been referred to as the greatest challenge of the 21st century and an existential threat to humanity that is already causing harm to people, communities, and ecosystems, here in Minnesota and around the world. Those impacts will become more severe and pronounced if the causes and symptoms of climate change go unchecked. As a result, it has been identified as a key area for action in MPact 2025.

In MPact 2025, the University committed to building a fully sustainable future and identified three actions to advance this goal:

- Demonstrate state and worldwide leadership in sustainability and environmental teaching, research, and convening power.
- Develop system leadership and governance coordination for sustainability initiatives.
- Establish next-generation systemwide Climate Action Plan.

In response, UMD has developed a climate action plan to meet the systemwide commitment of eliminating greenhouse gas pollution by 2050 and making the campus more resilient to the effects of climate change.

Since 2007, the Duluth campus has reduced its emissions over 25%. The 2023 Duluth CAP builds on this history of climate action by identifying strategies that align with the 2023 Duluth Campus Plan. UMD currently tracks emissions from heating and cooling, the University's fleet, fugitive emissions (refrigerants and fertilizers), commuting, University sponsored air travel, and solid waste. UMD's total carbon emissions can be split into the following:

- 47% of emissions are Scope 1 or direct emissions from burning natural gas and fuel oil for heating and cooling, fleet vehicles, and other fugitive emissions (fertilizers and refrigerants)
- 44% of emissions are from Scope 2 or indirect emissions from purchased electricity
- 9% of emissions are from Scope 3 or other indirect emissions, like commuting and waste

UMD's decarbonization framework addresses carbon pollution across the three scopes of emissions.

Scope 1:

- Replace the fossil fuel, steam heating system with decarbonization-supporting technologies, such as:
 - Low-temperature hot water heating
 - Geothermal heating and cooling technology
 - Thermal storage
 - Alternative fuel sources or electrification
- Ensure new buildings meet net zero emission standards
- Install energy conservation measures throughout the campus in existing buildings
- Transition UMD's fleet to electric vehicles or low- or zero-emission options
- Eliminate fugitive emissions

Scope 2:

- Install solar on rooftops of new and renovated campus buildings
- Rely on electricity grid transformation to renewable sources by 2040

Scope 3:

- Increase walking and the use of bicycles, public transit and carpooling
- Support commuters transitioning to walking, biking, transit, and electric vehicles

Note: Waste is a small part of UMD's footprint and being addressed through ongoing initiatives that will be reviewed and enhanced independent of the CAP. Emissions from air travel are largely out of UMD's control. High-quality offsets may be a strategy to address these emissions and this is being explored at a systemwide level rather than a campus-specific strategy.

The CAP also identifies vulnerabilities of the Duluth campus relative to climate change. Current and anticipated future warming is expected to result in changes in temperature, precipitation, and

severe weather. As a place-based institution, the campus will be unable to escape these impacts and will need to become more resilient to the effects. The CAP identifies portions of the campus plan that have climate resilience benefits, such as:

- Incorporate climate change projections of precipitation and warming trends into campus design
- Maintain redundancy of infrastructure systems
- Increase native plantings and reforestation for habitat and shade
- Enhance surface water protection and stormwater management
- Improve physical access to health services and recreation
- Create welcoming spaces to build community social resilience



DRAFT
UNIVERSITY OF MINNESOTA
Duluth Campus Plan Update

September 2023

The University of Minnesota Duluth's Land Acknowledgement

We collectively acknowledge that the University of Minnesota Duluth is located on the traditional, ancestral, and contemporary lands of Indigenous people. The University resides on land that was cared for and called home by the Ojibwe people, before them the Dakota and Northern Cheyenne people, and other Native peoples from time immemorial. Ceded by the Ojibwe in an 1854 treaty, this land holds great historical, spiritual, and personal significance for its original stewards, the Native nations and peoples of this region. We recognize and continually support and advocate for the sovereignty of the Native nations in this territory and beyond. By offering this land acknowledgment, we affirm tribal sovereignty and will work to hold the University of Minnesota Duluth accountable to American Indian peoples and nations.

Table of Contents

1 Introduction	5	5 Campus Frameworks	59
Purpose of the Campus & Climate Action Plans Framework	6	Academic and Research Facilities	60
Planning Process	8	Campus Life	62
2 Plan Drivers	11	Landscape	66
Systemwide Strategic Plan: MPact 2025	12	Recreation	70
MPact 2025 Sustainability, Climate Action, & Resiliency Goals	12	Mobility	72
Systemwide Planning Principles	13	Decarbonization and Resilience	76
UMD Mission & Vision	14	6 Implementation and Phasing Strategy	79
Campus Community Input	14	Near-Term Strategies	80
3 Existing Conditions Analysis	19	Long-Term Strategies	88
Duluth Campus	20	Campus Growth and Property Acquisition	92
UMD Campus Community	22	7 Acknowledgements	95
Building Use and Condition	23	University of Minnesota	96
Mobility and Connectivity	28	Consultant Team	97
Topography and Open Space	34	8 Appendix	99
Hydrology	37	UMD Properties	102
Emissions & Climate Projections	40		
4 Planning Vision: The Big Ideas	43		
Near-Term Framework	44		
Big Ideas	46		





Introduction 1

Purpose of the Campus & Climate Action Plans Framework

The University of Minnesota set out to develop an integrated, seamless set of campus and climate plans to shape the future of each campus in terms of physical changes and alignment with the System's climate action commitment. The purpose of completing a campus plan is to develop consensus around a shared vision for the future of the campus, establishing a framework with a set of actionable steps that the institution can take to realize this vision in a way that advances its goals and mission. The University of Minnesota Duluth's (UMD's) coordinated Campus and Climate Action Plans describe the vision and key recommendations for the campus. The plans were developed from primary drivers and reflected the values of the institution at a systemwide and campus-specific level. The plans also serve as a foundation to guide and inform near- and long-term planning for capital investments.

The UMD Campus Plan presents an overview of plan drivers, existing campus conditions, and community input that have informed the inception of four "Big Ideas" for the future campus. These Big Ideas are strategic opportunities for meaningful and positive change for the UMD community experience and campus operations. These Big Ideas are supported by planning frameworks, which present a vision for how campus improvements may be made at a systems level. Finally, the plan presents suggestions on which capital projects UMD should prioritize to maximize efficiency and impact over a fifteen- and thirty-year time horizon.

A Systems Approach

Each campus of the University of Minnesota System plays a pivotal role in fulfilling the tripartite mission of the University, advancing learning, research, and outreach throughout Minnesota. Each has its own unique identity, valued by students, faculty, staff, and the surrounding community. This integrated planning effort will provide each campus with a framework for future decision-making and implementation to support each individual institution's needs while advancing goals identified in the system-wide strategic plan, MPact 2025.

Planning Purpose and Goals

The purpose of this campus plan is to establish consensus and outline an approach to achieving shared goals in mobility, infrastructure, community connection, and resilience over a thirty-year time horizon. The recommendations that follow reflect UMD's unique needs as identified during the campus analysis stage, input and ideas shared by the UMD campus community, and areas for further study and evaluation. All of these recommendations are intended to support MPact 2025's commitment to building a fully sustainable future for UMN campuses. In a parallel effort, the project team has identified steps that UMD may take to eliminate greenhouse gas emissions by 2050; they are described in a companion document, "University of Minnesota Duluth Climate Action Plan."

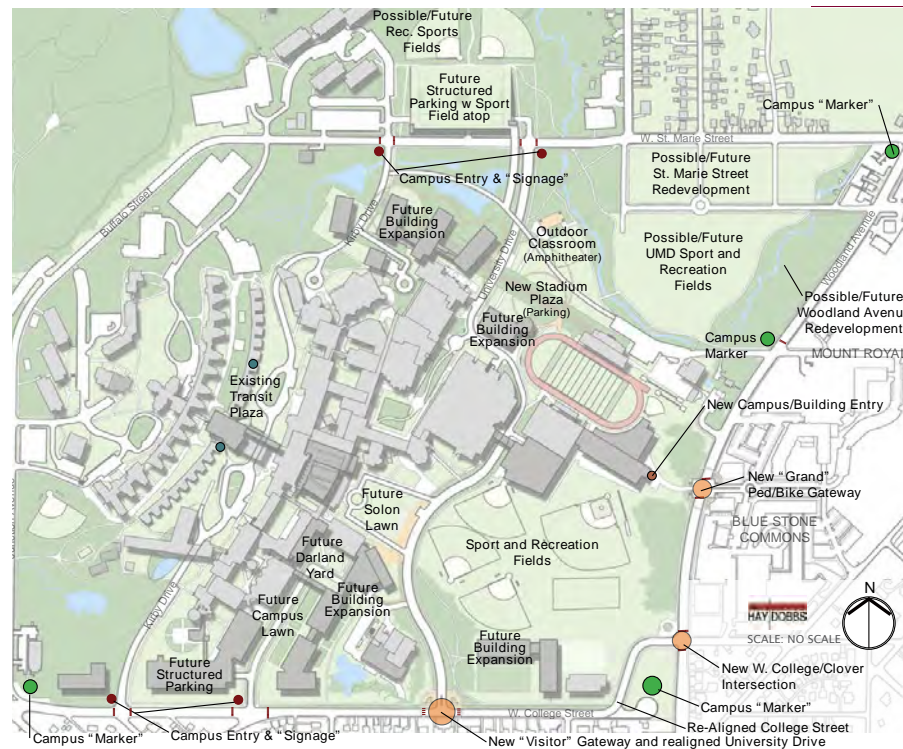
2013 Plan Update

The most recent UMD campus plan update was completed in 2013. A notable accomplishment since the 2013 plan was the 2019 addition of the Heikkila Chemistry and Advanced Materials Science building, which is situated on a site that the 2013 plan had identified for future building expansion. The stated goals for the 2013 plan were:

- Create a "Front Door" for the UMD Campus
- Develop a "Focal Point" for the UMD Campus
- Make the UMD Campus "Visible"
- Enhance the "Visual Quality" of the UMD Campus
- Create a "Pedestrian and Bicycle Friendly" UMD Campus
- Connect and "Integrate" the UMD Campus into the City of Duluth

Though certain priorities have shifted, several of the goals and strategies proposed in 2013 are also supported in the current plan. These include the addition of a visitor gateway off West College Street and proposed realignment of University Drive east of the power plant, the greening of the campus edge through strategic removal of surface parking, and the greening of the Solon Campus Center's entrance courtyard. Further alignments with or departures from the recommendations of the 2013 plan are noted in more detail in the following pages.

The near-term horizon for the UMD Campus Plan is fifteen years, through 2038. Other recommendations for physical change are linked to a long-term horizon of thirty years, to 2053. Geographically, the scope of this effort addresses the core UMD campus, supplemented with information about its facilities located throughout Duluth. Periodic updates to the plan will occur approximately every ten years to accommodate shifting needs and priorities for the UMD campus.



2013 Proposed UMD Master Plan - Long Term Plan

Planning Process

The UMD planning process progressed over the course of nine months, beginning in November 2022 and concluding with the completion of the final draft in August 2023. The planning process for UMD included the following phases of work:

Phase 1: Visioning

This initial phase developed a compelling vision for UMD and a framework for implementation based on input from stakeholders, review of past planning efforts, and MPact 2025 goals. A core component of this phase was conducting an inclusive and informed engagement process which was tailored to each campus in order to define this vision based on input from key stakeholder groups. The visioning phase was carried out in conjunction with leadership, established committees, and other members of each campus community.

The Visioning phase for the UMD plan was the longest of the four project phases. It began in November 2022 with a site visit and building and grounds tour, a comprehensive data collection and inventory process, stakeholder interviews, and community listening sessions. The project team then launched the MyCampus interactive mapping tool and the project website to collect input and share information virtually. Following site reconnaissance and data collection, the consultant team shared campus analysis findings with the UMD community in February. Findings drew upon site visit observations,

map and site survey-based analysis, and community input and ideation garnered over the four month period.

Further detail about the UMD community engagement process and outcomes is provided in subsequent sections.

Phase 2: Assumptions, Scenario Planning, and Modeling

During the second phase of work, the project team began to develop and test alternative approaches to addressing the campus needs and community priorities identified in Phase 1. This included developing consensus among campus leadership and stakeholders on assumptions about future changes, including demographic, financial, cultural, and climate system trends that impact campus activities, facilities, and infrastructure. At the conclusion of this phase, the project team reached consensus with campus leadership and community stakeholders on preferred alternatives to refine during Phase 3.

Phase 2 of the UMD planning process began in February 2023 following the presentation of campus analysis findings. During the two month phase, the project team explored and developed a series of alternative approaches to address campus systems including but not limited to student life, mobility and wayfinding, landscape, and infrastructure. The project team also began to model and analyze

proposed climate mitigation and adaptation solutions to validate UMD's ability to meet climate targets while adapting to projected climatic changes. These alternatives were shared with campus leadership as well as the broader campus community during a series of in-person meetings and workshops in March 2023. The project team recorded feedback on the concept alternatives and presented preliminary campus plan recommendations during a virtual campus forum in April 2023.

Phase 3: Draft Plan Production

The project team refined preliminary recommendations into a preferred direction during Phase 3, consolidating the selected strategies into a cohesive vision for the future of the campus. With approval from campus leadership, the project team began to develop documentation of their recommendations for preliminary review and feedback from the Board of Regents.

Phase 3 of the UMD planning process spanned two months, and included the development of presentation and docket materials showcasing the project team's recommendations for review by the Board of Regents in May 2023. Based on preliminary comments provided by the Board of Regents, the project team proceeded to draft a coordinated plan for Regent review in September 2023.

Phase 4: Final Plan Production

During the final project phase, the team gathered feedback from UMD stakeholders and University leadership on the draft plan, making final refinements as needed to plan contents and recommendations. The team then prepared the final planning document in both digital and print-ready formats for action to approve by the Board of Regents in October 2023.

Below: Aerial view of University of Minnesota Duluth Main Campus
Right: UMD students at Kirby Student Center







Plan Drivers **2**

Each campus plan is informed by a combination of key drivers. The Systemwide Strategic Plan: MPact 2025 is a planning resource common to all of the UMN system campuses, and outlines a vision for the future of the University as a whole. In addition to this document, other drivers which inform each distinctive campus plan include campus-level strategic plans and visions, preceding planning studies, community stakeholder input, and the unique set of conditions at each campus. The key drivers that have informed the UMD campus plan are described below; existing campus conditions are described in further detail in subsequent sections.

Systemwide Strategic Plan: MPact 2025

The UMD campus plan, and the climate action plan, are aligned with the systemwide strategic plan, MPact 2025, related to campus planning (Commitment 5, Action Items 5.3) and climate action planning (Commitment 2, Action Items 3.2). Many of the plans' recommendations embody the commitments outlined in the MPACT 2025 plan, as noted below.

Student Success

Continued investment in housing and wellness to support recruitment and retention. Development of the proposed Sustainability Corridor and Recreation Park will create places of respite and recreation and

could be used for applied learning opportunities.

Discovery, Innovation, & Impact

Reinvestment in academic buildings supports innovation and applied research across multiple colleges and units.

MNtersections

This plan provides a decarbonization framework to meet the University's commitment to eliminate carbon emissions by 2050.

Community & Belonging

The proposed Sustainability Corridor and the Recreation Park create places for the UMD Community to gather with each other to foster belonging, and to connect with adjacent city neighborhoods and parks.

Fiscal Stewardship

This plan denotes building divestment and demolition for buildings that no longer adequately serve UMD's mission, and renovate other facilities to advance UMD's commitment to building a sustainable future.

MPact 2025 Sustainability, Climate Action, & Resiliency Goals

Climate change has been referred to as the greatest challenge of the 21st century and an existential threat to humanity that is already causing harm to people, communities, and ecosystems, here in Minnesota and around the world. Those impacts will become more severe and pronounced if the causes and symptoms of climate change go unchecked. In MPact 2025 (Commitment 3, Action Items 3.2), the University committed to building a fully sustainable future and identified three actions to advance this goal:

- Demonstrate state and worldwide leadership in sustainability and environmental teaching, research, and convening power.
- Develop system leadership and governance coordination for sustainability initiatives.
- Establish a next-generation systemwide Climate Action Plan.

Systemwide Planning Principles

The Board of Regents approved campus planning principles in February 2021, listed below. These serve as expectations that ensure the effectiveness of campus plans and are the foundation of Regents' review and ultimate approval of each location's campus plans. The UMN system has a long history of regularly updated campus physical plans, which have traditionally been known as campus master plans.

1. Establish a sustainable vision of how the physical setting of each campus will embody its distinctive history, mission, and future.
2. Create an inclusive and welcoming experience for the increasingly diverse range of people who come to campus.
3. Optimize existing physical assets to facilitate flexible and innovative solutions toward an enduring future.
4. Consider the cost of attendance, investment, and operations when planning for each campus' future.
5. Integrate each campus' master plan with the Systemwide Strategic Plan.
6. Ensure an inclusive, accountable, and forward-looking process for developing and implementing the master plan.

THE PLAN

Inspired by the State of Minnesota, MPact 2025 reflects our deepened commitment to research, teaching, and service, open access to opportunity, and forward-thinking innovation to advance the University's land-grant mission and impact the world.



Commitments

Commitments represents the intersection of our values and action. They are like a spine to which all else is connected, and are intended to freely complement and interact with one another. The Commitments help us to articulate our vision at the 100,000 feet level, as well as provide direction to frame our organizational identity. The Commitments are inspiring, unifying, and impactful, but not constraining.

1: STUDENT SUCCESS

Meeting all students where they are and maximizing their skills, potential, and well-being in a rapidly changing world.

2: DISCOVERY, INNOVATION & IMPACT

Channeling curiosity, investing in discovery to cultivate possibility, and innovating solutions while elevating Minnesota and society as a whole.

3: MNTERSECTIONS

Inspired by Minnesota to improve people and places at world-class levels.

4: COMMUNITY & BELONGING

Fostering a welcoming community that values belonging, equity, diversity, and dignity in people and ideas.

5: FISCAL STEWARDSHIP

Stewarding resources to promote access, efficiency, trust, and collaboration with the state, students, faculty, staff, and partners.

Commitments of the Systemwide Strategic Plan: MPact 2025
(Source: Office of the President, MPact 2025: Systemwide Strategic Plan)

6

UMD Mission and Vision

Mission

The University of Minnesota Duluth integrates liberal education, research, creative activity, and public engagement and prepares students to thrive as lifelong learners and globally engaged citizens.

Vision

UMD will be agile in pursuing a dynamic future that builds upon our strengths and successfully confronts evolving challenges and opportunities. UMD will deliver an array of academic programs and student experiences that capitalize on our excellence and impact, as well as our scholarly strengths and external partnerships. In this way UMD will serve as a platform for success and achievement beyond graduation for students from all diverse and cultural backgrounds. By accomplishing this vision UMD assures that Minnesota has a highly qualified and innovative workforce to meet our future economic, environmental, social, and cultural challenges.¹

¹ <https://about.dumn.edu/strategic-plan/vision>

Campus Community Input

Consistent with the Regents' approved campus planning principles, the planning work completed for UMD was designed to ensure an inclusive,

accountable planning process. One of the key features of this work was to engage the campus community with an interactive mapping tool, MyCampus, which asked respondents to designate places of significance (live, eat, study, work, and play, among others). In the fall semester of 2022,



the mapping tool was available for all members of the campus community for three weeks. 671 individuals recorded responses. More than 7,700 campus locations were marked, and the mapping collected close to 2,000 individual comments. Of the participants who identified themselves, the majority were students (60%), with staff and faculty accounting for more than one-third of respondents-

26% staff and 12% faculty - in addition to small numbers of alumni and 'other' affiliation. 92% of student respondents were undergraduate students, with approximately one-third being first year students, and one-third being seniors.

In addition to virtual engagement with the MyCampus tool, the planning team prioritized keeping the

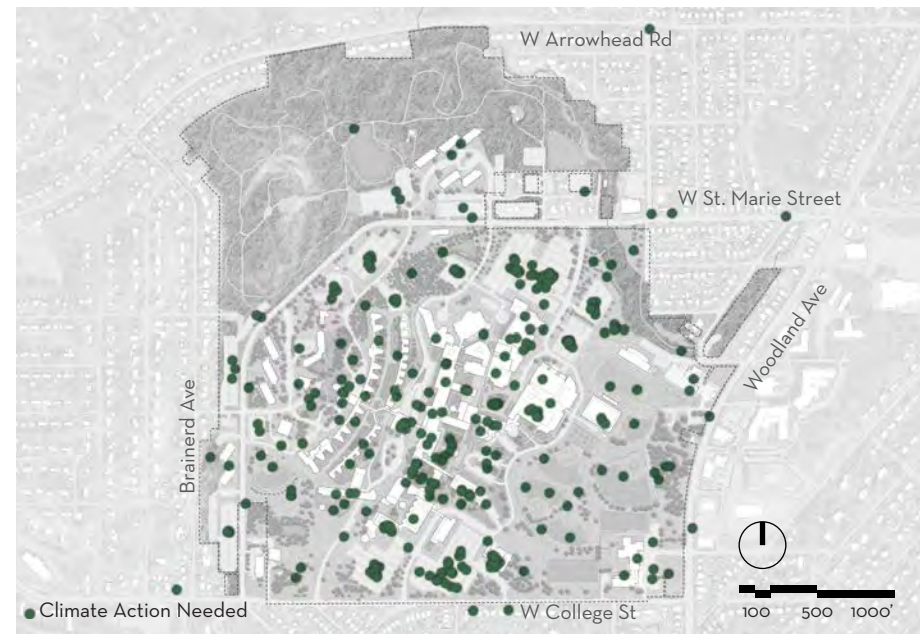
campus community apprised of the planning process through virtual and in-person touchpoints. A series of monthly meetings were held for the campus community from October 2022 through April 2023, with the exception of December 2022. November 2022 and March 2023 workshops were held in person at UMD, with the remainder being held virtually.

Below and left: Results from the MyCampus mapping activity, in which each point represents UMD perspectives about campus activities, assets, and conditions

Places to Study



Climate Action Needed



A Climate Action Plan (CAP) Advisory Committee, made up of facilities management and sustainability staff, convened throughout the project to focus on energy systems and UMD infrastructure. Engagement included a meeting with regional and state Department of Natural Resources (DNR) staff to learn more about recent state projects using geothermal and solar technologies.

Supporters and neighbors of UMD were invited to the April 2023 campus forum, and a meeting was held with City of Duluth Planning, Transportation, and Sustainability staff in May 2023 to share the Plan and look for partnership opportunities. The City of Duluth is in the process of constructing a city-wide connector trail which is currently shown along University Drive on campus. The UMD Coordinated

Campus and Climate Action Plans' proposed Sustainability Corridor on the Kirby Drive alignment appears to match the City's campus connector trail in purpose and character.

Below (left and right): Campus engagement activities included an open house-format community event, during which the planning team sought feedback on preliminary concepts.




Planning Framework



Above: The Planning Framework was developed as a discussion tool to illustrate all the considerations that a campus plan can make. Many of these topics are given strategic thoughts and commitment under other plans and initiatives at UMD and may not be heavily covered in the plan given these other dedicated efforts.



An aerial photograph of a dense forested landscape, likely a coastal area, with a river or stream winding through the trees. In the distance, several tall, thin masts or structures are visible against a clear sky. The entire image is overlaid with a semi-transparent blue filter.

Existing Conditions Analysis 3

Duluth Campus

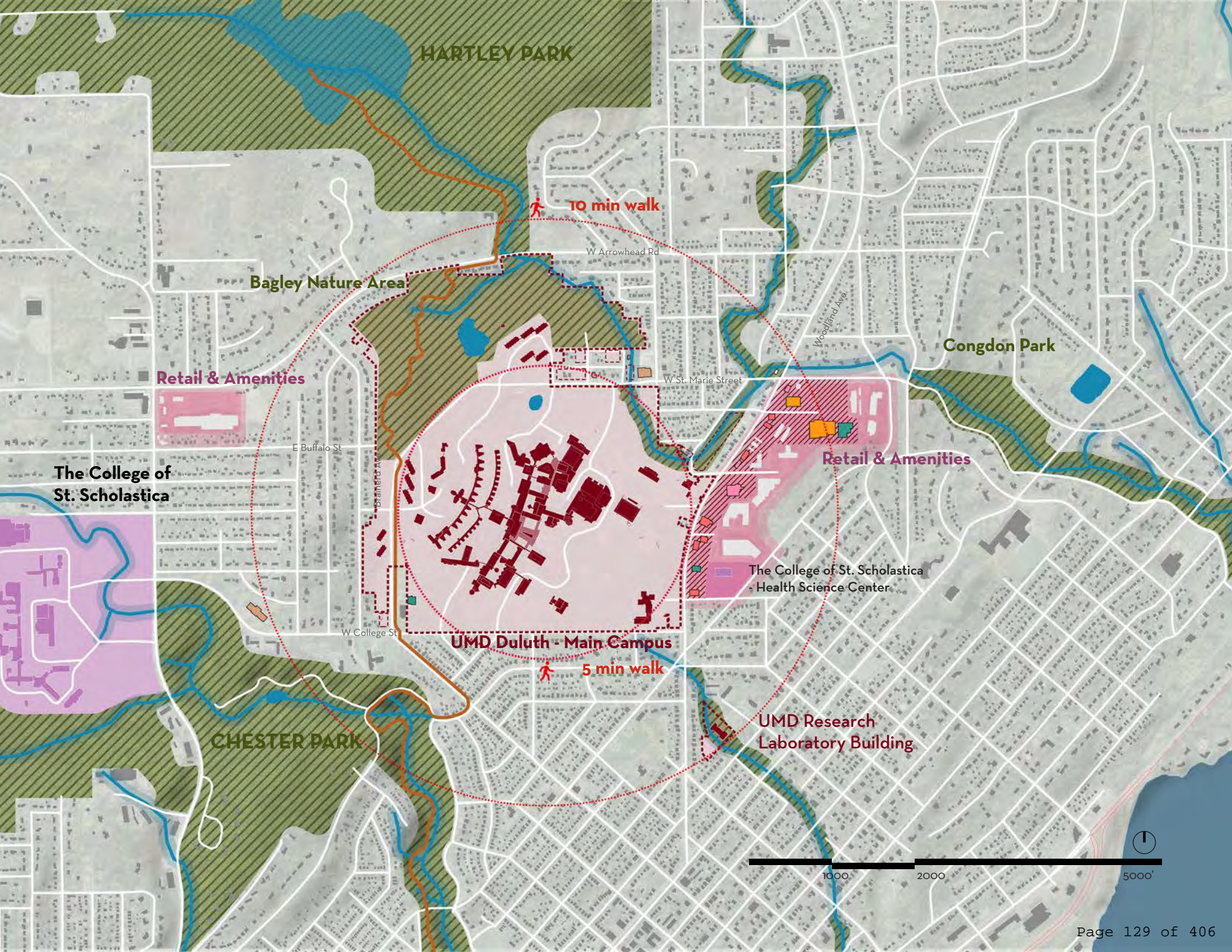
The existing conditions analysis occurred during the first phase of the planning process. The project team utilized a combination of stakeholder input, desktop analysis, and on-the-ground observations to develop a synthesized understanding of campus conditions and future needs. Where existing data was limited, the project team made assumptions based on best available information. Any such assumptions are noted below.

The UMD campus is located in the City of Duluth between Hartley Park and Chester Park, and is surrounded primarily by residential neighborhoods, with mixed development to the east and northwest. The campus contains over 50 buildings located on 250 acres overlooking Lake Superior. A prime resource for education, research, and recreation for both campus and the surrounding community is UMD's Bagley Nature Area on 60 acres of land on the north end of campus.

The planning process primarily focused on envisioning the future of the campus core, including the Bagley Nature Center and the Research Lab Building, located on the former UMD lower campus. The campus core does not include the Natural Resource Research Institute (NRRRI), Glensheen, Limnology, Research and Field Studies Center (RFSC) or other affiliated properties. Although these properties are not the focus of the plan, they are significant contributors to the UMD experience and their relationships with the campus core was considered. (Reference appendix)



An aerial view of Bagley Nature Area



HARTLEY PARK

10 min walk

W Arrowhead Rd

Bagley Nature Area

Retail & Amenities

E Buffalo St

The College of St. Scholastica

W St. Marie Street

Woodland Ave

Congdon Park

Retail & Amenities

The College of St. Scholastica - Health Science Center

W College St

UMD Duluth - Main Campus

5 min walk

UMD Research Laboratory Building

CHESTER PARK

1000 2000 5000'



UMD Campus Community

Almost 9,675 students were attending UMD during the fall semester of 2022, including UMD Medical School and Pharmacy students; with 35% living on campus, and 65% living off campus. The number of undergrad students was 8,810. The graduate student population was 865. Prior to the pandemic, the MPact 2025 undergraduate enrollment target for UMD was set at 9,100 total enrollment and future change on campus is linked to the MPact 2025 target population. Faculty and staff will be maintained with adjustments as per requirements for teaching and support services.

Student, faculty, and staff populations are projected to become more racially diverse, with an increase in new transfer enrollment from community and Tribal colleges.

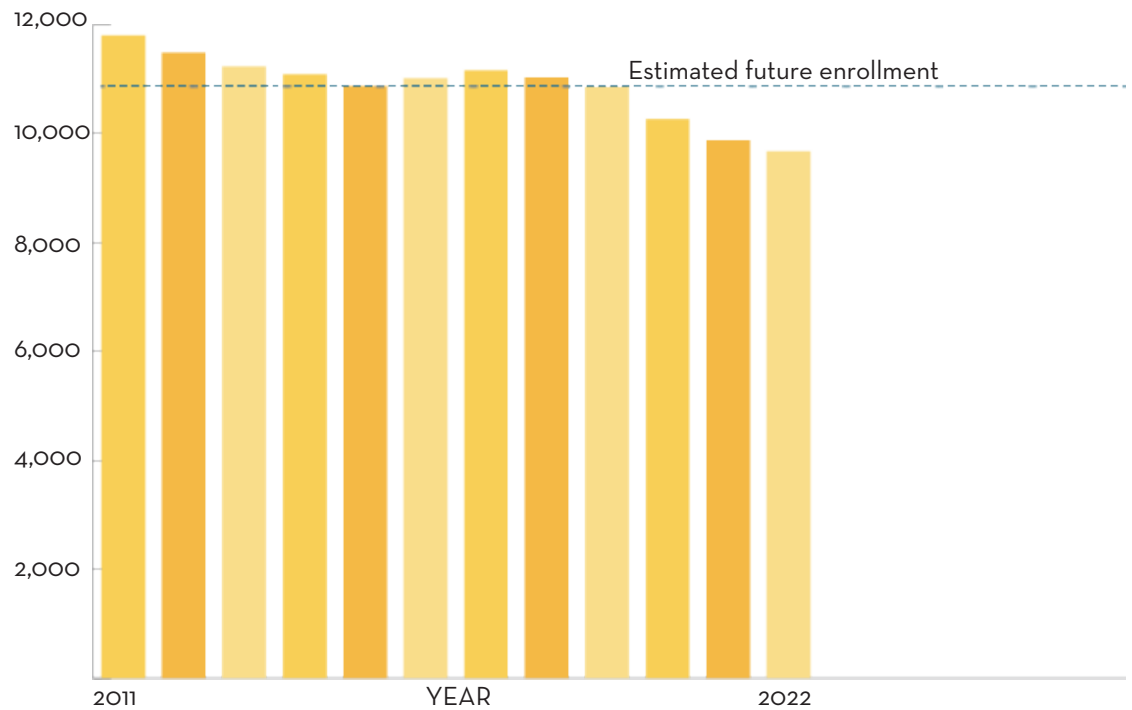
The plan assumes the relative share of undergraduate and graduate students will remain the same. Faculty and staff population will reflect enrollment and supportive services. UMD campus demographics will evolve over time to reflect diversity in the state of Minnesota, within the entering student classes, as well as the transfer cohort of students.



2,700 on campus residents



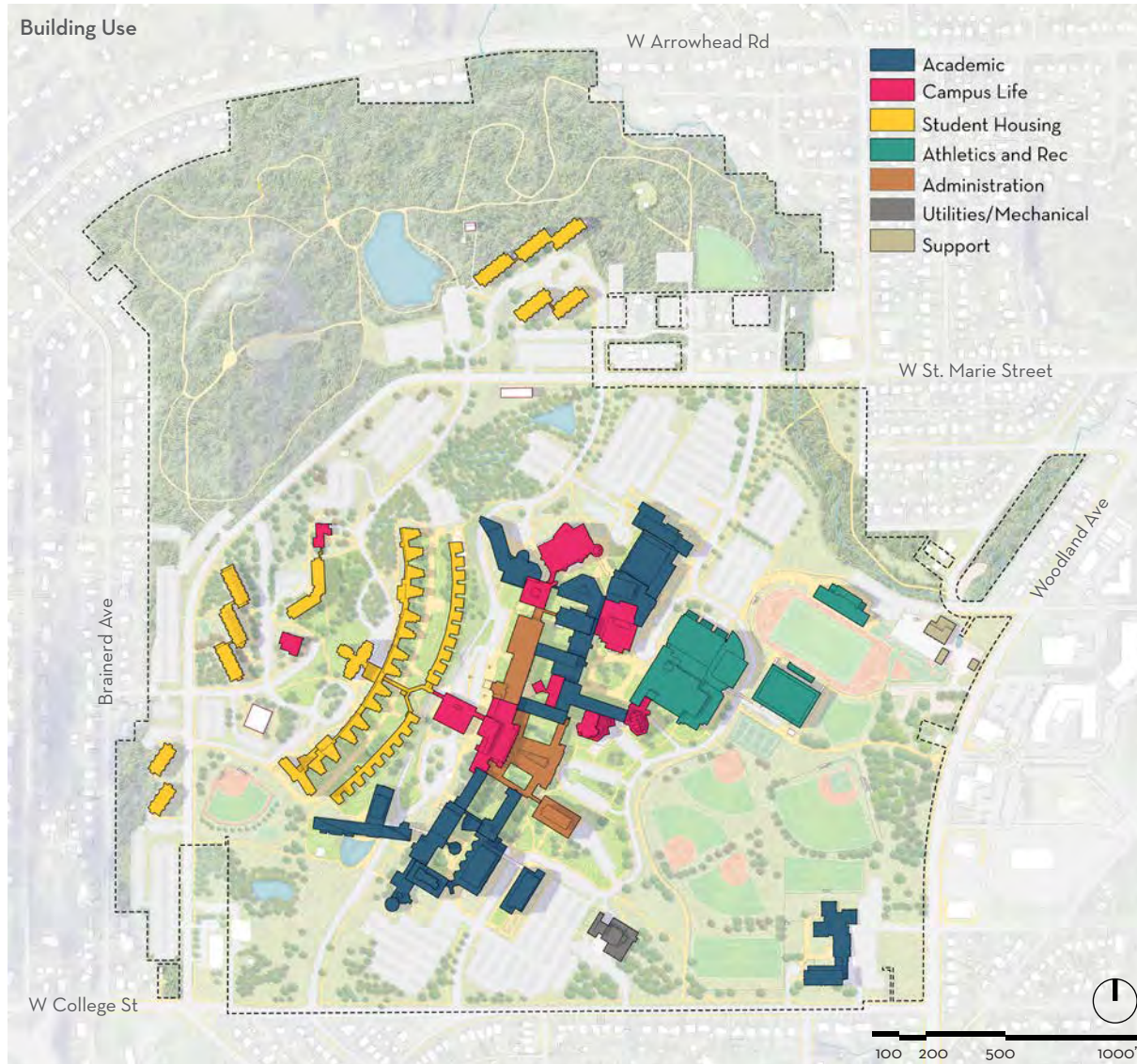
7,000 off campus residents



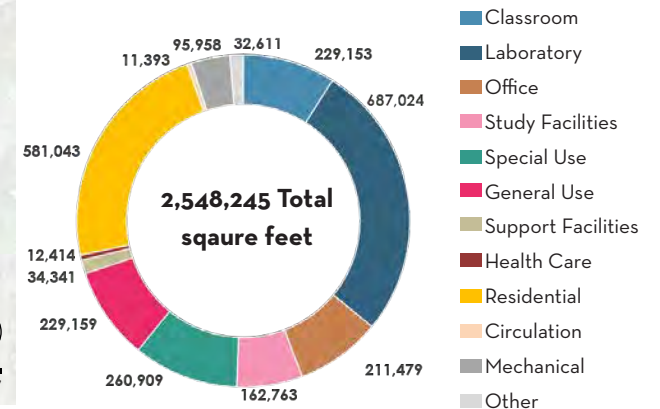
For planning purposes, future enrollment figures represent the mean enrollment from the past 12 fall semesters



Building Use and Condition

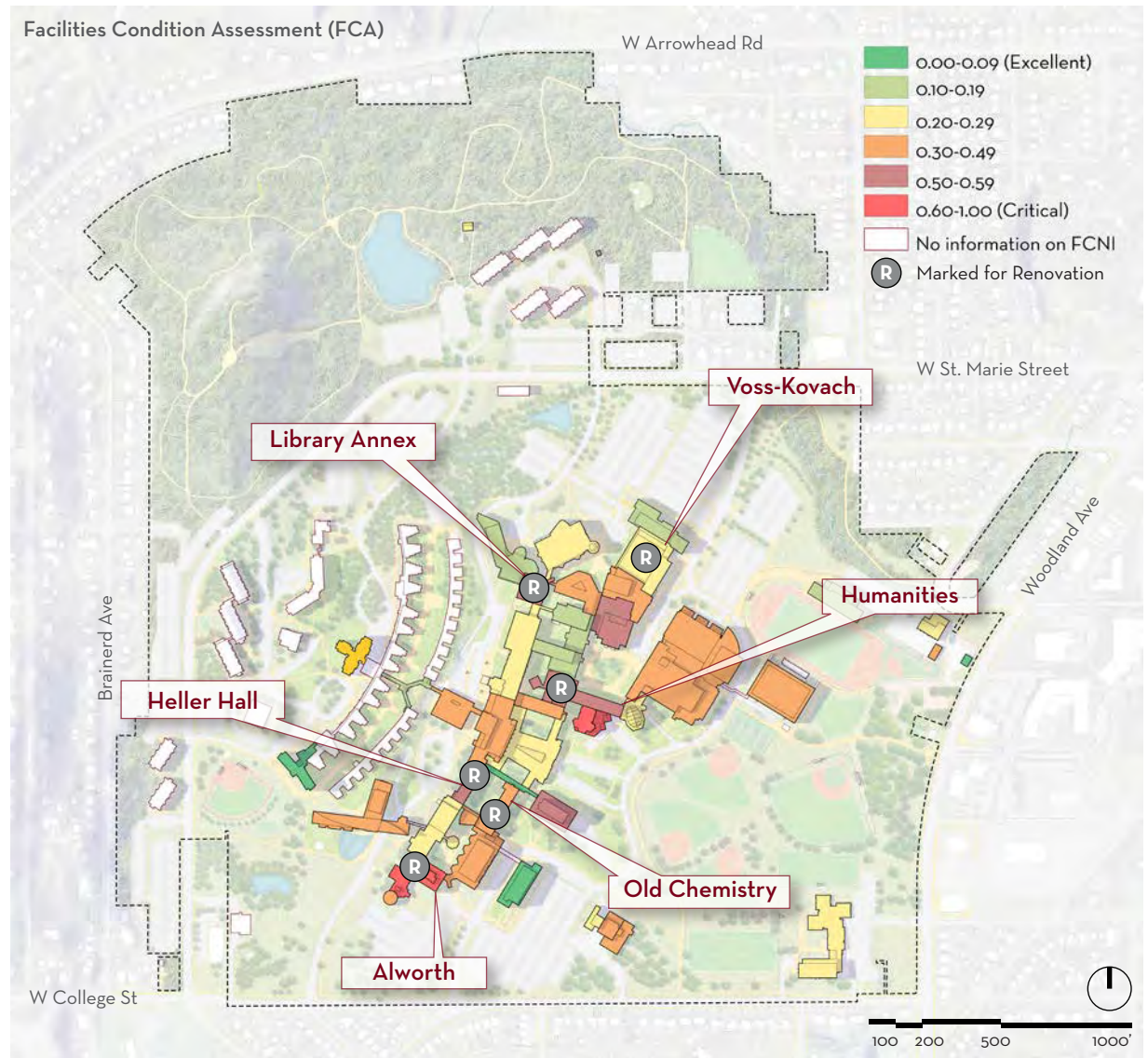


There are presently over 50 buildings on the UMD campus. The location and orientation of the buildings reflect the campus's topographic conditions as well as the climate of Duluth. Many of the buildings in the campus core, which primarily support academic, administrative, and student life functions, are connected by means of an interior corridor system. This reduces the amount of time students, staff, and faculty need to spend outside during the cold winter months. The residence halls, Residence Dining Center, and the Sports and Health Center are also accessible through indoor passageways. Building use distribution is striated, with residential and dining uses primarily concentrated north and west of the campus core and recreational programs concentrated to the south and east. Campus buildings are primarily oriented facing southeast towards Lake Superior; topographic changes on campus allow for views of the lake from certain vantage points. This orientation



is not optimized for solar gain; southern-facing buildings would allow for passive solar gain.

UMD building ages and conditions vary. Campus buildings were noted to be well-constructed, though the majority of buildings are over 30 years old. At the time of this study, a comprehensive facility conditions assessment (FCA) was ongoing. While data was available from a partial assessment in 2021, the most recent comprehensive FCA was completed in 2013. The partial 2021 data noted that AB Anderson Hall and MW Alworth Hall each had a facility conditions need index (FCNI) score over 0.8, indicating critical needs. AB Anderson Hall is currently undergoing comprehensive renovations. Additional buildings the University has identified for future renovations include Heller Hall, Chemistry, Library Annex, Humanities, and Voss-Kovach.



Limnology building



Above: Limnology Building (Source: UMD News Center, <https://news.d.umn.edu/news-center/articles/limnology-building-preserved>)



Glensheen in 2015

Cultural Resources

The University of Minnesota is one of the largest owners of historic assets, referred to as cultural resources (cultural landscapes, historic districts, and buildings) in the State of Minnesota.

The University is guided by Board of Regents (BOR) Policy on Historic Preservation and Minnesota State Statute. BOR policy articulates the University's commitment to preserving its historic resources and states that the University will take reasonable measures to ensure such preservation. Minnesota statutes require the University to cooperate with the State Historic Preservation Office (SHPO) to preserve the state's historic resources.

The University of Minnesota Duluth has several buildings that are listed on the National Register:

- Glensheen, a.k.a. Chester and Clara Congdon estate - 1905 to 1909
- Limnological Research Station, a.k.a. U.S. Fisheries Station- Duluth - 1880's
- Research Laboratory Building, a.k.a. Model School Building - 1926

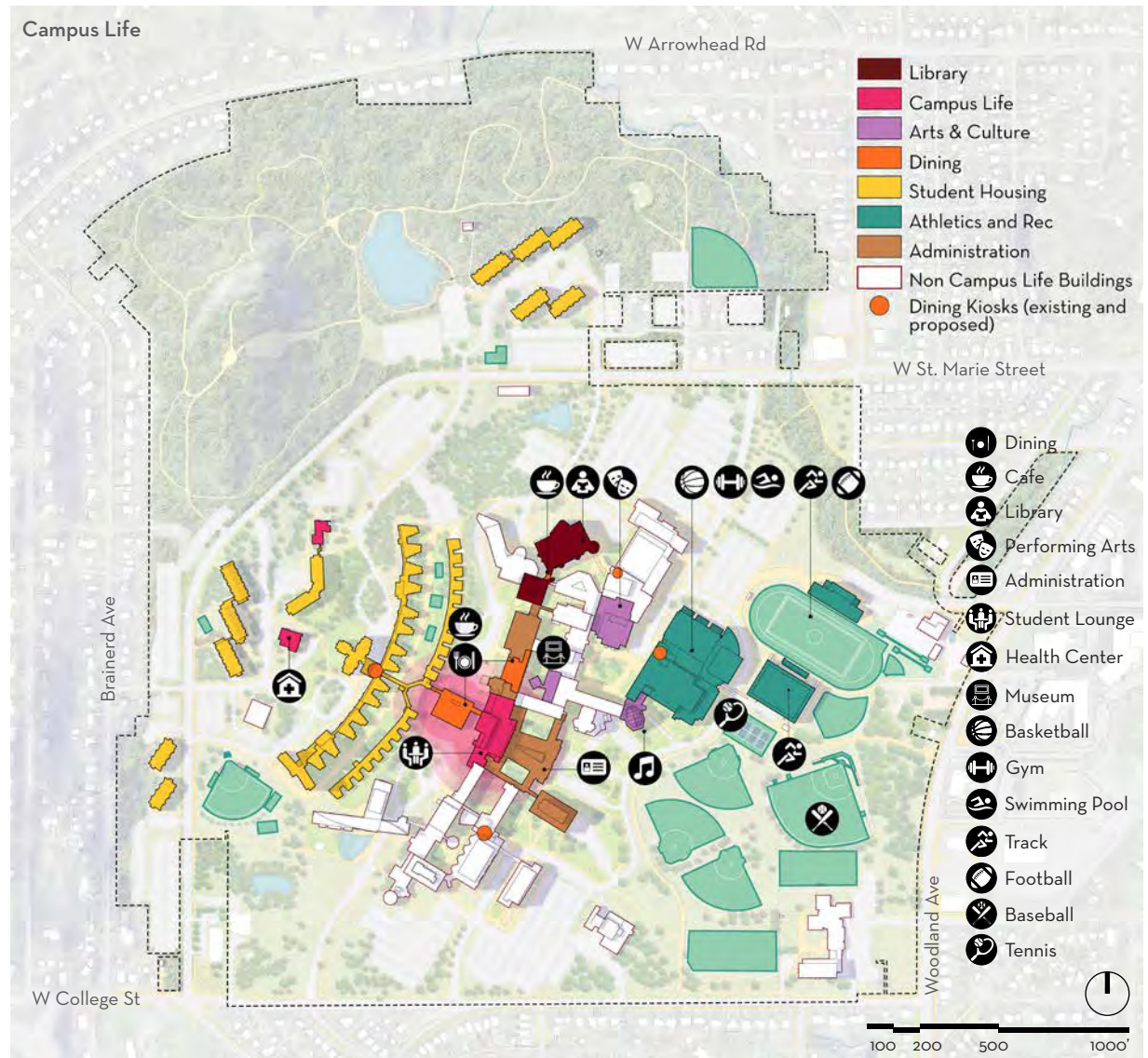
Left: Glensheen in 2015 (Source: <https://www.minnpost.com/mnopedia/2017/01/duluth-s-glensheen-estate-one-best-preserved-mansions-its-kind-minnesota/>)

Campus Life Facilities

UMD has nine residence halls with over 3,000 beds total. Over 90% of first year students live on campus, but only 12-13% of upper division students do. Vermilion Hall and Burntside Hall, constructed in the 1950s, are the oldest residence halls on campus, and also have the lowest bed capacity. There are plans to demolish both Burntside and Vermilion, potentially replacing them with a new residence hall with 351 beds, assuming future enrollment stabilizes. The new residence hall will be located on the northern end of Griggs Hall. While most student housing is co-located on the west side of campus, 490 beds are located in the Oakland Apartments north of West St. Marie Street, abutting the Bagley Nature Area. The Junction Apartments, west of Junction Avenue, have 136 beds.

Multiple dining venues operate on campus. Superior Dining Hall, located on the second floor of the Residence Dining Center, has inadequate seating during peak meal periods and inefficient soiled dish return¹. The main production kitchen which handles food production for Superior Dining and other food service locations on campus, has not been renovated since its construction in 1971. A campus dining feasibility study was completed in February 2023, which explores renovation alternatives for

¹ UMD Campus Dining Master Plan, Oct. 2018, prepared by Envision Strategies



food services venues on campus. UMD has elected to renovate the main production kitchen and is presently in the pre-design phase.

Health and Wellness

Student health services are housed in the former Provost's residence, which is situated among student housing on the west side of campus. The accreditation body for Health Services is the AAAHC. The Accreditation Association for Ambulatory Health Care (AAAHC) has cited clinic space as a significant issue to address. The facility is inadequate for the size of the student population, and will need to approximately double to meet existing demand.

UMD has a highly subscribed outdoor recreation and sports programs that engage students year-round. Recreational Sports Outdoor Programs (RSOP) and Applied Human Sciences share the Sports and Health Center facilities with varsity athletic teams. The building is difficult to navigate, and a lack of control points make the facilities challenging to manage. Fitness spaces are reported to be undersized to serve the current student population.

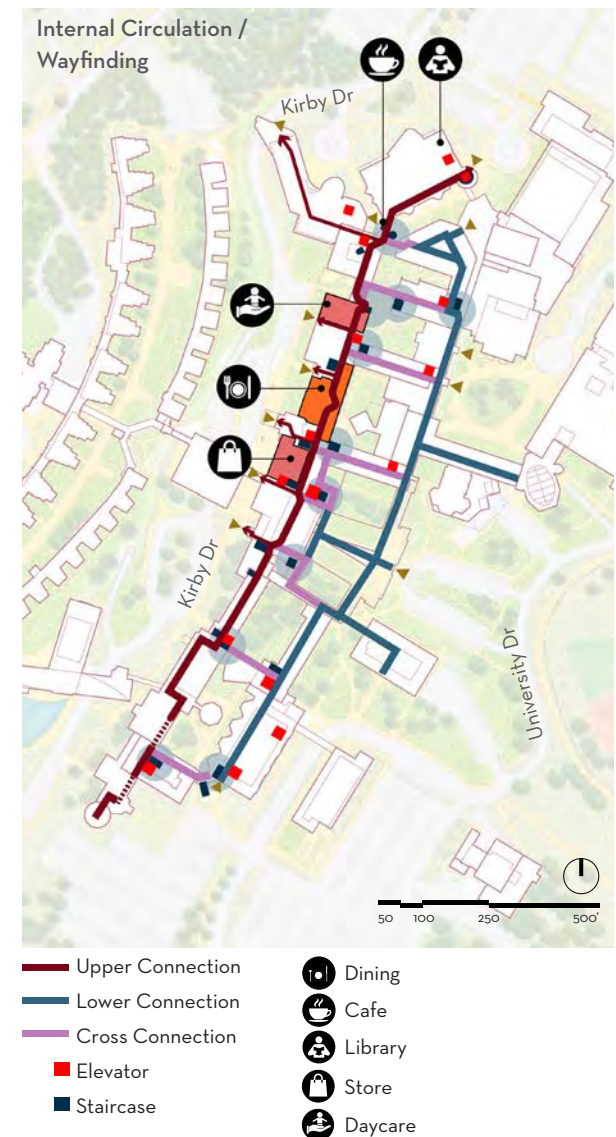
Existing spaces are repurposed to accommodate campus community requests where feasible. Improvements should reflect the diversity of students, faculty, and staff from art selection to wellness spaces.

Accessibility

One of the values of UMD is to create a welcoming and inclusive campus by making it more physically accessible. The accessibility of older buildings, particularly student housing, is a key concern for UMD. As new facilities are constructed and buildings are renovated, accessibility will be a primary goal. When major renovations occur, programming should consider a diversity of needs. The campus' commitment to providing equitable access to all future building, interior, and site design projects would allow for an improved experience by students, employees, and visitors.

Interior Circulation

The UMD campus is notable for its extensive interior system of connected corridors. The system features two major routes that offer consistent accessible connections north to south through the main complex of interconnected academic and administrative buildings. The red concourse is associated with Kirby Drive level of the campus and the blue concourse is roughly associated with the University Drive level of the campus. While at different elevations, these routes serve as the backbone of the interior circulation network and are connected by other interior corridors, stairways and elevators.



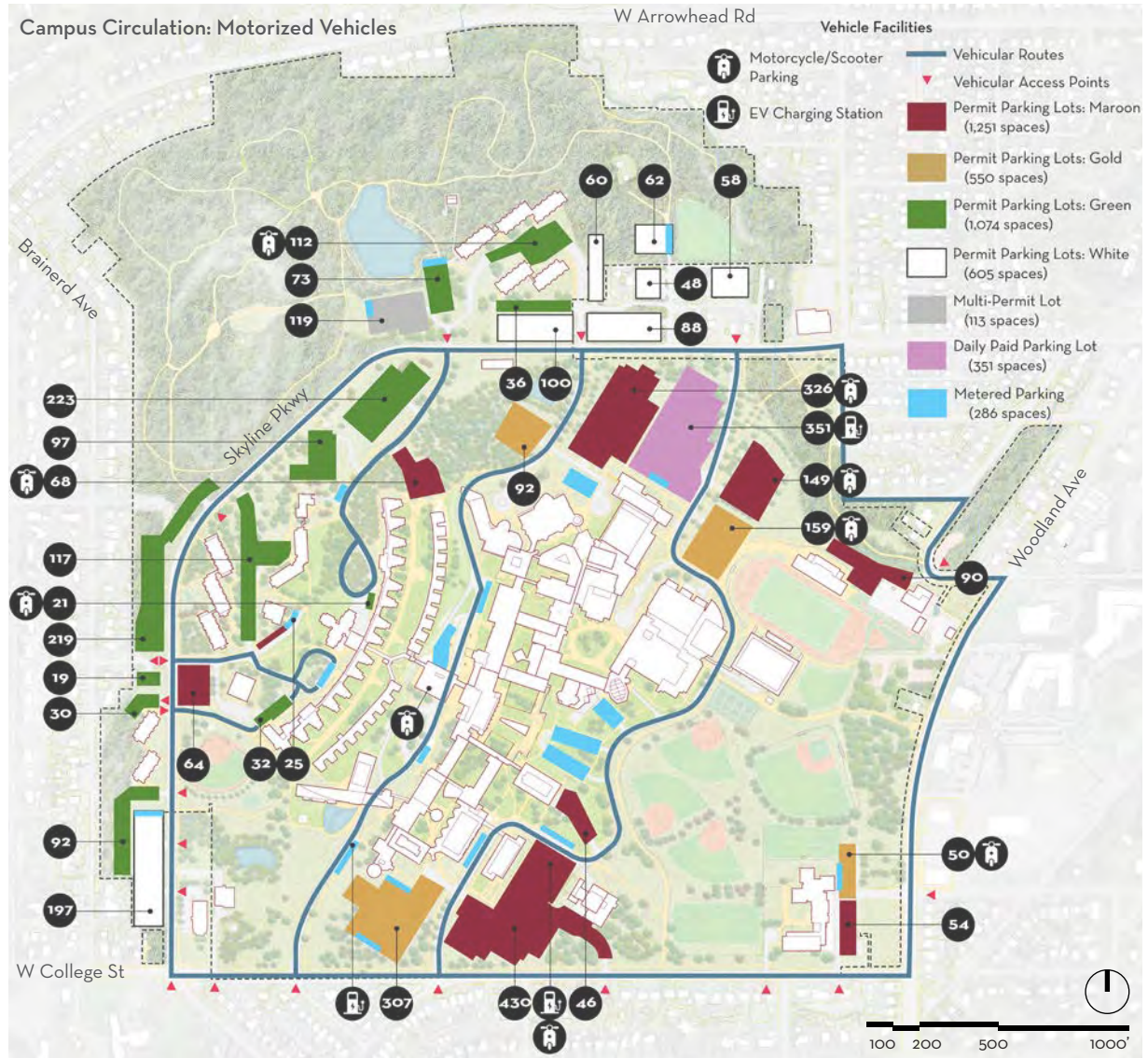


Mobility and Connectivity

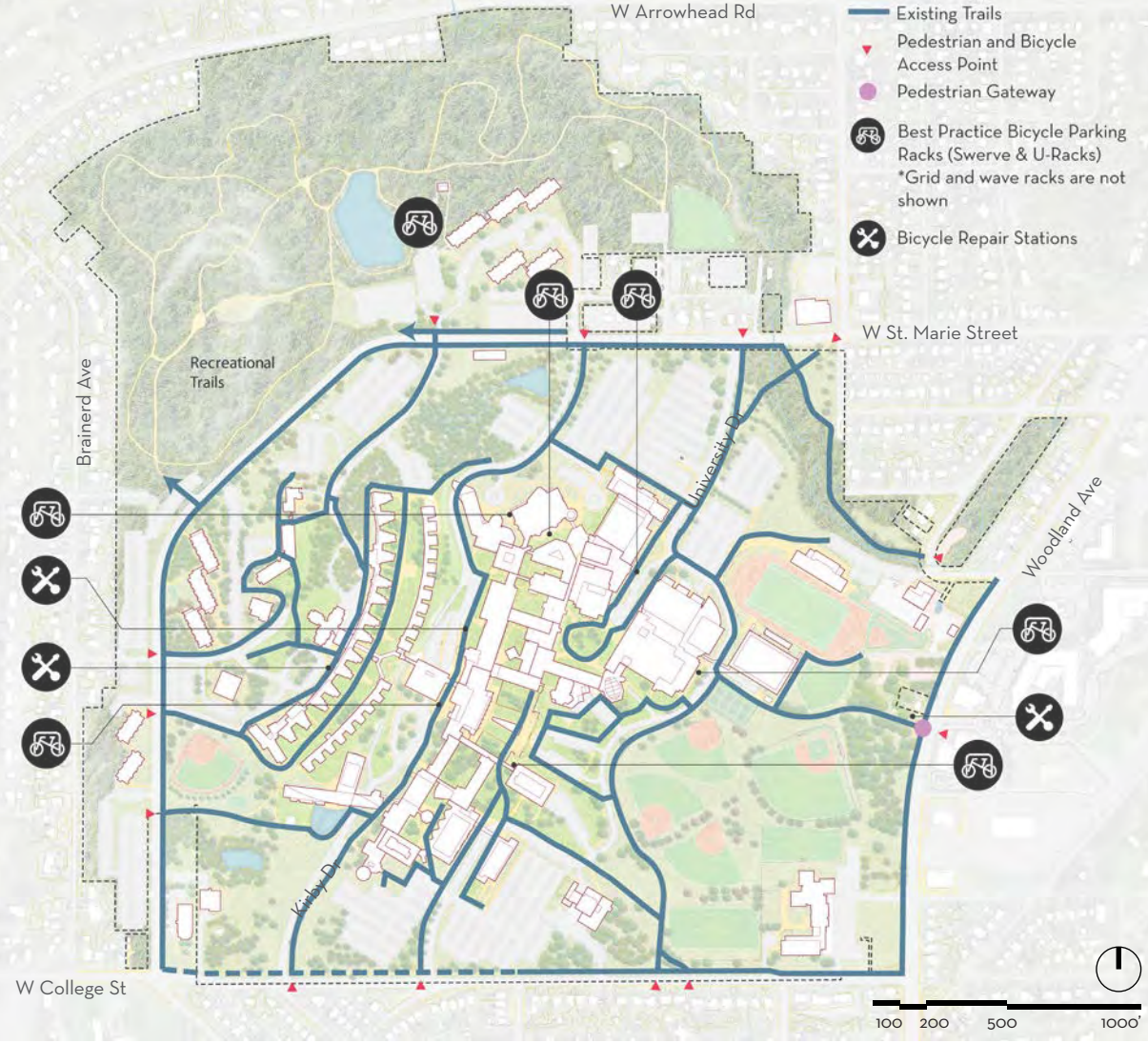
Vehicular Circulation

Campus transportation and circulation systems on the UMD campus today are primarily designed around vehicles. Key vehicular routes through campus include north-south connections via University and Kirby Drives. Brainerd Avenue serves as the western edge of campus. West St. Marie Street bisects the northern part of campus from east to west separating Oakland Apartments and the Bagley Nature Area from the rest of the UMD campus. Gateway signage is visible at the intersections of University Drive with West College Street to the south and West St. Marie Street to the north. Besides these locations, there are minimal vehicular-scale gateway, wayfinding, or branding elements at entry points or edges, and existing signage is primarily directional.

Parking facilities are placed strategically to provide vehicular users with convenient and direct access to campus buildings and facilities. UMD has 4,370 total vehicular parking spaces on campus, of which 83% are permit parking, 15% are metered, and 2% are accessible spaces. Parking permits are color-coded by user type (such as residential, commuter or faculty/staff) and inform where each user may park. Seventy-five percent of parking permits are issued to students, of which 32% are residential on-campus permits. Parking utilization for all permitted surface lots in 2022 averaged 77%, and ranged from 90% (highest) to 62% (lowest). EV charging stations are available at two parking lots and at metered parking on Kirby Drive.



Exterior Circulation: Pedestrians and Bicycles



Pedestrian and Bike Circulation

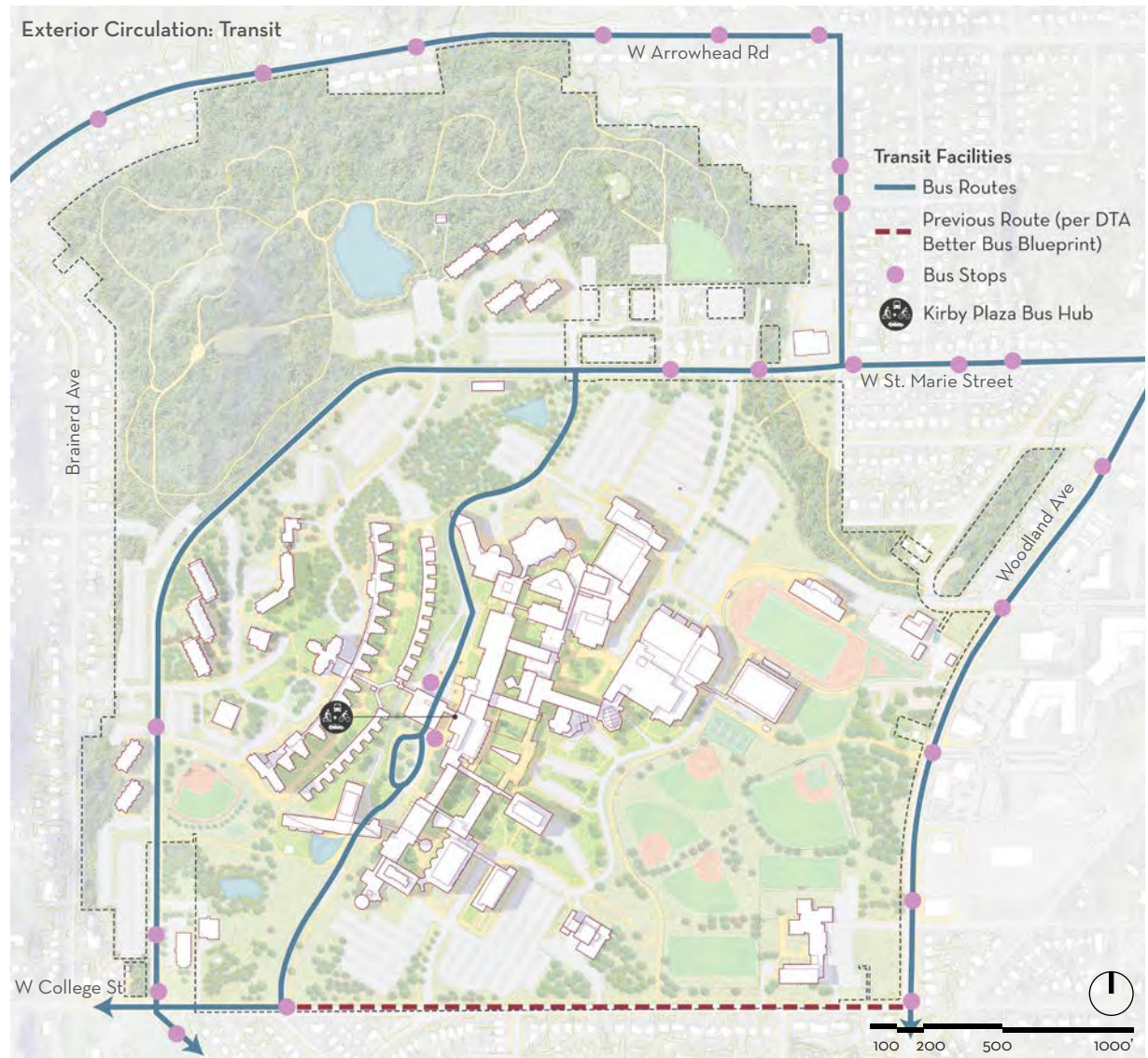
Exterior pedestrian pathways on campus are segmented. Kirby Drive is the only complete pedestrian route through campus. Minimal pedestrian crossing facilities or pedestrian access points to campus exist. One pedestrian-scale gateway at Woodland Avenue and Summit Street features landscape elements, lighting, and a pedestrian cross signal. The City of Duluth’s plans for a campus connector trail will include a route through the UMD campus roughly following the existing alignment of University Drive, which will improve safety and fill gaps in the pedestrian network. Potential for additional pedestrian-realm improvements include more consistent pedestrian-scale lighting, seating, signage, and wayfinding.

There are no designated bike routes on or around campus. In addition to the lack of designated bike routes, campus topography and the cold climate may be impediments to those who otherwise might cycle to, from, and around campus. Unless it is their only transportation option, travelers are unlikely to choose active transportation that is not convenient, comfortable, and accessible. In interviews with the planning team, UMD staff confirmed that the weather and surrounding topography during most of the standard academic semester months presents a challenge for people desiring to walk or bike to and around campus.

Existing bicycle and micromobility amenities include a bike rental program, three bicycle repair stations, the ZAP bike-to-campus program, end-of-trip facilities (changing area, showers, and lockers) are available by pass or membership, 43 bike racks (11 of which meet best-practice guidelines), and bike racks on all Duluth Transit Authority (DTA) buses. Best practice guidelines for bike parking racks recommend that racks are accessible, support upright bike position, provide two points of contact with the bike frame, and allow for locking of the frame and a minimum of one wheel. The UMD campus u-racks and swerve racks would be considered recommended racks, while the grid and wave racks would not. The UMD campus provides a total of 22 parking spaces at recommended racks and 244 parking spaces at non-recommended racks.

Transit

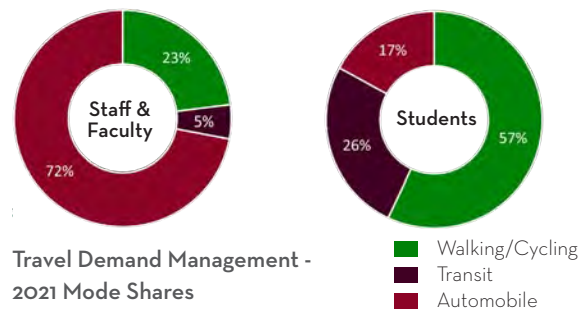
Local transit service to UMD is provided by Duluth Transit Authority (DTA). Jefferson Lines provides regional Intercity bus service. Buses service the campus core from Kirby Drive. The Kirby Plaza Bus Hub is the only bus stop in the campus interior, and is strategically located adjacent to the Kirby Student Center entrance. While most bus stops serving campus have signage only, the Kirby Plaza Bus Hub features lighting, seating, and shelter.



DTA amenities and services for students and UMD employees include free or discounted passes and tickets. The current DTA bus routes that provide access to campus include 6, 11, 11M, and 13, which circulate campus via Woodland Avenue, College Street, West St. Marie Street/Junction Avenue, Carver Avenue, and West Arrowhead Road. All routes access Kirby Plaza via Kirby Drive. DTA will be launching new routes throughout the service area in August of 2023. Per the Better Bus Blueprint, bus service will be removed along College Street from Woodland Avenue to Kirby Drive. The remaining roads will still be serviced by bus via routes 101, 104, 105, 106, and 112.

Modal Split

Commuting patterns impact land use on campus. Similar to the patterns seen on other UMN system campuses, there is a significant difference in how students get to and from campus compared to the faculty and staff. Estimates provided by the University for the 2021 Sustainability Indicator Management



Travel Demand Management - 2021 Mode Shares

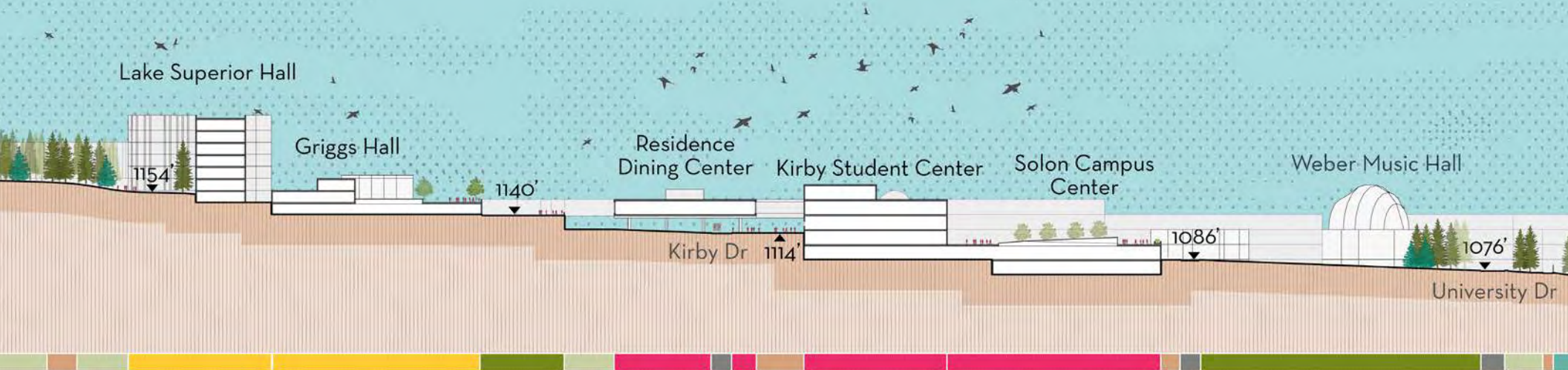
and Analysis Platform (SIMAP) report were informed by the total number of commuters, distribution of bus passes, and distance of residences to campus. The estimates suggest that 57% of the UMD student population were either walking or cycling to campus, 26% were taking public transit, and 17% were driving a personal vehicle. However, parking permits distributed to off-campus students suggest those commuting by automobile could be as high as 36%. In contrast, 72% of staff and faculty were driving, 23% were walking or cycling, and 5% were taking public transit. This creates demand both to support

vehicle use for the trip to and from campus, and to expand and maintain sidewalks, lanes, and trails for pedestrians and cyclists.

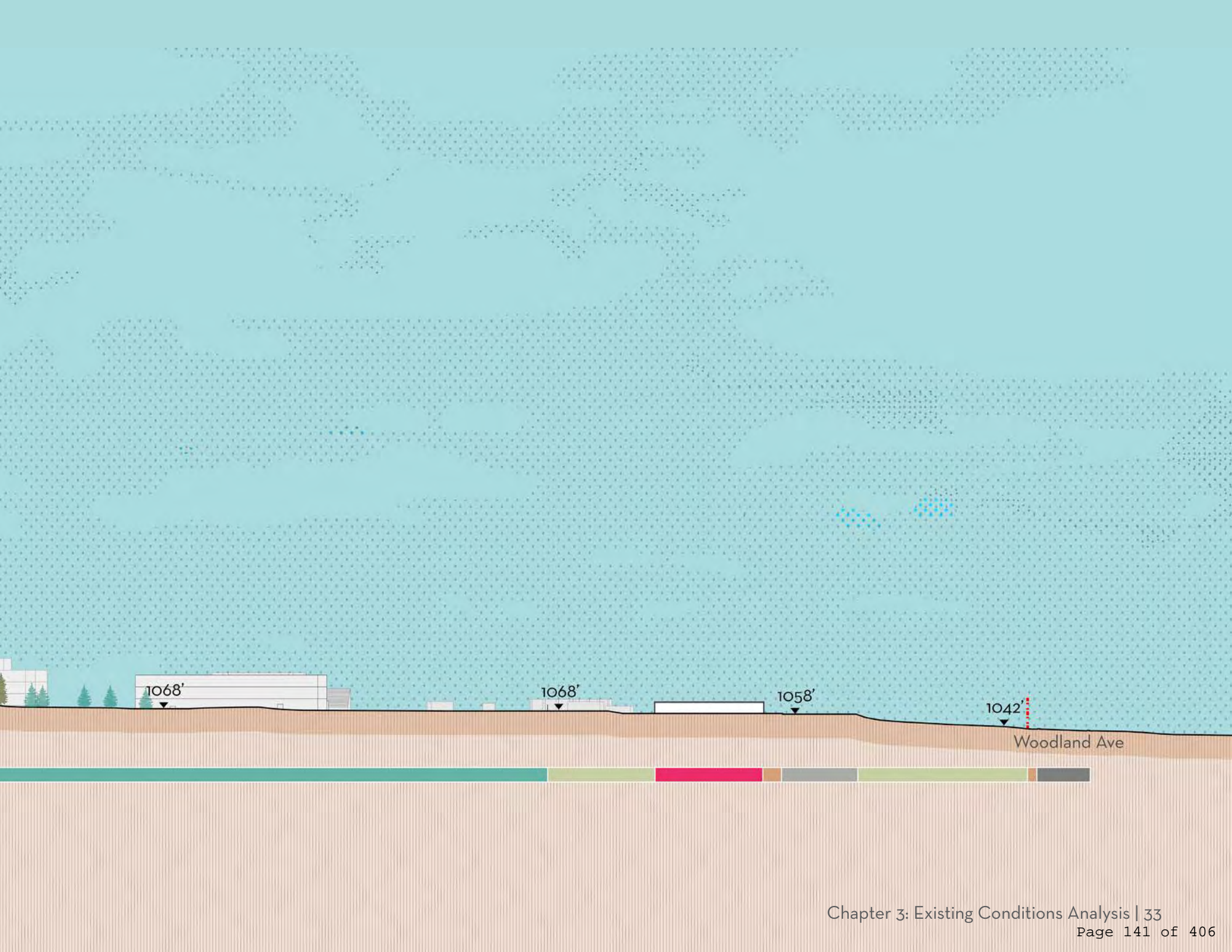
The plan seeks to support how people prioritize moving around, as well as embrace sustainable modes of transportation to improve transportation efficiency, reduce greenhouse gas emissions and impervious surface parking area. Maintaining access and circulation for vehicles as transit and other vehicle types create a greater presence on campus is a necessary shift in campus culture, if these goals are to be met.



A cross section view of campus, looking north, indicates the extent of grade change that occurs from west to east (page left to right). Much of the topographic change on campus is currently navigated within the campus buildings themselves; the extensive network of connected buildings is a unique attribute of the UMD campus.



- Housing
- Transitional Greens
- Roads
- Campus Life
- Open Spaces
- Walkways
- Athletics and Recreation Fields



1068'

1068'

1058'

1042'

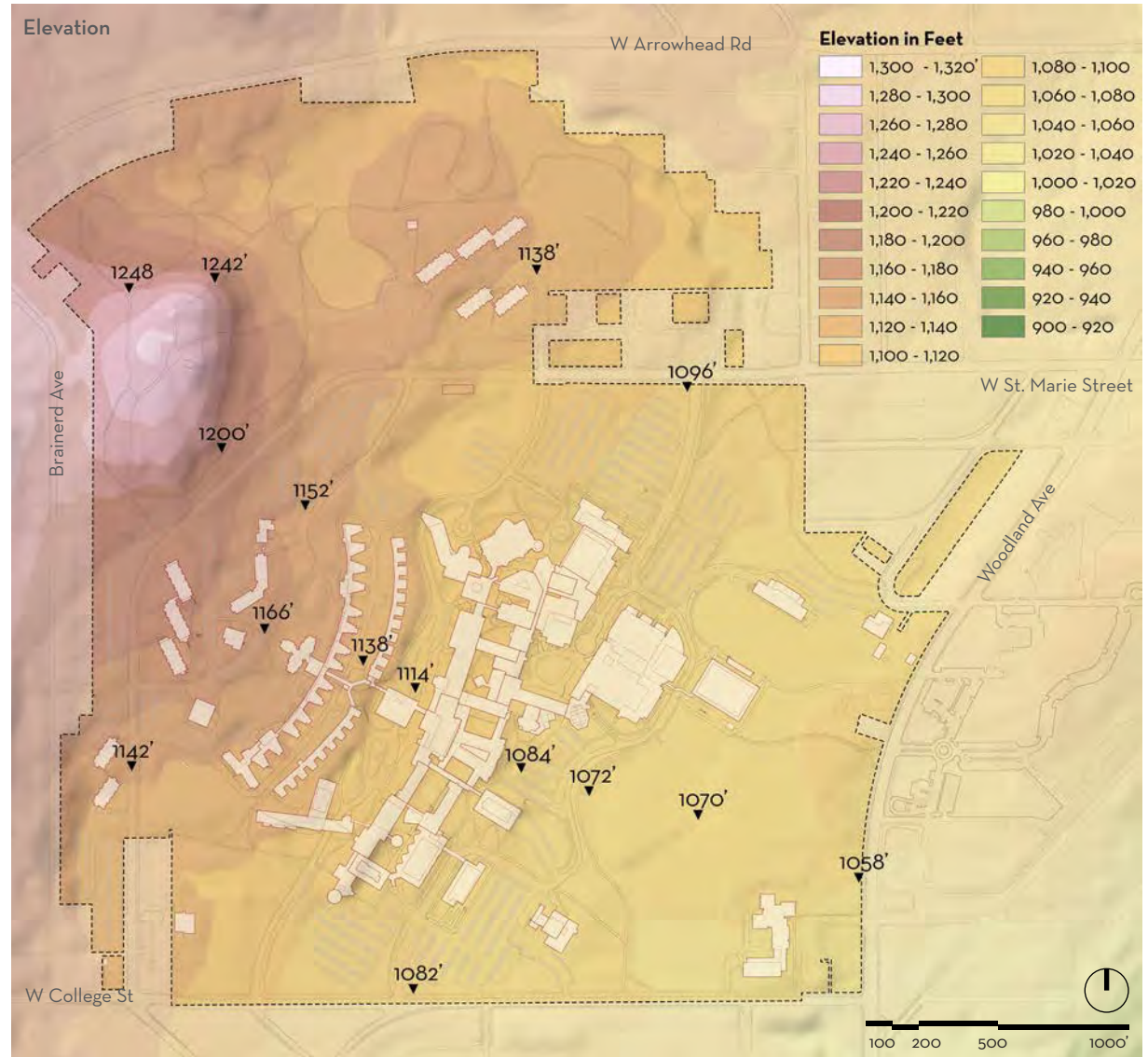
Woodland Ave

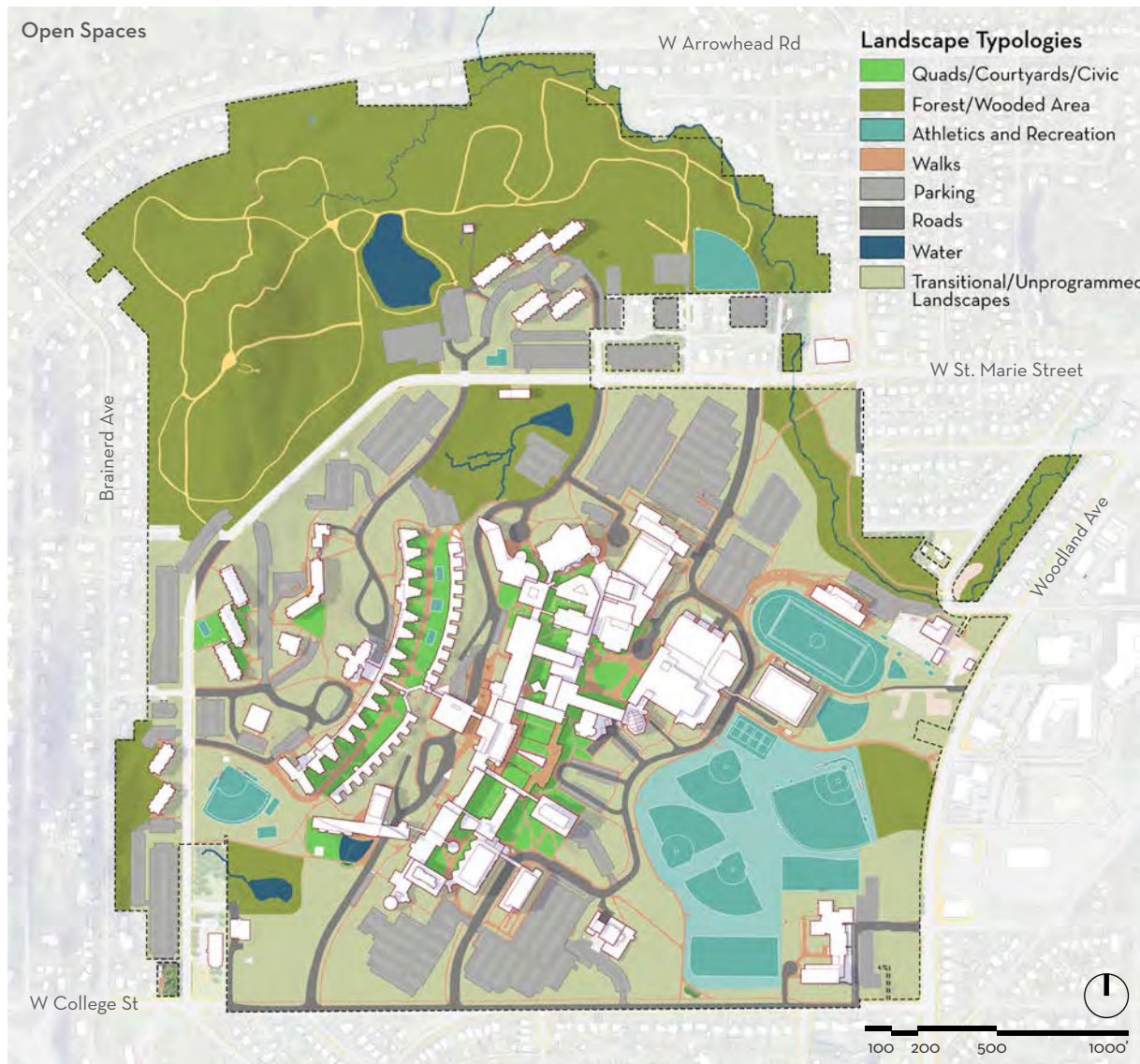


Topography and Open Space

Topography

The UMD campus is characterized by its dramatic topographic grade change from northwest to southeast. There is a nearly 200' grade change from the highest elevation on campus, located in Bagley Nature Area, to the lowest point by Woodland Avenue. There is a steep grade change between Residence Dining Center and Vermilion Hall due to a retaining wall. In many places on campus, grade change is negotiated with connected buildings; however, accessibility of outdoor spaces will remain an important consideration for future investments.





Open Space Resources

The Bagley Nature Area is a significant educational, research, and recreational resource for the campus community, and comprises nearly 25% of the UMD campus land area. While it is primarily wooded with a blend of young growth, secondary growth, and old growth forest, it also features Rock Pond, which drains into the Tischer Creek headwaters. Bagley contains a network of trails and a 1,400 square foot field station utilized as a classroom.

While the Bagley Nature Area is a prominent feature on the northern edge of campus, the campus core presently lacks a central, memorable open space. Approximately 50 acres of grounds are high-maintenance turf. Quads, courtyards, and other civic spaces are small and fragmented by campus buildings and surface parking. Outdoor recreation fields have limited seasonal use due to the long winter, and access is further restricted by perimeter fencing meant to prevent damage from foot traffic. This contributes to a perceived lack of accessible green space.

The 2013 campus plan recommended establishing a large green space east of the Solon Campus Center, to serve as the primary formal open space on campus, positioned to welcome visitors at this prominent entryway into the heart of campus. Today, this space is primarily dedicated to surface parking

serving UMD visitors. Almost 34% of the UMD campus is impervious surface (surface parking lots, roads, sidewalks, and building roofs). Surface parking is a highly visible feature along the campus edge and by major entry points. Reduction in surface parking lots would open up opportunities for reforestation, and provide a more welcoming 'green' entry experience to campus by allowing for the creation of new central open spaces for the campus community.

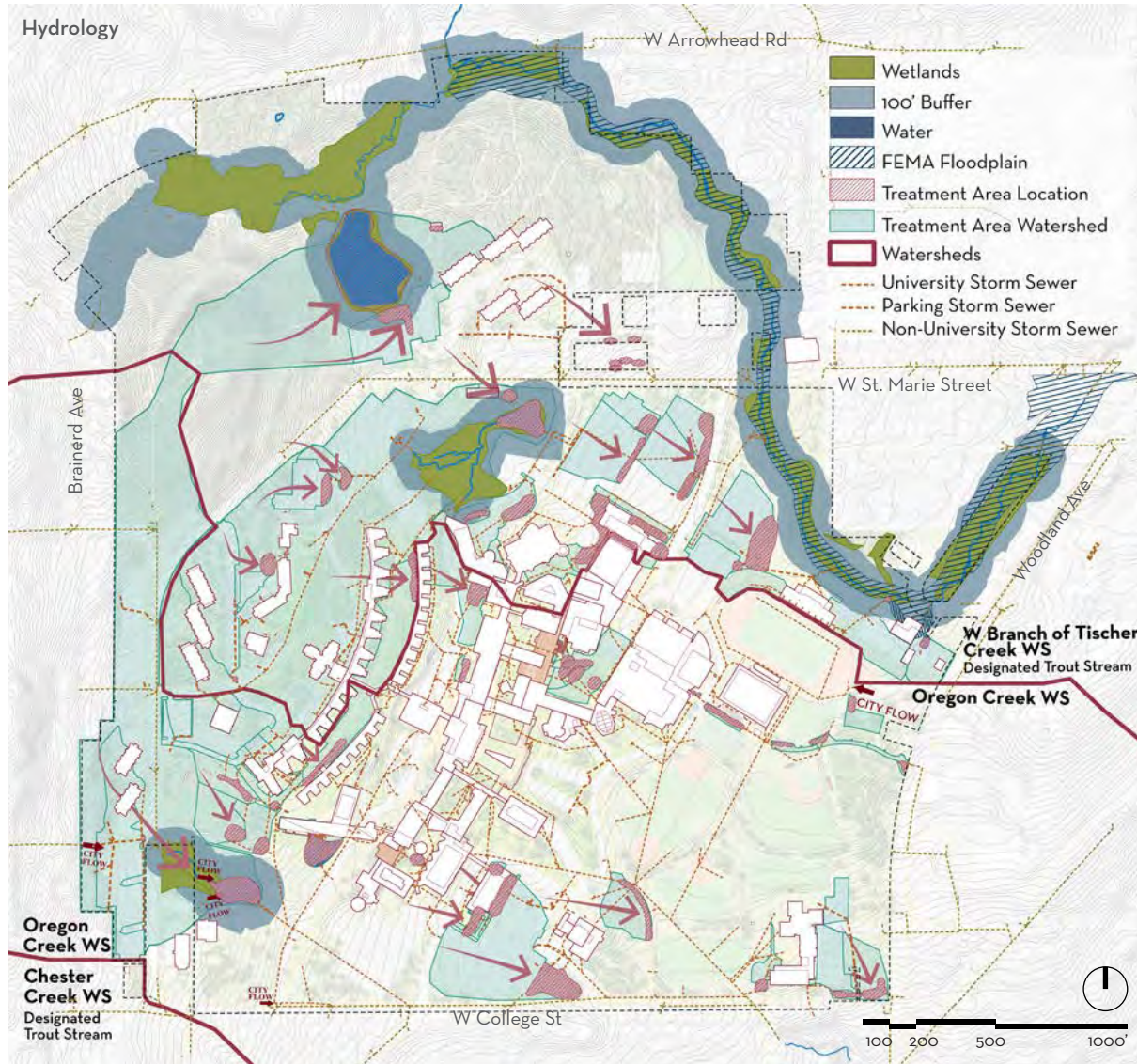
Landcover by Area

TYPE	ACRES	PERCENT %
BUILDINGS	27.32	10.60%
ROADS	16.60	6.40%
PARKING LOTS	29.87	11.60%
WALKWAYS	13.63	5.30%
TOTAL IMPERVIOUS	87.42	33.90%
SPORTS FIELDS	15.93	6.20%
OPEN SPACES	151.19	58.80%
TRAILS	2.76	1.10%





Hydrology



The majority of the UMD campus is situated in two watersheds- the Oregon Creek watershed and the West Branch of Tischer Creek watershed. A small area in the southwest corner of campus lies within the Chester Creek watershed. Chester and Tischer Creek are both designated trout streams, and EPA designated impaired waters.

Stormwater from UMD campus drains into multiple University and City of Duluth stormwater sewer systems which then empty into these local streams and ultimately Lake Superior, an EPA designated restricted waters, making it critically important to treat stormwater. There are presently about 60 stormwater features on campus, such as sump structures, rain gardens, sand filters, underground tanks, and permeable pavements areas. As a MPCA permitted MS4, UMD is required to inspect these stormwater treatment facilities every year and maintain them as necessary.

There is presently no information available on the existing capacity of the storm sewer systems versus the projected capacity needed to meet future rainfall projections under climate change, however, the City of Duluth currently has downstream flooding issues implying that the streams are "at capacity" during larger rain events. MS4 requirements, downstream flooding, trout streams, and impaired and restricted waters make stormwater treatment and rate control on campus an important design component for future

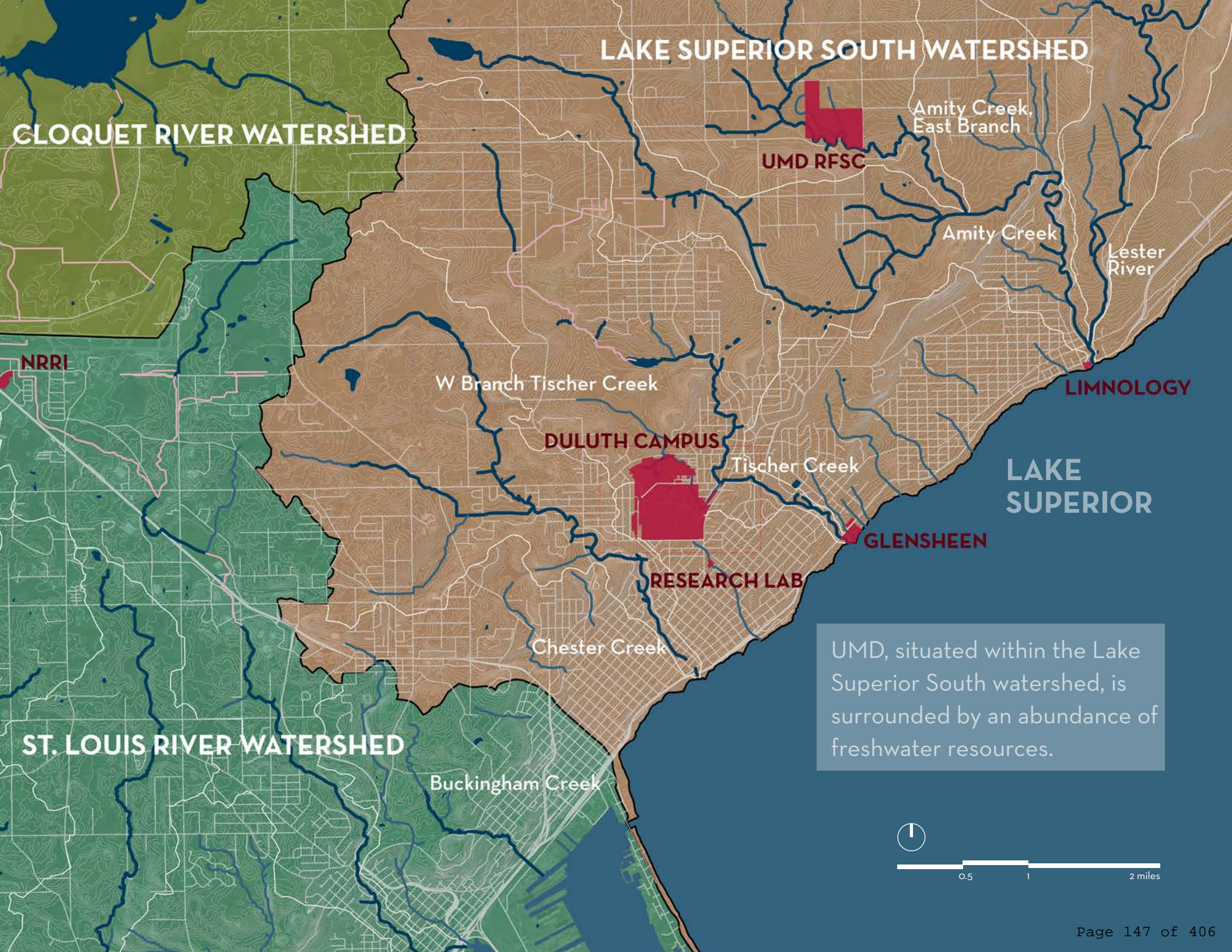


development and/or redevelopment. Additional stormwater information can be found on UMD's Stormwater Pollution Prevention Program website at <https://fm.d.umn.edu/stormwater-pollution-prevention-program-swppp>

Long lines of interconnected building foundations perpendicular to the general flow of groundwater tend to act as underground dams potentially creating basements moisture issues on the northwesterly side of the buildings. Future development should take this phenomenon into consideration when designing drain tile systems.



Left Above: HCAMS outdoor landscape
Left Below: Swenson Civil Engineering stormwater management



LAKE SUPERIOR SOUTH WATERSHED

CLOQUET RIVER WATERSHED

NRRI

UMD RFSC

Amity Creek,
East Branch

Amity Creek

Lester
River

W Branch Tischer Creek

DULUTH CAMPUS

Tischer Creek

LIMNOLOGY

**LAKE
SUPERIOR**

GLENSHEEN

RESEARCH LAB

Chester Creek

ST. LOUIS RIVER WATERSHED

Buckingham Creek

UMD, situated within the Lake Superior South watershed, is surrounded by an abundance of freshwater resources.





Emissions and Climate Projections

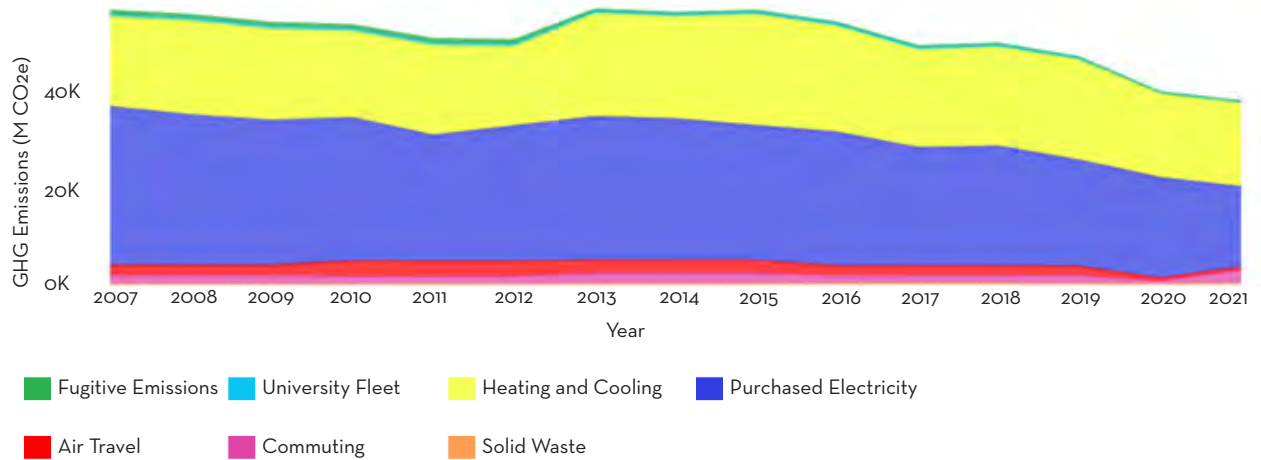
Shifts in climate have already occurred in Minnesota and globally. Many climate impacts are expected to worsen. Extreme events, like flooding, drought, and heat waves, will likely become more frequent and more intense with climate change in the future. Duluth is projected to have a slight increase in daily average temperature and high heat days due to climate change. Days with heavy rainfall (exceeding 4" of rain) are also projected to increase.

UMD currently tracks its greenhouse gas emissions from heating and cooling, the University's fleet, fugitive emissions (refrigerants and fertilizers), commuting, University-sponsored air travel, and solid waste. UMD's total emissions can be split into the following categories or "scopes":

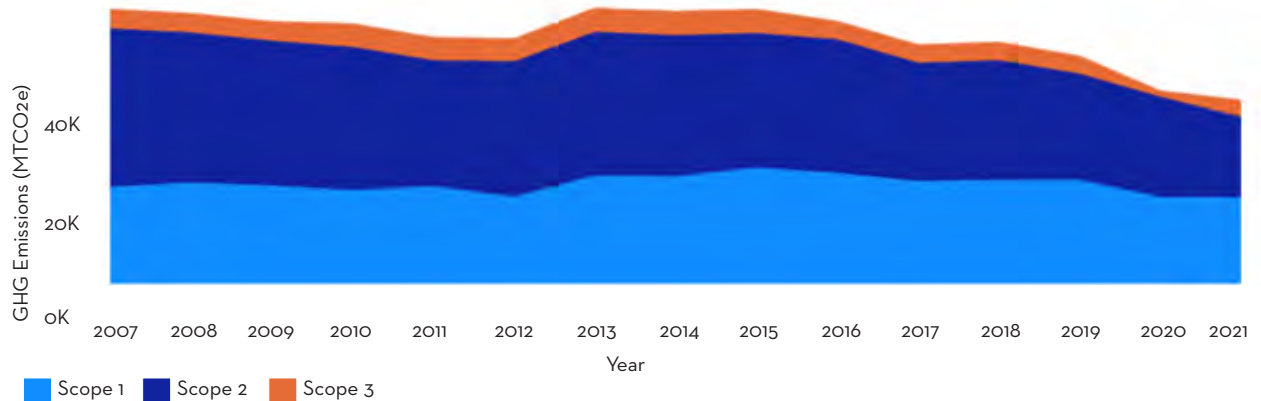
- 47% of emissions are Scope 1 or direct emissions from burning natural gas and fuel oil for heating and cooling, internal combustion fleet vehicles, and other fugitive emissions
- 44% of emissions are from Scope 2 or indirect emissions from purchased electricity
- 9% of emissions are from Scope 3 or other indirect emissions, like commuting and waste

While UMD successfully reduced emissions by 29% in 2020 over its 2007 baseline, further action will be required to meet system-wide climate commitments.

Emissions Timeline



Emissions by Scope









Planning Vision: The Big Ideas 4

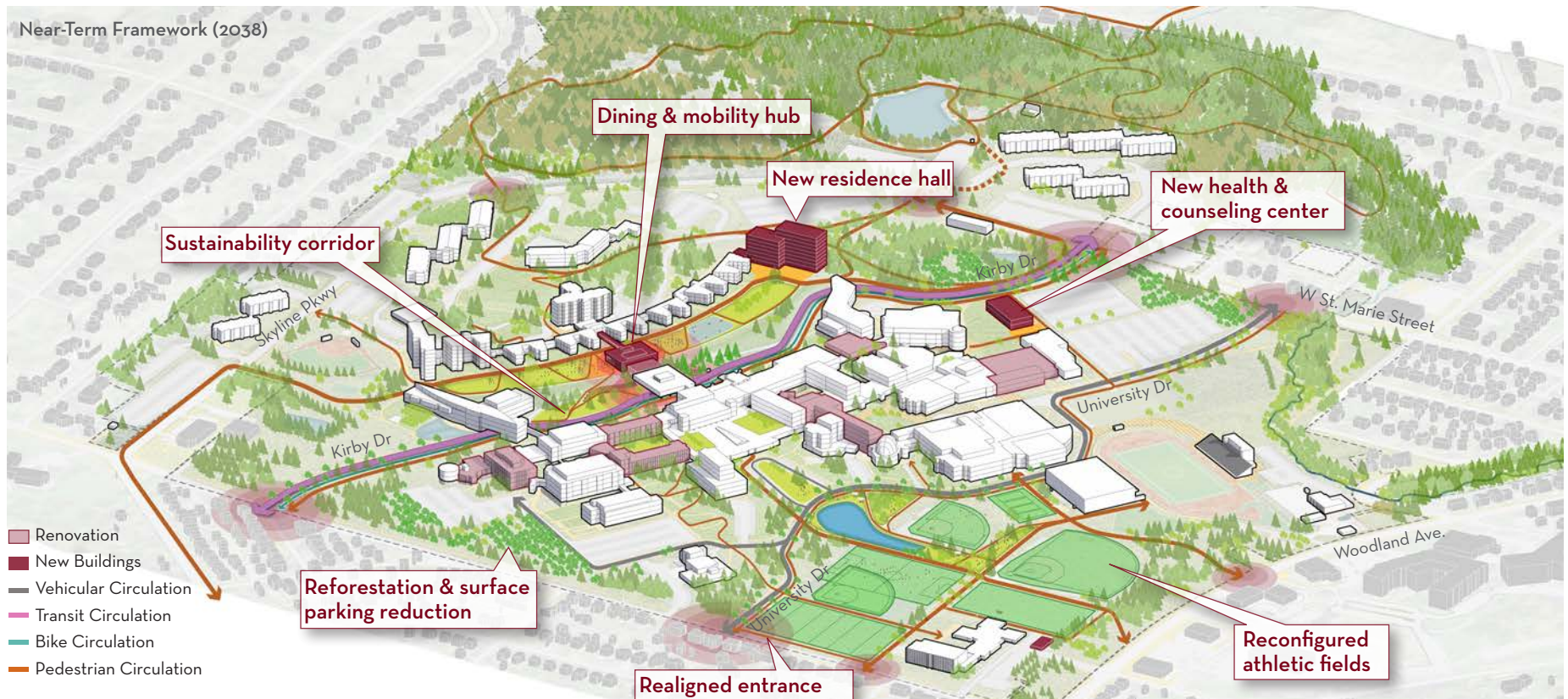
Near-Term Framework

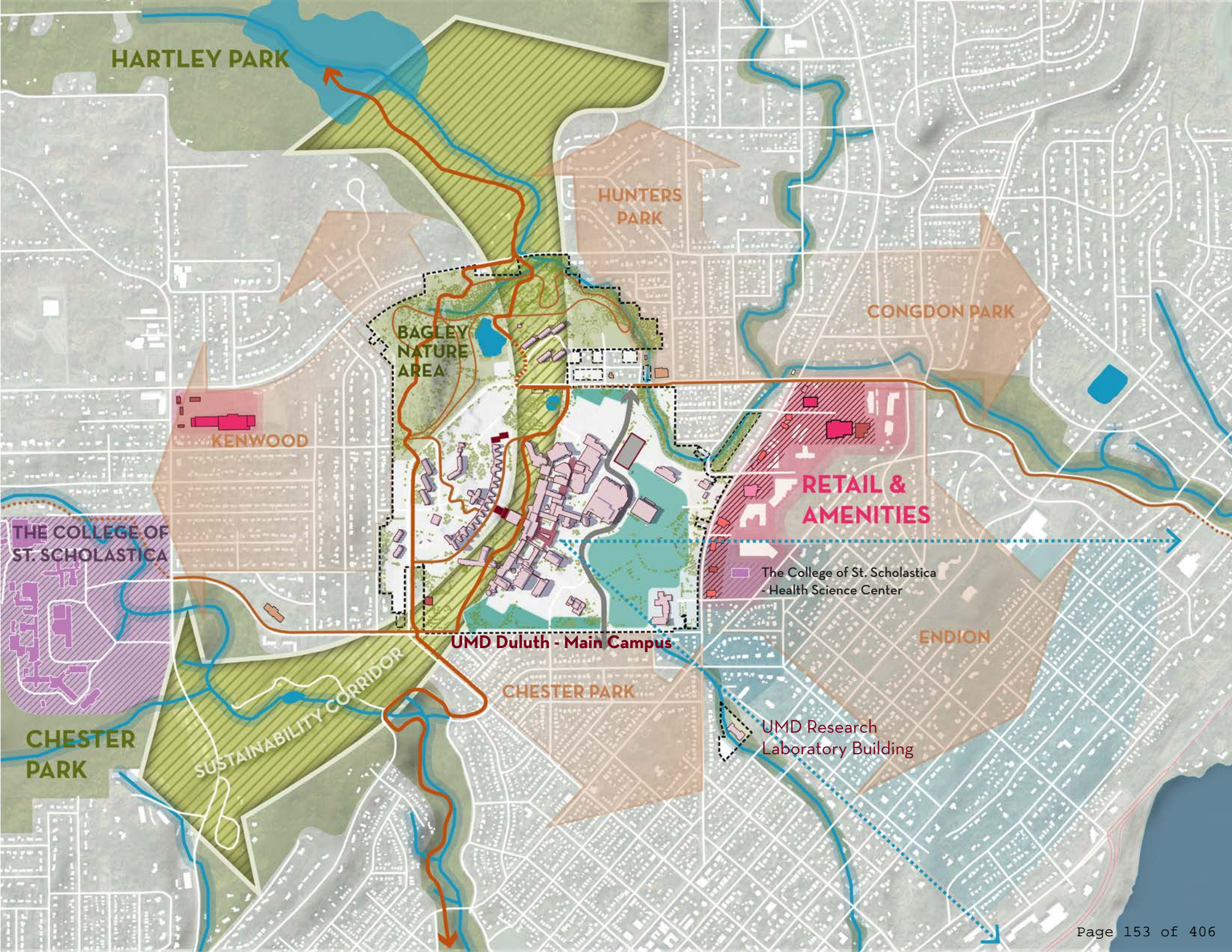
In the case of the Duluth campus and its unique features and conditions, the 'Big Ideas' of the Campus Plan grew out of the analysis of conditions and feedback received from a range of stakeholders. The alignment of the Strategic Plan commitments to this framework unites a view of how the campus could change and has influenced key recommendations contained in the plan.

The UMD Campus Plan describes a future that strengthens the distinctive and unique physical attributes of the campus in service of UMD's vision and mission while providing opportunities for implementation of campus decarbonization and resilience strategies detailed in the Climate Action Plan. To summarize this, the following four "Big Ideas" represent the potential physical transformation of campus.

The Big Ideas contribute to an overarching vision to reimagine the campus as a model of sustainability and carbon neutrality taking into account the existing conditions of the campus and opportunities for future development.

Right: Plan view of the Sustainability Corridor big idea, and the campus as a green connection between Hartley Park and Chester Park





HARTLEY PARK

HUNTERS PARK

CONGDON PARK

BAGLEY NATURE AREA

KENWOOD

RETAIL & AMENITIES

THE COLLEGE OF ST. SCHOLASTICA

The College of St. Scholastica - Health Science Center

UMD Duluth - Main Campus

ENDION

CHESTER PARK

SUSTAINABILITY CORRIDOR

CHESTER PARK

UMD Research Laboratory Building

Big Ideas



Big Idea 1: Sustainability Corridor



Big Idea 2: Recreation Park

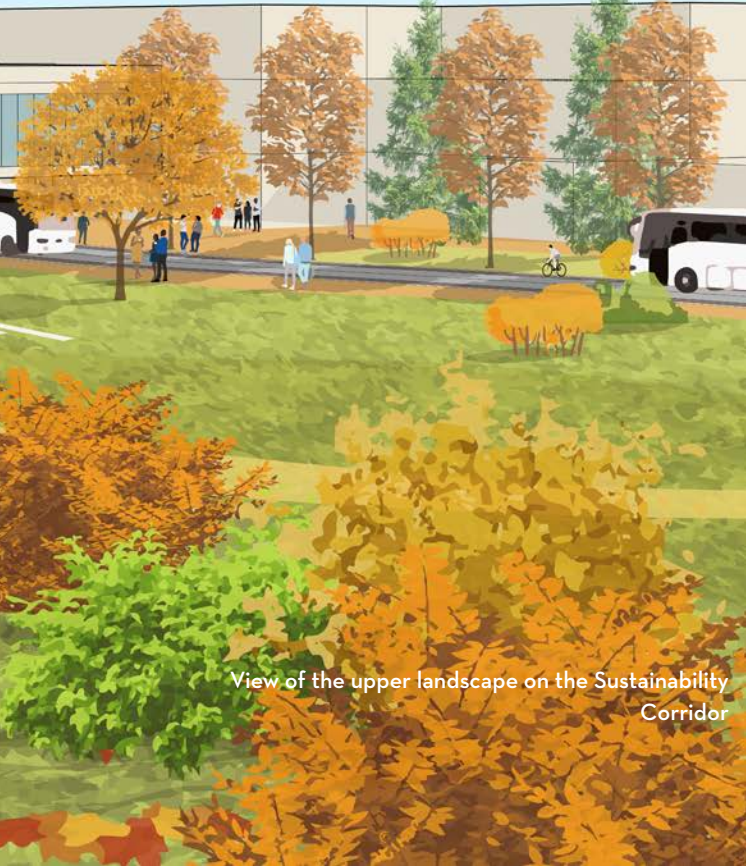


Big Idea 3: Greening the Campus Edge



Big Idea 4: Reinvest in the Campus Core





View of the upper landscape on the Sustainability Corridor

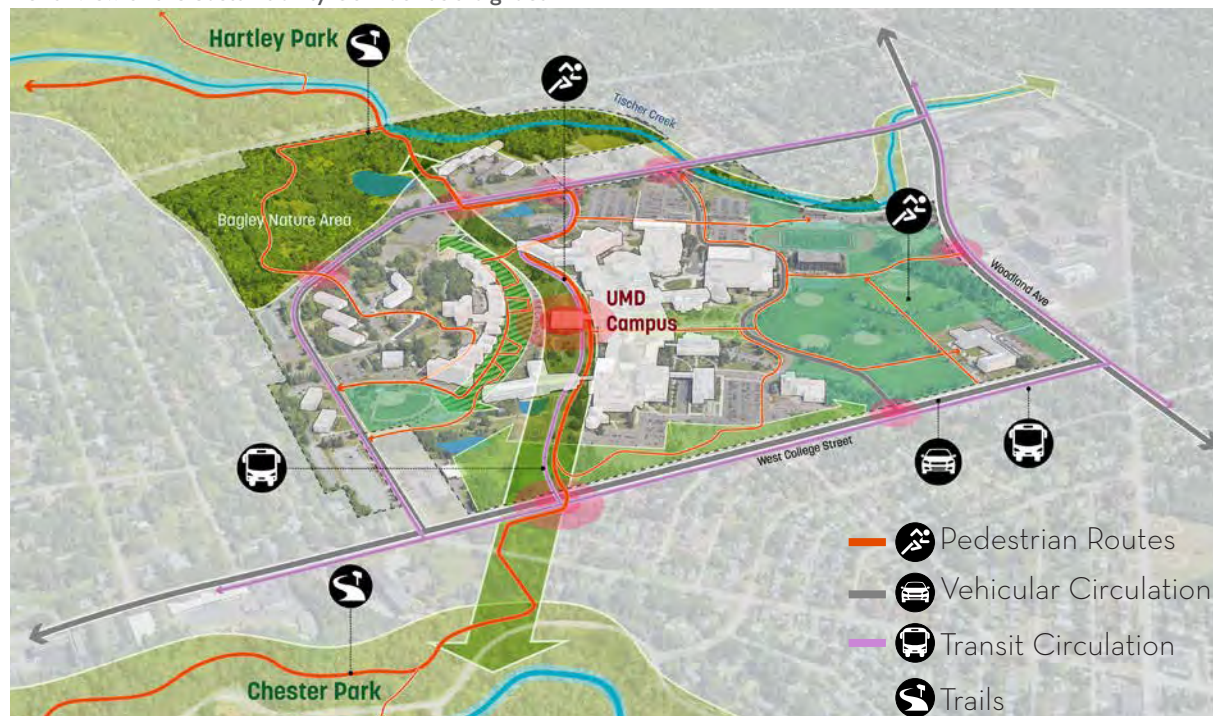
Big Idea 1: Sustainability Corridor

A new green corridor through the heart of campus will serve as gathering space for the UMD community, and will provide enhanced connections on the north and south boundary of campus to adjacent city neighborhoods and parks. The Sustainability Corridor will improve the entry experience into campus and strengthen pedestrian, cycling, and transit use enhanced by a new mobility hub and dining expansion along Kirby Drive. A gathering space for students to observe cultural traditions will be identified and developed with indigenous members

of the campus community. New open spaces along the Sustainability Corridor will provide recreation opportunities in the heart of a renewed student housing neighborhood, while simultaneously serving as sites for potential infrastructure instrumental to UMD's decarbonization goals, such as geothermal technologies.¹ University Drive will serve as the primary vehicular through-street and gateway to campus, alleviating automobile traffic along Kirby Drive.

¹ More information on low-temperature geothermal technology ("geothermal") can be found on page 76.

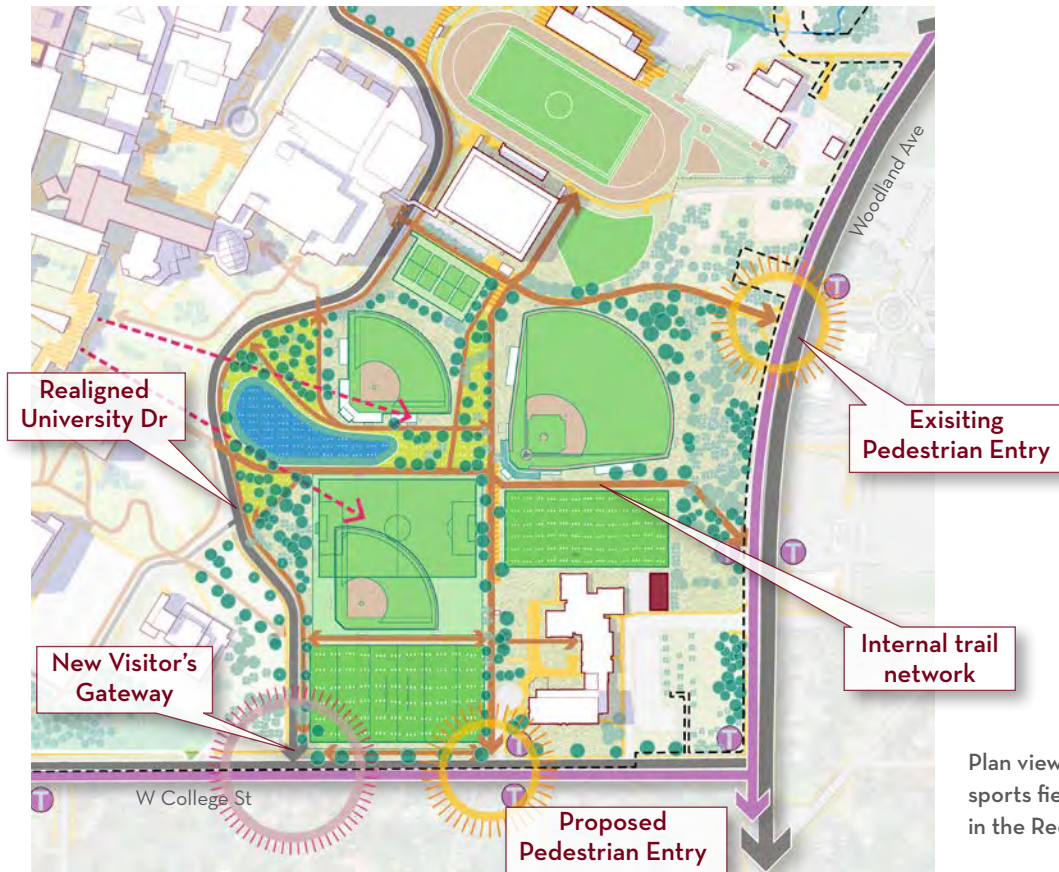
Aerial view of the Sustainability Corridor as a big idea



Big Idea 2: Recreation Park

The strategic renovation and reorientation of athletic and recreation fields will allow for a greater range of use while enhancing the eastern edge of campus with naturalized areas and pedestrian circulation. In addition to the ecological benefits that newly naturalized areas will provide, the Recreation Park will feature a stormwater pond, improving UMD's

ability to manage runoff with a feature that provides habitat and visual interest to this central campus space. Besides supporting both active recreation and passive landscapes, the Recreation Park could be another site for new infrastructure to support the decarbonization of campus energy systems.



Plan view of the proposed sports fields and walkways in the Recreation Park



View of the Recreation Park, looking towards the campus





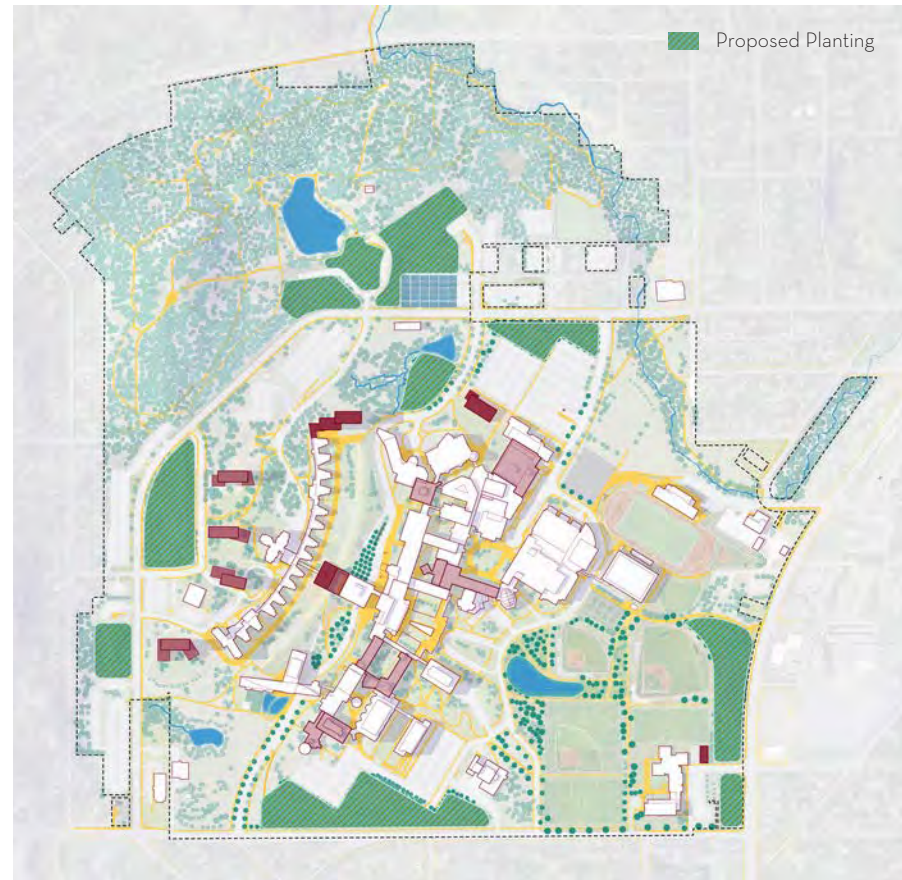


View of the proposed Visitor's Gateway, on W College St

Big Idea 3: Greening the Campus Edge

The eventual relocation and reconstruction of campus housing from the north side to the west side of campus, with the potential reduction in parking demand, will allow some existing impervious surfaces (parking lots) close to Bagley Nature Area and along the northern and southern edges of the core campus, to be returned to a more planted state. Some of the

surface parking areas may be converted to a parking structure if future parking demand necessitates. Reduced impervious surface will enhance the experience of travel on foot and by bike, reduce need for snow storage and removal during Duluth's snowy winters, as well as reduce urban heat island effects.



Plan showing the proposed planting on the edges of the campus

Big Idea 4: Reinvest in the Campus Core

Selective renovation of primary academic buildings in the connected campus supports teaching, learning and outreach mission and will reduce emissions associated with energy use. Renovation of the Main Production Kitchen and future dining expansion with creation of a Mobility Hub in the Sustainability Corridor will reinforce existing patterns of student and academic life. The conversion of Vermilion and Burntside to a lively, intensively-used recreation space in the heart of the campus' residential neighborhood is another aspect of this investment in the core. Progressive attention to opening up

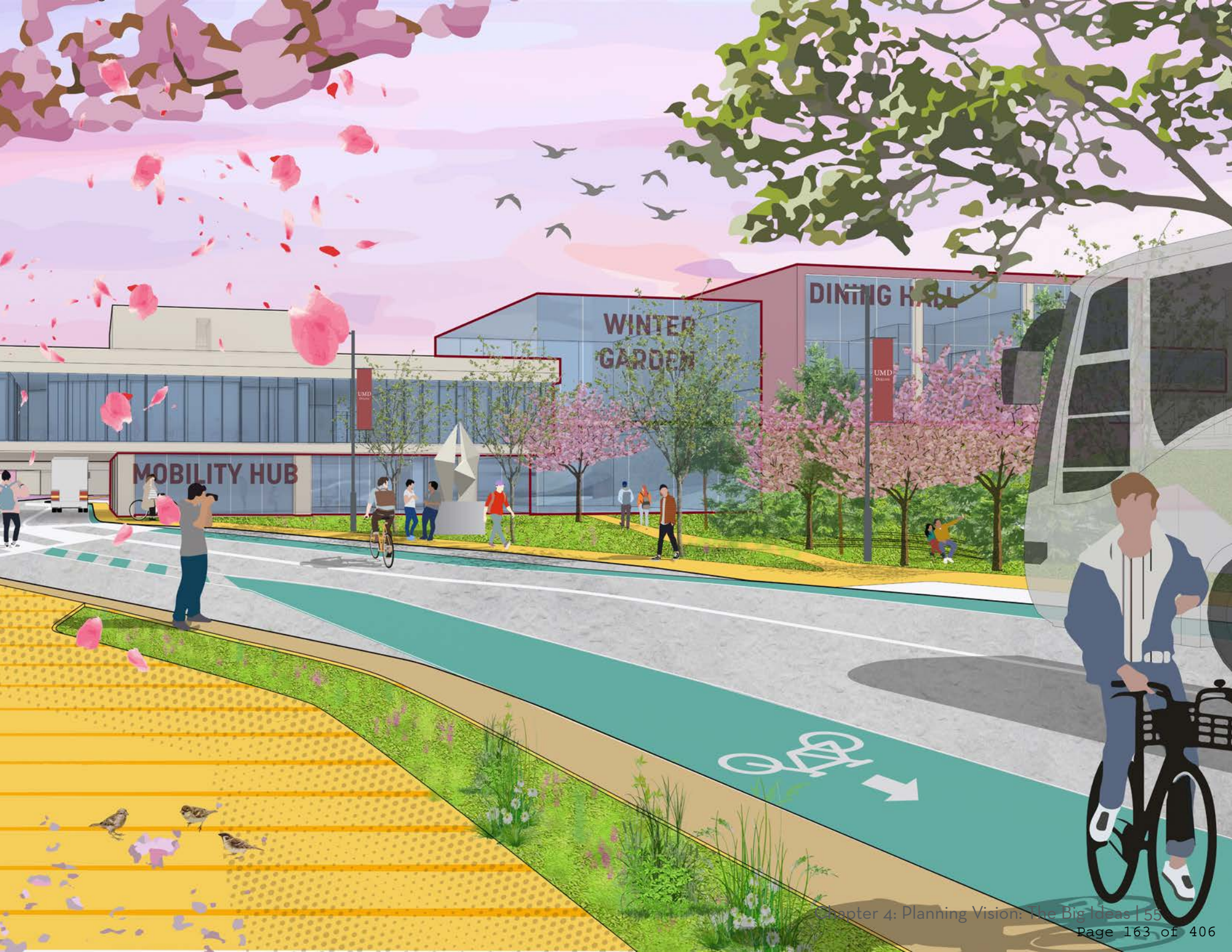
some key spaces within the connected buildings to allow views and access to courtyards is another recommendation associated with reinvesting in the campus core. These spatial connections through existing buildings will offer physical and visual connectivity between the Sustainability Corridor and internal courtyards of existing academic and administrative buildings. The connections also offer the opportunity to create internal "winter gardens," spaces featuring plants and natural materials, notionally carrying the exterior landscape through the buildings.

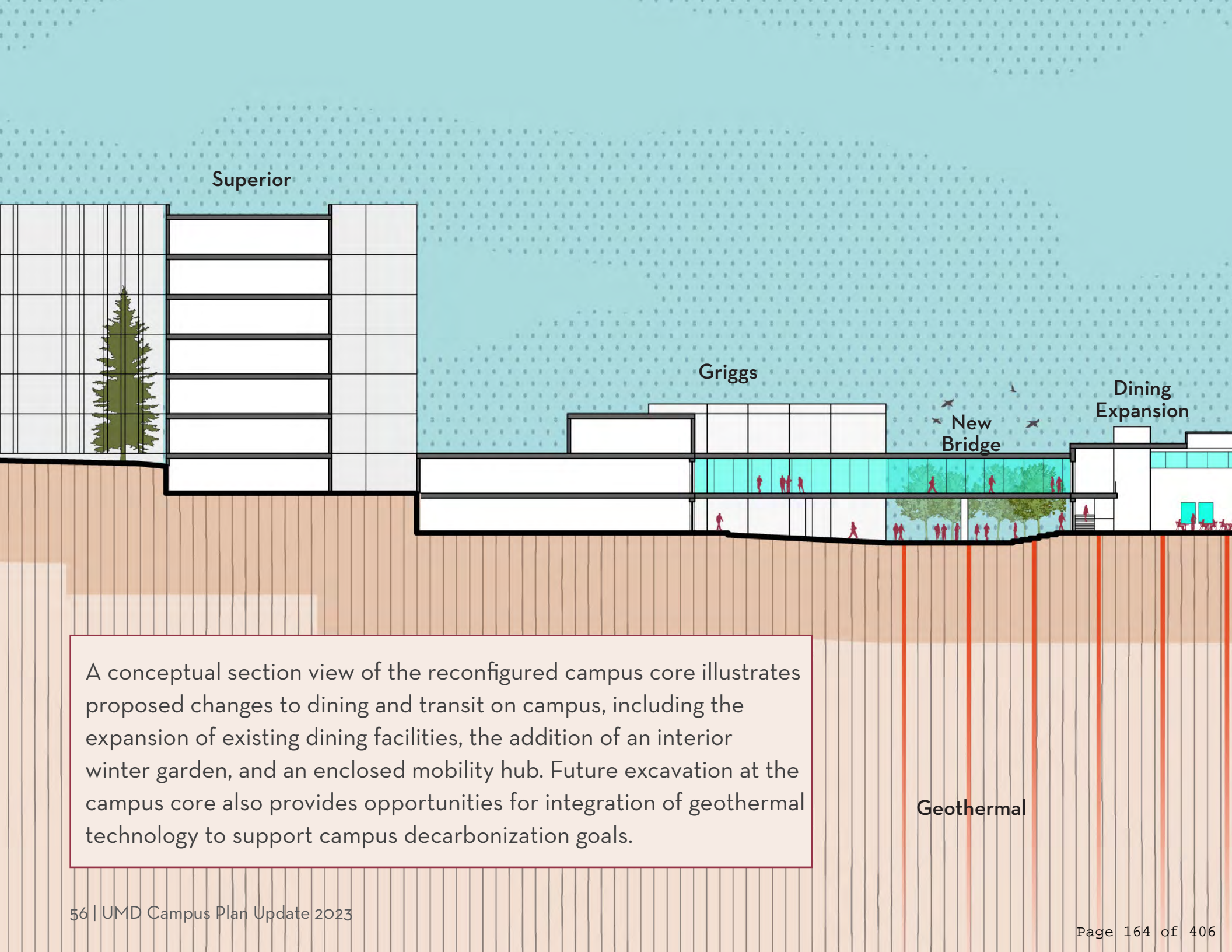


Right: A plan view of the upper and lower levels of the Sustainability Corridor with landscape and visual connections to the buildings in the campus core



View of the Sustainability Corridor, along Kirby Drive





Superior

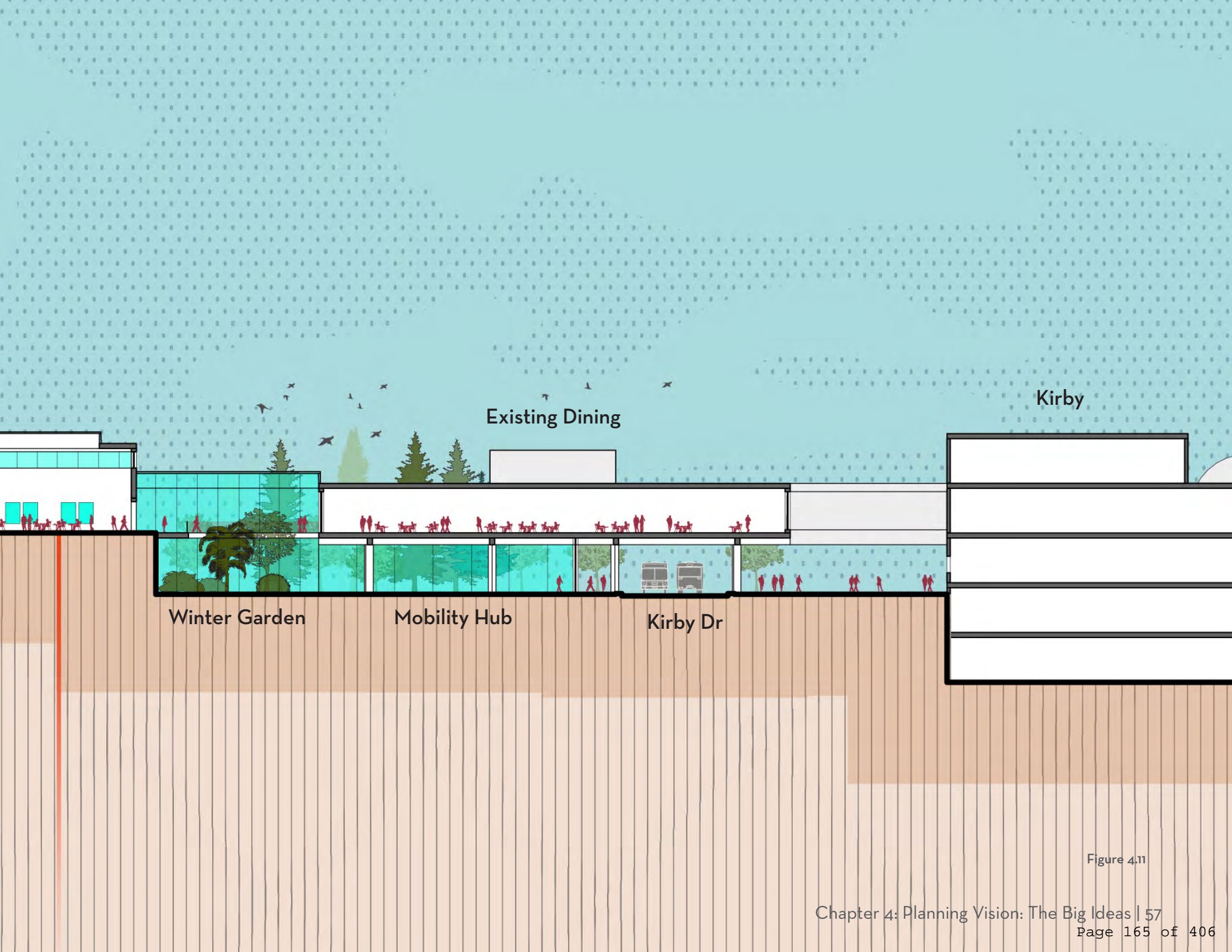
Griggs

New Bridge

Dining Expansion

Geothermal

A conceptual section view of the reconfigured campus core illustrates proposed changes to dining and transit on campus, including the expansion of existing dining facilities, the addition of an interior winter garden, and an enclosed mobility hub. Future excavation at the campus core also provides opportunities for integration of geothermal technology to support campus decarbonization goals.



Winter Garden

Mobility Hub

Kirby Dr

Existing Dining

Kirby

Figure 4.11





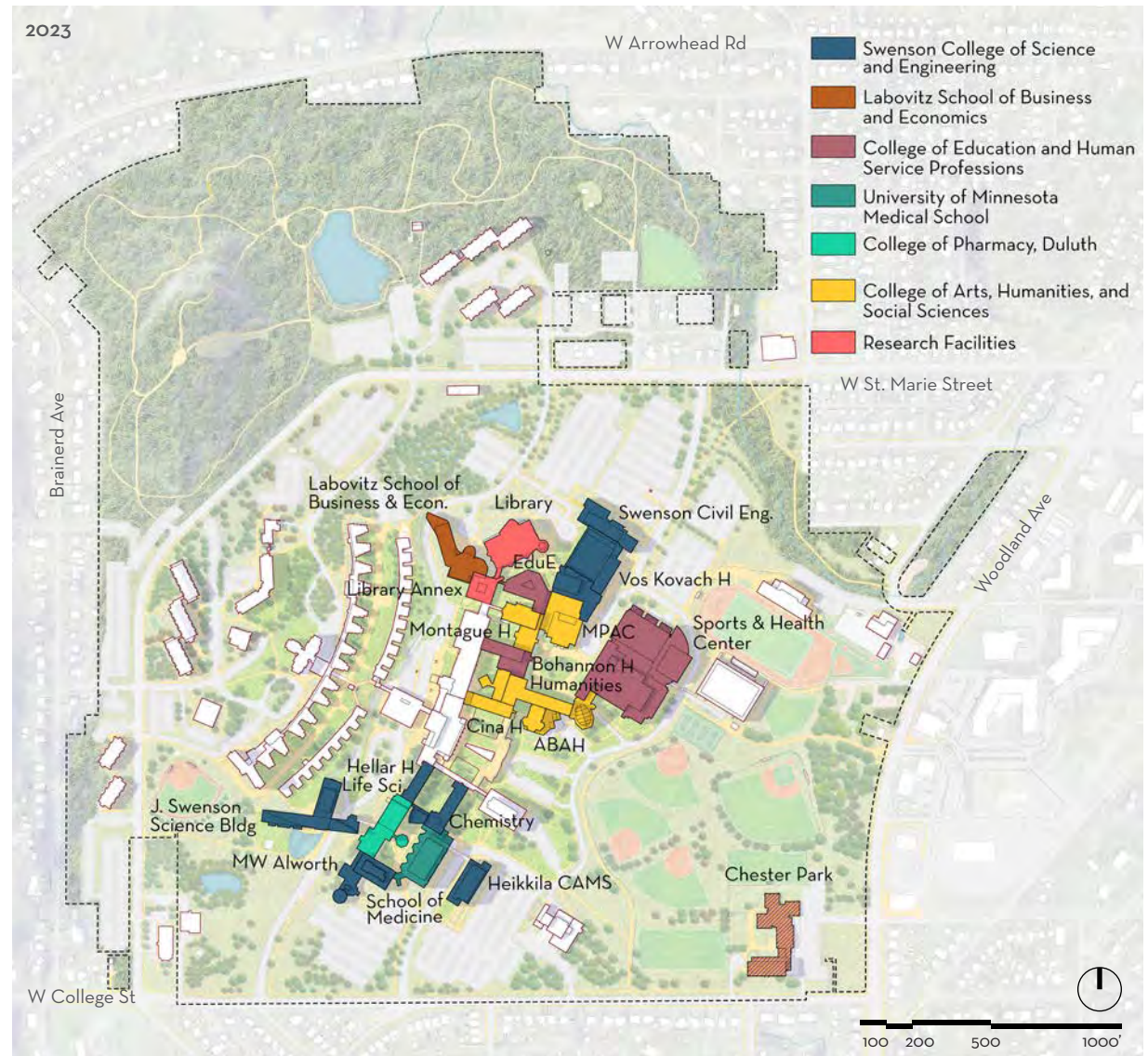
Campus Frameworks 5

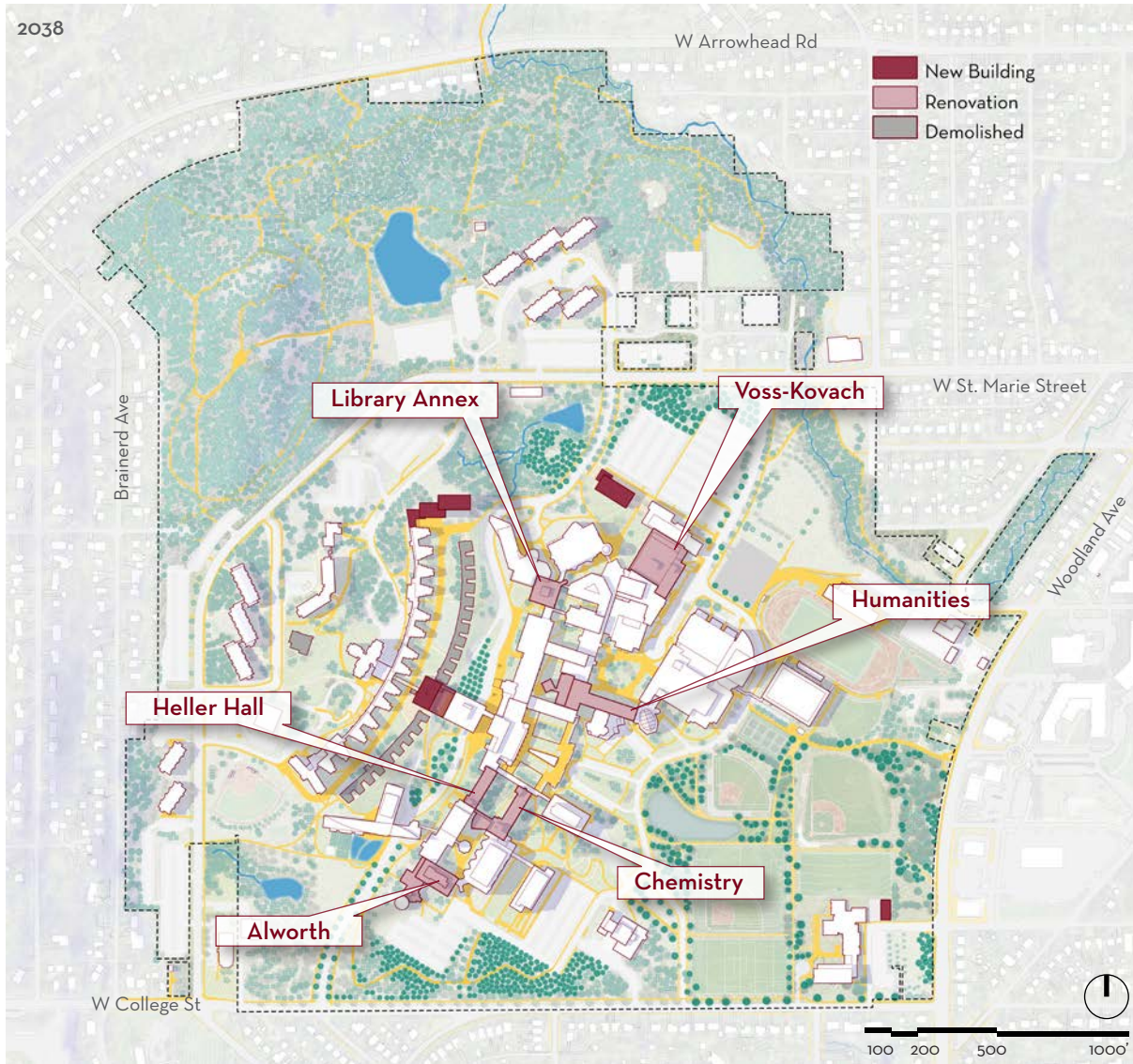


Academic and Research Facilities Framework

2023

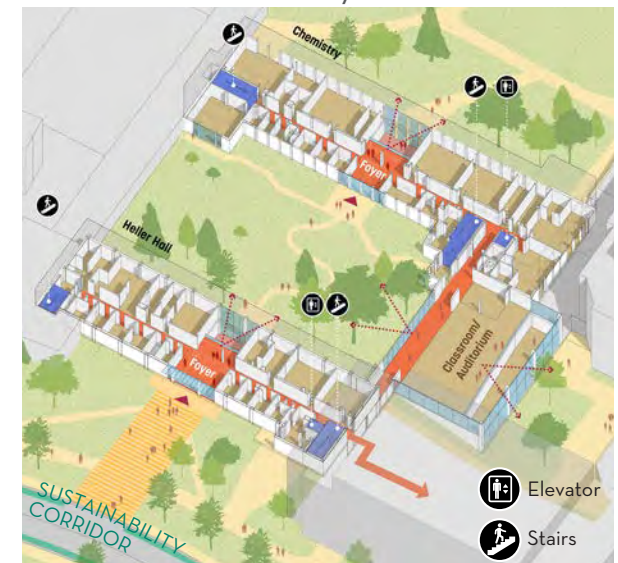
The Academic and Research Facilities Framework identifies opportunities to improve existing facilities to support UMD's educational mission. UMD's capital request list includes several building renovations that will collectively address known deficiencies and shortcomings in existing academic and research space. Based on current and projected space needs, no new construction of academic or research space is proposed on the campus. Instead, renovation and the reallocation of space within existing buildings will provide opportunities for addressing known office, lab, and collaboration space needs. Academic and research facilities proposed for renovation include Heller Hall, Chemistry, Library Annex, Humanities, and Voss-Kovach. Renovation to these academic buildings offers opportunities to improve internal circulation and new potential for visual connectivity between interior and exterior spaces. This could improve how people experience the Duluth campus, strengthening their sense of orientation and promoting an enhanced sense of place through visual cues such as landmarks and wayfinding. Renovation of the buildings also provides the opportunity to improve the energy efficiency and contribution each makes to the campus experience by integrating new social and engagement spaces; by offering visual and physical connections to the campus landscape, notably, the Sustainability Corridor; and, by introducing new wayfinding features.





The extensive interior corridor system is a boon to the campus community during the winter months. The system includes two main north-to-south routes within the buildings: the red concourse located at the Kirby Drive elevation of the academic buildings and the blue concourse located at the University Drive elevation. Any construction of new academic and research facilities proposed over the long term should prioritize proximity and potential connectivity with the existing complex of academic and campus life buildings that define the UMD core. New facilities could be constructed on the parking lots on the south side of campus as required in the longer term.

Below: Building renovations create visual and physical connections to the Sustainability Corridor





Campus Life

2023

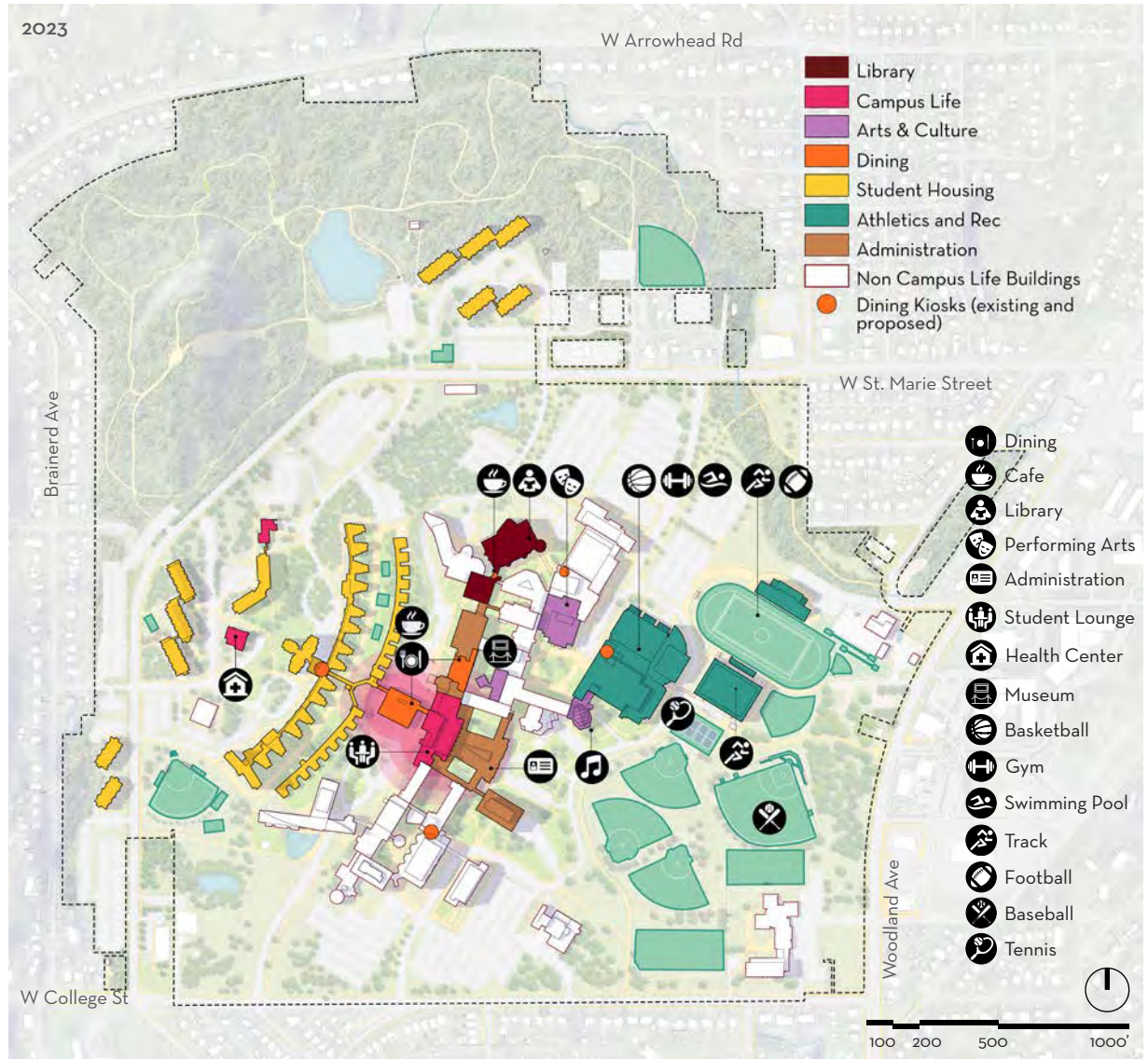
The Campus Life Framework highlights the gathering, dining, residential and student support facilities that contribute to the quality of life on campus. It takes into consideration existing student life facilities and provides recommendations for several new facilities.

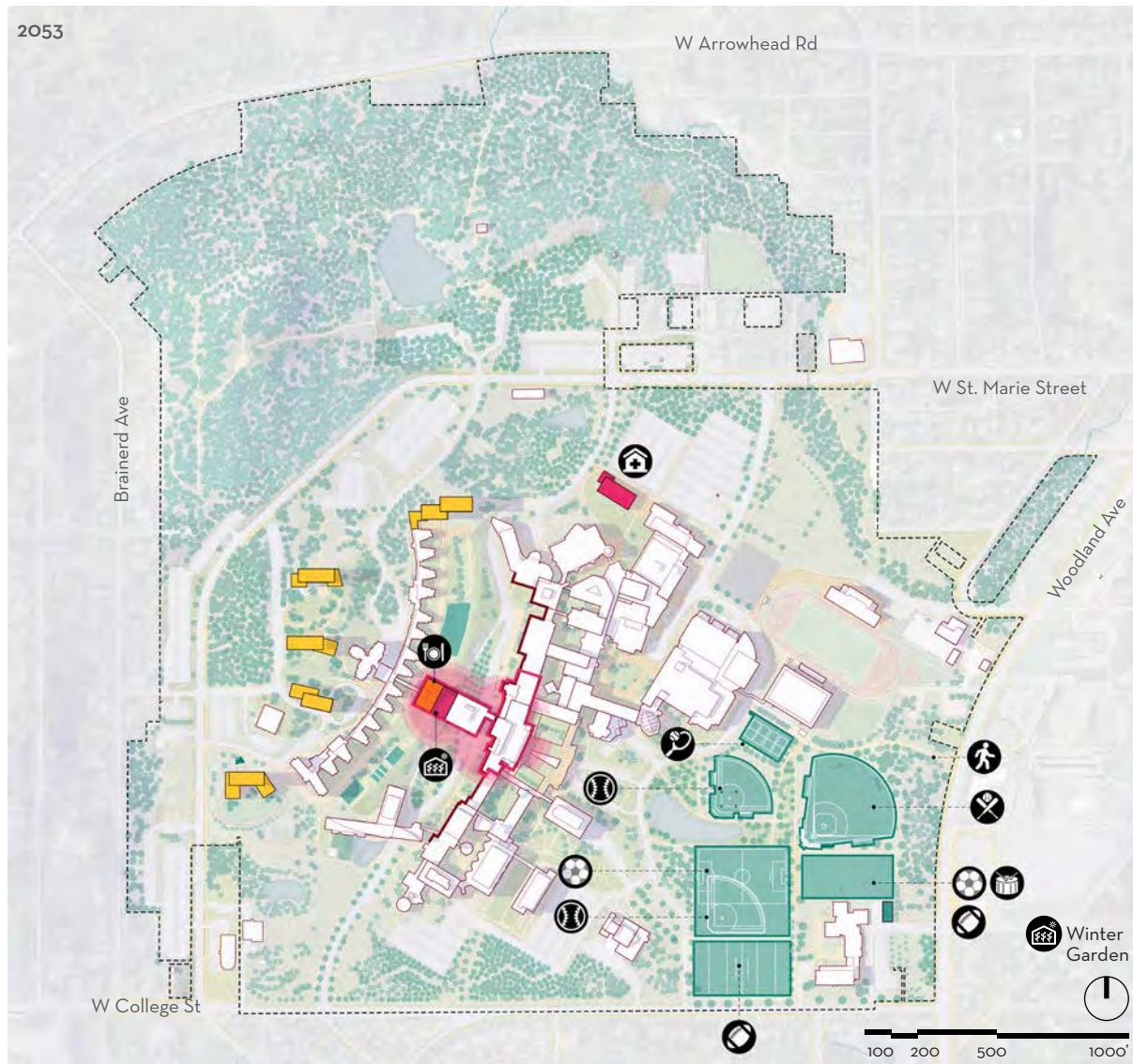
Superior Dining Hall and Mobility Hub

Centrally positioned, the existing Superior Dining Hall connects the academic buildings on the lower slopes of the campus with the crescent of residential buildings on the upper slopes (Lake Superior, Griggs, Vermilion and Burntside Halls). Superior Dining Hall serves as the main dining facility for the residential population.

The building is unique in that it is elevated on columns above Kirby Drive. The main dining spaces are one story above Kirby Drive, which passes under a portion of the building. Space below the Superior Dining Hall is unoccupied and open to the elements with limited bicycle parking. The kitchens, storage and service areas are located below grade.

The Campus Plan calls for additional dining space on the west side of the building to address the capacity challenges and operational deficiencies of the existing facility. Recommendations for the existing building include enclosure of the ground level to create a café and transit hub associated with the bus services utilizing Kirby Drive. The café will include a two-story winter garden connecting the ground





level of the building with the upper level where the dining expansion is proposed. The winter garden will incorporate the retaining wall located between the Griggs residential crescent area and the Kirby Drive level. The dining expansion will be located on the upper level, where it will connect to Griggs Hall.

The renovated and expanded dining hall is imagined as a beacon at the center of the proposed recreational areas associated with the Sustainability Corridor. It will include social engagement spaces and serve to bridge the residential and academic areas of the campus. Envisioned as a light-filled transparent space, the proposed expansion will offer direct connection to the landscapes and recreational areas of the Sustainability Corridor.

Housing

The Campus Plan includes demolition of Vermillion and Burntside residence halls and, depending upon increasing and sustaining undergraduate enrollment to pre-pandemic levels, a new residential tower. The new tower would support up to 351 beds, which would replace beds lost from Vermillion and Burntside and allow for additional capacity. The nine-story building will be south-facing to maximize passive solar gain and to connect with the landscapes and recreational areas proposed along the Sustainability Corridor (existing Burntside and Vermilion Halls site).



View from the proposed dining extension, looking out onto the upper level of the Sustainability Corridor



Over the long-term, future replacement housing is proposed west of Lake Superior Hall on the upper slopes of the campus. The framework illustrates a series of new residence halls designed to replace peripheral housing such as the Oakland and Junction Apartments. It provides recommendations for the eventual replacement of Goldfine Apartments and Heaney Hall, which are both located west of Lake Superior Hall, with new facilities optimally oriented for passive heating and cooling. The project team recommends that all future housing be oriented on the east-west axis to maximize passive solar gain and to facilitate the installation of solar panels. A detailed site planning study will be required to determine an optimal development and grading strategy given the presence of existing buildings and topographic challenges. Accessibility, building orientation, geothermal potential, and stormwater management will be key objectives in a comprehensive site development strategy. No net reduction of beds is proposed at this time.

Health and Counseling Center

A new health and counseling center is proposed north of the Kathryn A. Martin Library to replace the aging, outdated and undersized student health facility located south of Heaney Hall. The consolidated facility will form a new gateway to the campus from the commuter parking lots on the north. It will be located for ease of access from the residential areas

of the campus, as well as from the “red concourse” of the academic buildings, from bus services on Kirby Drive, and from the commuter parking areas. Future studies are recommended to determine the building program and total square footage required to meet UMD’s needs.

Sustainability Corridor

The vision for the Sustainability Corridor includes recreation fields, courts, terraces and patios, all of which are intended to enhance the residential experience for students living on campus. Located on the upper level of the Sustainability Corridor, these campus life amenities will be linked to Bagley Nature Area and to the parks and trail networks beyond campus by means of new pathways for pedestrians and cyclists.

Recreation Park

The Recreation Park will contribute to the campus life experience for resident students, commuters and the broader campus community. It will include new baseball, softball, soccer and multipurpose fields for athletic and recreational activities. The network of paths and interstitial landscape features between the fields will contribute to campus health and wellness objectives by providing walking and jogging routes. Low fences will protect the fields and be more likely to invite onlookers to support events and participate in future events.



Landscape

2023

The Landscape Framework provides the overall organizational structure for the campus. The Framework responds to the broader open space context of Duluth, notably Hartley and Chester Parks, and to the landform, drainage patterns, existing open space structure, and existing landscapes of the campus.

The Landscape Framework defines the landscape character of the following areas of the campus:

- the Bagley Nature Area;
- the Sustainability Corridor;
- the Recreation Park; and
- Campus Edges

It also provides recommendations for interstitial areas of the campus landscape as well as courtyards defined by campus buildings.

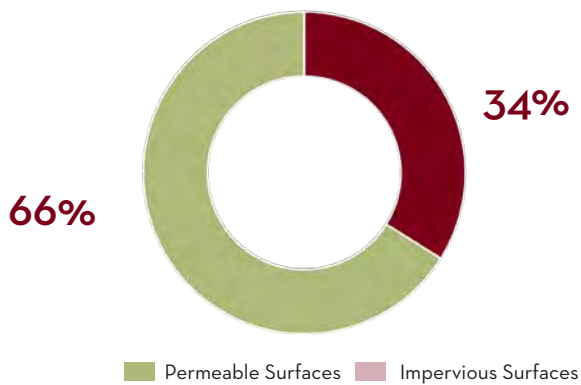
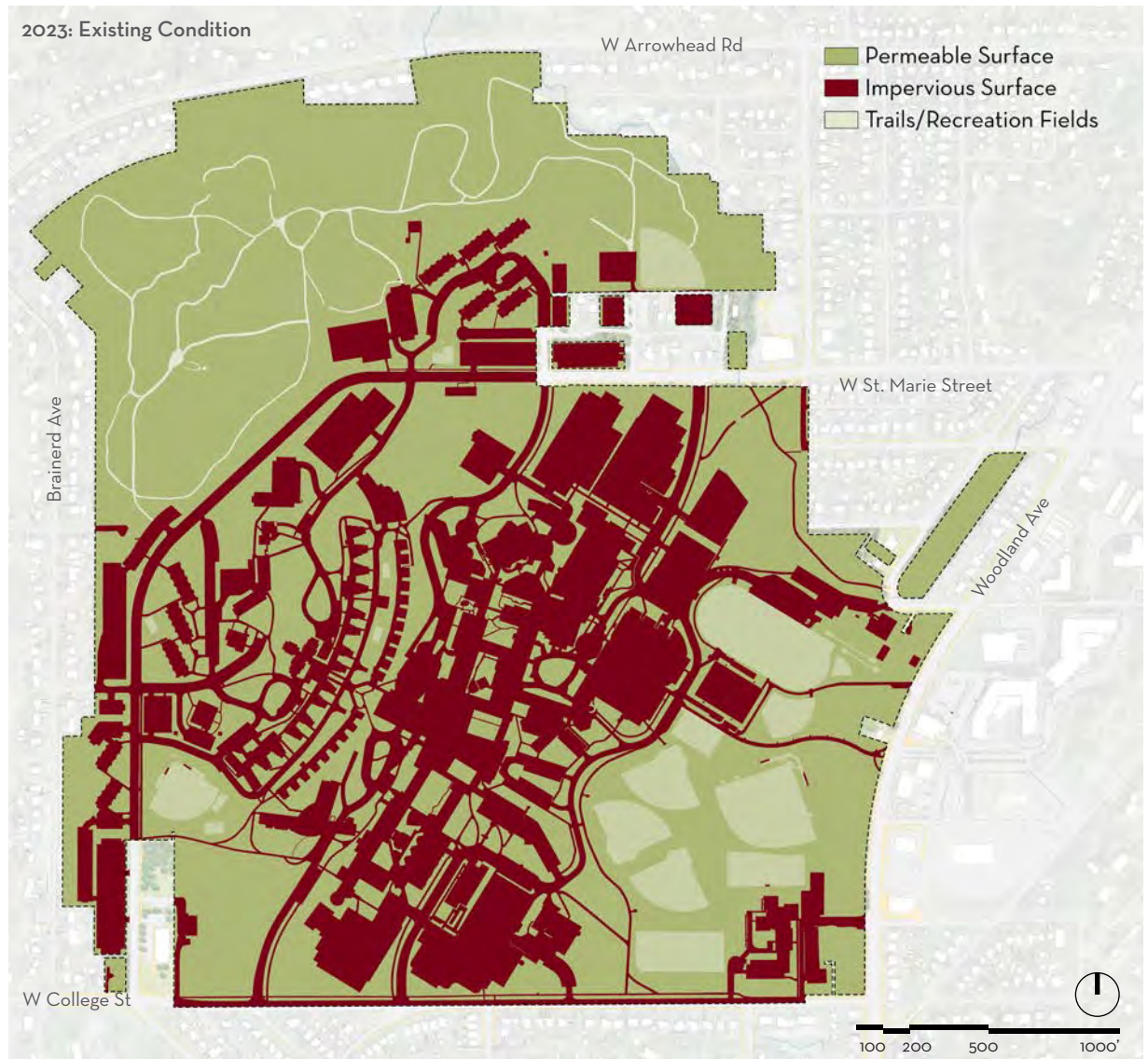
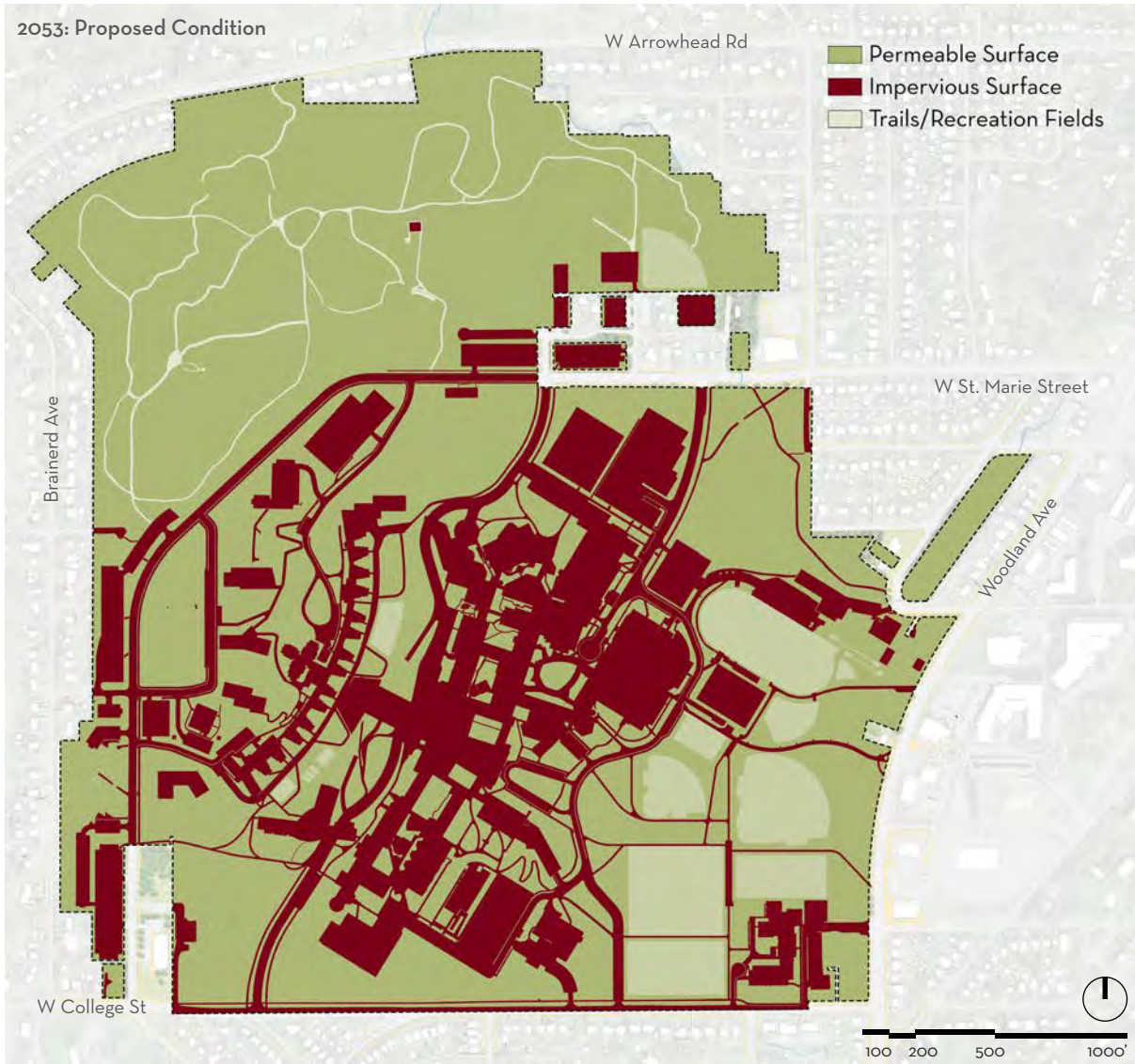


Figure 5.07: Existing Condition





Bagley Nature Area

The Landscape Framework calls for the preservation of existing campus woodlands, primarily the Bagley Nature Area, and for reforestation of previously developed areas. The demolition of the aging and inefficient Oakland Apartments and the associated parking will allow for reforestation north of W. St. Marie Street, offering co-benefits of carbon sequestration and habitat restoration while contributing to the greening of campus edges.

Sustainability Corridor

The proposed Sustainability Corridor is envisioned as the central “park” of the campus; the type of centrally -located gathering space, lacking on the campus today. Conceptually, it establishes a linear park linking Hartley Park and the Bagley Nature Area on the

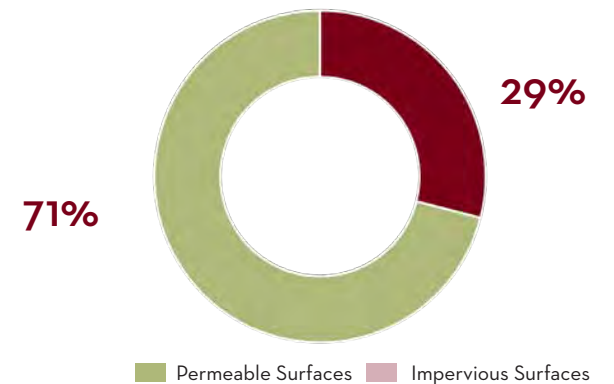


Figure 5.07: Proposed Condition

north to Chester Park on the south. At this broadest level, the Corridor will connect the campus with Duluth's system of parks and trails.

The Sustainability Corridor defines a strong organizational structure for campus development-- a structure that can be implemented incrementally over time in conjunction with investments in infrastructure and new facilities. It encompasses a wide swath of land through the center of the campus along Kirby Drive and features upper and lower topographic levels separated by the existing retaining wall located west of Kirby Drive. Burntside and Vermilion Halls define the upper level with the lower level defined by Kirby Drive.

In addition to aesthetic goals, the Sustainability Corridor includes a number of functional features that support UMD's sustainability initiatives:

1. North-south pedestrian, bicycle and transit circulation routes through the campus, the intent of which is to promote sustainable mobility. Personal cars will be prohibited with the exception of those traveling to the bookstore, child care center or ADA parking areas.
2. Stormwater management features to address water quality concerns and slow the rate of runoff.
3. A recreation corridor featuring pathway connections to the parks north and south of the

campus and recreation lawns, courts and plazas on the upper level and following the footprint of Griggs Hall.

4. Opportunity to incorporate geothermal wells under the recreation areas proposed on the sites of Burntside and Vermilion Halls (both planned for demolition).

Campus Edges / Reforestation Areas

The Landscape Framework identifies opportunities for reforestation along W. College Street and W. St. Marie Street. The reorganization of surface parking along the public edges of the campus will enable reforestation while improving the appearance of the campus.



Stormwater Management

The UMD campus includes three watersheds: Chester Creek, Oregon Creek, and the West Branch of Tischer Creek. Chester and Tischer Creeks are designated trout streams both of which are protected in the Landscape Framework by means of buffer areas and landscape corridors. While further study is needed, stormwater best management practices (BMPs) are proposed for all major landscape and building projects. Notable opportunities include along the Sustainability Corridor, where impervious parking and building areas could be replaced by water receiving landscapes. Similar opportunities exist in the proposed Recreation Park where a stormwater retention pond and BMPs are recommended.



Top Right: Bagley Nature Area campgrounds
Bottom Right: Swenson Civil Engineering stormwater management

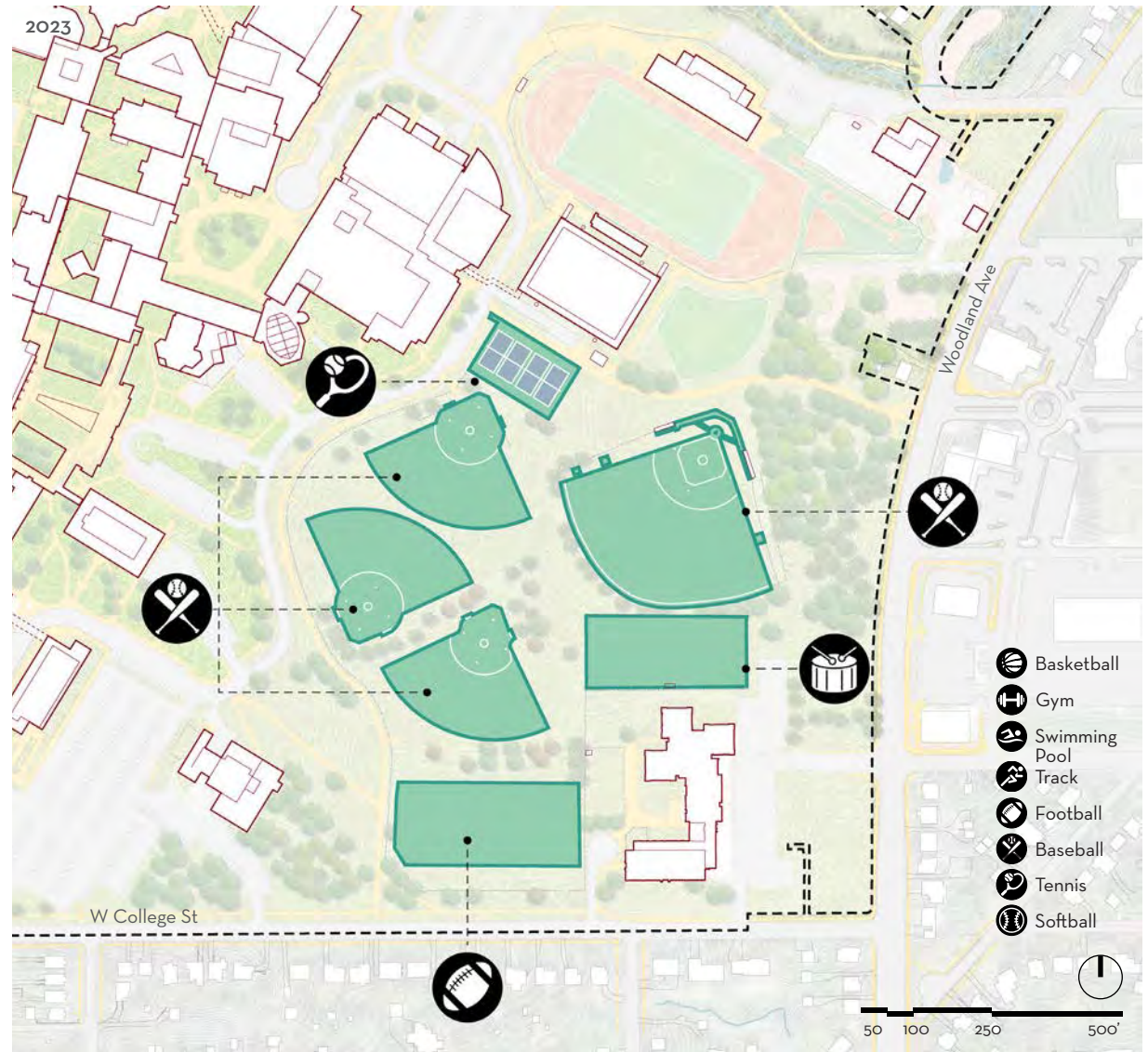


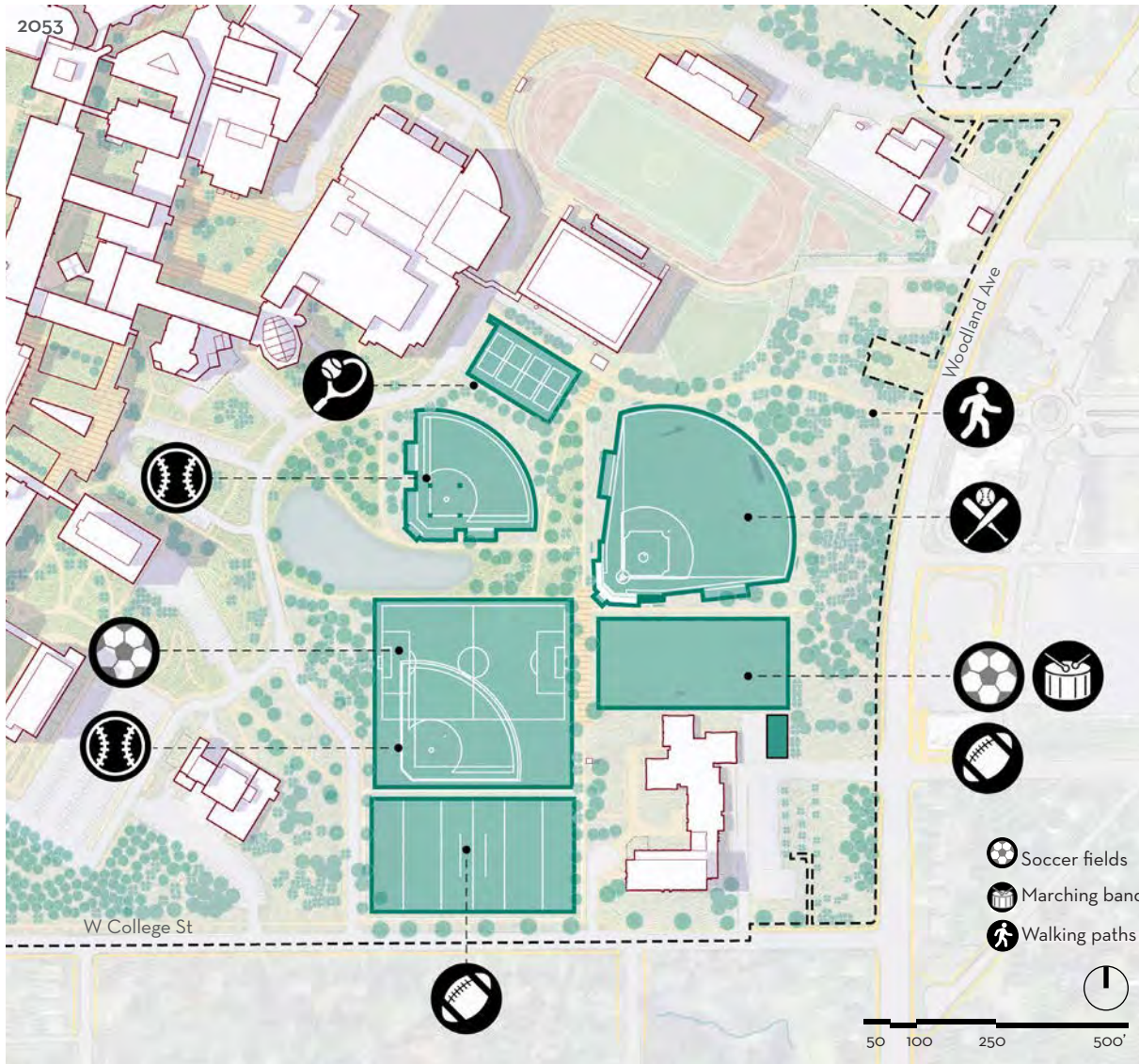
Recreation

2023

Recreation Park

The Recreation Framework is integrated with the Landscape Framework, reimagining the arrangement of existing east campus recreation fields in response to programmatic needs, required upgrades and opportunities for incorporating geothermal on campus. In doing so, the intent is to create a park-like environment and pathway network between and around the fields. The pathways, combined with a central stormwater retention pond, contribute to the idea of a “park” for both recreational and formal athletic activities. Eliminating the existing fence around the entire perimeter of the field area will open up the park for circulation and passive recreation. The proposed fields will be fenced along their respective perimeters for movement through the park on the proposed pathways.





The Recreation Park will contribute to the campus life experience for resident students, commuters and the broader campus community. It will include new baseball, softball, soccer and multipurpose fields for athletic and recreational activities. It will also feature a new storage shed to support recreational activities, which is proposed to the east of the Chester Park building.

The network of paths and interstitial landscape features between the fields will contribute to campus health and wellness objectives by providing walking and jogging routes. Low fences will protect the fields and be more likely to invite onlookers to support events and participate in future events.



Mobility

2023

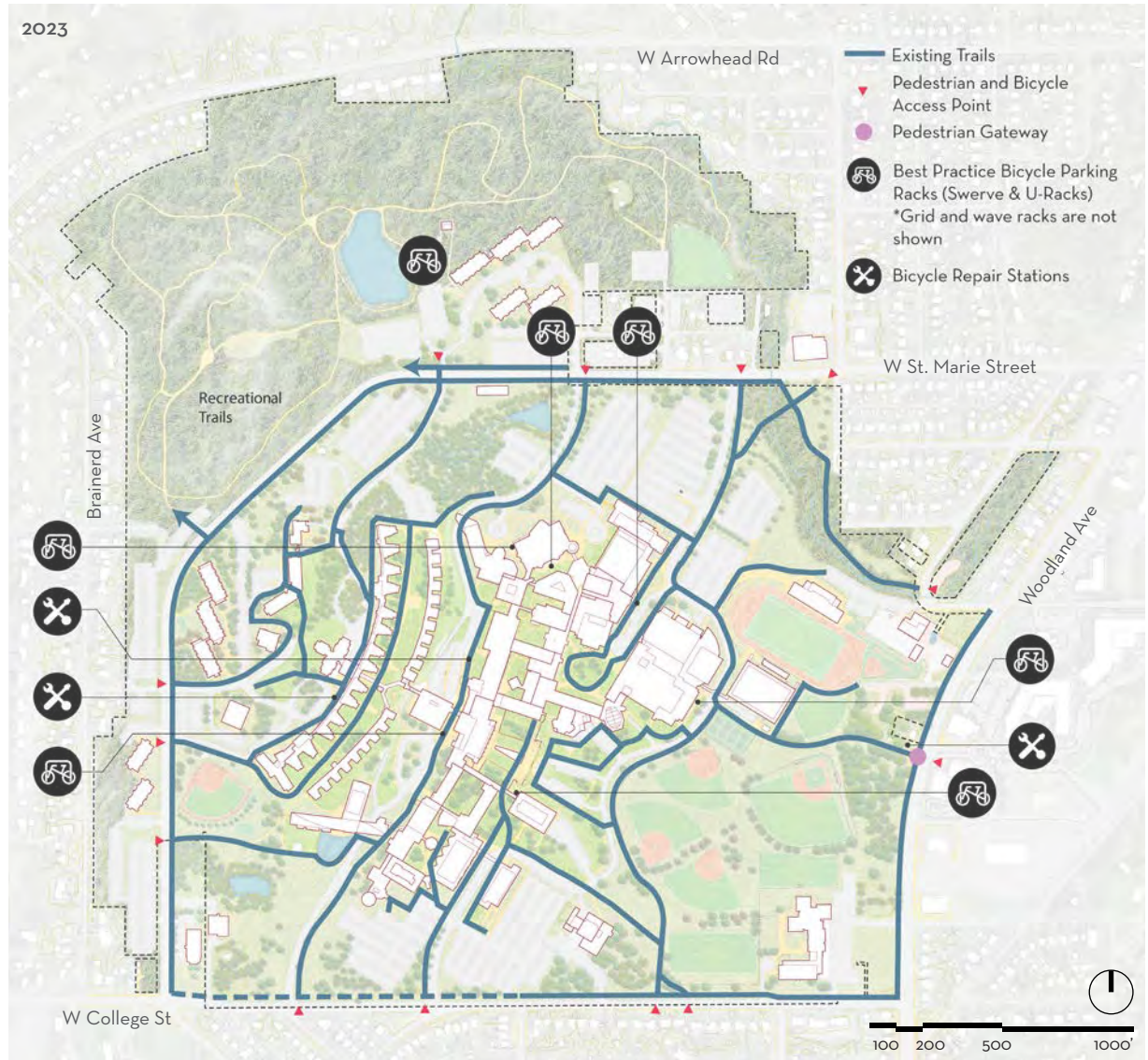
Accessibility and Pathways

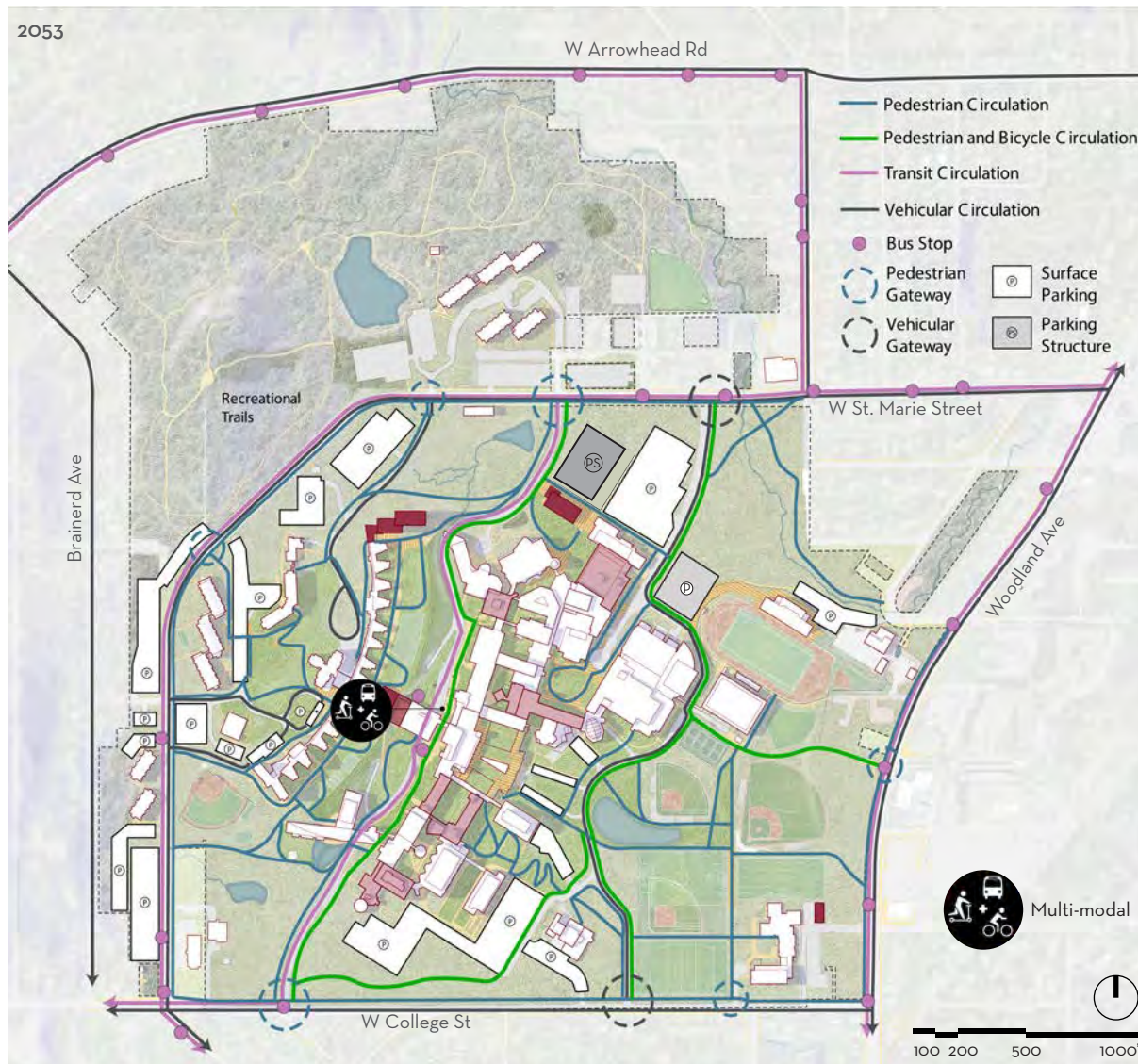
Continued expansion of the interior concourse system is proposed to connect with major academic buildings that may be constructed in the future. Accessible connections of the interior concourse system to external pathways is recommended as part of future site and building projects. It is also recommended that an interior wayfinding and signage strategy be developed to facilitate navigation and movement across the campus such as a strategy for demarcating distance north and south from the center of the Kirby Student Center.

Exterior pathway improvements are proposed on the upper and lower elevations of the Sustainability Corridor. On the upper level directly, following the Griggs curve, pathways and bike routes are proposed to connect the campus north to the Bagley Nature Area / Hartley Park and south to Chester Park. Other exterior pathway improvements are proposed within the Recreation Park to create an open accessible network across the campus.

Transit

Increasing transit ridership among students, faculty, and staff will have multiple benefits, including reduction of demand for surface parking and reduction of commuter-associated emissions. In order for UMD to strengthen its multi-modality transit culture, further investments in supportive





programming and transit infrastructure are recommended. A sheltered mobility hub at the core of campus, connected to the Kirby Student Center and the expanded Residence Dining Center, will give prominence and visibility to transit access while improving the user experience. Close coordination with the City of Duluth will be instrumental in updating other bus stops and shelters servicing campus to incentivize ridership, as well as identifying opportunities for improved service routes. Based on conversations with representatives of the City of Duluth, future transit connectivity between the mobility hub and nearby destinations including Kenwood Village and the College of St. Scholastica should be considered.

Improvements to wayfinding and enhanced interconnectivity between and within the campus activity center (Kirby) and other campus destinations will likely encourage more members of the UMD campus community to make the trip on foot or by bike. Coordination with the City of Duluth to support the implementation of the Campus Connector Trail Plan through campus- the first paved, vertical commuter corridor in Duluth- will realize additional benefits for pedestrians and cyclists in the community and improve connectivity between UMD and the surrounding community.

Kirby Drive

The Mobility Framework envisions the future of Kirby Drive as closely linked to the implementation and success of the Sustainability Corridor. By redirecting personal automobiles to University Drive and restricting parking on Kirby Drive, this key corridor will become a route into the heart of campus accessed by pedestrians, cyclists, and transit riders. The proposed transit hub on Kirby Drive will encourage ridership, offering shelter and supporting micromobility with co-located bike or scooter-sharing hubs. A well-lit and sheltered interior could double as social or study space to serve waiting transit riders. The removal of most automobile traffic from Kirby will positively impact the efficiency of transit operations, and strategic elimination of surface parking will offer opportunities for iconic new social spaces or planted areas along the corridor.

Automobiles and Parking

The Mobility Framework supports the reduction of single-occupant vehicle use on campus and associated surface parking area. To realize this vision, UMD may elect to cap parking space permitting, gradually reducing surface parking in tandem with the implementation of transportation demand management (TDM) policy and program support. Repurposing excess surface parking into green space will enhance the campus environment aesthetically,

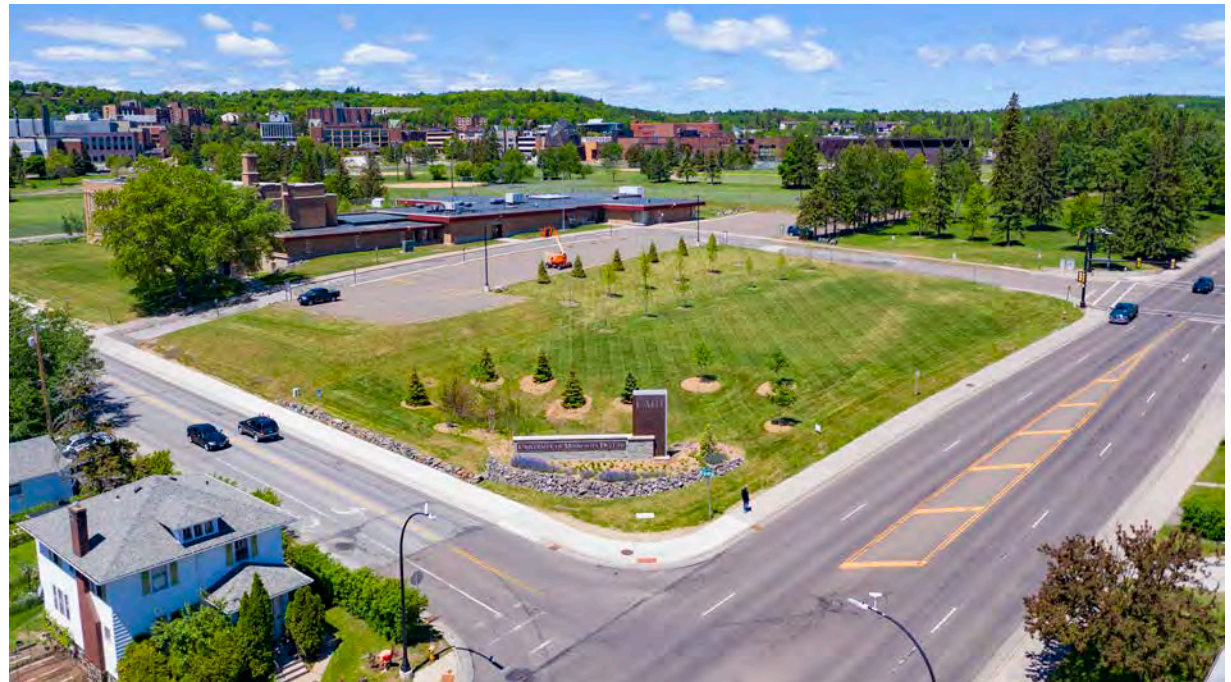
increase stormwater percolation, and improve ecosystem function. It will also facilitate reforestation in key areas notably along Kirby Drive and along W. College Street and W St Marie Street.

Gateways

The Mobility Framework recommends landscape and wayfinding enhancements at both existing and new gateways with the intent of improving the arrival sequence to the campus. The campus plan defines a new visitor gateway on W. College Street, east of the power plant. A new segment of University Drive will

provide a more direct route to Solon Campus Center and other visitor destinations, including the arts and sporting venues on the north side of campus.

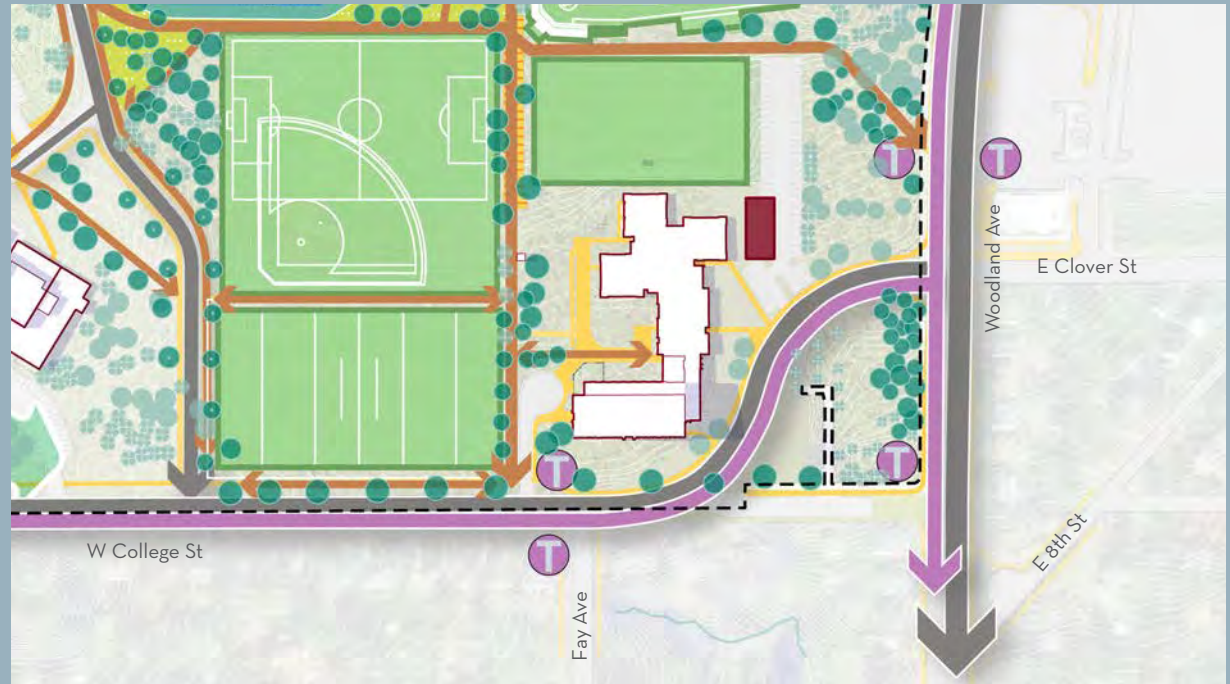
Gateways to the Sustainability Corridor occur at the intersection of Kirby Drive and W. College Street, and at the intersection of Kirby Drive and W. St. Marie Street. These gateways are envisioned to be part of the linear landscape corridor through the center of campus.



Woodland Avenue Gateway Study

The 2013 Master Plan recommended realigning West College Street to intersect with Woodland Avenue at Clover Street, identifying this reconfiguration as a strategy to improve the experience of arriving to campus.

This concept was studied further during the 2023 planning process. Based on transportation planning and urban design best practices, the realignment of W. College Street would create an awkward gateway experience and sense of arrival, particularly for visitors coming from the south, because the building contains active UMD programs and is expected to remain in place. Uniting the two sides of the Woodland Avenue neighborhoods at a future intersection would require significant public investment in infrastructure and would displace surface parking at Chester Park building, resulting in reduction of green space along this prominent campus edge if surface parking is shifted north. As future circulation and development in the area around campus brings additional demand for improved intersection at Woodland and College, UMD should continue to work with affected stakeholders and the City of Duluth to arrive at a workable solution without sacrificing campus facilities or land, or negatively affecting the entry experience for vehicles and non-motorized traffic.



The 2013 plan considers re-alignment of W College St to intersect with Woodland Avenue at E. Clover St, depicted above



Decarbonization and Resilience

2023

New Constuction and Substantial Renovation

Substantial renovation of campus buildings will support decarbonization goals, described in the Climate Action Plan, through improvements such as energy efficiency and the addition of rooftop solar infrastructure. Prioritization of adaptive reuse over new construction, where feasible, will be another strategy to reduce UMD’s embodied carbon. New construction will include the future health and counseling center as well as the proposed residence hall. New facilities will be oriented to optimize energy performance, maximize passive heating and cooling potential, and support rooftop solar infrastructure. The design of future buildings will also account for climate change projections, such as more intense precipitation events and annual warming trends.

Where feasible, the installation of energy-conserving infrastructure such as geothermal and wastewater heat recovery technology will occur in conjunction with substantial renovation, demolition, and new construction projects to minimize the need for additional disturbance in the future. The site of the proposed residence hall is recommended as a location for a cooling thermal energy storage tank; the future demolition of Burntside and Vermilion will similarly provide the opportunity to install geothermal infrastructure on those sites (refer to 2023 Climate Action Plan for additional details).

Landscape

Where feasible, the reduction of impervious surfaces will enhance opportunities for climate-resilient native plantings and reforestation, increasing UMD’s ability to sequester carbon dioxide while improving the ecological value of the campus to support habitat and provide shade. The reduction of impervious surfaces will also reduce stormwater runoff, thereby contributing to the health of the surrounding watershed. Improvements to the campus landscape will also positively impact the campus community; enhanced opportunities for outdoor circulation and recreation will promote the physical and mental health of community constituents, thereby contributing to the resiliency of the UMD community as a whole.

Mobility

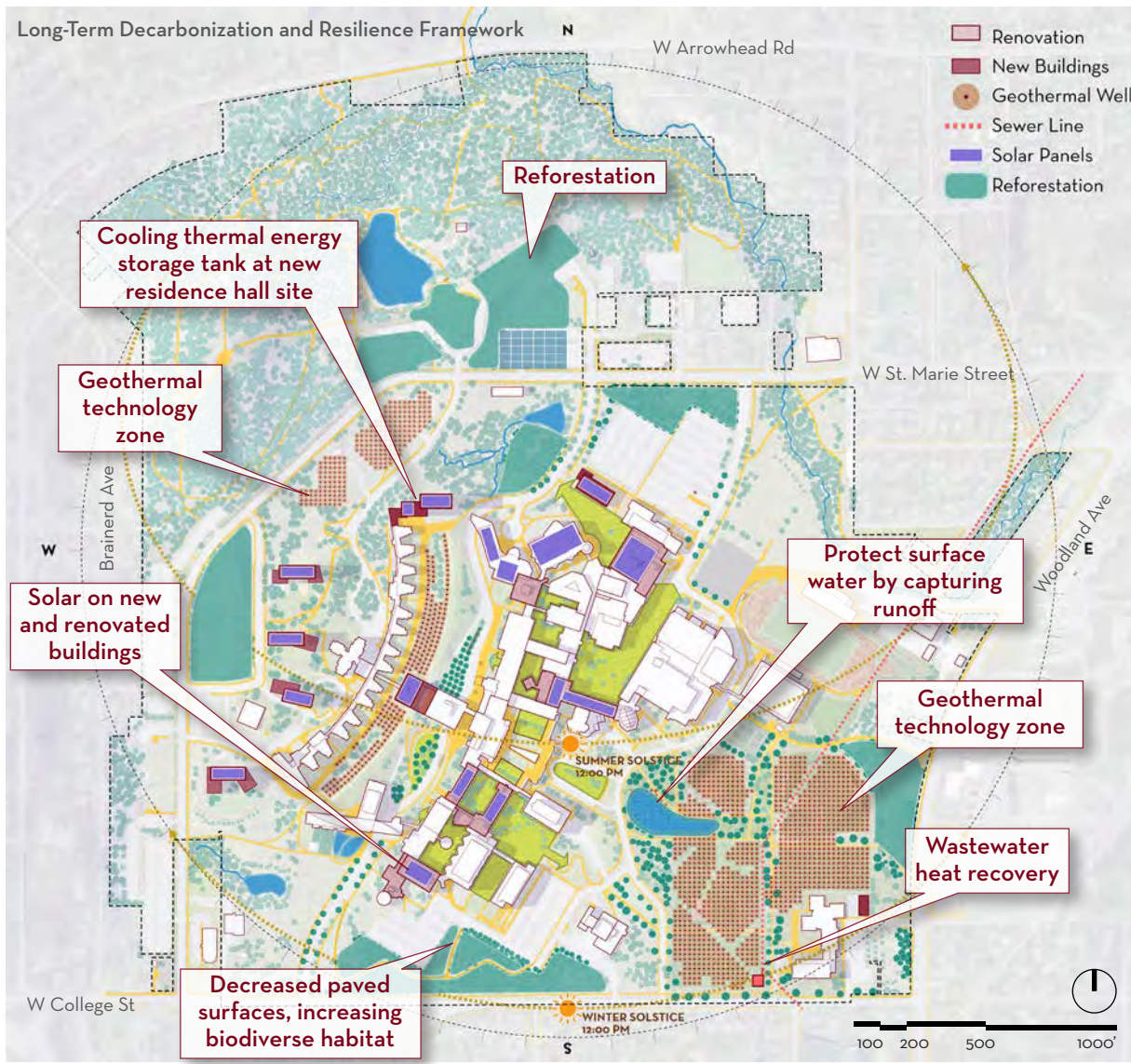
The strategic reduction of vehicular traffic along Kirby Drive, improvements to pedestrian and cyclist circulation, and the introduction of a new mobility hub at the center of campus will support decarbonization goals by incentivizing UMD

Low-temperature geothermal technology involves circulating chilled water or another thermal fluid through closed-loop piping that is buried underground. Refer to the accompanying Climate Action Plan for futher information about the application of this technology for efficient heating and cooling.

community members to use more sustainable means of accessing and navigating campus. A more walkable, accessible campus with improved pedestrian safety will additionally contribute to the health and safety of community members.

Community Wellness

Improved access to wellness resources, ease of circulation, and the activation of community spaces will support the health and resilience of the campus community in the future. The relocation and expansion of health and counseling facilities will improve how UMD students are able to access and receive health care, better supporting their physical and emotional wellbeing. Expanding opportunities for passive and active recreation through activated outdoor spaces and improved connections to neighborhood resources will further boost the health of the campus community. Incorporating art and cultural spaces that acknowledge and celebrate the diversity of the campus constituents and the indigenous history of the land will build community and foster social resilience.







Implementation and Phasing Strategy

6

Near Term Strategies (2038)

Academic and Research Facilities

- Renovation of Alworth, Heller, Old Chemistry, Library Annex, Humanities, and Voss-Kovach
- Relocation of Large Lakes Observatory and subsequent divestment of the Research Lab Building
- Substantial renovation of any buildings on campus should support decarbonization goals as discussed in the accompanying Climate Action Plan, such as upgrades to heating and cooling systems and addition of rooftop solar infrastructure

Campus Life

- Further coordination is needed with indigenous UMD community members to identify meaningful placemaking
- Demolition of Vermilion Hall, Burntside Hall, and Health Services
- Construction of a new residence hall¹, a new health center, and expansion of the Residence Dining Center facilities (Main Production Kitchen and dining hall)

¹ The construction of a new residence hall is recommended assuming student enrollment remains stable. The location, design, and timeline for construction of new campus facilities, including athletic fields, should align with the goals and strategies identified in the Climate Action Plan.

Landscape

- Construct a linear park on the former site of Vermilion and Burntside Halls as part of the proposed Sustainability Corridor
- Enhance pedestrian access to the Bagley Nature Area/Hartley Park and the Chester Park building with an expanded network of pedestrian paths
- Reforest campus edges following strategic removal of surface parking on the campus perimeter
- Expansion of park facilities to support the Sustainability Corridor concept should occur in coordination with the implementation of sustainability and decarbonization measures described in the Climate Action Plan. Removal of surface parking to support reforestation along the campus perimeter will require further study

Recreation

- Reconfiguration of athletic fields and addition of a new storage shed to support athletic and recreational programming in coordination with decarbonization measures

Mobility

- Develop a Transportation Demand Management (TDM) Plan and program to reduce single occupant vehicle commuting and increase

carpooling, shared rides, transit, walking and biking trips (1-5 Years)²

- Coordinate with the City of Duluth to provide complete, safe, connected and quality networks of pedestrian and bicycling facilities to campus, including crossings
- Construct a new campus mobility hub for transit and micro-mobility users in conjunction with the expansion of dining facilities (associated with the Superior Dining Hall renovation)
- Realign University Drive at the West College Street entrance, creating a new campus gateway sequence and improving the visitor experience
- Limit parking and personal vehicular use on Kirby Drive, increasing multi-modal and transit use through this key campus corridor
- Improve Woodland Avenue access (provisionary)

² A TDM Plan should include well-defined measures and accountability; baseline and ongoing data collection, including annual travel survey and standardized count programs that are integrated with Greenhouse Gases (GHG) data collection and development; targets for travel mode shares coordinated with targets for Scope 3 commuter greenhouse gas reduction; modified policies to align with targets and timelines; parking management and reduction strategies; programs and technologies to streamline and progress TDM efforts; a timeline for implementation milestones, and a public-facing dashboard showing progress towards targets. The TDM Plan is recommended for implementation before other near-term mobility strategies listed above.

While the Campus Plan was developed to encompass a 30-year time horizon, many of the projects the plan considers respond to more immediate campus needs. These projects are therefore included as near-term strategies, all of which are recommended for implementation within the next 15 years.

Dining and mobility hub

New residence hall

New health & counseling center

Sustainability corridor

Reforestation & surface parking reduction

Realigned entrance

Reconfigured athletic fields

- Renovation
- New Buildings
- Vehicular Circulation
- Transit Circulation
- Bike Circulation
- Pedestrian Circulation

Implementation Activities

The UMD Campus Plan is a framework for future growth and change. It will be adapted over time in response to strategic decisions and the mission-driven needs of the University.

The campus plan defines concepts for change for all areas of the campus, with the expectation that specific investments will require further exploration and discussion. Some of the recommended changes are small in scale; others are transformative and must happen through a series of incremental steps over time. Still others are dependent on the involvement of other parties to effect significant change, such as on the edges of the UMD Campus. The plan does not define project-level details for facilities, either in physical form or in cost, for most concepts outlined in the document. Future project development will result in better knowledge and awareness of the scope and timeline for these events.

Given all the unknowns associated with future events, the 'Big Ideas' and recommended initiatives serve as the core guidance for ongoing decision-making about capital projects. This flexibility is intended so that the decision-making process for future projects can uphold the intent of the plan.

A number of significant ongoing UMD planning efforts are expected to follow the 2023 Campus Plan Update, as described below.

UMD Cultural Resources Inventory

Staff will compile an inventory of eligible historic resources consistent with state requirements. For resources listed on the National Register of Historic Places, impacts to historic landscapes, districts, and/ or buildings, consideration must be given to maintaining the integrity of such resources while also meeting University needs for teaching, research, and outreach, maintenance and operations, accessibility and other factors.

Energy Master Plan

In alignment with the Climate Action Plan goals established as part of the integrated campus and climate action plan effort, this work will itemize the scope of work needed to effect change in energy supply systems and utilities on the UMD campus.

Ongoing Transit Service Planning

In tandem with the Duluth Transit Authority, to support improved ridership option for students, staff and faculty.

Other non-motorized transportation (bike/ scooters/ pedestrian) plans

A campus-wide assessment of near and long term improvements to address access (universal design) and mobility needs for non-motorized transportation.



Near-Term Framework (2038)

2023

Existing Site

UMD's main campus today, pictured right, consists of over 50 buildings. Although the buildings are positioned to allow users to enjoy the views of the surrounding scenery, the building orientation is not necessarily optimal for the cold climate of Duluth, which requires energy-intensive heating.

Transit via personal vehicle is popular, particularly in winter months; roughly one third of campus landcover is impermeable due to buildings and paved surfaces, such as parking and roads.



2038

2053



Campus in 2038 (Approx)

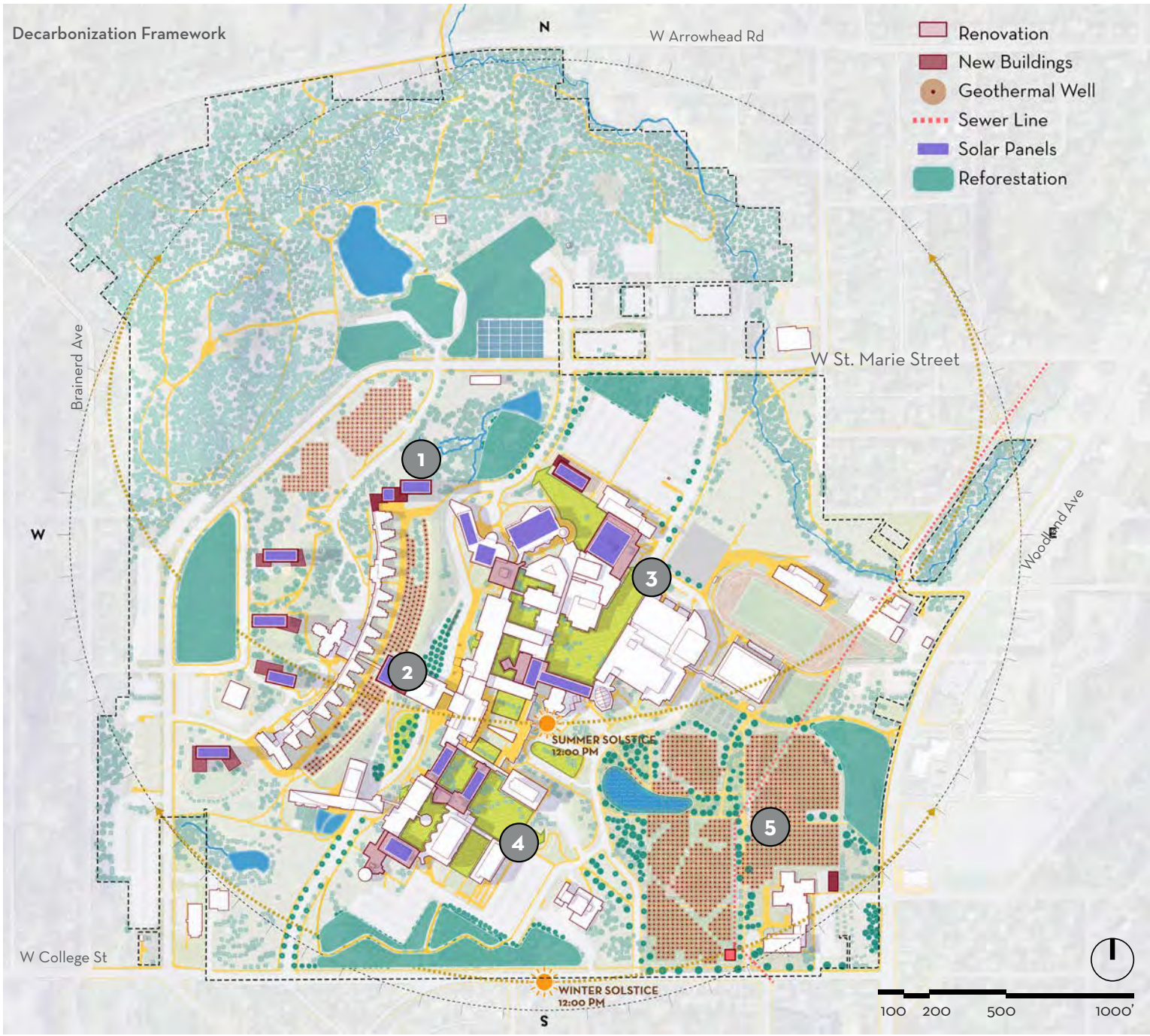
- Ⓐ New health center
- Ⓑ New residence hall
- Ⓒ Sustainability corridor
- Ⓓ Dining and mobility hub
- Ⓔ Reconfigured athletic fields
- Ⓕ Reforestation & parking reduction
- Ⓖ New visitor's gateway
- Ⓗ Planned building renovations

Near-Term Framework (2038)

Decarbonization and Resilience

The Climate Action Plan articulates five geographic areas of campus, or “nodes,” for phasing of decarbonization projects that may be implemented within a 15 year time horizon.

- **Node 1:** Construct all-electric residence hall that houses heat pumps heating and cooling plant, and construct thermal energy storage tanks and geothermal field proximate to the residence hall
- **Node 2:** Install geothermal field following the demolition of Vermilion and Burntside, removing steam piping in the residence halls and expanding hot water system in its place; add temporary steam to hot water converter and pumps in expanded dining facility for hot water system resiliency during the conversion process; install exhaust/relief air heat recovery.
- **Node 3:** Install steam to hot water converter and hot water distribution pumps in Lund plant; direct bury hot water lines from Lund to the Sports and Health Center; convert the Sports and Health center to hot water; demolish steam and condensate lines and expand the hot water system throughout the northern half of campus buildings; connect the two hot water systems at the dining hall expansion site and at the new residence hall; install exhaust/relief air heat recovery.
- **Node 4:** Demolish steam and condensate lines and expand the hot water system throughout the southern half of campus buildings; remove converter and pumps at dining hall expansion site; complete hot water loop back to Lund plant; install exhaust/relief air heat recovery.
- **Node 5:** Install wastewater heat recovery and geothermal fields during reconstruction of the Recreation Park.



Long Term Strategies (2053)

Campus in 2053 (30 years)

Academic and Research Facilities

- Continue to reinvest in existing academic and research facilities
- Demolish obsolete buildings when they can no longer be adaptively reused

Campus Life

- Demolish Oakland Apartments, Junction Apartments, Goldfine Apartments, and Heaney Hall, replacing them with new housing to the west of the campus core. No net loss of beds is recommended at this time, but should be reevaluated based on future need and enrollment trends.
- Relocate the child care center (UMD Children's Place) to the Chester Park building, assuming there is sufficient financial support and continued demand.

Landscape

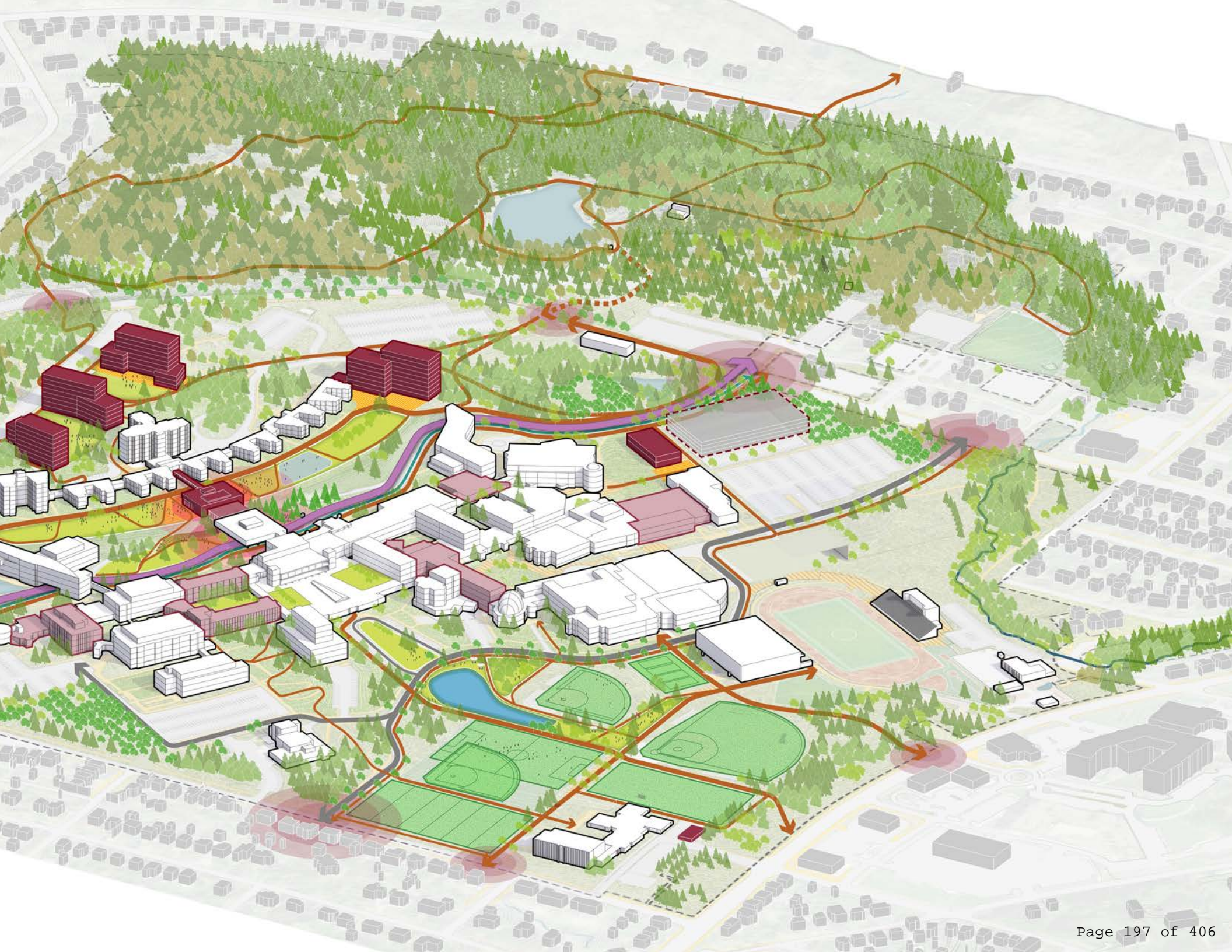
- Reforest areas of former surface parking and housing locations, augmenting tree cover at Bagley Nature Area and other forested areas on campus with climate-resilient species

Mobility

- Realize a focused mode shift away from single-personal vehicles to public transportation, pedestrian, and cycling
- Complete long-term strategic reduction of surface parking
- Construct a potential parking structure in coordination with the removal of surface parking (no net addition of parking is recommended)



- Renovation
- New Buildings
- Vehicular Circulation
- Transit Circulation
- Bike Circulation
- Pedestrian Circulation



Long Term Strategies (2053)

2023

2038

Campus in 2038 (Approx)

- A** New Health Center
- B** New residence hall
- C** Parking ramp
- D** Sustainability corridor
- E** Dining and mobility hub
- F** Reconfigured athletic fields
- G** Reforestation & parking reduction
- H** New visitor's gateway



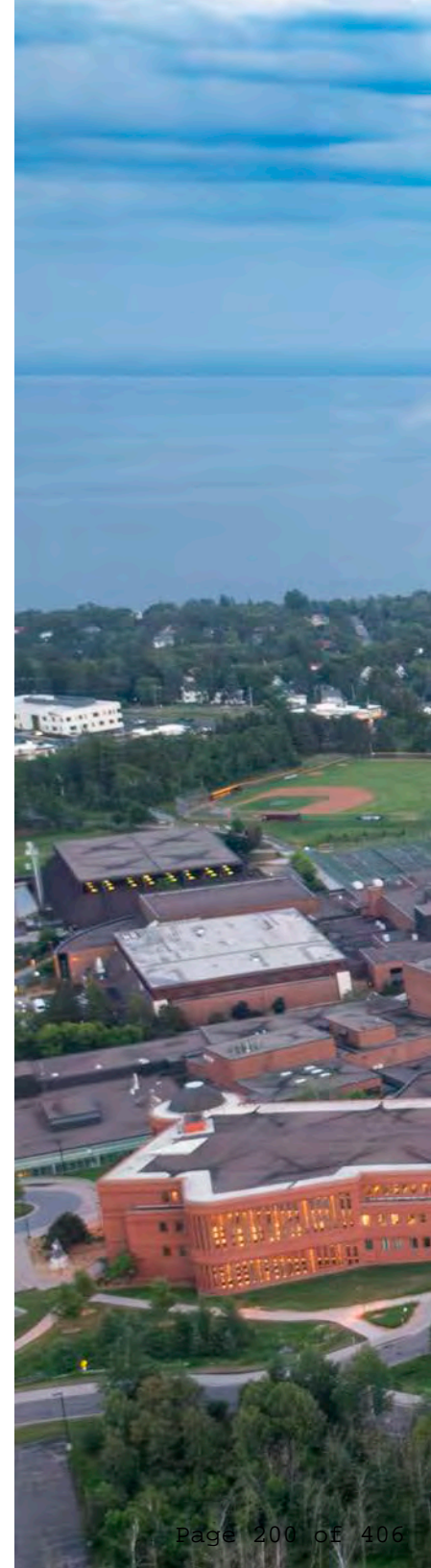
Campus in 2053 (Approx)

- A** Reforestation
- B** New residence halls
- C** Parking ramp



Campus Growth and Property Acquisition

In the near future horizon, campus growth is expected to be accommodated on land already owned by the University. However, as enrollment and other mission support activity expands beyond the capacity of the current footprint, it may be appropriate to consider additional land purchase consistent with the Regents' policy on land acquisition. Maintaining a stable, vibrant surrounding edge to the campus is a high priority for UMD as a good neighbor within the City of Duluth. Consideration of impact to municipal tax base, maintenance of city systems and preservation of physical and natural resources are all contributing factors to long term decisions about land assembly immediately adjacent to current campus holdings on the core UMD campus site.









Acknowledgements **7**

UMD Campus Plan Update and Climate Action Plan Acknowledgements

Interim Chancellor McMillan and the Executive Committee; Interim Vice Chancellor for Finance & Operations Bosell, Vice Chancellor for Student Life Erwin, Interim Executive Vice Chancellor for Academic Affairs Hietapelto, and Associate Vice Chancellor for Academic Affairs Mencl, provided direction and made sure recommendations of the Campus Plan and Climate Action Plan align with University of Minnesota Duluth goals.

The Executive Committee selected an advisory committee made up of representatives across UMD to provide guidance and direction to the planning team. The Advisory Committee included the following:

- Chuck Bosell, ITSS
- Kim Dauner, Faculty Senate Rep
- Julie Etterson, Biology, Institute on the Environment
- Forrest Karr, Athletics
- Pat Keenan, Student Life
- Jonna Korpi, Facilities Management/Sustainability
- Katy Morgan, Staff Senate Rep
- Susana Pelayo-Woodward, Diversity & Inclusion

- Shane Peterson, Facilities Management
- John Rashid, Facilities Management
- John Sawyer, Facilities Management
- Ella Stewart, Student Association Representative

The coordinated Campus and Climate Action Plans were informed through the participation of the following UMD campus community members:

- Climate Action Plan Subcommittee
- Facilities Subcommittee
- Multicultural Student Center
- Student Leader Open Forum
- Focus Groups
 - * Athletics & Recreation
 - * Deans & Research Directors
 - * Dining Services & UMD Stores
 - * Facilities Management
 - * Health Services
 - * Housing & Residential Life
 - * Kirby Student Center

* Sustainability

* Transportation & Parking Services & Student Affairs

Thanks to all the students, faculty, and staff for their time and contributions to develop the UMD Campus Plan Update and Climate Action Plans, September 2023.

This page intentionally left blank



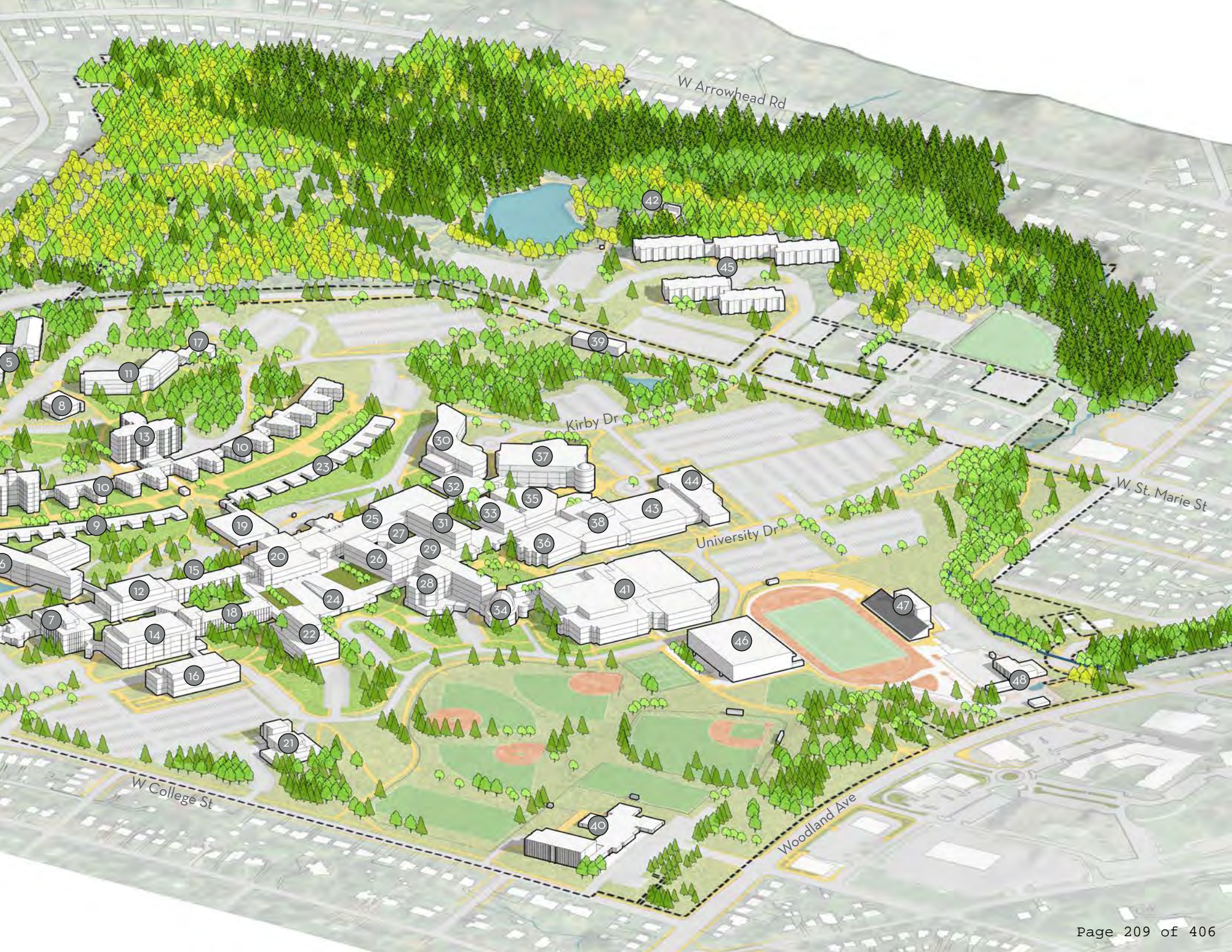


Appendix 8

2023 UMD Campus Buildings

- | | | | |
|----|---|----|--|
| 1 | Junction Apartments | 24 | Solon Campus Center |
| 2 | WDSE | 25 | Kirby Plaza |
| 3 | Ianni Hall | 26 | Cina Hall |
| 4 | M.W. Alworth Planetarium | 27 | Tweed Museum of Art |
| 5 | Goldfine Hall | 28 | A.B. Anderson Hall |
| 6 | James I. Swenson Science Building | 29 | Humanities |
| 7 | M.W. Alworth Hall | 30 | Labovitz School of Business |
| 8 | Health Services | 31 | Bohannon Hall |
| 9 | Vermilion Hall | 32 | Library Annex |
| 10 | Griggs Hall | 33 | Montague Hall |
| 11 | Heaney Hall | 34 | Weber Music Hall |
| 12 | Life Science | 35 | Education Endazhi-ginkinoo'amaading |
| 13 | Lake Superior Hall | 36 | Marshall Performing Arts Center |
| 14 | School of Medicine | 37 | Kathryn A. Martin Library |
| 15 | Heller Hall | 38 | Engineering |
| 16 | Heikkila Chemistry and Advanced Material Sciences | 39 | CUB |
| 17 | Heaney Hall Service Center | 40 | Chester Park |
| 18 | Chemistry | 41 | Sports and Health Center |
| 19 | Residence Dining Center | 42 | Bagley Classroom |
| 20 | Kirby Student Center | 43 | Voss-Kovach Hall |
| 21 | Lund | 44 | Swenson Civil Engineering |
| 22 | Darland Administration Building | 45 | Oakland Apartments |
| 23 | Burntside Hall | 46 | Ward Wells Field House |
| | | 47 | Malosky Stadium |
| | | 48 | Robert W. Bridges Fleet Ground Maintenance |





W Arrowhead Rd

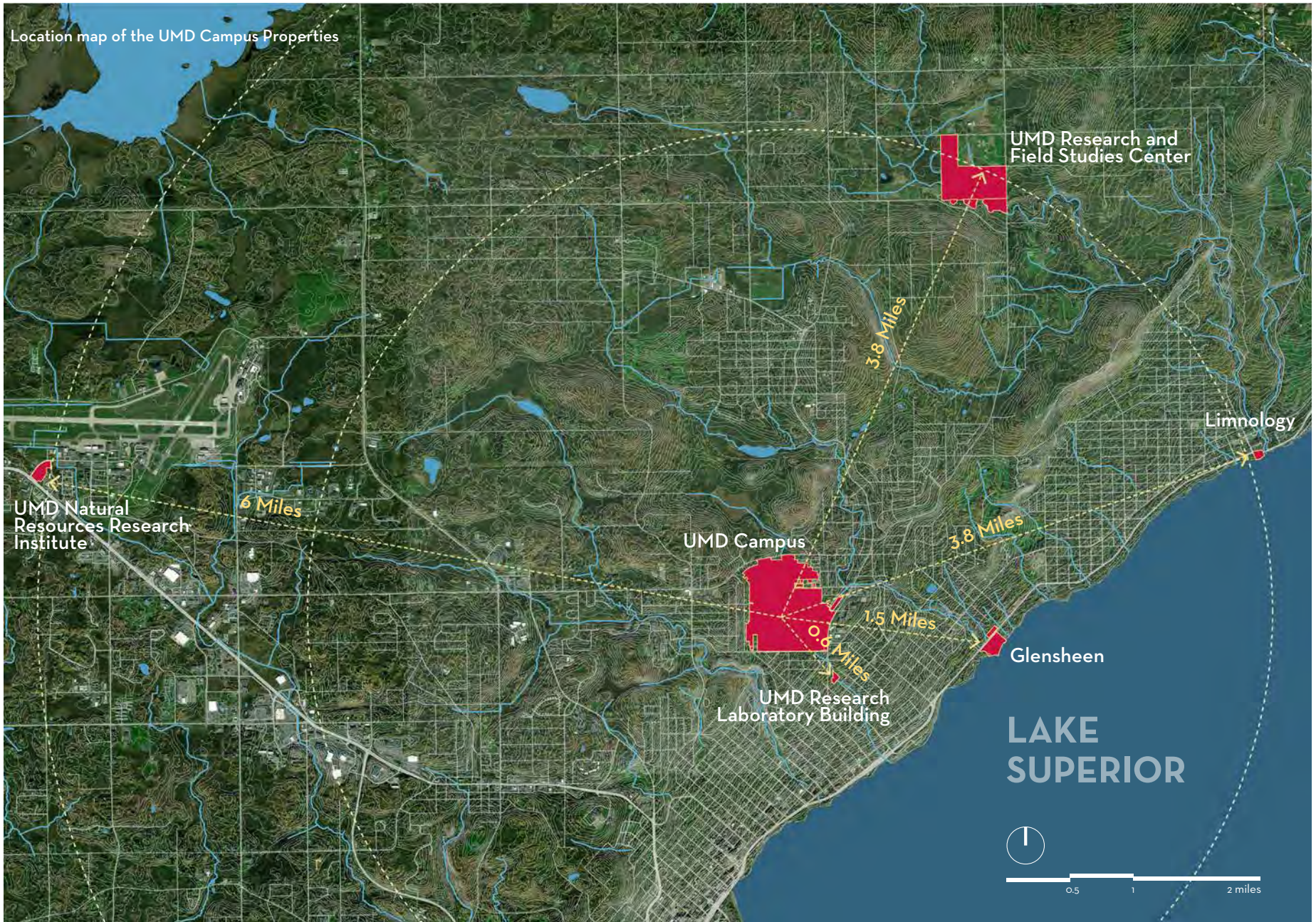
Kirby Dr

University Dr

W St. Marie St

W College St

Woodland Ave



Aerial photo of the Glensheen Campus



Glensheen

The Glensheen Mansion is a historic property located on a 22-acre lakefront parcel. Built as a home for the Congdon family, construction was completed in 1908. The property was transferred to the University of Minnesota in 1979, restored, and opened for public use as a museum. In addition to the Glensheen Mansion, the property also features the Boat House, Carriage House, and Gardener's Cottage.

The Glensheen Mansion today receives 110,000 - 120,000 visitors annually. It is used as a venue for community and corporate events, as well as leadership events for the UMN system. The property is also used for UMD classes, including museum studies, art history, and environmental education.

Potential improvements include expanded visitor parking, bus parking, and a public welcome center with restrooms. Deferred maintenance includes improvements to humidity control and cooling systems, electric infrastructure upgrades, and enhanced ADA accessibility.

Limnology

The Limnology building is located where the Lester River meets Lake Superior, approximately four miles from the UMD main campus. A former US Fisheries station, the University acquired the property in 1947. It has since supported a variety of functions, including limnology (freshwater research). The building was placed on the National Register of Historic Places in 1978. Renovated in 2012, the building today houses the UMD recreation sports and outdoor program (RSOP). Spaces on the first floor are also used by UMD departments for office and meeting space.



Aerial photo of the Limnology Campus

Research & Field Studies Center

Also referred to as the “Land Lab” or “The Farm”, the Research & Field Studies Center is operated as an experiential learning resource for UMD students and faculty. The 114-acre property is located approximately four miles from campus, and is used primarily for research associated with UMD’s Environment, Sustainability, and Geography departments. Some instructional work also occurs at the site. The Research & Field Studies Center has provided food grown on site to UMD Dining Services in the past. A master plan was completed for the property in 2014. Recommendations focused on making the property more accessible to visitors with enhanced pathways and wayfinding. No transit routes service the site; students and faculty must provide their own transportation.



Aerial photo of the Research & Field Studies Center

Natural Resources Research Institute (NRRI)

The Natural Resources Research Institute (NRRI) is an applied research institute supporting approximately 150 permanent staff, as well as additional student researchers. NRRI has two industrial research facilities in the state.

The Hermantown location is situated at the headwaters of Miller Creek, in close proximity to the Duluth airport. The building which houses the research was constructed in the 1980s as an air defense command center. Today, it houses central NRRI administration, 19 research labs, and flexible pilot space serving the needs of land, wildlife, water, and mineral research. Potential needs include expanded laboratory facilities, and converting office spaces into flexible laboratories to increase research capacity and enhance opportunities for collaboration with research partners, faculty, and students.

The 27-acre NRRI site in Coleraine focuses on minerals, metallurgy, and bio-based research. Formerly the property of the United States Steel Corporation, buildings on the site were built in 1930s and earlier. Potential needs include a new process technology building for metallurgy research



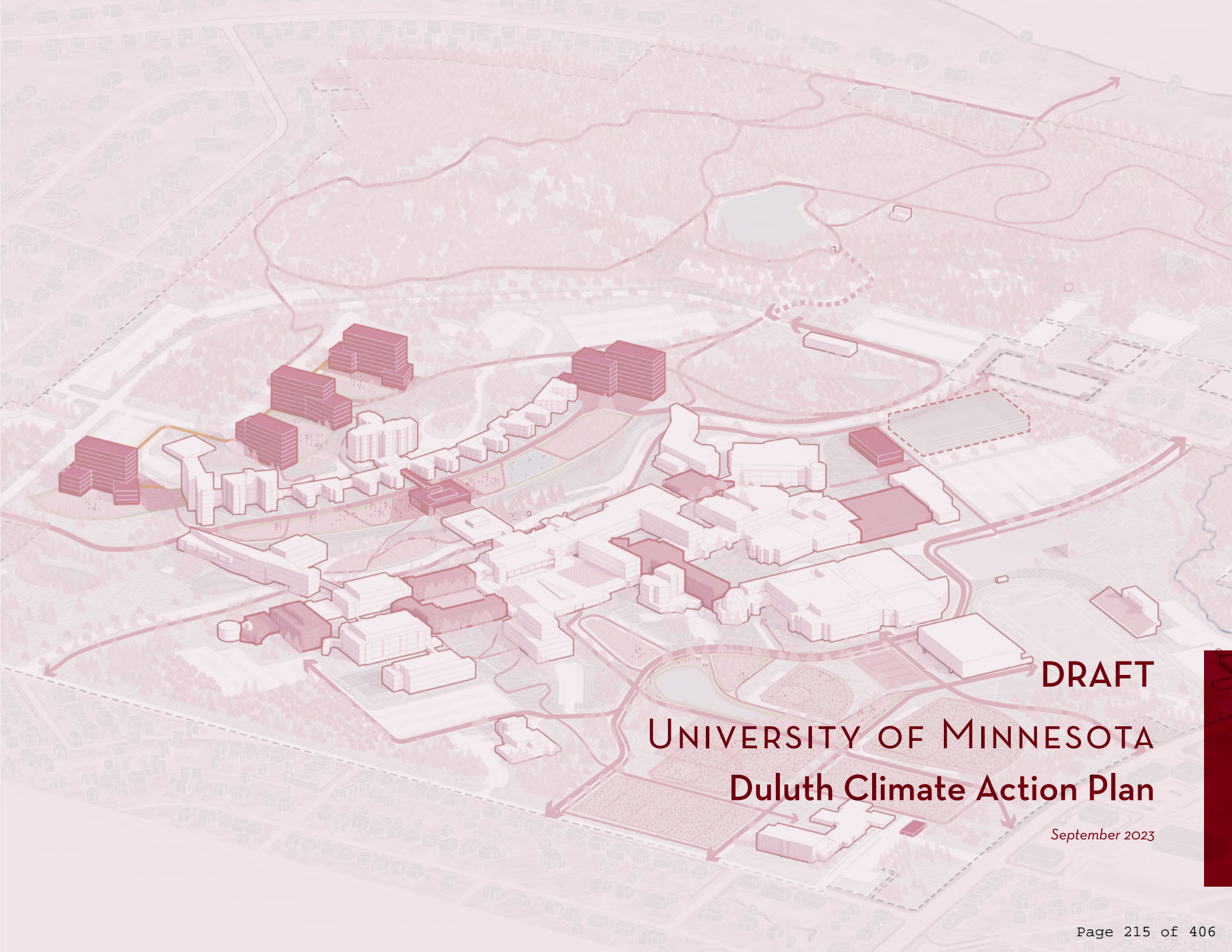
Aerial photo of the Natural Resources Research Institute (NRRI)

SASAKI



Affiliated
Engineers[®]

TOOLE
DESIGN



DRAFT
UNIVERSITY OF MINNESOTA
Duluth Climate Action Plan

September 2023

The University of Minnesota Duluth's Land Acknowledgement

We collectively acknowledge that the University of Minnesota Duluth is located on the traditional, ancestral, and contemporary lands of Indigenous people. The University resides on land that was cared for and called home by the Ojibwe people, before them the Dakota and Northern Cheyenne people, and other Native peoples from time immemorial. Ceded by the Ojibwe in an 1854 treaty, this land holds great historical, spiritual, and personal significance for its original stewards, the Native nations and peoples of this region. We recognize and continually support and advocate for the sovereignty of the Native nations in this territory and beyond. By offering this land acknowledgment, we affirm tribal sovereignty and will work to hold the University of Minnesota Duluth accountable to American Indian peoples and nations.

Table of Contents

1	Introduction	4
2	UMD Climate Action Heritage	8
3	Campus and Climate Action Plan Framework	12
4	Roadmap for UMD Decarbonization	16
	Building Energy Demand Mangement	20
	Efficient Energy Delivery Through District Systems	23
	Campus Energy Model	23
	On-Campus Renewable Energy	24
	Energy System Phasing	24
	UMD Fleet	28
	Fugitive Emissions Reduction Strategies	29
	Carbon Offsets and Sequestration	29
5	Climate Adaptation	30
6	Acknowledgements	34
7	Appendix	38
	Existing Campus Buildings Map	40
	Glossary of Terms	42
	UMD Decarbonization Planning Tool	46
	GHG Emissions Calculation Model and Parking Analysis	48





Introduction 1

Introduction

In its Sixth Assessment Report, the Intergovernmental Panel on Climate Change (IPCC)¹ finds that human-induced global warming is responsible for 2°F of warming and documents its impacts. Human generated emissions of carbon dioxide and methane are primary drivers of climate change, and thus are the focus of global and local activity to reduce emissions. Impacts of climate change in Minnesota are evident, including destruction or accelerated deterioration of property, new and exaggerated challenges to public health and reduced agricultural yield. Residents of St. Louis County, home to the City of Duluth, will continue to see a gradual increase in the average daily maximum temperature and in the number of high heat days² (Figure 1).

The Minnesota Pollution Control Agency, Minnesota Department of Health, and the Department of Natural Resources are state government entities which apply the findings of the IPCC, the US government, their own research, and that of the academic community to inform the Minnesota Legislature and public about climate change. These entities enact programs and policies to limit in-

¹ The Intergovernmental Panel on Climate Change synthesizes the work of nearly 1,000 of the world's top scientists in the study of climate change, its impacts, mitigation, adaptation, and vulnerability. It issues publications used throughout the globe as the guide in setting national policy, rules and practices to mitigate climate change.

² <https://crt-climate-explorer.nemac.org/>

state activity that contributes to climate change, while mitigating its impacts, and documenting the consequences of climate change in the state such as higher temperatures, more extreme storms with intense flooding, and alterations to ecosystems. The Minnesota Climate Change Subcabinet, inclusive of the aforementioned agencies along with the Governor's Advisory Council on Climate Change, has developed the Minnesota Climate Framework that sets a vision on how to address and prepare for climate change. The State of Minnesota has committed to carbon neutrality by 2050.³

The University's strategic plan, MPact 2025, operationalizes the historical and institutional commitments to climate mitigation and adaptation by stipulating that each campus must have a climate action plan in place by 2025. The burdens of environmental pollution, including those associated with climate change, are disproportionately borne by Black, Indigenous, and people of color (BIPOC), people in poverty, and the disenfranchised. While the Climate Action Plan will lead to reducing carbon pollution and other local air pollutants that negatively impact human and environmental health in census tracts identified as environmental justice areas of concern by the Minnesota Pollution Control Agency, **much more work remains to be done. As such,**

³ <https://climate.state.mn.us/minnesotas-climate-action-framework>

environmental justice endures as an important issue to the University.

The University of Minnesota Climate Adaptation Partnership brings together the University's resources of research and learning with the state's communities to advance capacity-building and climate-informed activity. The City of Duluth's Climate Action Work Plan 2022-2027⁴ follows the city's 2021 declaration of a climate emergency, recognizing the effects of climate change that are occurring in the region and the urgent need for action. The action plan commits to reducing emissions related to city operations, strengthening community resilience, and activity to enable climate action effectiveness.

The University of Minnesota Duluth 2023 Climate Action Plan (CAP) was developed in coordination with the 2023 Campus Plan, and aims to complement the City of Duluth's efforts. The CAP documents UMD's commitment and action plan to reduce its greenhouse gas emissions and mitigate climate change impact on campus. It provides a 30-year planning horizon for UMD to mitigate its greenhouse gas (GHG) emissions (Scopes 1, 2, and 3 emissions associated with commuting to and from campus)⁵

⁴ Created in collaboration with the Great Plains Institute

⁵ Scope 1 emissions are direct GHG emissions that occur from sources that the campus controls. UMD annually inventories fugitive emissions, fertilizers, fleet, heating and cooling (Scope 1 emissions); purchased electricity (Scope 2);

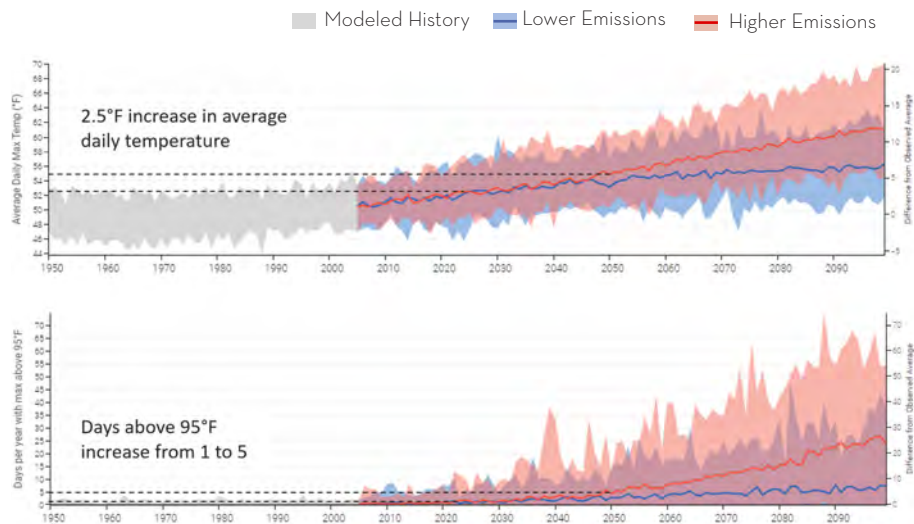


Figure 1: St. Louis County, Minnesota modeled gradual change in temperature. Source: NOAA

while providing for the projected energy needs associated with modeled climate change for St. Louis County. The plan also outlines preliminary findings related to climate adaptation and resilience as it relates to UMD’s infrastructure, environment, and community. The CAP was guided by campus leadership and supported with detailed attention from Duluth campus staff responsible for campus sustainability and energy and utility systems.

and air travel, commuting, and waste generated in operations (Scope 3).

The goals established for the CAP are:

1. Realize carbon neutrality by 2050, or sooner
2. Reduce the operating cost associated with use of natural gas and electricity
3. Increase reliance on renewable energy, particularly on-campus installations
4. Preference to avoid entering into power purchase agreements or procuring renewable energy credits or offsets
5. Ensure performance standards are met in replacing heating and cooling systems, specifically by:

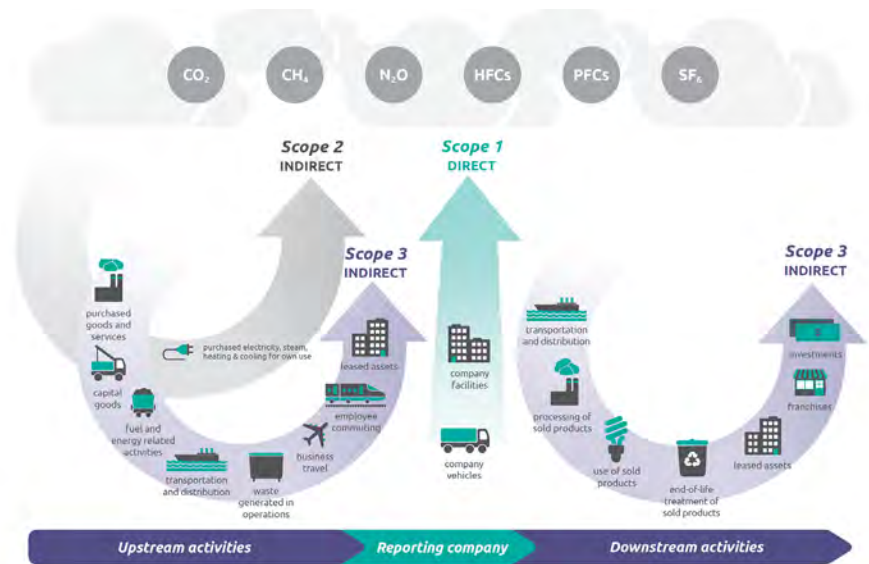


Figure 2: Scope emissions. Source: USEPA.

- a. Providing the same or improved thermal comfort and air quality
- b. Providing the same or reduced maintenance burden
- c. Ensuring the same or enhanced reliability and redundancy
- d. Employing technologies that are proven and can be readily approved by the authority having jurisdiction
- e. Providing for a system that can be phased in its installation and that anticipates the operational life constraint associated with central heating plant boiler #4.





UMD Climate Action Heritage **2**

UMD Climate Action Heritage

UMD first inventoried its GHG emissions in 2007; in 2008 the University of Minnesota system committed to carbon neutrality by 2050 and to integrate climate change into curriculum, research, and outreach. In response, UMD issued the 2011 Energy Action Plan - Version 2.0, formalizing its target of 25% GHG emissions reduction by 2020 from the campus' 2007 emissions (57,653 metric tons of carbon dioxide equivalent or MTCO_{2e}) and carbon neutrality by 2050. The 2011 plan observes that 92% of its total emissions are attributed to operating campus buildings. It recommends:

- Ensuring the new construction is more energy efficient compared to the existing building stock
- Investing in energy savings measures in existing buildings
- Scheduling and setting points for heating and cooling to reduce energy use
- Evaluating the opportunity to eliminate use of Number 6 fuel oil in generating steam and combined heat and power
- Enhanced campus engagement - education, research and outreach

The 2011 plan addresses the campus interest in renewable energy and provides insights into the cost and other barriers to on-campus implementation. It outlines interest in decreasing emissions related to campus commuting and waste management. Activity has continued as evidenced in the campus exceeding its 2020 GHG emissions reduction goal.

Using 2007 as the base, the campus intended to reduce its GHG emissions by 25%, and ultimately realized a 29% reduction in 2020. It is also evidenced in UMD's participation in the AASHE STARS program⁶ (2011, 2016 and 2019 reports), for which UMD earned Gold status in 2019. The 2019 STARS report shows comprehensive involvement in campus sustainability and a reduction in Scope 1 and Scope

⁶ The Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment & Rating System

2 GHG emissions from 5.22 metric tons of CO₂ equivalent per in weighted campus user in 2007 to 4.77 tons per campus user in 2018. This is a 9% reduction of emissions per campus user⁷ (Figure 3).

⁷ Weighted campus users is the calculation of campus occupants proportionate to the time spent on-campus. This calculation can normalize emissions data overtime. Between 2007 and 2018, UMD experienced a 12% emissions reduction, some of which can be attributed to the 4% reduction in weighted campus users. By normalizing the data by users, UMD can show emissions reduction progress unattributed to a decline in campus users.

Bagley outdoor classroom



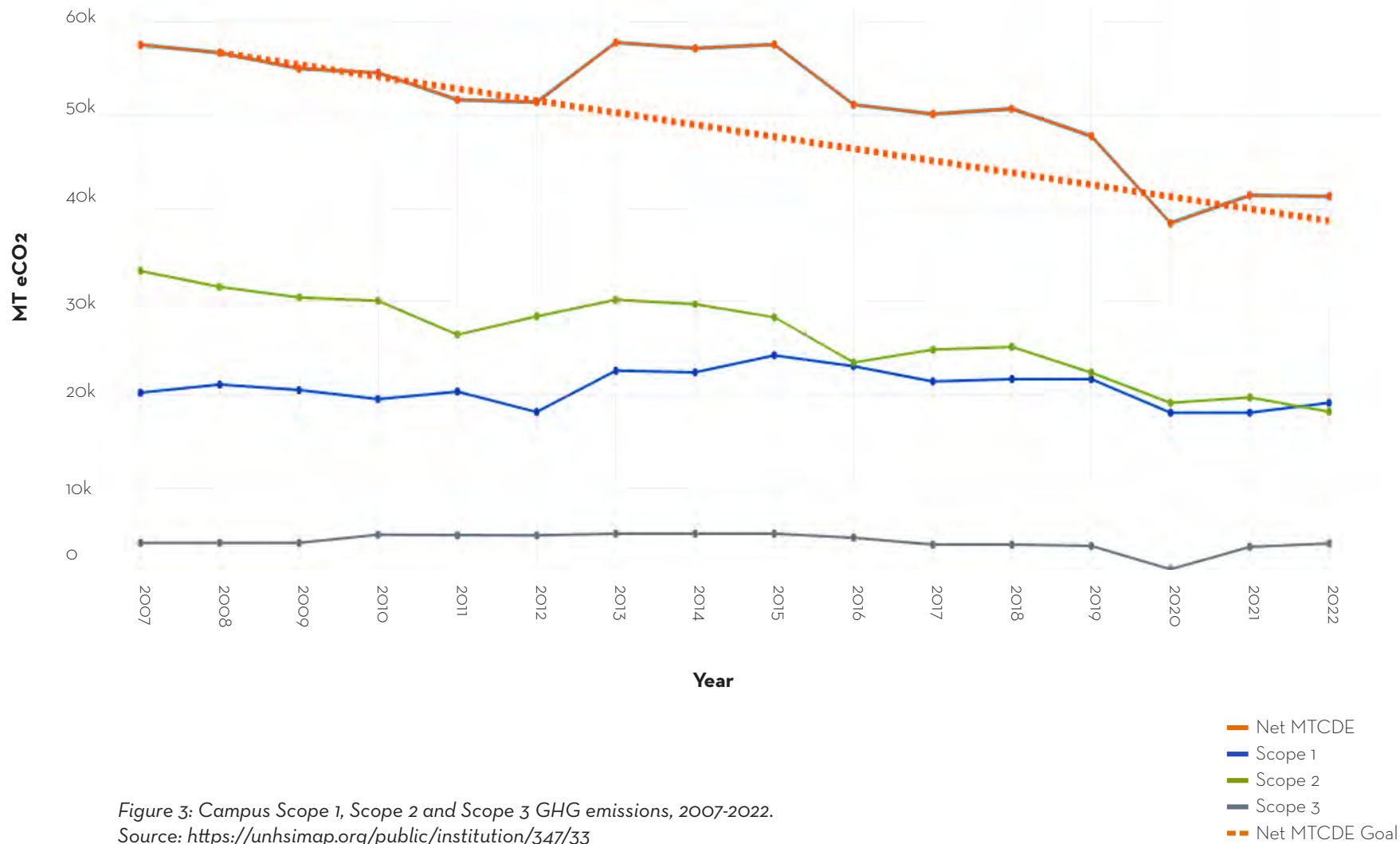


Figure 3: Campus Scope 1, Scope 2 and Scope 3 GHG emissions, 2007-2022.
 Source: <https://unhsimap.org/public/institution/347/33>





Campus And Climate Action Plan Framework **3**

Campus and Climate Action Plan Framework

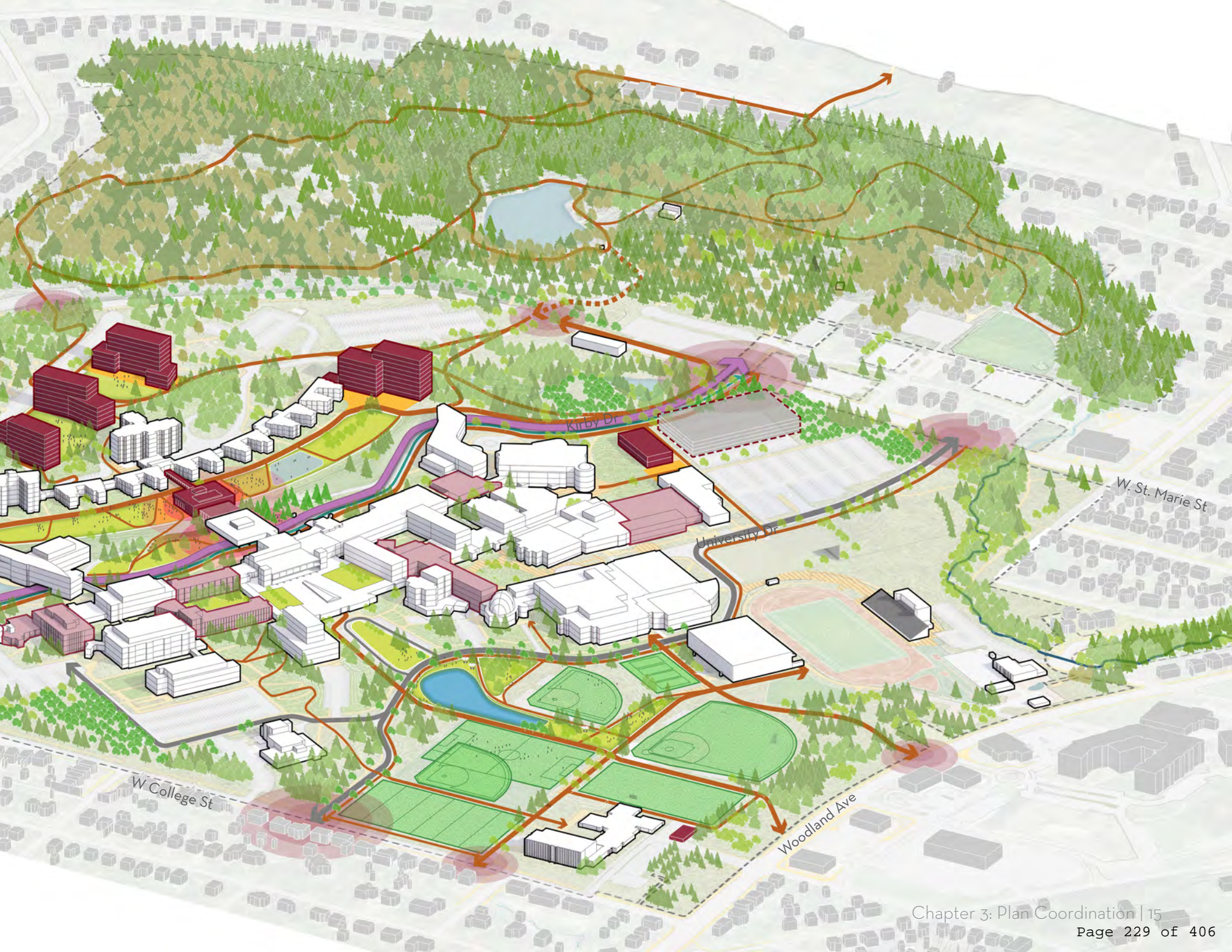
The University of Minnesota Duluth Campus Plan Update (Fall 2023) and the Climate Action Plan (CAP) were developed together as a comprehensive Campus and Action Plans Framework to ensure deep integration of thought through a shared process of broadly engaging the campus community and key stakeholders from the University of Minnesota system in the plans' development and recommendations. The two plans shared a process rich in engagement with Executive and Advisory Committees, as well as targeted involvement with faculty, staff, and students through interviews, open houses and map-based data collection activities. UMD staff also served in a dedicated way, as the CAP Advisory Committee. Both plans benefited from guidance from the University of Minnesota's Planning, Space and Real Estate Office and the Office of Sustainability. Further information about the planning methodology and stakeholder process is provided in the 2023 Campus Plan Update companion document.

The Campus and Climate Action Plans Framework is primarily concerned with the 250 acres of UMD's main campus. Ideas for physical improvements to campus circulation, building renewal and replacement, enhanced sports and athletics facilities and better protected natural areas are detailed in the Campus Plan. Details of how to accommodate these investments while realizing GHG emissions goals are the substance of this plan. The campus context is valued in both plans: considering campus

connections to the city's road and open space networks; analyzing opportunities to increase the campus community's use of public transportation; improving the welcoming nature of the campus for members of the larger community to participate in university arts, sports, and cultural events; and in recognizing the need for investment in UMD's buildings that are located elsewhere in the region.

Throughout the process, the CAP Advisory Committee accessed a proprietary, dynamic, web-based planning tool created for this endeavor. Together with the consultant team, the CAP Advisory Committee used the dynamic planning tool as a platform to test the technical, practical, and cost implications of options to reduce campus emissions. With issuance of this plan, the UMD Decarbonization Planning Tool (Planning Tool) is available to UMD for its continued use. In the near-term, it will add value to the campus as it undertakes a more detailed study of its energy and utility plan which will respond to the climate action plan, adding detail to the analysis contained herein.









The Roadmap for UMD Decarbonization 4

The Roadmap for UMD Decarbonization

Nearly 90% of UMD campus' GHG emissions are attributed to heating, cooling and powering of its buildings (Figures 5 & 6). Campus heating and cooling relies on natural gas provided by Comfort Systems (City of Duluth). Electrical power is provided by

Minnesota Power and 102.1 kW of on-campus solar capacity (which equates to approximately 1% of total electricity use).

The Climate Action Plan employs, as a foundation, the logic that carbon neutrality is best realized by reducing energy demand through building energy savings measures (ESMs), ensuring efficient energy delivery through district systems and engaging clean

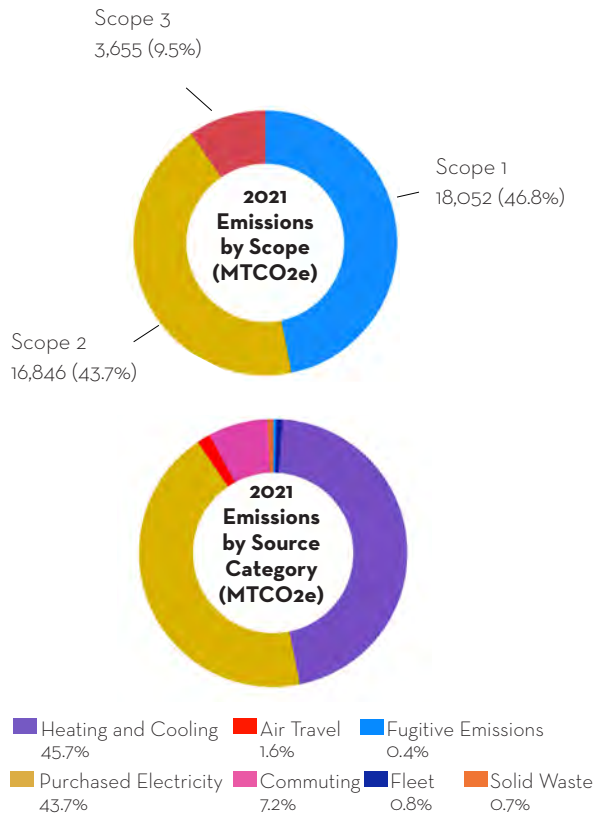


Figure 5: Campus greenhouse gas emissions by scope and source category.

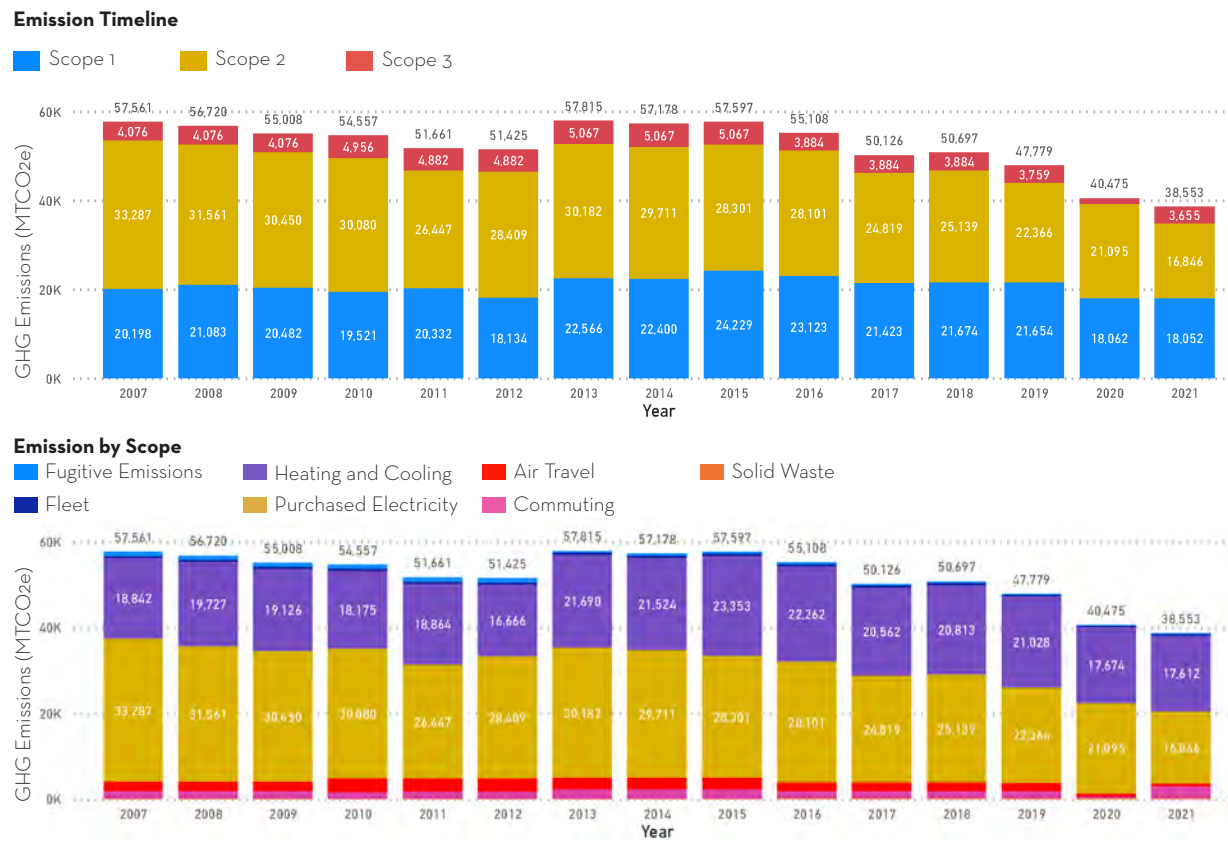


Figure 6: Campus greenhouse gas emissions over time (Data source: University of Minnesota Duluth. Graphic: Affiliated Engineers, Inc.)

energy supplies (Figure 7). As expressed through life cycle analysis, this combination results in the best cost and optimal operational certainty. An important influence on this plan is the expectation that electricity in Minnesota will be generated entirely from renewable sources by 2040 (Figure 8). Passed in 2023, Minnesota law (Senate File 4) accelerates the state utilities' ongoing progress. This makes the 2023 CAP's goal of carbon neutrality by 2050 or sooner much less challenging to accomplish.

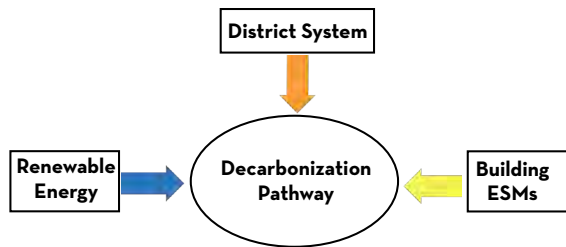


Figure 7: Decarbonization is best realized through a three-pronged approach. (Source: Affiliated Engineers, Inc.)

Energy Resource Mix and Emission Rate (lbs CO₂e/kwh) by Year

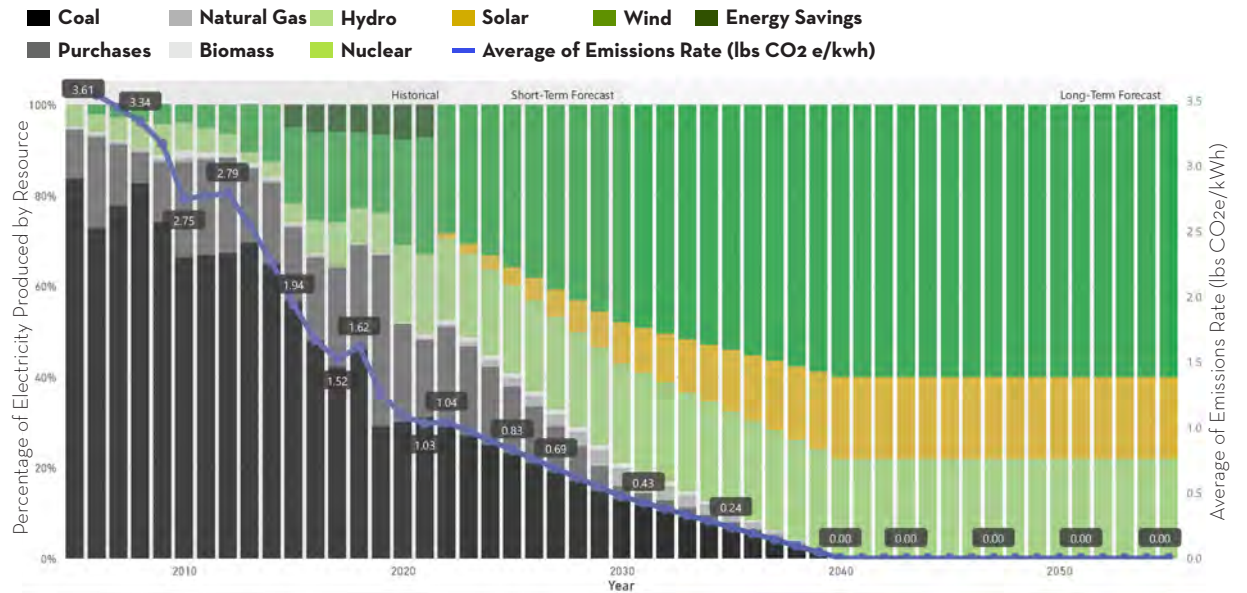


Figure 8. Illustration of likely Northern Minnesota grid transition to clean energy (Source of analysis and illustration: Affiliated Engineers, Inc.)

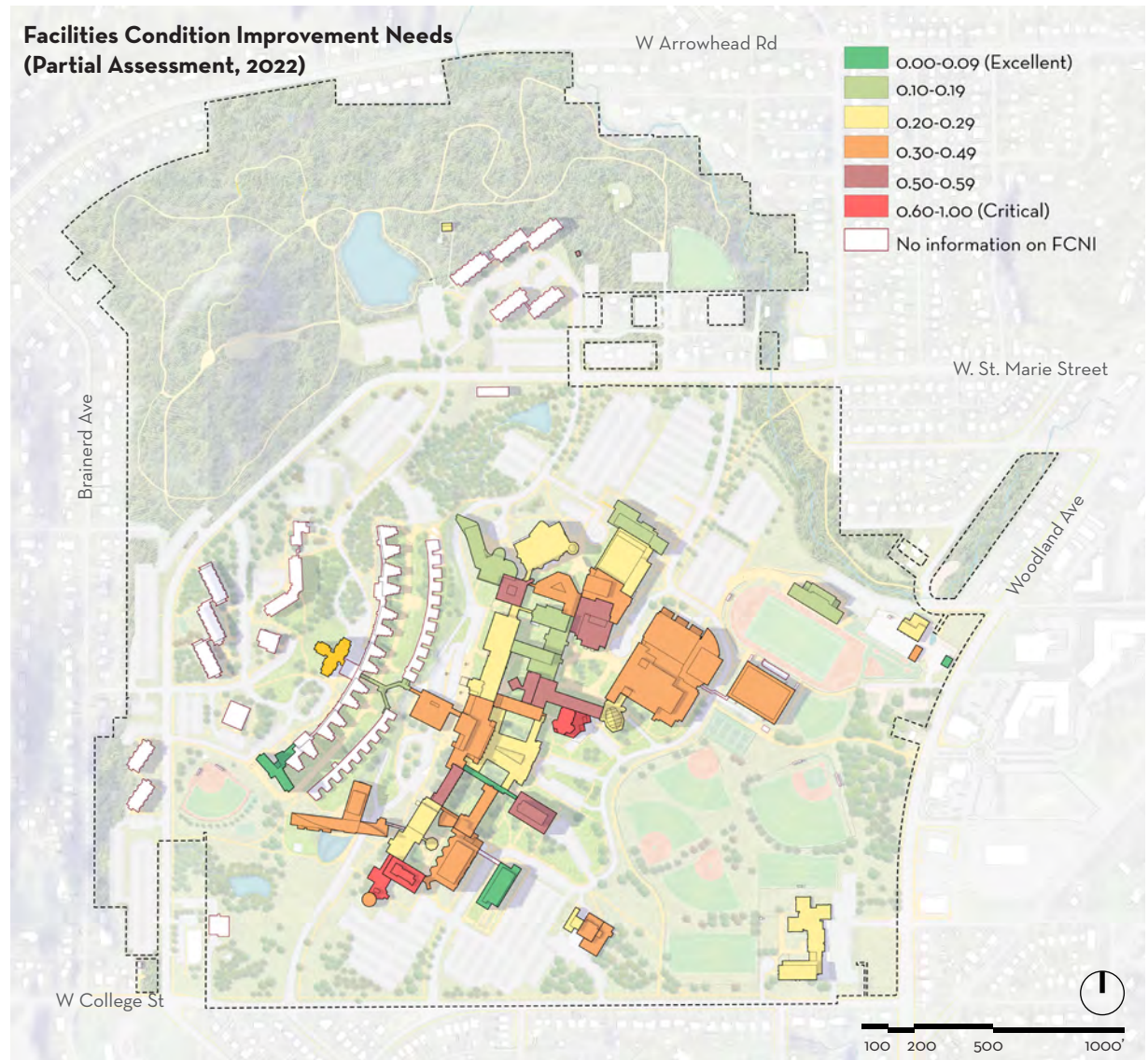
Building Energy Demand Management

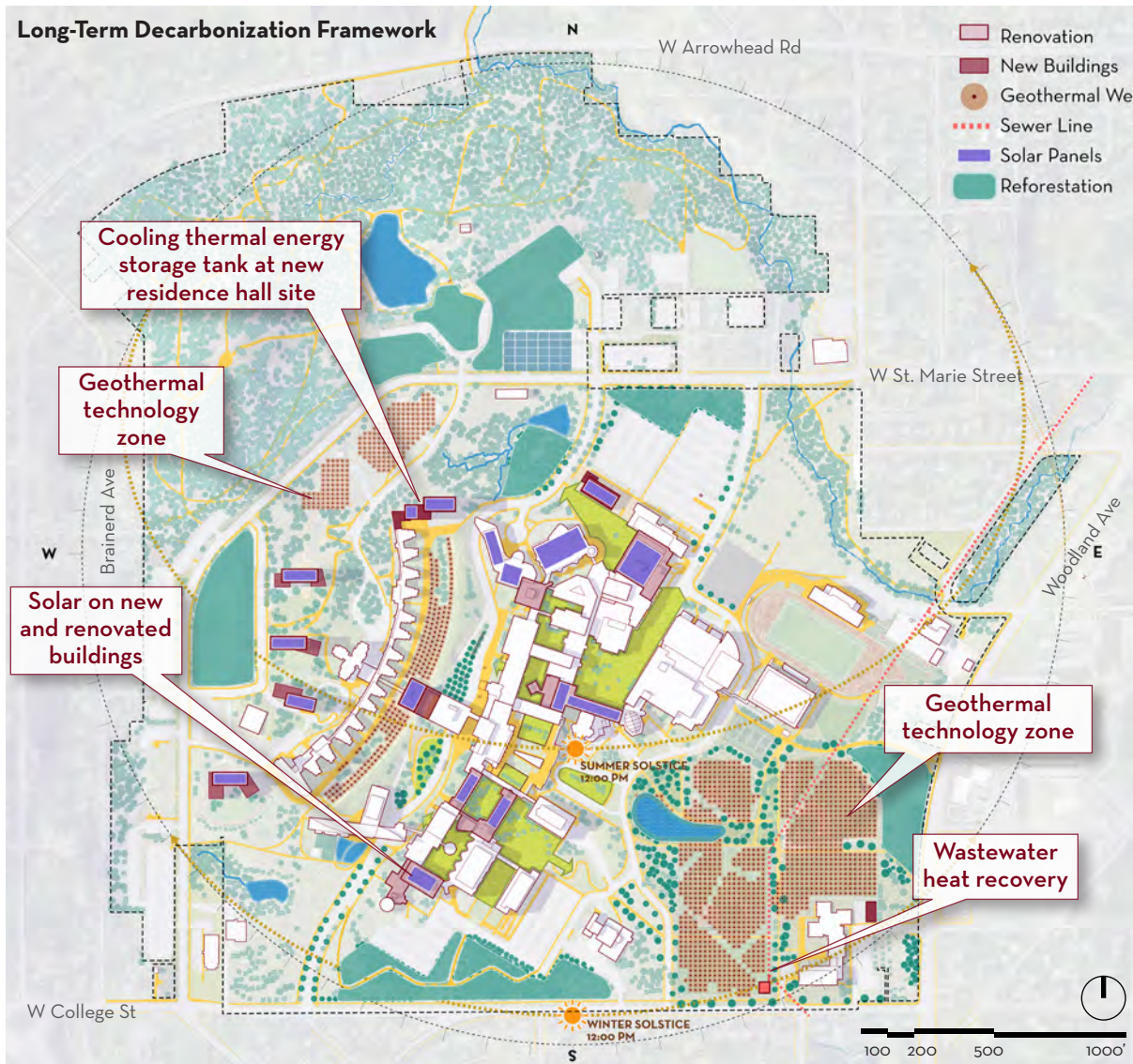
Building energy demand management reduces energy use and improves energy efficiency. In existing buildings, this is recognized as investing in building energy savings measures through systematic upgrades and renovations. At the campus scale, it can also occur through decommissioning buildings and constructing new buildings that are exemplary in energy performance.

The 2023 Campus Plan Update describes the need for major renovation to some campus buildings. While renovations accommodate changed programmatic needs, UMD also has facility condition improvement needs (Figure 8). A 2022 facility condition assessment attests to the need for \$445M in capital investment in campus buildings. The Campus Plan calls for addressing these needs in part through strategic building decommissioning as well as targeted, comprehensive investment in renovating existing buildings.

In assessing program needs and building conditions, the Campus Plan calls for decommissioning seven buildings and constructing six new buildings. If implemented in full, changes to campus facilities are

Figure 8. UMD Facility Condition Improvement Needs (Source: ISES Corporation, illustration by Sasaki Associates)





estimated to include:

- A net increase of 78,000 SF of residential life buildings
- A net increase of 60,000 SF of student life facilities
- A net increase of 35,000 SF of health clinic space

The goal of reducing building energy demand on campus is applied to the six new buildings in this plan, assuming that they will be all-electric and highly energy efficient. This will accelerate current the implementation of the 2030 Energy Standard by implementing a zero-carbon standard to all future new construction.⁸

⁸ The University currently applies the energy and carbon emissions performance targets established by the Minnesota B3 Sustainable Building 2030 Energy Plan Standards (b3mn.org/2030energystandard) for all new construction and major renovations, which was developed by the UMN Center for Sustainable Building Research. The standard is based on Architecture 2030 and sets targets for buildings to become more energy efficient and less carbon intensive in their operations. As an example, buildings constructed in 2023 under the standard must be 80% more energy efficient and less than a comparable building constructed in the baseline year of 2003.

Figure 9. Proposed Long-Term Decarbonization Framework. This strategy integrates investment in zero-carbon heating and cooling systems, as well as solar PV, into renovations and new construction proposed in the Campus Plan Update. Illustration courtesy of Sasaki Associates.

	2021 Emissions (MTCO₂e)	Campus Plan Near-Term Emissions (MTCO₂e)	Campus Plan Long-Term Emissions (MTCO₂e)
Scope 1 Heating, cooling, and fugitive emissions	17,760	148*	0
Scope 1 Fleet	292	119**	0
Scope 2 Purchased electricity	19,689	0	0
Scope 3 Commuting	2,222	991	345***

Figure 10: Campus greenhouse gas accounting focuses on Scope 1 and Scope 2 emissions. Scope 3 emissions outside of commuting are also a concern of the UMD Office of Sustainability, which is committed to communicating, educating, and inspiring action to integrate sustainability into all aspects of campus life.

*Remaining fugitive emissions from refrigerants and fertilizers.

**Accounting for a 70% reduction in fleet emissions from the 2018-2022 average.

***Emissions remaining from commuting will need to be addressed through innovation, emerging technology, or carbon offsets to meet the carbon neutrality goal.

The 2023 CAP factors in the energy advantages to be gained through the Campus Plan’s call for comprehensive renovation in some campus buildings. It also assumes that the burden of addressing the heating, cooling and power related upgrades identified in previous facility condition assessments to be part of the base case decarbonization model.

As a companion to the major renovation projects and assumed investment to address deteriorating facility conditions, the Planning Tool analyzes the

opportunities to invest in building energy savings and conservation measures. These measures are grouped by low, medium and high costs, which report on estimated first cost and savings (electric and natural gas). Because of Minnesota Law (Senate File 4), the emissions value of reducing natural gas (rather than electricity) through energy savings measures is of prime importance.

Figure 10 illustrates the best case scenario for implementing the Campus and Climate Action Plan

Framework using the CAP Advisory Committee’s preferred decarbonization approach (see appendix for further detail). The University plans to immediately develop a energy and utility plan upon the completion of the CAP, which will further the analysis of this document in anticipation of capital investments.

Efficient Energy Delivery Through District Systems

Thirty-eight UMD campus buildings are connected to a central steam plant; 26 buildings are on independent systems.⁹ The steam system is fed from three natural gas boilers in the central heating plant. The boilers are non-condensing and produce saturated steam at 135psi. The boilers have a total combined heating capacity of 200,000 lbs./hr. Boiler #4 is nearing the end of its serviceable life and will become increasingly difficult and expensive to keep operational. If Boiler #4 becomes non-operational, the campus will not have any heating system redundancy. The steam distribution system is mainly located in tunnels and within the connected buildings. It is well maintained and well insulated.

The chilled water system provides cooling to campus buildings. There are three main chiller plants (Swenson, CUB and Lund) that have a total cooling capacity of 5,200 tons. There are seven main chillers ranging from 11 to 25 years old. Some of the chillers have been rebuilt, which has extended their usable life. The chilled water is distributed to campus buildings through utility tunnels, buildings, and direct

⁹ The CAP analysis includes all buildings within UMD's GHG inventory, which does include offsite buildings such as NRR1, Glensheen, and others. In alignment with the campus plan, strategies for offsite properties are not included in this document and will need to be assessed separately.

buried pipes. Twenty-two buildings are completely or partially air conditioned. Some buildings or spaces with insufficient cooling capacity have supplemental package air conditioning systems. UMD has three primary incentives to shift from its current steam system:

- Emissions reduction goals
- Transitioning to a system that is less expensive to staff and manage
- A timely transition from steam to hot water would avoid the need to continue investing in deteriorating equipment

Campus Energy Model

A thirty-year energy model was generated with companion modeling of thermal energy storage (heating, hot water, and chilled water storage), geothermal, heat balance and dispatch model.¹⁰ This incorporates climate science models for temperature changes in St. Louis County, Minneapolis. Order of magnitude life cycle cost estimates were developed for a base case (business-as-usual) and each of the potential technology mix options. This then generated the seven best combinations of technical solutions (which technologies and what sizes or dimensions) for the campus to select as first and second choice technology mixes.

¹⁰ The evaluation of alternatives that meet energy demand and the associated costs

Utilizing the Planning Tool, the CAP Advisory Committee vetted 12 options to replace campus steam in combination with building energy demand management (low, medium, and high first-cost options). The campus selected a preferred and second option for decarbonization. The two share many attributes—low temperature hot water distribution, building energy demand, heating and cooling thermal energy storage, disabled economizer false cooling, exhaust air heat recovery, low temperature geothermal, and photovoltaic technology installed on rooftops of new and major renovation campus buildings. The preferred option also includes electrode boilers and wastewater heat recovery while the second option is unique in adding heat pumps and natural gas boilers for peaking and/or to be fueled with renewable natural gas.

On-Campus Renewable Energy

UMD uses on-campus solar PV to generate energy, as an educational tool for students, and as a visible expression of its commitment to reducing campus GHG emissions. UMD's preferred path and optional path to decarbonization both propose expanded use of solar PV arrays to satisfy approximately 1.5% of total campus energy demand at the close of the plan's 30 year term, or 766 kW, resulting in 855,647 kWh/year of electricity generation. To meet this goal, solar installations have been mapped to new construction, buildings undergoing major renovations, and others that are likely good candidates for solar.

Energy System Phasing

Recommended investments in campus thermal systems are organized geographically as five nodes. With the exception of new housing to be constructed on the eastern edge of campus in the timeframe of 2038-2053, each node of investment fits with the Campus Plan's 15-year vision (Figure 11). When implemented, campus energy strategies will be transformed. New construction of highly energy efficient buildings, renovations that enhance energy efficiency, and an expanded network of efficient energy production and distribution (central and district plants) will approximately yield an 89% reduction of greenhouse gas emissions using 2021 as the baseline.

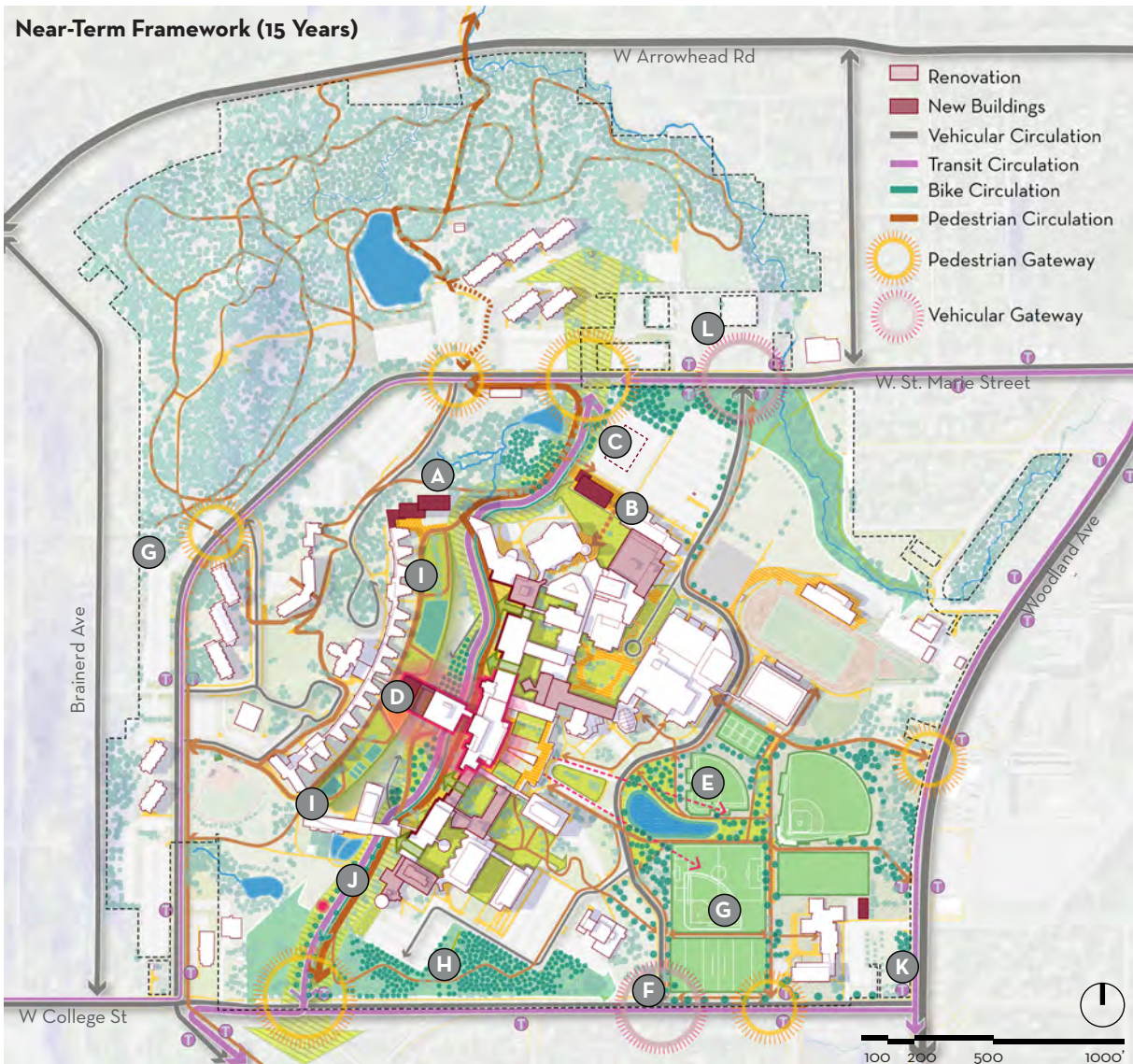
Low-Temperature Geothermal Technology

Low-temperature geothermal technology involves circulating chilled water or another thermal fluid through closed-loop piping that is buried underground in either horizontal trenches or vertical bores. Stable underground temperatures enable the colder supply entering the loop to gain some heat before returning to the heat recovery chiller evaporators. This system can be used during the summer to reject heat from the conventional cooling system condensers back into the ground rather than using evaporative cooling towers or other heat rejection systems.

This looped piping acts as a heat exchanger where heat is transferred through the surface of the piping that is in contact with the earth. The capacity of the system is dependent on the specific heat and thermal conductivity of the circulating fluid, the thickness and thermal conductivity of the piping, the thermal conductivity of the backfill/grout, and the temperature difference and thermal conductivity of the surrounding earth (noting that the temperature difference to the surrounding earth varies seasonally and is influenced by the piping system effect). The total capacity of the system is a product of the specific capacity and the total surface area of the piping.

The appropriate size and type of a vertical system, such as is proposed for this campus, can be determined with software modeling and unit costs from local contractors. Typically, a one-acre bore field can yield a capacity of 150 to 750 tons by utilizing approximately 50 to 150 bores, depending on type.

Low-temperature geothermal is an excellent option for sourcing low-grade heat because it is scalable, works in all climates and most locations, has an expected life of 60 years or more with very low maintenance, and only requires the energy to drive circulating pumps. The largest barrier to this technology is initial capital cost, which is sometimes overcome with a full life cycle cost analysis with appropriate value assigned to reduced emissions. The space for drilling the bores can be repurposed after the system is completed and backfilled for use as open space, recreational space, parking, and in some cases for building construction.



Campus and Climate Action Framework

Near-term Framework (approx. 15 years)

- Ⓐ New residence hall north of Griggs Hall to replace Burntside and Vermilion, pending enrollment demand
- Ⓑ New health center
- Ⓒ Parking ramp, if needed, north of new health and wellness center
- Ⓓ Dining expansion and mobility hub
- Ⓔ Reconfigured athletic field and recreation area with potential low-temperature geothermal (“geothermal”) technology and stormwater pond
- Ⓕ Visitor gateway
- Ⓖ Enhanced pedestrian access to Bagley, Chester Park School
- Ⓗ Reforestation (Multiple locations)
- Ⓘ New linear park with geothermal wells
- Ⓝ Kirby Drive is multimodal with limited vehicular access
- Ⓚ Resolution on Woodland Ave access
- Ⓛ Future campus support

Figure 11: The Campus Plan Near-Term Framework (15 years) (Source: Sasaki Associates)

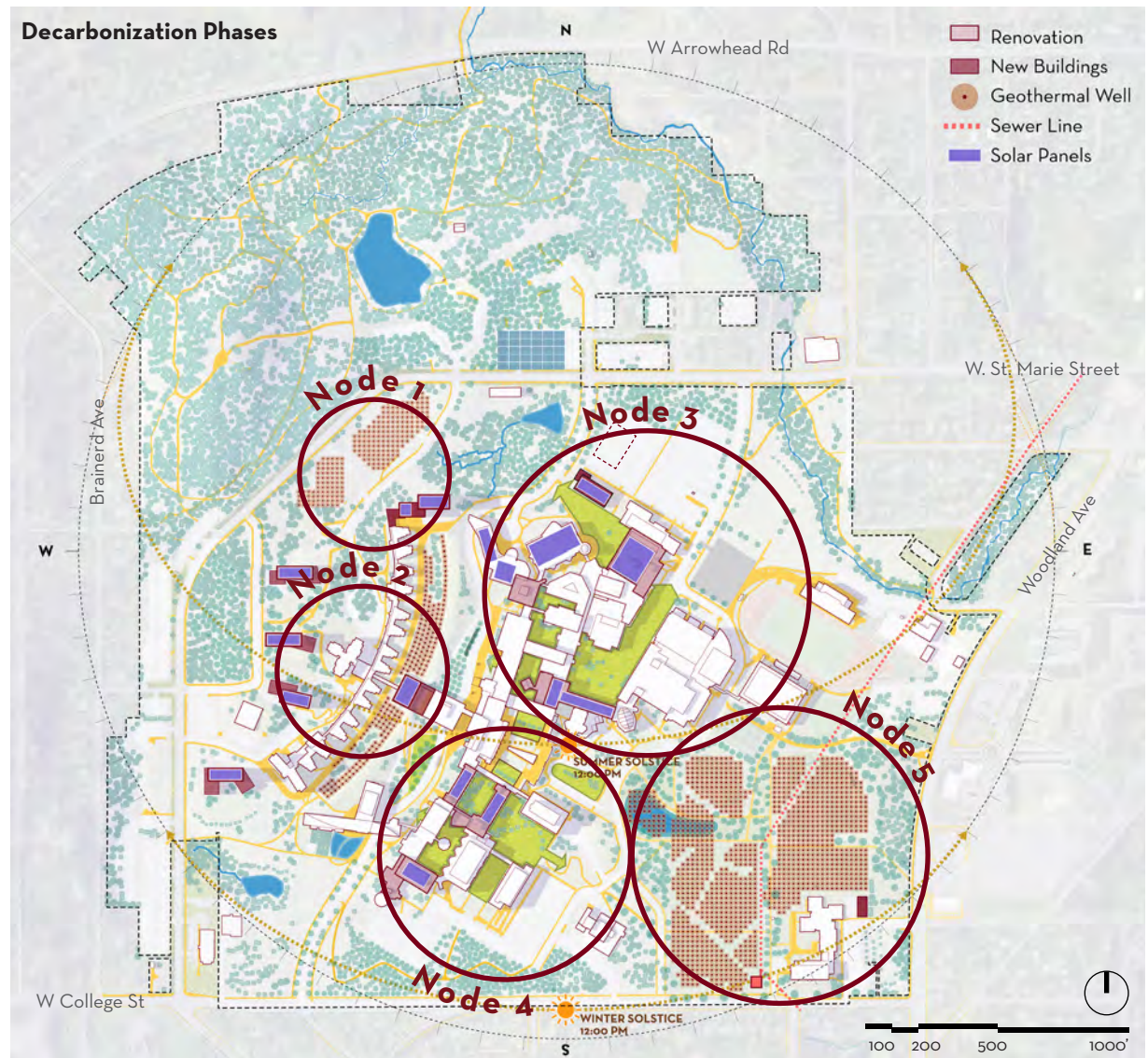
The Planning Tool details a sequence of nodal investments distributed geographically from west to east. Identification of these nodes for infrastructure investment can be revisited in coordination with future capital improvements opportunities identified in the Campus Plan. The nodal phasing strategy described below illustrates one possible approach to the sequencing of decarbonization investments:

Node 1: Construct an all-electric residential hall and construct thermal energy storage tanks and geothermal field proximate to the residential hall.

Node 2: If sequenced after node 1, these investments will yield 12% carbon-free heating annually (campus cumulative estimate): Install geothermal field as part of Sustainability Corridor project; remove steam piping in the residence halls and expanding hot water system in its place; add temporary steam to hot water converter and pumps in extension/expansion dining facility for hot water system resiliency during the conversion process; and install exhaust/relief air heat recovery.

Node 3: Install steam to hot water converter and hot water distribution pumps in Lund plant; direct bury hot water lines from Lund to the Sports and Health

Figure 12: Climate Action Plan Decarbonization Phases (Source: Sasaki Associates)



Center; convert the Sports and Health Center to hot water; demolish steam and condensate lines and expand the hot water system throughout the northern half of campus buildings, connect the two hot water systems at the dining hall extension/expansion and at the new residence hall; and install exhaust/relief air heat recovery.

Node 4: If sequenced after nodes 1 through 3, the following investments will yield 50% carbon-free heating annually (campus cumulative estimate): demolish steam and condensate lines and expand the hot water system throughout the southern half of campus buildings; remove converter and pumps at dining hall extension/expansion; complete the hot water loop back to Lund plant; and install exhaust/relief air heat recovery.

Node 5: If sequenced after nodes 1 through 4, the following investments will yield 90+% carbon-free heating annually (campus cumulative estimate): install sewer heat recovery and geothermal fields; retire steam plant; replace all Lund chillers with heat recovery chillers; and replace cooling towers with pressurized thermal storage tanks.¹¹

¹¹ This phase can be executed at any time, but system benefits occur after full campus conversion to hot water heating. Swenson chiller plant can be removed when the Lund heat recovery chillers + geo/pond/sewer are installed. CUB chiller plant to remain online for CHW system firm capacity

Scope 3: Commuting

The UMD campus annual inventory of GHG emissions includes emissions attributed to students, staff and faculty commuting to and from the campus. This calculation is an estimate generated by information about home addresses, individuals' bus pass status, and assumptions about travel modes and distance to campus. Employing the Technical Guidance for Calculating Scope 3 Emissions¹², Toole Design modeled Scope 3 emissions to predict future reduction of commuter emissions associated with the adoption of electric vehicles in combination with a Transportation Demand Management Program, targeted campus mobility enhancements and shifts in commuter travel choices.

Without factoring the possibility that students, faculty and staff might engage in their responsibilities remotely, modeling suggests that appealing options to ride public transit, walk, bike or carpool to campus can generate an important shift from reliance on single occupancy car commuting. Assuming employment remains constant, modeling projects a decrease in faculty and staff commuting by single occupancy vehicle trips from current levels (estimated 1,151 trips/day) to 987 trips/day, a decrease of 14%. Assuming a future student enrollment of

¹² Greenhouse Gas Protocol, World Resources Institute (<https://ghgprotocol.org/scope-3-calculation-guidance-2>)

10,800¹³ with 3,000 students living on campus, the model projects a decrease in single occupancy vehicle trips among the off-campus student population from current levels (estimated at 1,181 trips/day) to 778 trips/day, a decrease of 34%. A more appealing pedestrian experience on campus also influences the shift to walking and bicycling. Mobility enhancements, as described in the UMD Campus Plan, include:

- A multimodal mobility hub that provides travel assistance, wayfinding, is connected with pedestrian and bicycling facilities and incorporates campus transportation and parking management
- Improved pedestrian infrastructure (improved layout and enhanced experiential elements)

The Campus Plan calls for a transformed landscape which supports many objectives including those that will reduce commuter associated GHG emissions by prioritizing the needs of pedestrians and cyclists over motorized vehicles. Projecting mode shifts to be achieved in the near-term (15 years), and assuming Minnesota achieves 40% reduction in GHG from transportation sector in this timeline, the UMD campus may reduce estimated annual Scope 3 commuter GHG emissions:

¹³ 10,800 is the approximate average of UMD enrollment from the last 12 years, based on UMD reporting. This future enrollment is a stand-in figure, and has not been validated by UMD. <https://idr.umn.edu/reports-by-topic-enrollment/enrollments>

- Associated with staff and faculty commuting from 1,291 to 1,102 metric tons of carbon equivalent
- Associated with student commuting from 930 to 550 metric tons of carbon equivalent.¹⁴
- Recognizing that a certain amount of UMD commuters will always drive, UMD will also prepare to support commuters that transition from an internal combustion engine (ICE) vehicle to an electric vehicle (EV).

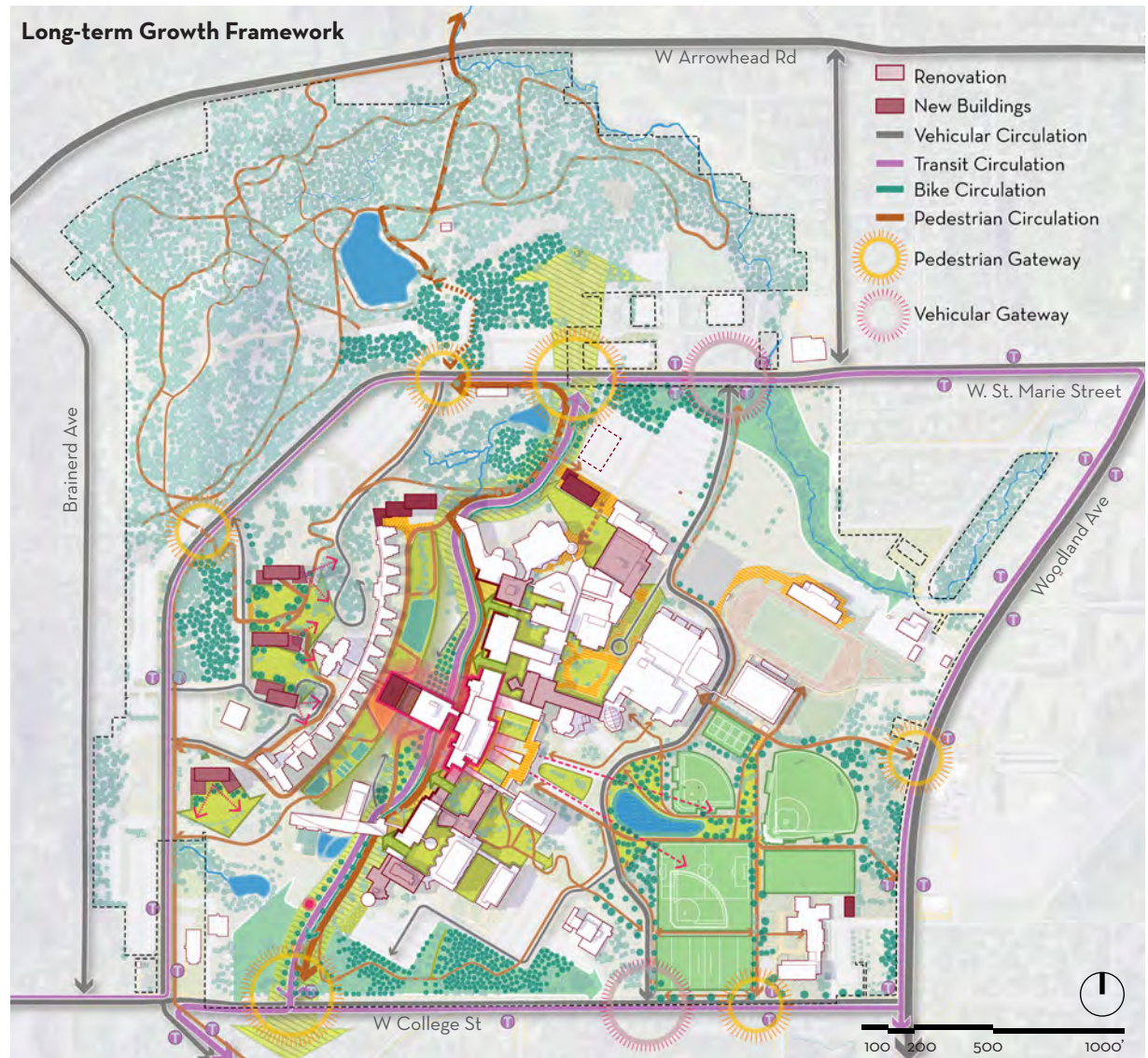
UMD Fleet

As of 2022, the UMD fleet included 13 light duty vehicles, 7 medium duty vehicles, 15 passenger vans, 12 sedans, 10 SUVs and 17 transit vans. The University of Minnesota's goal is to reduce UFleet emissions by 70% from the 2018-2022 average annual emissions by 2033, by leveraging the following strategies:

- Transition from internal combustion vehicles to vehicles or modes with zero tailpipe emissions
- Reduction of fuel and energy usage of the UFleet by reducing vehicle miles traveled and improving fuel efficiency

¹⁴ This assumes that transit is via electric vehicles.

Figure 13: The Long-Term Framework of growth as documented in the Campus Plan (Source: Sasaki Associates)



Fugitive Emissions Reduction Strategies

Fugitive emissions are unintentional emissions from pressurized containment such as appliances, storage tanks and piped systems. These include refrigerants, such as those associated with use of compressors, condensers, and evaporators. Fertilizers, particularly in agricultural settings, produce fugitive emissions above a de minimis level. In the academic setting, fugitive emissions are also associated with equipment used in medical education and scientific research. Proper installation, preventative maintenance and repair are key to reducing campus fugitive emissions. Fugitive emissions can be prevented through deliberate selection of equipment, using risk of fugitive emissions as a value in procurement decisions.

Carbon Offsets and Sequestration

All IPCC models show the need for some carbon dioxide removal from the atmosphere to limit warming. While a goal of this plan is to avoid the use of offsets, many campuses ultimately rely on offsets relating to Scope 3 emissions, those that result from activities and assets not owned or controlled by the university. UMD counts emissions related to air travel, commuting and waste generated in operations as its Scope 3 emissions. In addition, the CAP does not account for many upstream and downstream emissions associated with University activity. The University can play an important leadership role in driving scientific understanding and practice of effective carbon dioxide removal programs.

Strategies to bring about this work will happen at a system level and include:

- Charge a task force to research and make recommendations on the best use and sourcing of carbon insetting, offsetting, and carbon removal credits
- Identify sources of funding to procure carbon credits
- Engage with and learn from academic expertise related to carbon dioxide removal and sequestration or utilization



An aerial photograph of a city, likely Seattle, is shown on the left side of the page. The image is partially obscured by a large, solid orange overlay that covers the right two-thirds of the page. The text 'Climate Adaptation 5' is centered in white on the orange background.

Climate Adaptation 5

Climate Adaptation

Climate adaptation—taking steps to adapt to the threats of a changing climate—is often associated with resilience. Climate resilience is considered the ability to withstand shocks and stressors, like intense rainfall events or hotter summers, that could disrupt or impact campus infrastructure, natural systems, and community.

The City of Duluth Climate Action Work Plan, 2022-2027¹⁵ calls for actions to improve the resilience of city-wide infrastructure that would increase UMD’s ability to adapt and respond to climate change. For example, the plan calls to improve the resiliency of the water plant and distribution system through electricity service upgrades, which would directly benefit the University’s resilience. Likewise, UMD’s priorities align with the City’s goals to reduce carbon emissions and strengthen community resilience.

Improving redundancies in the electric grid to other critical services will also be essential. UMD identified the risk associated with relying solely on

a single upstream electrical distribution route to feed the campus. This risk can be addressed through partnerships with utility providers. On campus, UMD can increase the robustness of the building-specific emergency generator network and update campus emergency management/response. Other on campus infrastructure systems are generally resilient today and investments in the next generation of infrastructure utility systems will maintain redundancy and reliability by ensuring that future designs take climate change projections into consideration.

The opportunity to make natural systems on and adjacent to campus more resilient is expressed in the Campus Plan through the illustration of a new stormwater management facility, strategic reforestation, and the reduction of pervious surfaces. With the development of a sustainability corridor and recreation fields, UMD will also have an opportunity to increase native species or plantings with greater adaptability to climate change.

The Campus Plan recognizes the value of social resilience in the UMD community through design that supports both health and well-being as well as community connectedness. Community resilience will be strengthened through increased access to passive and active recreation and by increasing welcoming spaces to build social cohesion and connecting people with the outdoors. The Campus Plan features a new health center with additional square footage; improved walking, biking, and transit experiences; and upgraded critical facilities, like housing and food centers.

¹⁵ https://duluthmn.gov/media/12752/duluth-cawp_final_and_financememo.pdf

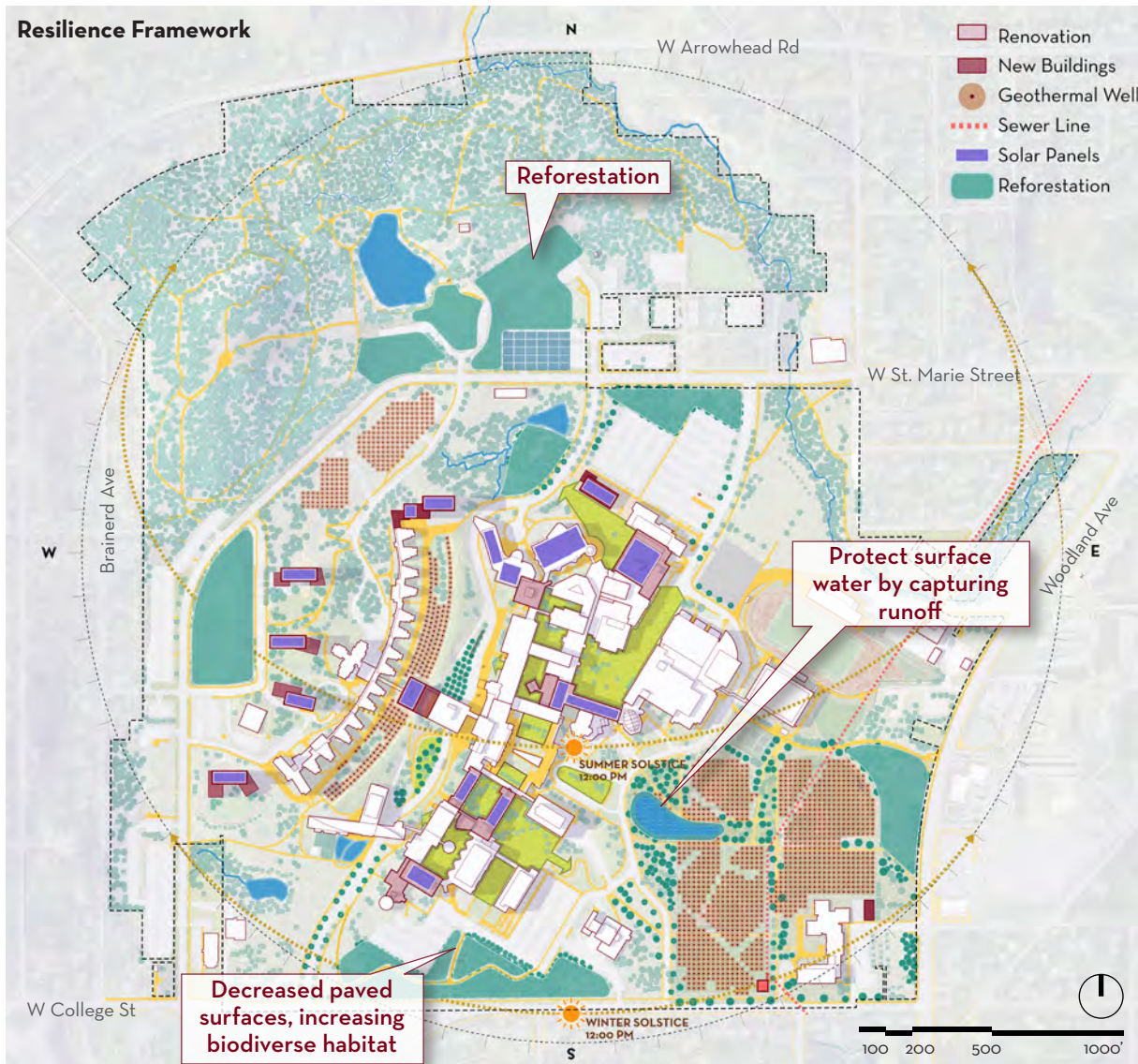


Figure 15: The Resilience Framework demonstrates comprehensive resilience strategies for the Duluth campus: incorporate climate change projections into campus infrastructure design; increase pervious surface; maintain redundancy of infrastructure systems; increase native plantings for habitat and shade; enhance surface water protection and stormwater management; improve physical access to health services; expand passive and active recreation to support improved health; and create welcoming spaces to build community and social resilience (Source: Sasaki Associates)





Acknowledgements 6

UMD Campus Plan Update and Climate Action Plan Acknowledgements

Interim Chancellor McMillan and the Executive Committee; Interim Vice Chancellor for Finance & Operations Bosell, Vice Chancellor for Student Life Erwin, Interim Executive Vice Chancellor for Academic Affairs Hietapelto, and Associate Vice Chancellor for Academic Affairs Mencl, provided direction and made sure recommendations of the Campus Plan and Climate Action Plan align with University of Minnesota Duluth goals.

The Executive Committee selected an advisory committee made up of representatives across UMD to provide guidance and direction to the planning team. The Advisory Committee included the following:

- Chuck Bosell, ITSS
- Kim Dauner, Faculty Senate Rep
- Julie Etterson, Biology, Institute on the Environment
- Forrest Karr, Athletics
- Pat Keenan, Student Life
- Jonna Korpi, Facilities Management/Sustainability
- Katy Morgan, Staff Senate Rep
- Susana Pelayo-Woodward, Diversity & Inclusion

- Shane Peterson, Facilities Management
- John Rashid, Facilities Management
- John Sawyer, Facilities Management
- Ella Stewart, Student Association Representative

The coordinated Campus and Climate Action Plans were informed through the participation of the following UMD campus community members:

- Climate Action Plan Subcommittee
- Facilities Subcommittee
- Multicultural Student Center
- Student Leader Open Forum
- Focus Groups
 - * Athletics & Recreation
 - * Deans & Research Directors
 - * Dining Services & UMD Stores
 - * Facilities Management
 - * Health Services
 - * Housing & Residential Life
 - * Kirby Student Center

* Sustainability

* Transportation & Parking Services & Student Affairs

Thanks to all the students, faculty, and staff for their time and contributions to develop the UMD Campus Plan Update and Climate Action Plans, September 2023.

This page intentionally left blank



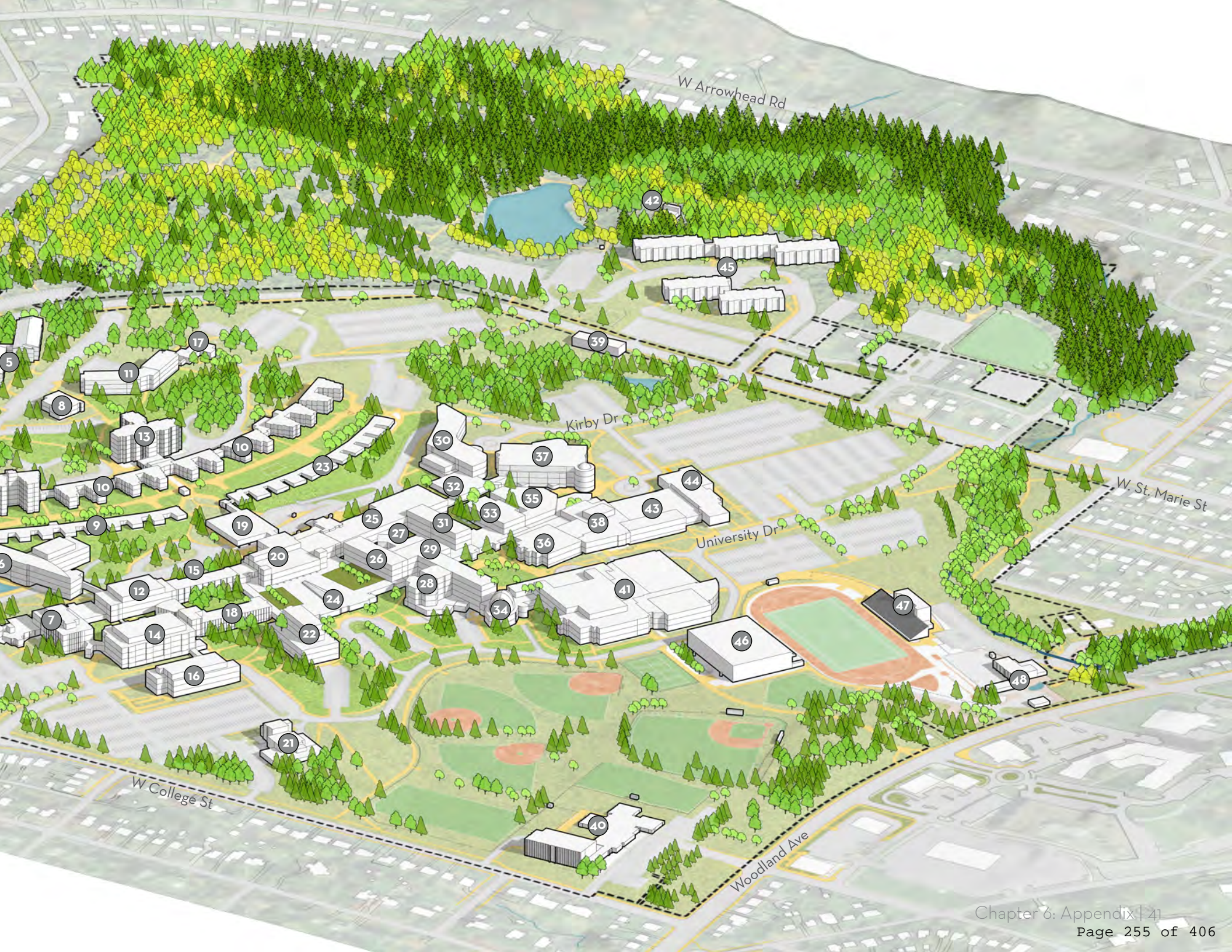


Appendix 7

2023 UMD Campus Buildings

- | | | | |
|----|---|----|--|
| 1 | Junction Apartments | 24 | Solon Campus Center |
| 2 | WDSE | 25 | Kirby Plaza |
| 3 | Ianni Hall | 26 | Cina Hall |
| 4 | M.W. Alworth Planetarium | 27 | Tweed Museum of Art |
| 5 | Goldfine Hall | 28 | A.B. Anderson Hall |
| 6 | James I. Swenson Science Building | 29 | Humanities |
| 7 | M.W. Alworth Hall | 30 | Labovitz School of Business |
| 8 | Health Services | 31 | Bohannon Hall |
| 9 | Vermilion Hall | 32 | Library Annex |
| 10 | Griggs Hall | 33 | Montague Hall |
| 11 | Heaney Hall | 34 | Weber Music Hall |
| 12 | Life Science | 35 | Education Endazhi-ginkinoo'amaading |
| 13 | Lake Superior Hall | 36 | Marshall Performing Arts Center |
| 14 | School of Medicine | 37 | Kathryn A. Martin Library |
| 15 | Heller Hall | 38 | Engineering |
| 16 | Heikkila Chemistry and Advanced Material Sciences | 39 | CUB |
| 17 | Heaney Hall Service Center | 40 | Chester Park |
| 18 | Chemistry | 41 | Sports and Health Center |
| 19 | Residence Dining Center | 42 | Bagley Classroom |
| 20 | Kirby Student Center | 43 | Voss-Kovach Hall |
| 21 | Lund | 44 | Swenson Civil Engineering |
| 22 | Darland Administration Building | 45 | Oakland Apartments |
| 23 | Burntside Hall | 46 | Ward Wells Field House |
| | | 47 | Malosky Stadium |
| | | 48 | Robert W. Bridges Fleet Ground Maintenance |





Glossary of Terms

This glossary of terms was provided to CAP Advisory Committee as a point of reference for decarbonization methods and terminology used during the plan's development.

Concepts

1. **Building energy savings measures** – means of eliminating energy waste as compared to energy conservation which are means to not use energy. In this plan, AEI does not differentiate between the two, but uses the term “building energy savings measures”.
2. **Carbon neutral** – having a balance between emitting and absorbing carbon (reference to “carbon” is shorthand use for carbon dioxide) from the atmosphere. Carbon dioxide is the most common greenhouse gas and is sometimes used to represent all greenhouse gases. Other greenhouse gases are methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride.
3. **Low temperature hot water system** – a system that releases heat from the generator at temperatures that do not exceed 130°F. This system is more energy efficient than a steam system and has less stringent operating staff requirements.
4. **Re/retro-commission** – a systematic process to investigate, analyze and optimize an existing building's systems' performance. Recommissioning is used for the process when it is done for a building that has already been

commissioned (typically done during the design-construction-occupancy period) while retro-commissioning is the term used to describe the same process when being done for a building which has not been commissioned .

Renewable Energy

1. **Biomass processing** – direct combustion, thermochemical conversion, chemical conversion or biological conversion of solid organic matter (such as wood, wood waste, agricultural crops, agricultural waste, biogenic materials in municipal solid waste, animal manure and/or human waste) to generate energy. Biomass represents 5% of the total primary energy use in the US.
2. **Biogas processing** – anaerobic digestion of organic materials (such as animal manure, sludge, food waste) to create a gaseous compound to generate energy.
3. **Grid electricity** – an interconnected network for electricity delivery. Each state compels the electric utilities operating in its state to submit plans for growth and development, including commitments to decarbonizing.
4. **Grid renewable fuels**
 - a. **Renewable natural gas (RNG)** – highly processed biogas used as a substitute for fossil fuel-based natural gas.
 - b. **Green hydrogen** – hydrogen produced from renewable or low-carbon power.
5. **High temperature geothermal energy** – high

temperature underground heat sources that can be used as a source for heat and/or power.

6. **High temperature solar thermal energy** – also known as concentrating solar thermal, it is used for heat and/or power generation.
7. **Hydropower** – also referred to as hydroelectric power, this technology uses the flow of moving water to generate electricity.
8. **Ocean energy** – this suite of technologies are in early stages of commercialization. They capture wave, tidal and ocean thermal energy as renewable energy sources.
9. **Small modular nuclear reactors (SMRs)** – generally sized at 300 Mwe or less and is a non-fossil fuel energy production technology. In February 2023 the NRC issued its first final rule to certify a modular nuclear scale technology (NuScale Power).
10. **Solar photovoltaics (PV)** – technology that converts sunlight to electricity.
11. **Wind energy** – technology that converts kinetic energy from wind to electricity.

Energy Savings Measures

1. **Controls**
 - a. **Chilled water reset** – a controls strategy to improve the efficiency of the cooling system by raising the set point when the building cooling load is low. This can be done in reference to outdoor air temperature or independently.
 - b. **Condenser water reset** – a controls strategy

that uses its measurement of outside air temperature to assign supply water temperature information to building systems.

- c. **Demand controlled ventilation CO₂ sensing** – sensors measure CO₂ in a room and use that measurement to set the control for room ventilation.
- d. **Hot water building loop reset** – a controls strategy that resets the building heating hot water loop temperature to a lower value when the outdoor air temperature is higher, usually in the summer when the heating demand is low.
- e. **Increase IT/electrical rooms cold setpoints** – strategy to avoid overcooling IT/electrical rooms (without compromise to system performance).
- f. **Pneumatic to direct digital control system** – the conversion of building pneumatic (air) controls to electronic direct digital controls (DDC). This allows for more precise control, more sophisticated control strategies and doesn't rely on compressors and potentially leaky pneumatic lines.
- g. **Supply air temperature reset** – a control strategy to moderate an air handling unit supply air temperature based on outside air temperature and room demand.

2. Envelope

- a. **Air sealing** – strategies to close cracks and openings in building envelope to limit exfiltration and infiltration, which lead to increases in heating/cooling energy usage .

- b. **Insulation** – covering that reduces thermal heat loss/gain through the building envelope.
- c. **Weatherization** – strategies, equipment and products that protect a building from the impact of sunlight, precipitation and wind and modifying the building to optimize energy efficiency.

3. HVAC General Building System Upgrades

- a. **Connect to district system** – Connect the building to a campus district system (heating, cooling), which is more efficient than stand-alone equipment due to the size, scale and connection to other buildings.
- b. **VFD pumps** – variable frequency drives allow pumps to slow down and speed up based on the system demand, which saves energy compared to traditional constant speed equipment.
- c. **VAV air system** – variable air volume air systems supply a variable amount of airflow based upon the demand in the spaces/ building. They are superior in performance compared to constant air volume systems because of the ability to ramp down energy usage when there is low demand.
- d. **Run around loop¹** – also known as coil energy recovery loops, this technology pumps heat from the exhaust air stream to preheat the incoming ventilation air without sacrifice to comfort or safety.

¹ Specific to district system

- e. **Energy recovery wheel²** – a technology that supplements traditional heating systems by more efficiently humidifying incoming air, reducing the energy used by the heating system.

4. Lighting systems

- a. **Lighting Controls** – means of reducing electricity demand associated with use and associated cooling burden.
 - i. **Daylight** – technologies that reduce the need for overhead lighting through effective use of natural and artificial (ambient) lighting.
 - ii. **Occupancy/vacancy** – technologies that adjust lighting in response to sensing occupancy of a space.
 - iii. **Scheduling** – technologies that schedule use of lighting (daily or weekly) for the purpose of providing lighting in accordance with anticipated use of space.
- b. **LED upgrades** – replacing incandescent/ fluorescent lighting with the superior performing light emitting diode (LED) lighting.

5. Re/retro-commission

- a. **Airside economizer³** – the process of verifying the performance of building duct and damper arrangements (airside economizer) to establish that they operate as designed.
- b. **Room T-stat and setbacks** – the process of verifying the performance of building temperature and humidity control systems to

² idib.

³ idib.

- establish that they operate as designed.
- c. **System scheduling** – the process of verifying the performance of building scheduling systems to establish that they operate as designed.
- d. **System setpoints** – the process of verifying the performance of building system setpoints to establish that they operate as designed.

Space-Specific Energy Savings Measures

1. **Indoor Sports and Recreation**
 - a. **Demand controlled ventilation** – technologies that control the rate at which outdoor air is delivered to a zone based on the number of the zone’s current occupants.
 - b. **Displacement ventilation** – air distribution technologies that introduce cool air into a zone at low velocity which creates buoyancy and shifts air to create desired ventilation.
 - c. **Ice rink chiller heat recovery** – technologies that capture waste heat from the chillers used to maintain ice rinks.
 - d. **Liquid pool cover** – products that slow evaporation when the air temperature is lower than the pool water temperature.
 - e. **Shower/pool water heat recovery** – technologies that capture heat from waste water and use it to preheat incoming domestic cold water or meet other heat loads.
2. **Laboratories**
 - a. **Air change per hour reduction** – a strategy to reduce the number of air changes per hour without compromise to comfort, safety or integrity of research.
 - b. **Air change per hour setback** – a schedule (daily or weekly) that reduces the number of air changes per hour without compromise to comfort, safety or integrity of research.
 - c. **Consolidated variable flow exhaust system**
 - i. **Contaminate sensing** - allow the system to ramp down and save energy when contaminants are not detected
 - ii. **Variable frequency drive** - allow the fan system to change speeds to meet the load demand at the time. This is advantageous compared to a traditional constant speed fan.
 - iii. **Wind responsive** – system can ramp down when wind is detected because the pollutants will be removed naturally from the area
 - d. **Fume hood zone presence sensing setbacks** – technologies that triggers the fume hood setback mode when the fume hood does not have users within an established distance from it.
 - e. **High-efficiency fume hoods** – equipment with optimal energy efficient design
 - f. **High-efficiency, ultra-low temperature freezers** – equipment with optimal energy efficient design.
- g. **Reduce fume hoods across buildings/campus** – a practice of installing the number and location of fume hoods within established limits (proximity of researchers to fume hoods and number of users per fume hood)
- h. **Variable air volume fume hoods** – technologies used with exhaust control systems that monitor and control the amount of air being exhausted from fume hoods.
3. **Residence halls**
 - a. **EnergyStar appliances** – highly energy efficient equipment as certified and verified by the USEPA.
 - b. **Low flow domestic hot water fixtures** – fixtures that restrict hot water flow (saving energy and water use) as compared to traditional fixtures.
 - c. **Occupancy based receptacle control** – devices that turn equipment off when the device senses a space is vacant.
 - d. **Occupancy control HVAC setback** – technologies that control HVAC according to the sensing of space occupancy.
 - e. **Smart thermostats** – Wi-Fi enabled devices to automatically adjust heating and cooling.

This page intentionally left blank

University of Minnesota Duluth Decarbonization Planning Tool

The University of Minnesota Duluth Climate Action Plan Dynamic Planning Tool is web-based and interactive. It has been provided to the CAP Advisory Committee for their use during the planning process and following its conclusion.

The Planning Tool houses :

- Background information used in developing the climate action plan. Typically, this addresses climate, climate change, weather, building information, historical emissions, 2021 emissions, grid decarbonization, steam, chilled water, combined heating and cooling, central steam plant Sankey diagram and electricity.
- Model inputs: macroeconomic factors, electricity rate model, trim heating fuel rate model, carbon rate model, building additions and removals, electricity grid decarbonization path.
- The baseline case: GHG emissions, carbon wedge, district system capital expenditures, building capital expenditures, cash flow and life cycle cost analysis.
- The ideation process: decarbonization framework, campus values, renewable energy and district energy.
- Screening: renewable and district energy.
- Building demand reduction opportunities: impact, by building and by energy savings measure.
- Option Models: key assumptions, options, phasing, year 30- monthly energy model, year

30- hourly energy model, year 30- monthly heat balance, year 30- hourly heat balance, option district costs and option building costs.

- Evaluation: GHG emissions comparison, options scatter, lifecycle cost analysis, cash flow comparison.
- Recommendations.
- Appendix: full options list, heating hot water thermal energy storage, chilled water thermal energy storage, geothermal and solar PV.

This study modeled life cycle costs (capital expenditures, building energy savings measures, electricity and natural gas utility costs, carbon costs, and photovoltaics costs) to compare the baseline practice to decarbonization options. Based on a 30 year analysis, the cost of maintaining the existing system is \$330+ million. Alternatives range from \$360 million to \$413 million. The campus expects its upcoming energy and utility plan to focus on the preferred and second choice options, as described in the body of this report, including undertaking technology viability testing (geoexchange and capture-and-reuse of waste heat from campus sewer pipes) and refining the order of magnitude cost estimates included in this plan.

The objectives of structuring the study around use of this tool are:

- Sharing information and analysis with key stakeholders to the process.

- Providing information in language that is accessible to all stakeholders, whether technically trained/educated or not.
- Engaging stakeholder with full transparency to see and test inputs and assumptions to the energy modeling.
- Creating a complete documentation of the work so that the campus has easy access to it in the future, including for the University of Minnesota Duluth as its expectation is to follow this climate action plan with a detailed energy and utility study that will build off of this plan.

This plan considered the following investments that could be replacements for campus steam. Each comes with the obligation to ensure that campus buildings can operate with hot water rather than steam. These technologies were identified by the campus advisors as candidates for the mix of investments to replace the steam boiler central plant because of their cost, reliability, performance potential and ease of management:

- Cooling thermal energy storage,
- Disabled economizer false cooling,
- Electrode boiler,
- Exhaust air heat recovery,
- Heating thermal energy storage,
- Heat pumps,
- Low temperature geothermal,
- Low temperature solar thermal,
- Natural gas boilers (for peaking and/or operated

- by renewable natural gas or hydrogen),
- Photovoltaic technology,
 - Surface water heat recovery (from an on-campus pond), and
 - Wastewater heat recovery.

GHG Emissions Calculation Model and Parking Analysis

Introduction

The UMN-Duluth Campus and Climate Action Plan (CCAP) includes an analysis of greenhouse gas (GHG) emissions from faculty and students commuting to campus. Emissions from commuting are classified under Scope 3 Emissions by the Environmental Protection Agency (EPA). The methodology the EPA uses to calculate Scope 3 emissions was originally developed by GHG Protocol, the international organization that standardized measurements of GHG emissions from public and private sector operations. This project included a scenario modeling exercise to evaluate shifts in mode shares and identify how more efficient use of transportation choices could benefit the campus sustainability and GHG goals. Two future scenarios were modeled, a more aggressive scenario and a more moderate scenario. Additionally, a parking analysis was done to estimate the number of future parking spaces that may be needed.

The same assumptions were used in both analyses. This appendix documents the methodology that was used and explains the variables in the calculation and primary data sources.

GHG Emissions Analysis

The analysis for calculating greenhouse gas emissions

is based on the Average-Data Method found in GHG Protocol's Technical Guidance for Calculating Scope 3 Emissions. The full methodology is described in chapter 7 of this document.¹

The expression used to calculate emissions from commuting is given below:

$$\left(\frac{\text{Number of commuters}}{\text{per travel mode}} \right) \times \left(\frac{\text{One-way}}{\text{commuting distance}} \right) \times (2) \times \left(\frac{\text{Commuting days}}{\text{per year}} \right) \times \left(\frac{\text{Emission Factor}}{\text{kg/mile}} \right)$$

Where:

- Number of Commuters = (Percent of trips taken for each mode) * (Number of commuters)
- One-Way Commuting Distance = [data provided in the SIMAP dashboard]
- Commuting Days per Year = [data provided in the SIMAP dashboard]
- Emission Factor = [data provided by EPA]

Assumptions

Table 1 lists variables and assumptions provided by UMD to the project team and used in the analysis.

Data Sources

SIMAP

Sustainability Indicators Management and Analysis Platform (SIMAP) is a carbon and nitrogen accounting platform that offers campuses an online tool to track and report campus-wide sustainability. Data entered into the dashboard by staff for 2021 were provided to the project team. There were some nuances identified in the data provided, which are described below.

The percent of trips taken by automobile, bus, or walking that were entered into the online dashboard do not add up to 100%. Rather, they sum to 99.9% for faculty/staff; and to 99.6% for students. This caused a slight discrepancy when comparing the sum of the number of commuters for each mode with the total number provided in SIMAP.

¹ Greenhouse Gas Protocol. (2013). Technical Guidance for Calculating Scope 3 Emissions. https://ghgprotocol.org/sites/default/files/2023-03/Scope3_Calculation_Guidance_0%5B1%5D.pdf

The number of faculty/staff commuters is calculated by multiplying the number of commuters entered into SIMAP (1,592), by the percent of trips taken by each mode. Since the percentages in the given data do not sum to 100%, the number of commuters for each mode do not sum to 1,592, the number given in the data. Rather, they sum to 1,590.

The number of student commuters in the given data (9,880) includes both on-campus and off-campus. Since the model calculates GHG emissions from commuting to campus, the number of off-campus students was used in the calculation. The percentage breakdown of on- and off-campus students was given by UMD at 28% and 72%, respectively. This breakdown was applied to the calculation based on data provided to the project team. Thus, the number of off-campus students is 72% of 9,880, or 7,114. This number was used to multiply by the percentages of trips taken by each mode to identify the number of commuters per travel mode. Again, because of the discrepancy in percentages of trips taken by each mode, the sum of number of commuters for each mode is 7,085, which does not match the number of off-campus students at 7,114.

Environmental Protection Agency

Table 2 represents carbon emissions factors that were sourced from the EPA in a report titled “Emission Factors for Greenhouse Gas Inventories”.

Table 1: Variables and Assumptions [provided by UMN]

Variable	Faculty/Staff	Students
Number of commuters	1,592	9,880
Number of students in the future	N/A	10,800
Percent of students on-campus	N/A	72
Percent of students off-campus	N/A	28
Number of one-way trips per week	10	8
Number of commuting weeks per year	50	32
Percent of trips taken by automobile	72.3	16.6
Percent of trips taken by bus	4.8	26.0
Percent of trips taken by walking	22.8	57.0
Average distance of automobile trip in miles	6.68	8.25
Average distance of bus trip in miles	2.8	3.6
Average distance of walking trip in miles	0.5	0.5

Most of these figures were taken from a screenshot of the SIMAP dashboard pasted in a Word file named “FY21_Commuting_Data_Simap_fromUMN.docx”.

**Note that the percentages of trips taken do not add to 100% for either Faculty/Staff or Students.*

The original data is located on pages six and seven of the report, in Tables 10 and 11. This report is updated annually; the version used in this analysis is from 2022. The data is represented in the tables 2 and 3.²

The CO₂e Emission Factor is the sum product of each gas emission factors with its global warming potential. The EPA employs this method since greenhouse gas emissions are typically reported in units of carbon dioxide equivalent (CO₂e). Carbon dioxide equivalent is a metric used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP). The global warming potential is an index that represents the combined effect that a given gas has in the atmosphere; the index is developed by the Intergovernmental Panel on Climate Change (IPCC). Gases are converted to CO₂e by multiplying by their global warming potential (GWP).³

Vehicle type for passenger cars also encompasses minivans, SUVs, and small pickup trucks, or otherwise vehicles with a wheelbase less than 121 inches. An emissions factor of zero was used for electric

vehicles because the model is meant to calculate emissions specifically from commuting. According to the U.S. Department of Energy Alternative Fuels Data Center, all-electric vehicles have zero tailpipe emissions.⁴

⁴ US Department of Energy. Alternative Fuels Data Center. https://afdc.energy.gov/vehicles/electric_emissions.html

Table 2: Carbon Emissions Factors [EPA, 2022]

Vehicle Type	CO ₂ Factor (kg/mi)	CH ₄ Factor (g/mi)	N ₂ O Factor (g/mi)	CO ₂ e Emission Factor (kg/mile)
Passenger Car	0.332	0.007	0.004	0.334
Bus	0.056	0.021	0.0009	0.057
Electric Vehicle/ Bus	0.000	0.000	0.000	0.000

Table 3: Global Warming Potential [EPA, 2022]

Gas	100-Year GWP
CO ₂ (carbon)	1
CH ₄ (methane)	25
N ₂ O (nitrous oxide)	298

² Environmental Protection Agency (EPA). (2021). Emissions Factors for Greenhouse Inventories. https://www.epa.gov/system/files/documents/2022-04/ghg_emission_factors_hub.pdf

³ Intergovernmental Panel on Climate Change. (2007). Climate Change 2007 Synthesis Report. <https://www.ipcc.ch/report/ar4/syr/>

Methodology

Using the expression described above, and the 2021 SIMAP data provided by the University, the total amount of emissions from commuting to UMN-Duluth by faculty/staff and students is calculated at 2,222 metric tons of CO₂e.

An analysis of future scenarios was also done using the GHG Scope 3 Emissions model. The GHG emissions from commuting were measured for two future scenarios with hypothetical changes in mode split. The future scenarios were initially labeled Scenario A, which tested an aggressive mode shift, and Scenario B, which tested a moderate mode shift. The scenarios were later relabeled to “near-term” (moderate mode shift) and “long-term” (aggressive mode shift) to align with language applied to the UMD Campus and Climate Action Plan. In each scenario, the percentages of trips made by automobile, bus, and walking were modified. The mode split percentages for each scenario are given in Table 4. Additional key points include:

- The long-term scenario is one in which an “aggressive” mode shift was tested, and envisioned a future where commuters switched from automobiles to bus or walking by a large margin. Modeling a more aggressive scenario with a significant mode shift was done to see how much closer it could move the University toward

GHG targets, and to identify whether it could serve as a reasonable future target. This scenario, however, is less realistic due to the extent which commuter behaviors would need to change, and underscores the need to incorporate carbon off-set strategies to achieve decarbonizing the Scope 3 commuter trips.

- The near-term scenario is one in which the shift away from automobiles is more moderate. It was modeled to identify a target that would be more achievable in moving the University toward their sustainability and GHG objectives.
- A variation of the near-term scenario was modeled in which all bus commuting was done by electric buses. In this model, the emissions factor from bus commuting was set at zero.
- Future analysis accounts for growth in the student population at UMD. The number of students in the future is given in the data at 10,800, and is held constant in both the near-term and long-term scenarios. It is assumed that future enrollment at 10,800 is stable throughout the planning period.
- A mode shift can be achieved with the support of a robust transportation demand management (TDM) program that includes policies, programs and services to reduce single occupant vehicle commuting. A first, and priority action step, is to develop a TDM Plan.

Table 4: Commute Mode Split in Current and Future Scenarios

Group	Travel Mode	Current Scenario	Moderate (Near-Term)	Aggressive (Long-Term)
Faculty/Staff	Passenger Car	73.3%	62.0%	41.0%
	Bus	4.8%	10.0%	26.0%
	Walking	22.8%	28.0%	33.0%
Students	Passenger Car	16.6%	10.0%	3.0%
	Bus	26.0%	30.0%	33.0%
	Walking	57.0%	60.0%	64.0%

The analysis was furthered by running the GHG Scope 3 model on the long-term and near-term scenarios with a larger Minnesota state-wide electric vehicle fleet. Minnesota’s Climate Action Framework includes an aspirational target to reach 20% of electric vehicles on the roads by 2030. Additionally, bipartisan legislation passed in 2007 called the Next Generation Energy Act requires 80% reduction in GHG emissions by 2050. The GHG model was run to include 80% EV usage in the long-term/aggressive scenario, and 40% EV usage in the near-term/moderate scenario. Table 5 identifies the current Scope 3 Commuter GHG emissions, and future GHG emissions if the moderate/near-term mode shift is achieved.

To incorporate EVs in the model, the line for automobile commuters was split into EV commuters and gas car commuters. To identify the number of EV commuters, the number of automobile commuters was multiplied by 80% in the long-term scenario, and 40% in the short-term scenario. An emissions factor of zero was entered into the GHG model for EV commuters.

Parking Analysis

An analysis of future parking was also completed to estimate the number of parking spaces that may be needed if the campus achieved a mode share with fewer automobile commutes. If the campus achieves the moderate shift in commuter behavior show in Table 4, approximately 3,437 parking permits would be needed, instead of the current 4,426 parking

Table 5: Scope 3 Commuter GHG Emissions [Metric Tons of Carbon Equivalent]

Group	Current Scenario (Based on 2021 SIMAP)	Moderate (Near Term)	Moderate (Near Term) with Electric Vehicle Transit
Faculty/Staff	1,291	1,115	1,102
Students	930	671	549

permits. This value is a proxy for space needed for parking and creates an opportunity to visualize alternative land uses on campus.

Assumptions

Table 6 lists the variables provided by UMD to the project team and used in the analysis. This data also informed the GHG emissions calculations. Table 7 presents the modeling assumptions created using the parking analysis data.

Methodology

The number of parking permits currently issued was provided by the University. The number of future parking permits issued was calculated using the same mode split that was used to model GHG in the near-term and long-term scenarios.

Commuter Parking

The number of future parking permits issued is identified by the expression:

$$\left(\frac{\text{Number of Future Car Commuters}}{\text{Number of Current Automobile Commuters}} \right) \times \left(\frac{\text{Number of Current Parking permits issued}}{\text{Number of Current Automobile Commuters}} \right)$$

A ratio of number-of-parking-permits-issued to number-of-automobile-commuters was calculated. This percentage was multiplied by the number of automobile commutes in the long-term and short-term scenarios. The output identified how the amount of parking permits and needed parking spaces could change with different mode splits in the two future scenarios tested. The figures are a loose approximation because the data supplied is for varying years. Therefore, the future number of parking permits is based on a ratio of parking in year 2023 to commuters in year 2021.

For off-campus students, the calculation method is the same as faculty/staff. Where the ratio of number-of-parking-permits-issued to number-of-automobile-commuters is multiplied by the number of automobile commuters in the future scenarios.

On-Campus Student Parking

According to University records, approximately 42% of on-campus students currently hold a parking permit. To test options for reducing surface parking, beyond reductions that could be realized through commuter mode shifts, the project team tested reducing the share of on-campus students with a parking permit. On-campus students currently represent 28% of the student enrollment. Modeling included testing both a moderate and an aggressive reduction in on-campus students with parking permits. In each scenario, the share of on-campus students is held constant at 28% of a total student body of 10,800 (accounting for modest enrollment growth and stabilization). Scenarios tested reducing the share of on-campus students with parking passes to 35% and 25%, demonstrating potential opportunities for further gains in reducing impervious surface dedicated to campus parking. These findings are represented in Figure 1.

Table 6: Variables Provided by UMN for Parking Analysis

Variable	Total
Number of faculty/staff commuters	1,592
Number of student commuters	9,880
Number of students in the future	10,800
Percent of students on-campus	72
Percent of students off-campus	28
Percent of faculty/staff trips taken by automobile	72.3
Percent of student trips taken by automobile	16.6
Number of total parking permits issued for faculty/staff in 2023	1,058
Number of off-campus parking permits issued for off-campus students in 2023	2,288
Number of on-campus parking permits issued for on-campus students in 2023	1,080
Number of parking spaces	3,445

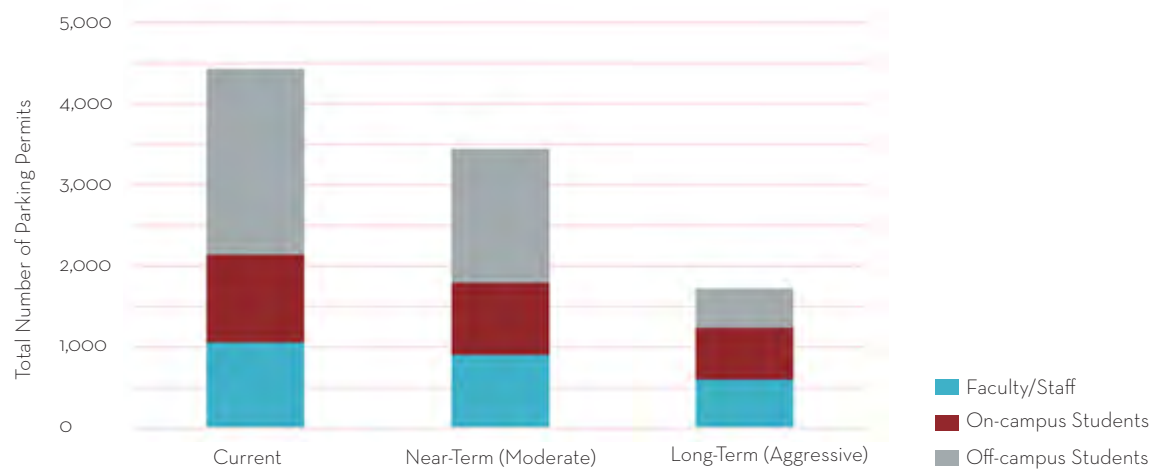
Table 7: Scenario Modeling Assumptions

Variable	Moderate (Near-Term) Scenario	Aggressive (Long-Term) Scenario
Percent of automobile trips by faculty/staff	62	41
Percent of automobile trips by students	10	3
Percent of on-campus students who are issued a parking permit	35	25

Commuting and Parking Conclusions

Converting commuter trips from single occupancy vehicle to carpooling, transit, walking or bicycling, as shown in the near-term (moderate) scenario in Table 4, contributes to more sustainable commuting, and reduces the amount of on campus parking needed. If the moderate mode shift is achieved, the number of parking permits would decline and space currently dedicated to permit parking could be reduced approximately 22%, allowing parking spaces to be repurposed for reforestation and open space.

Figure 1: Number of Parking Permits Issued in Current, Near-Term, and Long-Term Scenarios (Toole Design Group)



This page intentionally left blank

SASAKI



Affiliated
Engineers[®]

TOOLE
DESIGN

Duluth Campus Plan

David McMillan, Interim Chancellor

Leslie Krueger, Assistant Vice President, Planning, Space, and Real Estate

Monique MacKenzie, Director of Campus Planning

Shane Stennes, Chief Sustainability Officer

Greg Havens, Sasaki

Finance & Operations Committee

September 7, 2023

SENIOR VICE PRESIDENT FOR FINANCE AND OPERATIONS

World Class Services for a World Class University



University Services

We Make the University Work

Today's Discussion

1. UMD
Campus Plan
Review by
Board of
Regents for
October Action

1. UMD Climate
Action Plan
Discussion



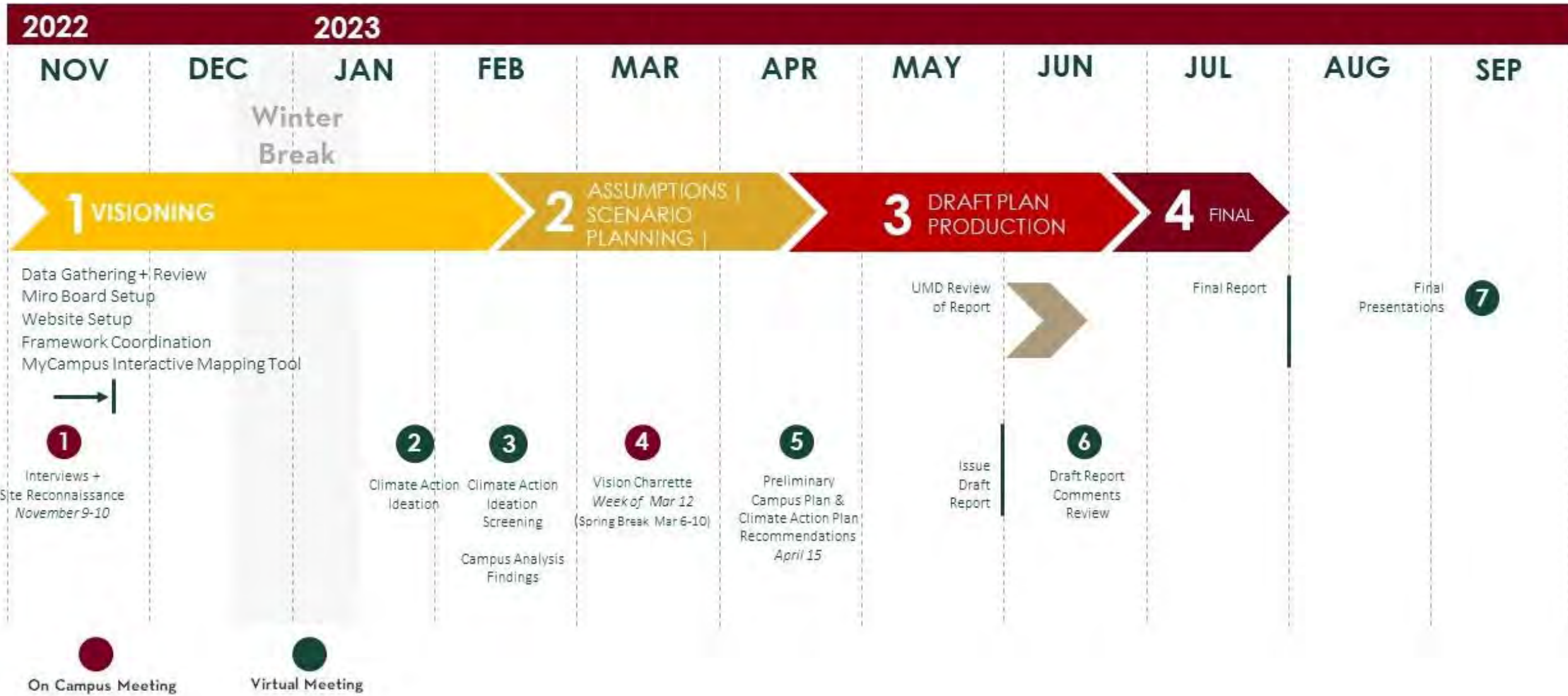
Campus and Climate Action Plans make use of an integrated, holistic framework to define the desired future state of the UMD campus.

Purpose of Integrated Campus and Climate Action Planning

1. Advance MPact 2025's commitment to build:
 - a fully sustainable future
 - comprehensive long-range capital facilities and landholding strategies to drive strategic growth
2. Effectively address shared goals in mobility, infrastructure development, community connections, and resilience
3. Create a pathway to eliminate carbon pollution by 2050
4. Develop strategy to guide physical change on campus with a planning horizon of approximately 30 years
5. Share recommendations that are actionable in the near term, and reflect each campus's long-term view of the future

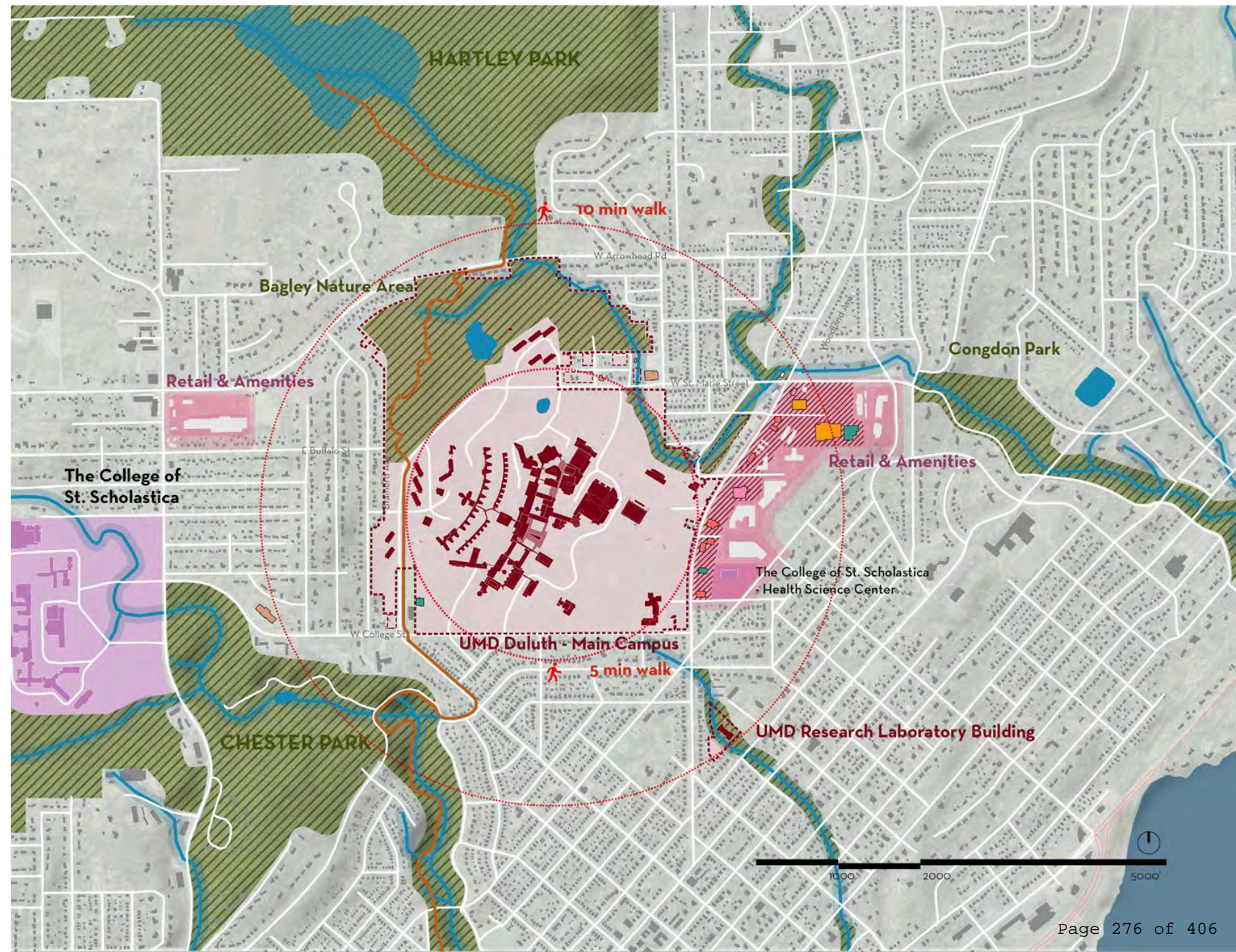
Campus Plan Update

UMD Coordinated Campus and Climate Action Plan Schedule



Geographic Context

- UMD campus situated between Hartley Park and Chester Park
- Surrounded by primarily residential neighborhoods, with mixed-use development to the east and northwest



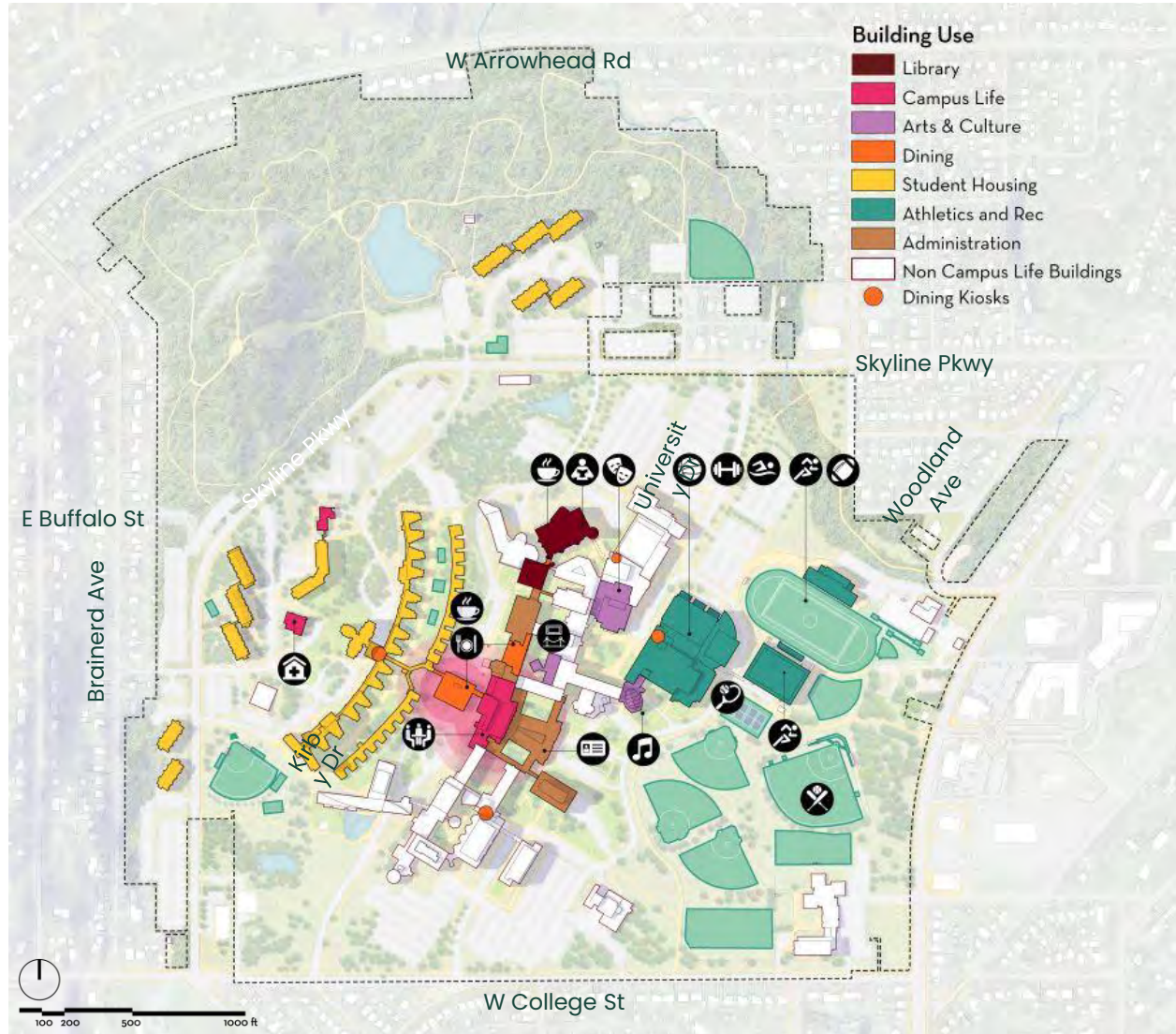
UMD Campus Today



Campus Life

2023

2053



What We've Heard

- 35% of undergraduates live on campus
- Places and programs are needed to engage off-campus students
- Need expressed for student events, inclusive spaces, and casual lounge space
- Dining, fitness, and health services are undersized

Recommendation: Plan for a new health services facility

Sources:

- UMD Campus FCA Data_Fall 2021
- Athletics & Recreation Data from UMD



Land Cover/ Impervious Surface

2023

2053



TYPE	ACRES	PERCENT %
BUILDINGS	27.32	10.60%
ROADS	16.60	6.40%
PARKING LOTS	29.87	11.60%
WALKWAYS	13.63	5.30%
TOTAL IMPERVIOUS	87.42	33.90%
SPORTS FIELDS	15.93	6.20%
OPEN SPACES	151.19	58.80%
TRAILS	2.76	1.10%

CAMPUS AREA: 250 ACRES / 34% IMPERVIOUS AREA

**Recommendation:
Reduce impervious area by utilizing best management practices**

Sources: Data provided by UMD and ArcMaps

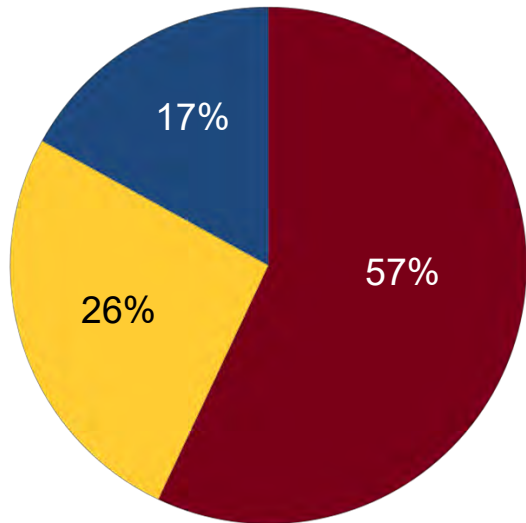


Mobility and Mode Shares

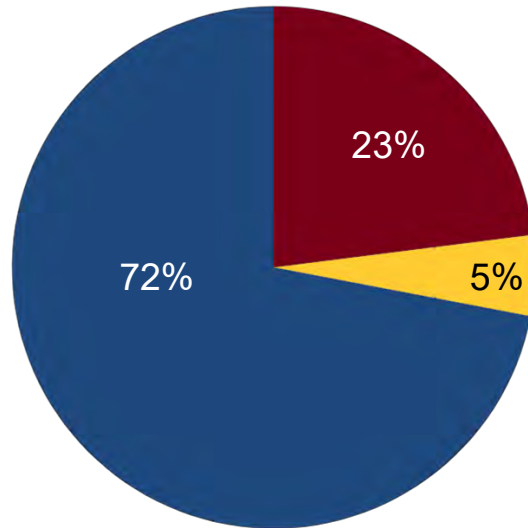
2023

2053

Students



Faculty and Staff



- Walking/Biking
- Transit
- Automobile

2021 Mode Shares

- The majority of staff and faculty drive to campus
- The majority of students walk or bus to campus
- Students are concerned about pedestrian crossings
- Transit service limitations and availability of affordable housing near campus sustain the high vehicle use of staff and faculty
- Access and knowledge of existing bike and transit programs could be stronger
- UMD is committed to providing an in-person educational experience. Working and studying with flexibility is still an option for some and could affect travel to and from campus

Recommendation:

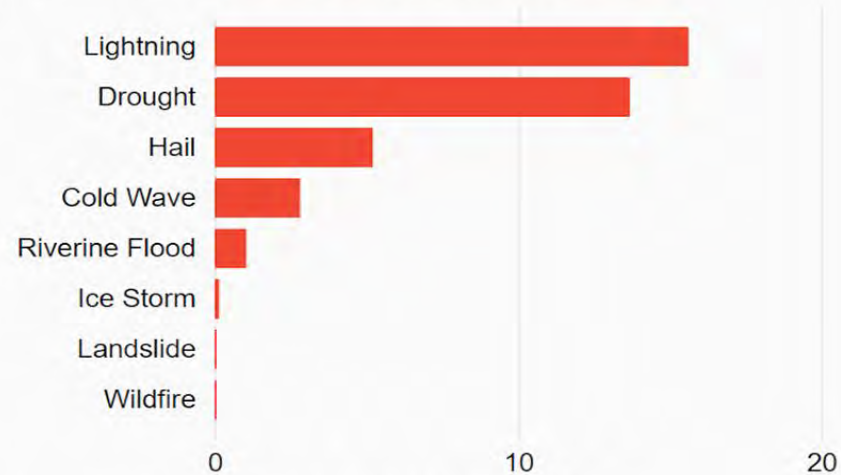
Migrate higher % of all vehicle trips to EV and support improved transit and non-motorized travel to campus



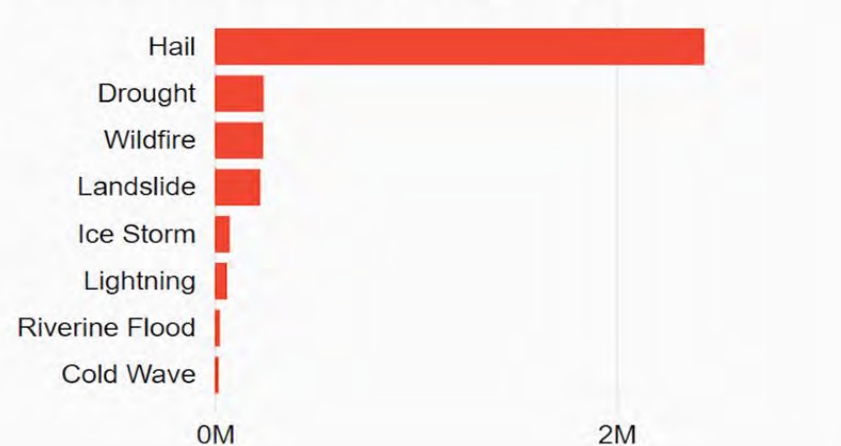
Climate Projections

COUNTY LEVEL RISK DATA

Annualized Expected Frequency of Events



Annualized Expected Building Damage (\$)



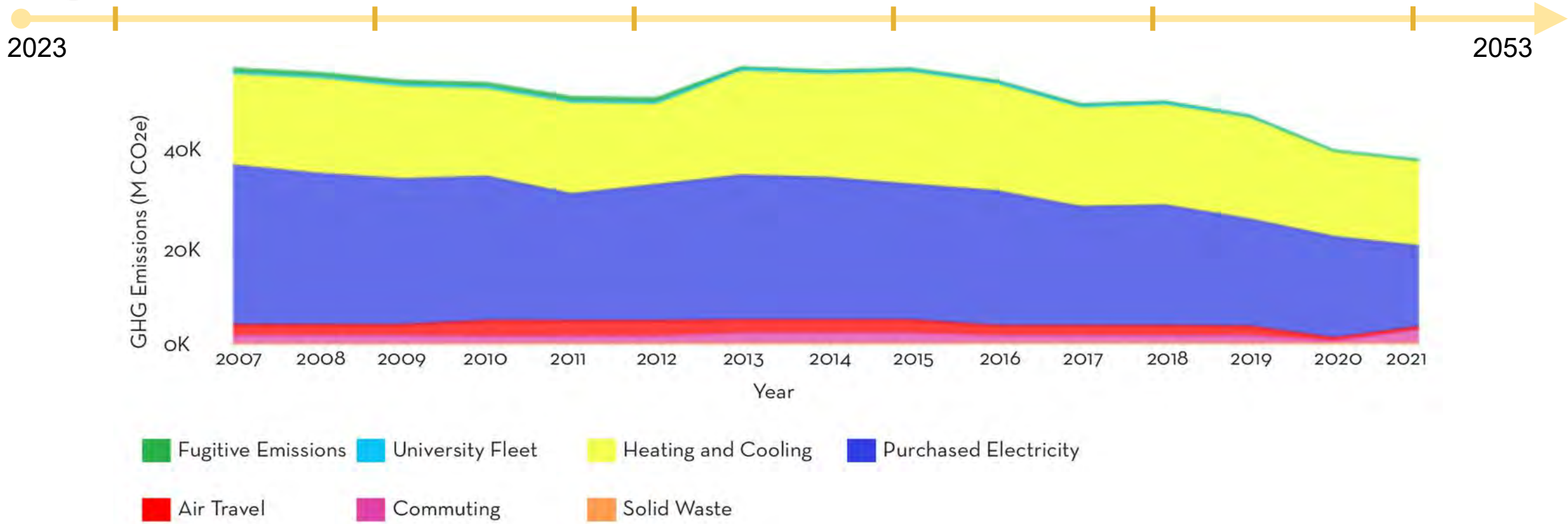
- Climate change is already occurring in Duluth
- 50% of Lake Superior ice coverage has been lost over the last century
- Expected climate change shifts:
 - Slight increase in daily average temperature
 - Slight increase in high heat days
 - Winters are expected to shorten
 - Increased frequency of intense rainfall events

Recommendation:

Adapt campus infrastructure to be resilient to increased hot weather and severe rain events



Greenhouse Gas Emissions: Climate Impact

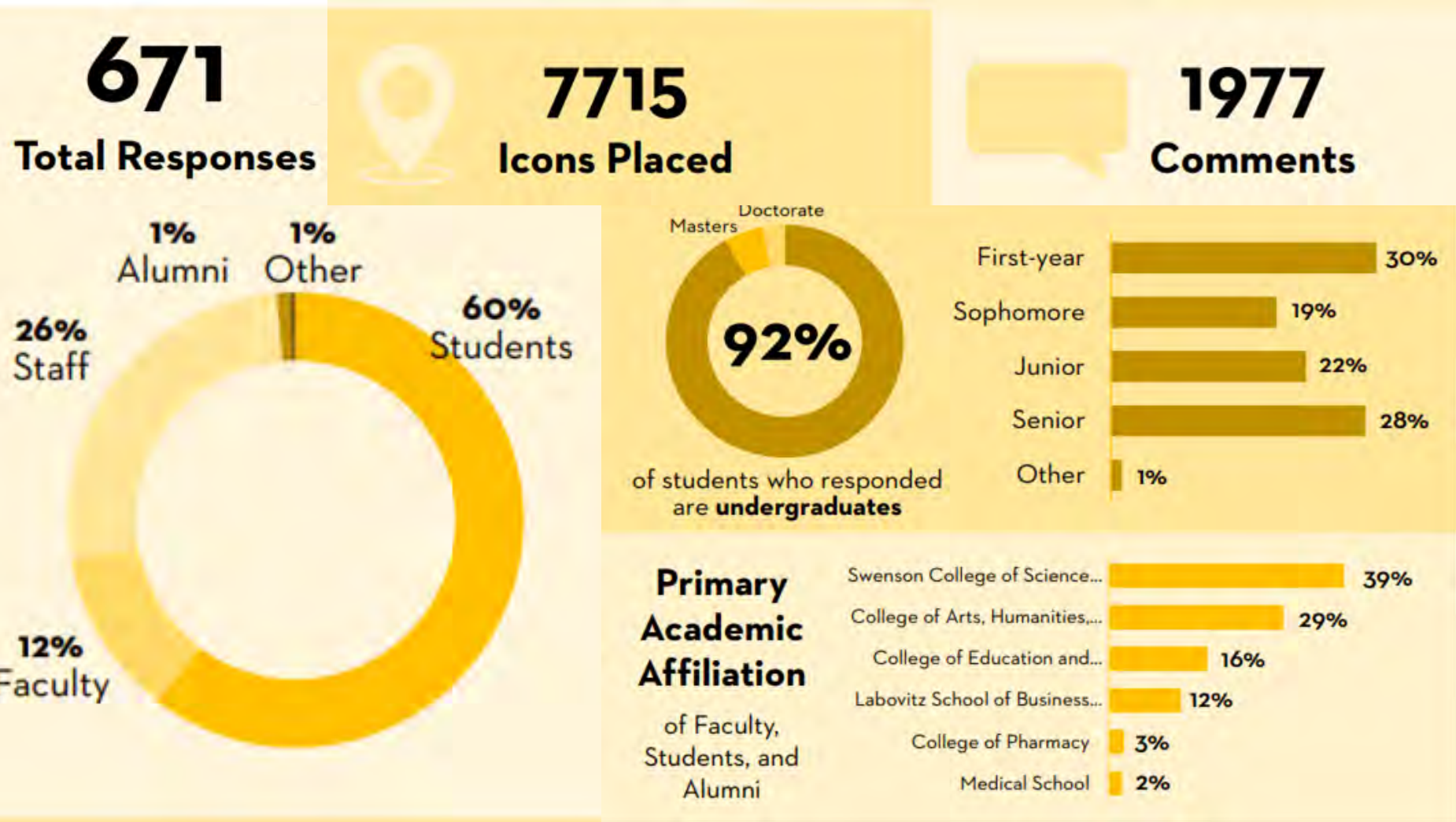


- Heating and cooling on campus and purchased electricity account for most of UMD's emissions
- UMD emissions have decreased by 25-30% since 2007
- UMD emitted 41,396 MTCO₂e in 2021

Recommendation: Focus on emissions reductions from all three scopes

Engagement: Mapping the Campus

Interactive Mapping Tool Results



UMD MyCampus Mapping Results (Fall 2022)

"I like to walk around campus and more walkways like this one and Bagley would be great. "

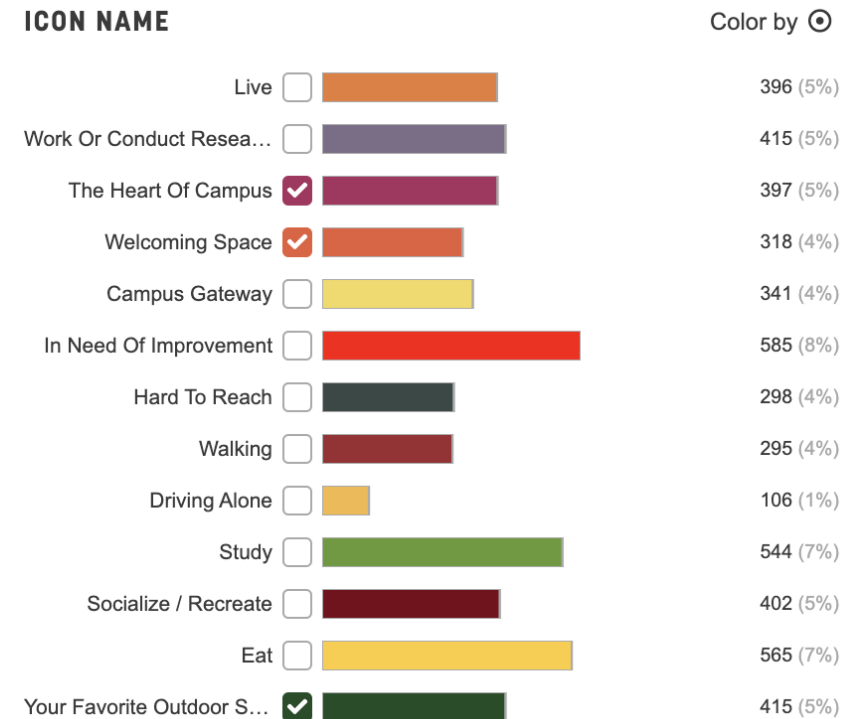
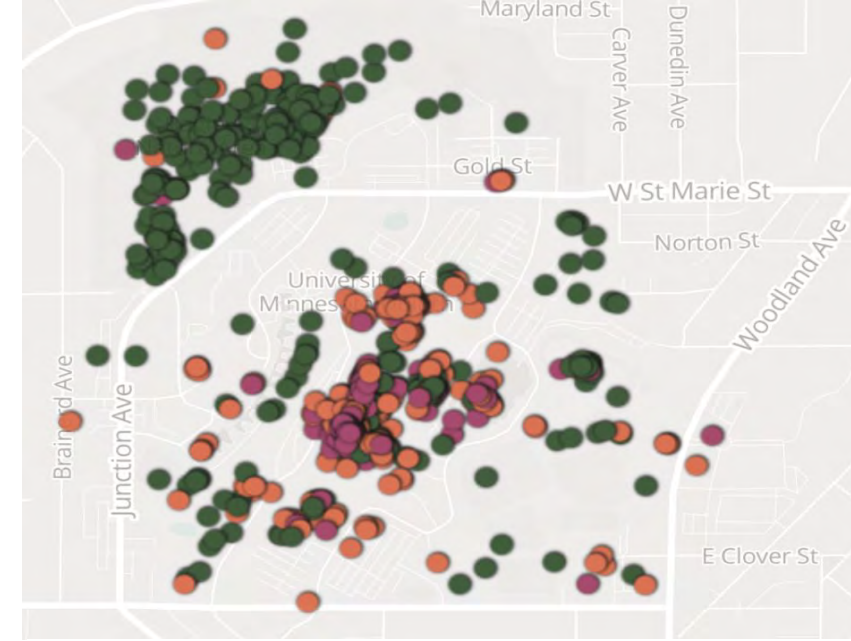
"We don't look like a green campus with all the surface lots"

"Lose many of the surface lots and build a ramp, the campus is clean but not very inviting"

"The outdoor spaces between buildings could be an incredible area for socializing or learning but I feel that these areas are under-resourced. With not enough tables or seating on the paved areas, students are less likely to spend time here or feel like the space is for them."

"This is where most people hear about stuff going on and where there's more socialization"

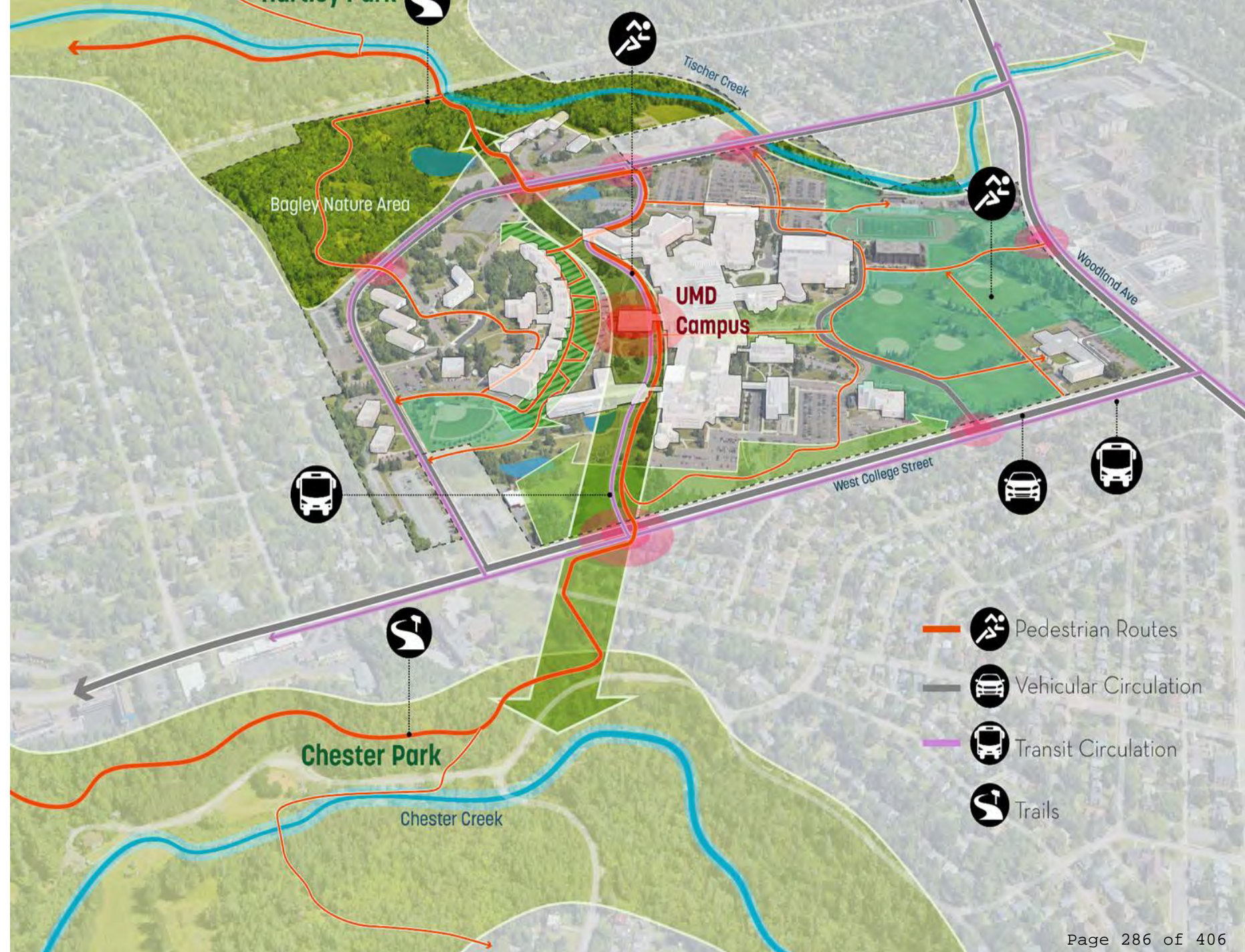
"Students love this space but with a lack of seating, only a few are able to use it for extended periods when the weather allows."



Campus Plan Four Big Ideas

Big Idea #1: Sustainability Corridor

- Link Hartley Park and Chester Park via the campus to connect with other Duluth features
- Create a resilient new “heart” for the campus that reinforces existing patterns
- Design and build welcoming gateways to campus at key entry points to this corridor



The Lower Landscape of the Sustainability Corridor Kirby Drive Looking South

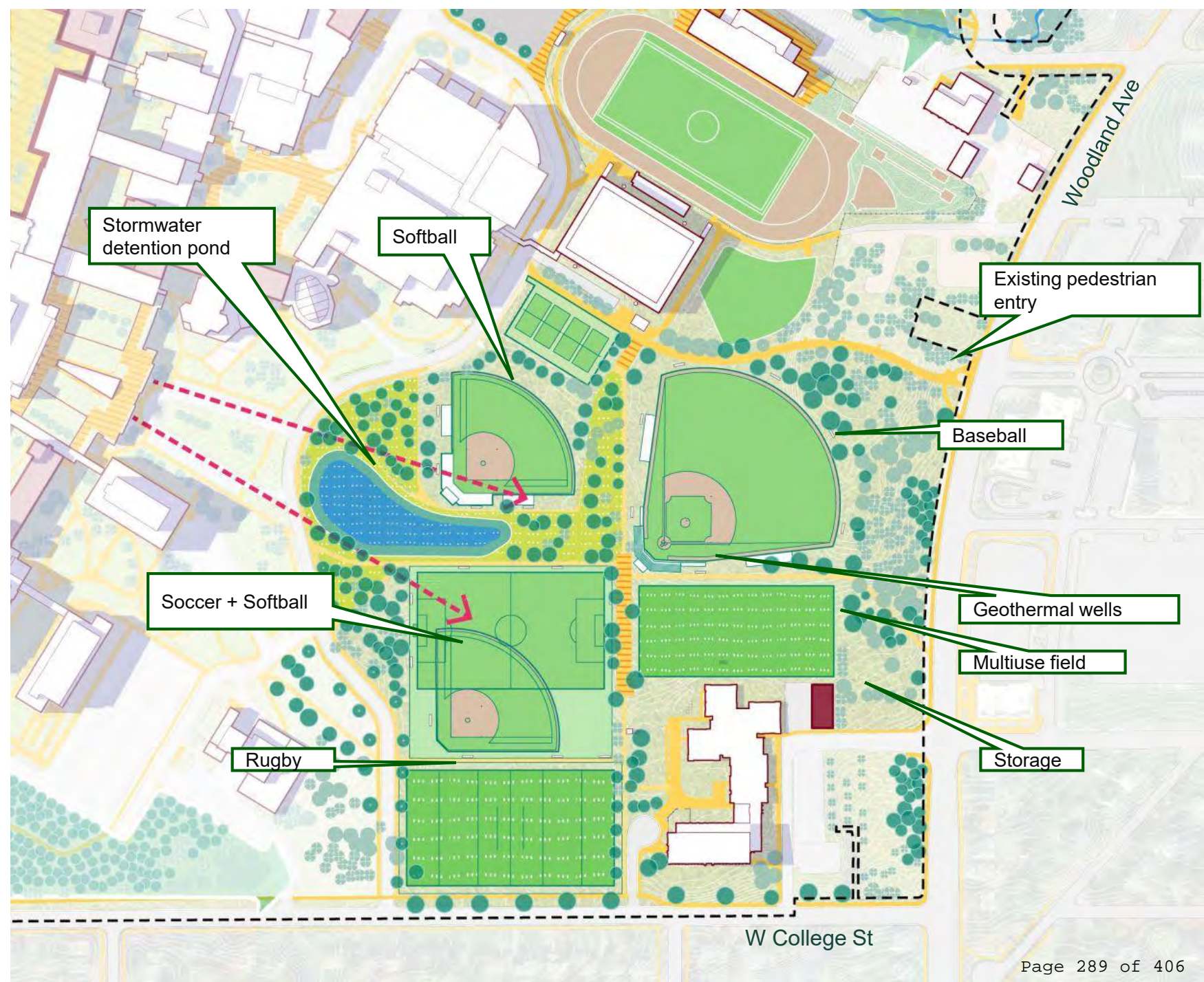


The Upper Landscape of the Sustainability Corridor Looking North



Big Idea #2: Recreation Park

- Reconfigure athletic fields for improved flexibility and utility
- Introduce a new pedestrian path system among recreation fields: multiple benefits for movement and access
- Collect stormwater in multifunctional detention pond
- Install geothermal and sewer heat recapture infrastructure



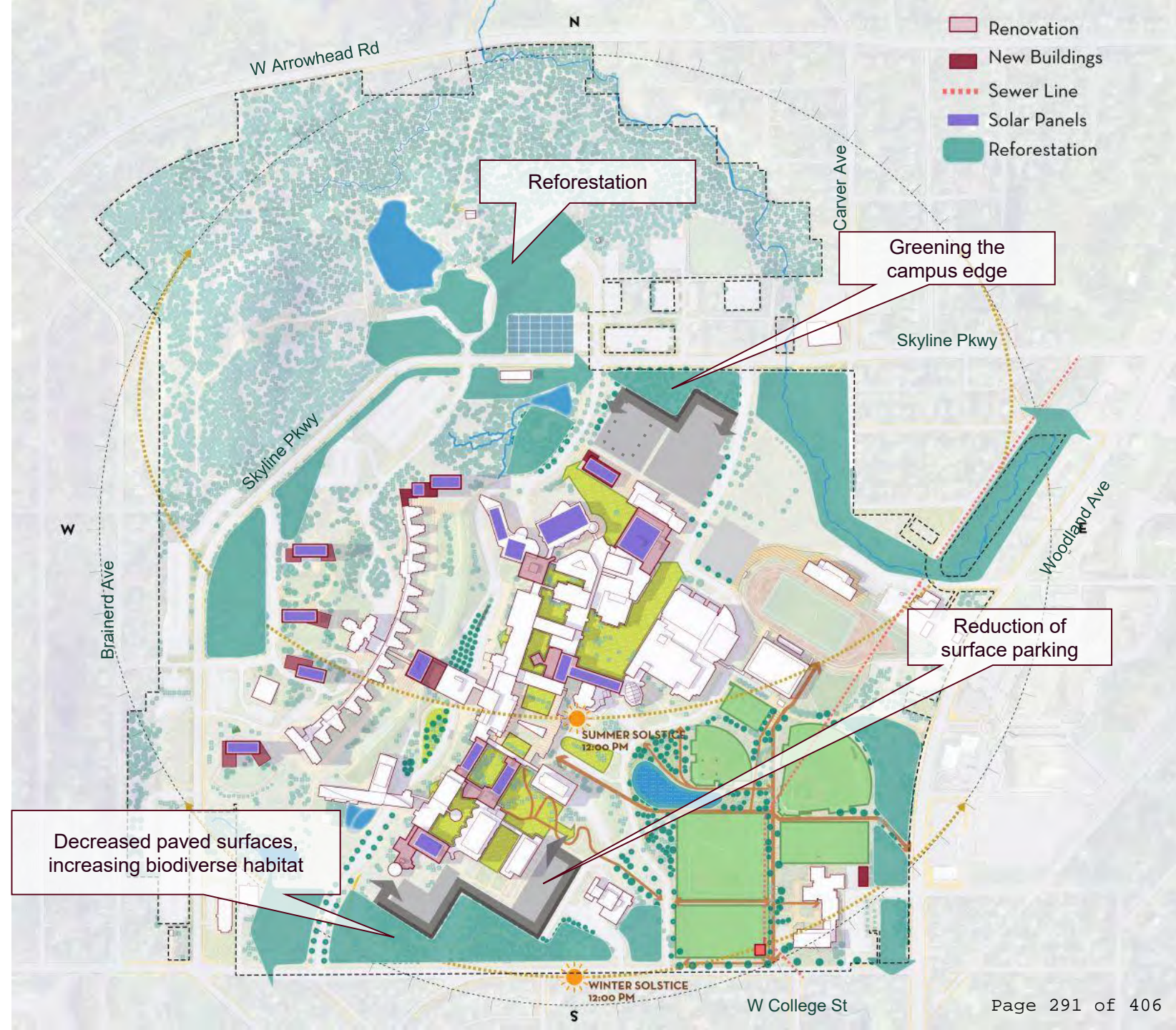
Recreation Park and Gateways View Looking toward the Solon Campus Center



Big Idea #3: Greening the Campus Edge

- Relocation of existing structures at end of useful life
- Reforestation of north and south ends of campus to increase carbon sequestration and improve biodiversity resilience
- Recreation park experience for pedestrians and cyclists
- Introduce a naturalized passive recreation landscape between recreation fields
- Shift from surface parking to structured parking as demand warrants
- Green the campus edges, reducing views of surface parking

* Does not indicate priority or intended sequence



Proposed Gateway on W. College



Big Idea #4: Reinvest in the Campus Core

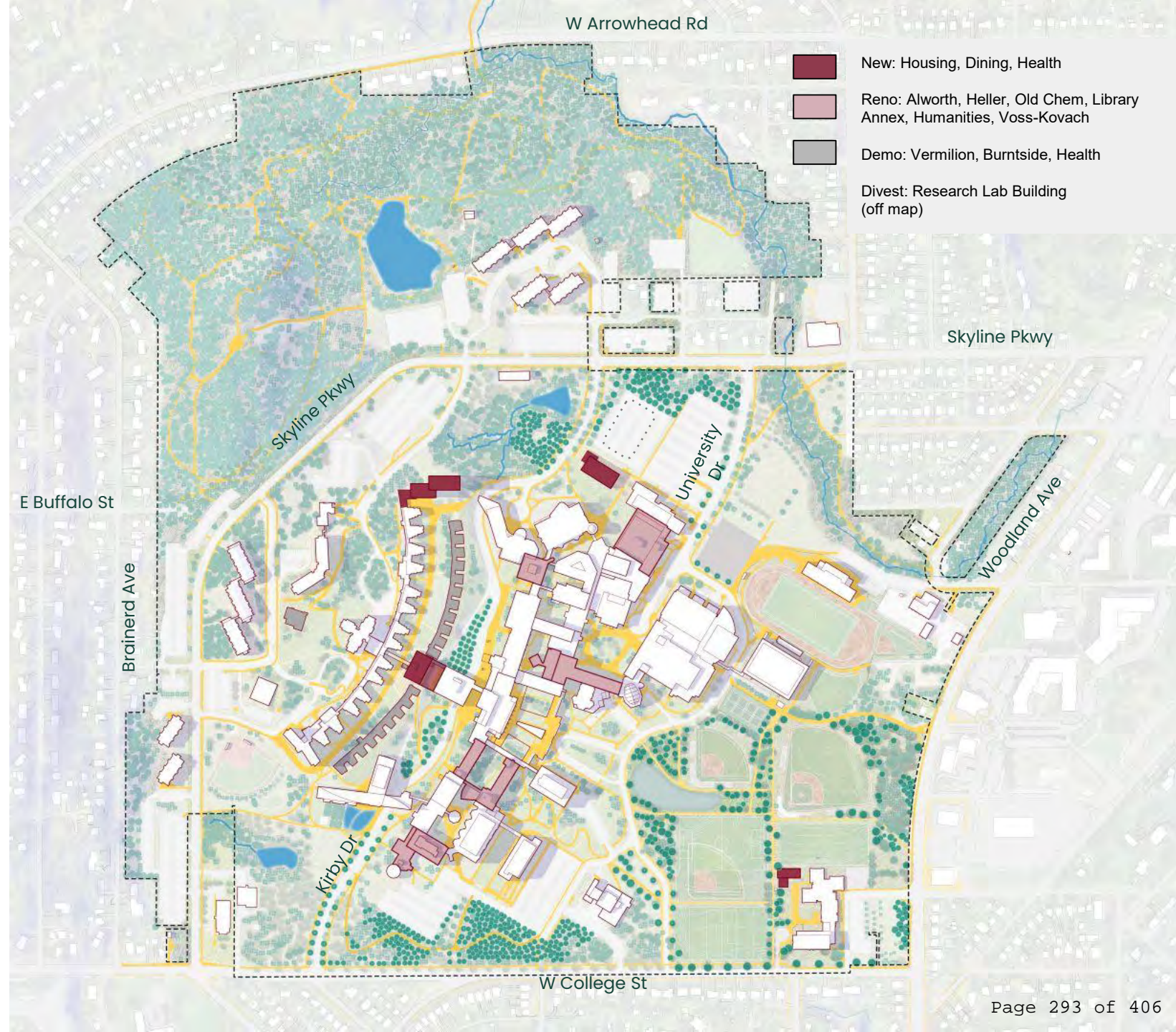
Building Recommendations

- Existing buildings to receive energy efficiency retrofit(s)
- New construction and major renovations to meet decarbonization targets
 - Renovations to include solar installations when feasible
- Demolition
- Divestment

Open spaces/places

Connections

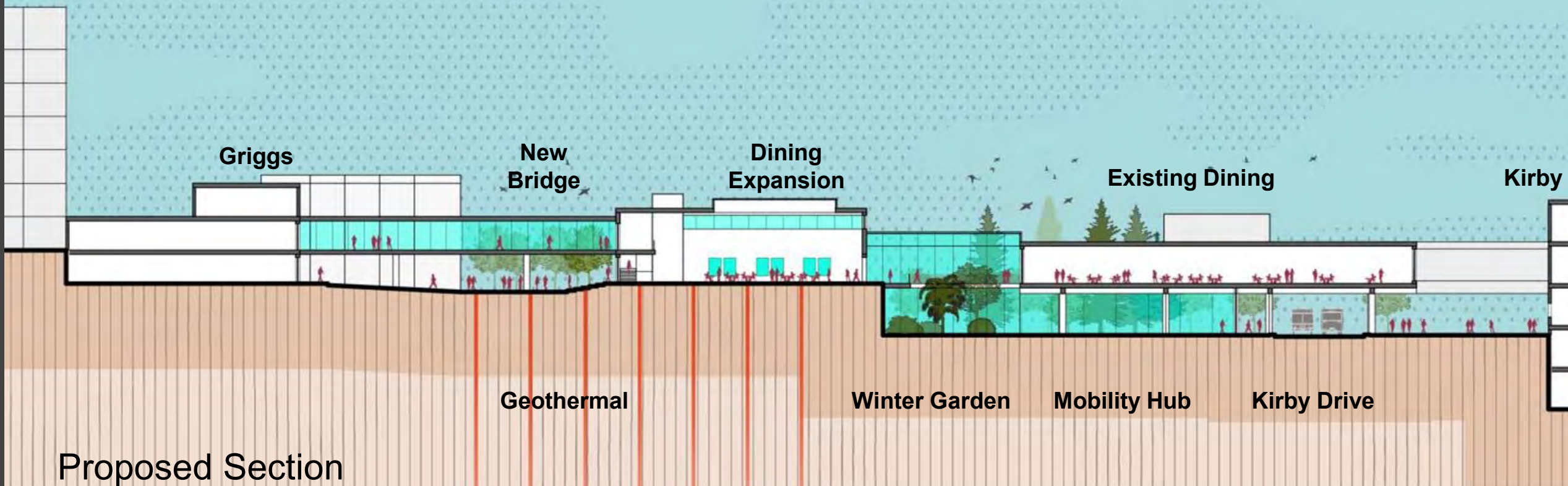
** Does not indicate priority or intended sequence*



Dining and Mobility Hub



Superior



Proposed Section

Campus Plan Implementation and Phasing

Near Term Campus and Climate Action Framework (15 years)

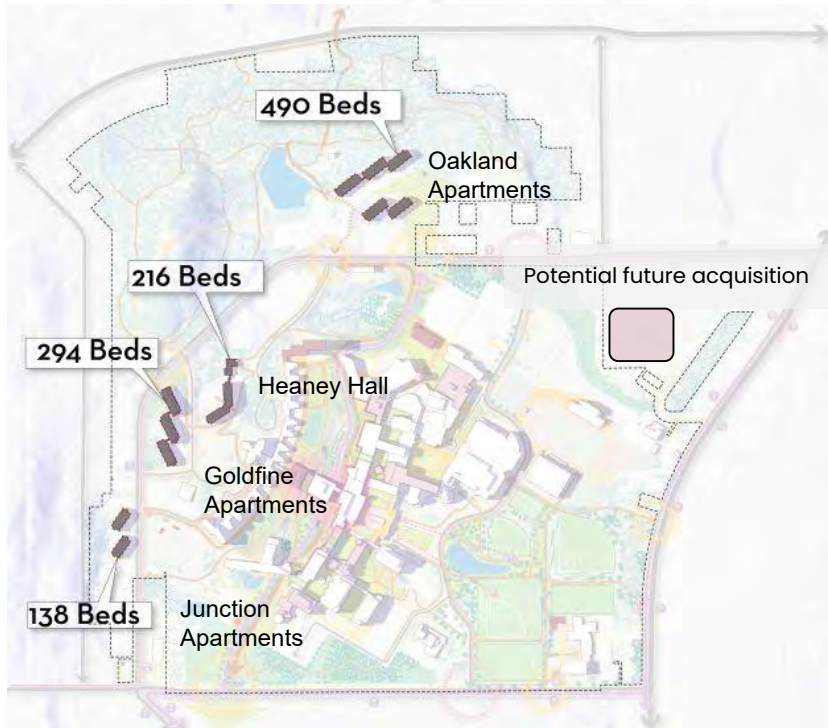
- A** New health center
- B** New residence hall
- C** Sustainability corridor
- D** Dining and mobility hub
- E** Reconfigured athletic fields
- F** Reforestation & parking reduction
- G** New visitor's gateway
- H** Planned building renovations



**Does not indicate priority or intended sequence*

Long Term Campus and Climate Action Framework (30 years)

- Ⓐ Reforestation
- Ⓑ New residence halls
- Ⓒ Parking ramp



**Does not indicate priority or intended sequence*

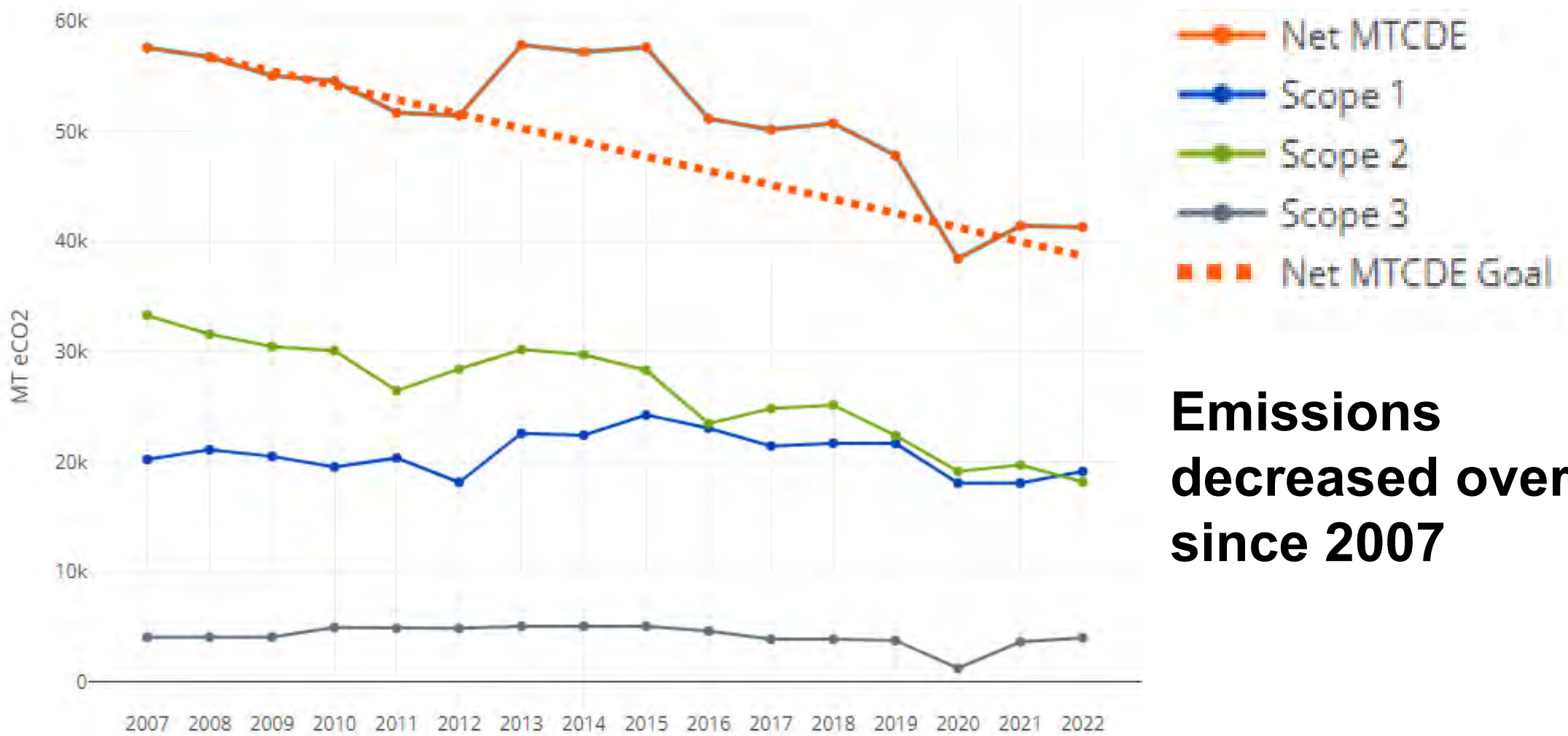


The Upper Landscape of the Sustainability Corridor View from the proposed Dining Hall Expansion



Climate Action Plan

A History of Climate Leadership

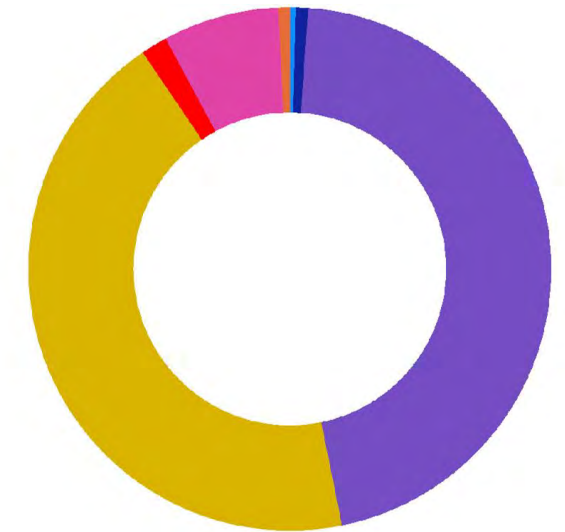
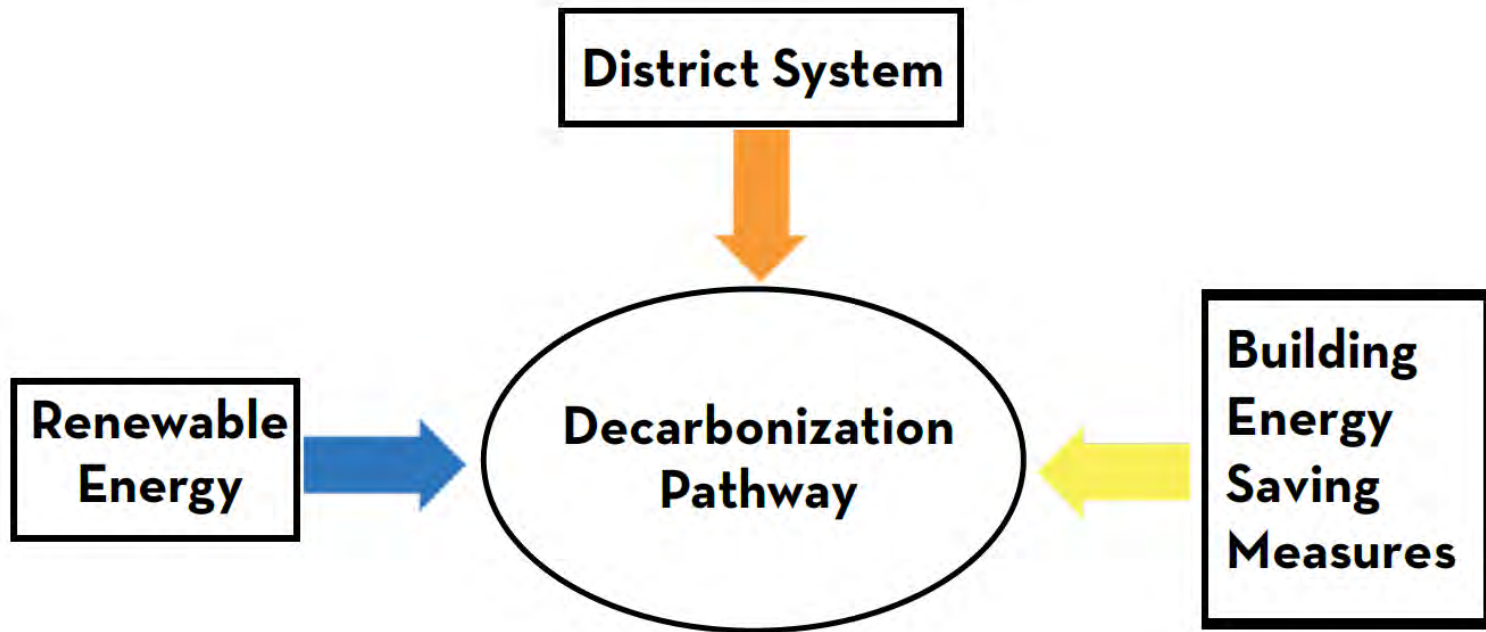


Emissions decreased over 25% since 2007

Source: SIMAP



Carbon Pollution at UMD: Intense Focus on Buildings and Energy



- Heating and Cooling, 45.7%
- Purchased Electricity, 43.7%
- Air Travel, 1.6%
- Commuting, 7.2%
- Waste, 0.7%
- Fugitive Emissions, 0.4%
- University Fleet, 0.8%

Source: Affiliated Engineers, Inc.



Building Energy Demand Management



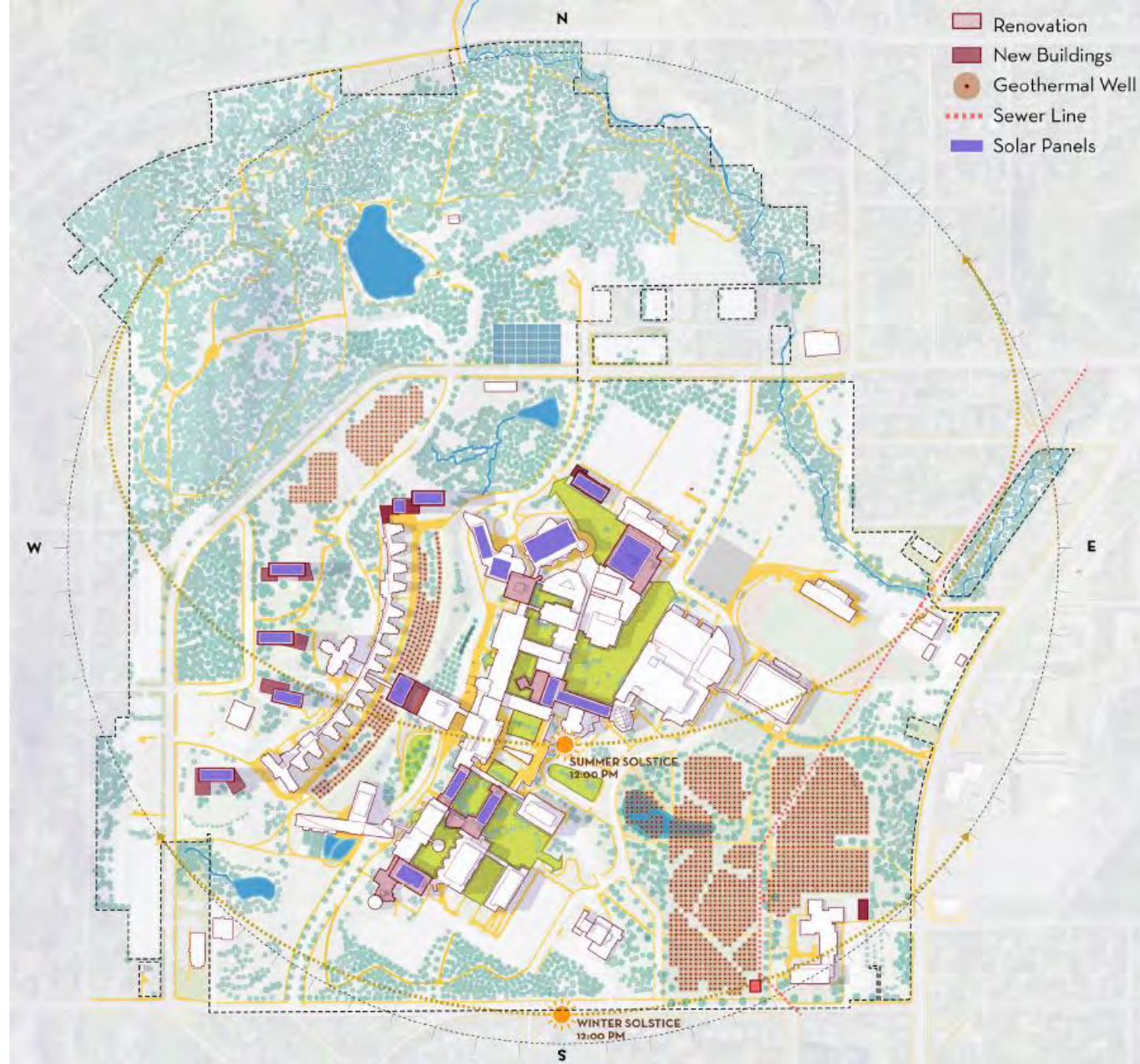
Energy efficiency projects coordinated with facility improvements



Net zero new construction and energy savings from divestment

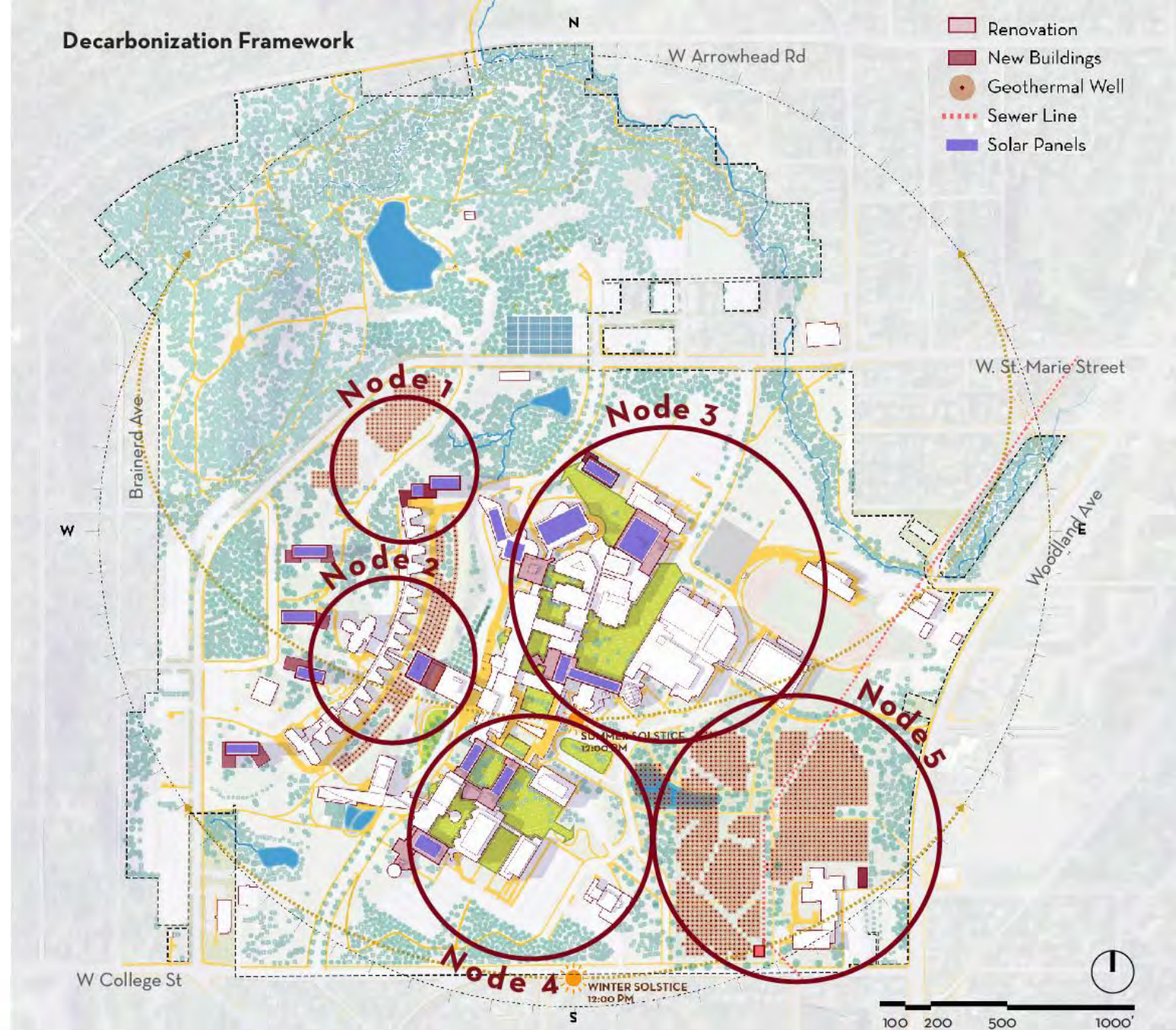
Energy Supply

- Carbon-neutral electricity from utility
- Efficiency through updates to the district system
 - Low temp hot water
 - Geothermal
 - Heating and cooling thermal energy storage
 - Decarbonized fuel source
- On-campus renewable energy



Phasing

- East to west configuration, but adaptable based on campus plan progression
- Clustered for efficiency of construction of distribution network



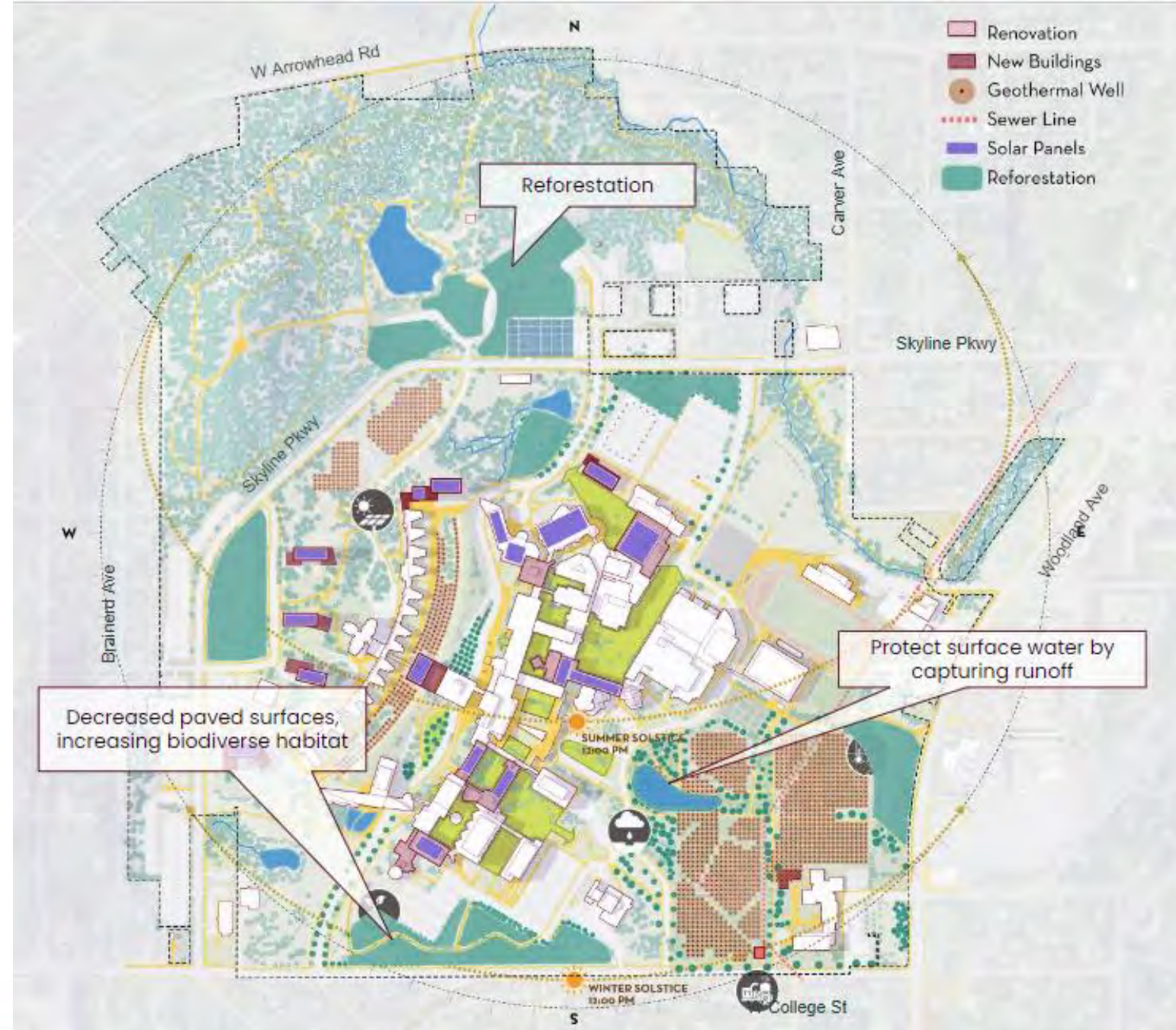
Other Emissions Topics Addressed in Climate Action Plan

- Commuting by walking, biking, transit, electric vehicles
- University Fleet electrification
- Eliminate fugitive emissions
- Carbon offsets and sequestration



Climate Adaptation

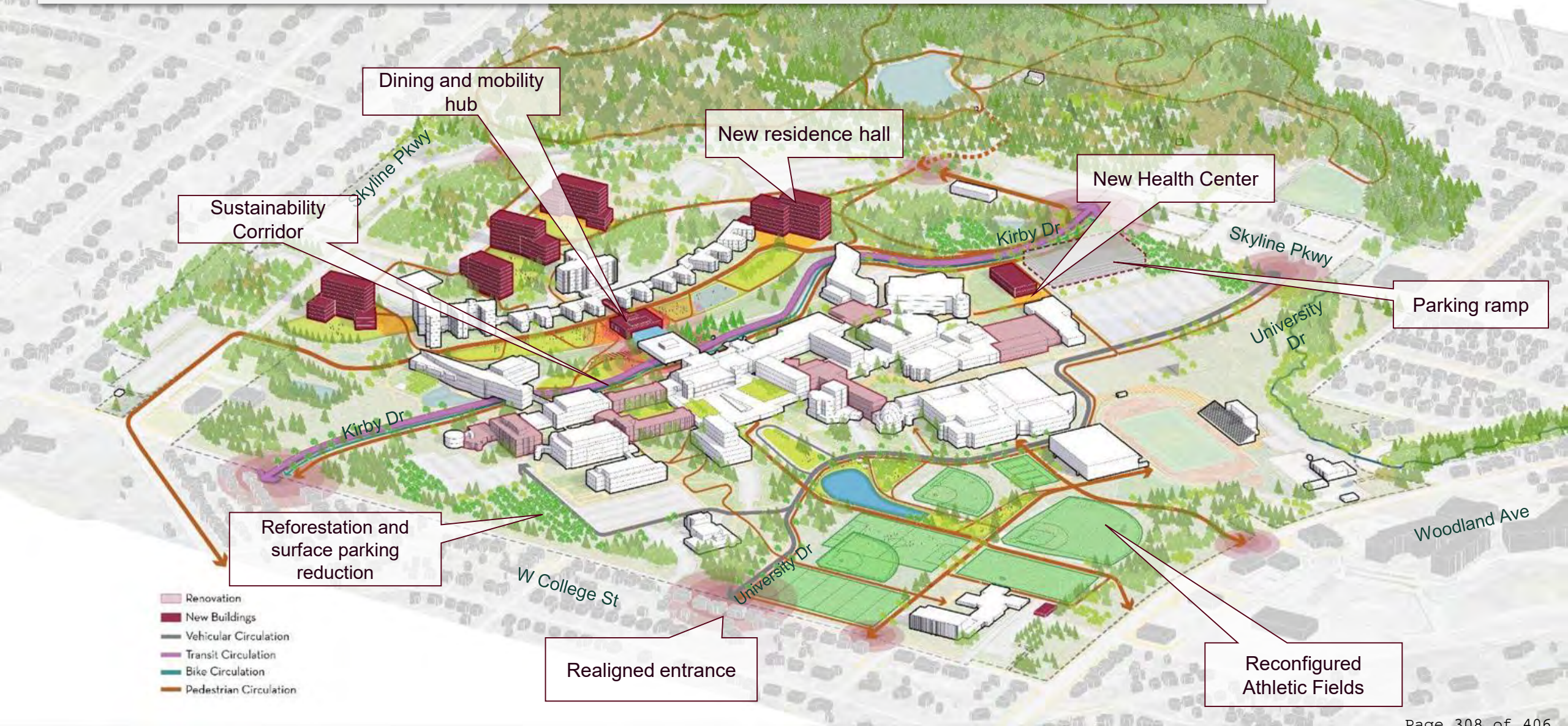
- Incorporate climate change projections of precipitation and warming trends into campus design
- Maintain redundancy of infrastructure systems
- Increase native plantings and reforestation for habitat and shade
- Enhance surface water protection and stormwater management
- Improve physical access to health services and recreation
- Create welcoming spaces to build community social resilience



Discussion

UMD Campus and Climate Action Plan

Integrating campus change and climate strategies to shape the future





UNIVERSITY OF MINNESOTA

Driven to Discover[®]

Crookston Duluth Morris Rochester Twin Cities

The University of Minnesota is an equal opportunity educator and employer.



BOARD OF REGENTS DOCKET ITEM SUMMARY

Finance & Operations

September 7, 2023

AGENDA ITEM: Consent Report

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Myron Frans, Senior Vice President

PURPOSE & KEY POINTS

Purchase of Goods and Services \$1,000,000 and Over

The purpose of this item is to seek approval for purchases of goods and services of \$1,000,000 and over.

- To Cardinal Health for an estimated \$4,000,000 for the purchase of pharmaceuticals and related supplies for Boynton Health Pharmacy (Twin Cities campus) for the period of September 18, 2023 through October 31, 2024. The cost of goods purchased through this contract will be paid for from the sale of prescriptions and retail items to patients and from sales to University departments for research and other uses. The costs have been included in Boynton’s budget. See enclosed documentation for the basis of supplier selection.
- To Envigo RMS, The Jackson Laboratory, and Charles River for an estimated \$18,000,000 for laboratory animals for Research Animal Resources (Twin Cities campus) for September 18, 2023 through June 30, 2028. The bulk animal orders will be purchased with centralized departmental funds currently budgeted for these purchases. Suppliers were selected as the result of a competitive Request for Proposal (RFP) process conducted by Purchasing Services. Three suppliers responded to the RFP, and none were a targeted business.
- To LKO Enterprises, Inc., Northland Constructors of Duluth, Inc., and ATK for an estimated \$800,000 of contract snow removal labor and equipment services as needed for the University of Minnesota Duluth’s (UMD) Department of Facilities Management and coordinate properties for the period of October 1, 2023 through September 30, 2024 with optional contract extensions of \$800,000 every year through September 30, 2028. The total contract value, if all options are extended, would be \$4,000,000. This approval authorizes both the base term and the optional contract extensions. This purchase of contract labor and equipment services by Facilities Management has been budgeted for FY 2024. It will be funded through individual Repair & Replacement projects and Operation & Maintenance funds. Suppliers were selected as the result of a competitive RFP process conducted by Purchasing Services. Five suppliers responded to the RFP, and none were a targeted business.

- To Nel Hydrogen US for an estimated \$1,190,400 for a hydrogen gas production system for the University of Minnesota West Central Research and Outreach Center in Morris, MN. The source of funds for the purchase will come from a sponsored project funded by the United States Department of Energy APRA-E REFUEL+IT Program and is led by the Research Triangle Institute (dba RTI International). The supplier was selected as the result of a competitive RFP process conducted by Purchasing Services. Two suppliers responded to the RFP, and none were a targeted business.
- To Videotronix, Incorporated dba VTI Security for an additional \$6,000,000 for safety and security systems services for the Public Safety Emergency Communications Center (PSECC) for all University of Minnesota campuses for the period of May 2023 through April 2028. This is in addition to the \$1,000,000 approved by the Board in May 2023. The funds for this contract are budgeted and will come from the additional funds received from the State of Minnesota that are dedicated to these efforts. See enclosed documentation for the basis of supplier selection.
- To Zoom Video Communications, Inc. for an estimated \$1,868,850 to provide an enterprise online meeting solution for all University of Minnesota students, faculty, and staff for the Office of Information Technology (OIT) for the period of October 6, 2023 through October 7, 2028. The cost of this contract is currently included in OIT's budget and will be funded with O&M funds. See enclosed documentation for the basis of supplier selection.

Approval of Use of UMore Park Funds

The purpose of this item is to seek approval to use money from the UMore Legacy Fund to finance costs associated with the Future of Advanced Agricultural Research in Minnesota (FAARM) project, as outlined in the docket materials.

Capital Budget Amendments

The purpose of this item is to seek approval of capital budget amendments for the following projects:

- Main Production Kitchen Renovation, Residence Dining Center, Duluth campus
- Middlebrook Dining Renovation, Twin Cities campus

Project overviews, which provide the basis for the request, project scope, cost estimate, funding, and schedule, are included in the docket. Site maps locating the projects on their respective campuses are also included.

Employment Agreement

The purpose of this item is to seek approval for the following employment agreement:

- Melinda Pettigrew, Dean, School of Public Health, Twin Cities campus

Real Estate Transactions

The purpose of this item is to review and act on the following land exchange, purchase, and leases for the Twin Cities campus.

- Land exchange for properties on 350th Avenue and State Highway 14, Waseca
- Purchase of 160 acres in Mower County for FAARM
- Lease of office space for the Learning Abroad Center's program in Montpellier, France

Schematic Designs

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

- Cedar Creek Classroom Expansion, Cedar Creek Reserve, Twin Cities campus
- Shepherd Lab Renovation, Twin Cities campus
- Women's Gymnastics Building, Twin Cities campus

Project overviews, which provide the basis for the request, project scope, cost estimate, funding, and schedule, are included in the docket. Site maps locating the projects on their respective campuses are also included.

BACKGROUND INFORMATION

Approvals are sought in compliance with Board of Regents Policy as follows:

- Purchase of Goods and Services \$1,000,000 and Over: *Reservation and Delegation of Authority*, Article I, Section VII, Subd. 6.
- Real Estate Transactions: *Reservation and Delegation of Authority*, Article I, Section VIII, Subd. 1.
- Lease Transactions: *Reservation and Delegation of Authority*, Article I, Section VIII, Subd. 2
- Use of UMore Funds: *Reservation and Delegation of Authority*, Article I, Section I, Subd. 6.
- Employment Agreements: *Reservation and Delegation of Authority*, Article I, Section IV, Subd. 1.
- Capital Budget Amendments: *Reservation and Delegation of Authority*, Article I, Section VIII, Subd. 8.
- Schematic Designs: *Reservation and Delegation of Authority*, Article I, Section VIII, Subd. 9.

INTERIM PRESIDENT'S RECOMMENDATION

The Interim President recommends approval of the Consent Report.

Purchase of Goods and Services \$1,000,000 and over

To Cardinal Health for an estimated \$4,000,000 for the purchase of pharmaceuticals and related supplies for Boynton Health Pharmacy (Twin Cities campus) for the period of September 18, 2023 through October 31, 2024.

The pharmaceuticals purchased by the Boynton Health Pharmacy are used to fill prescriptions for University of Minnesota students, staff, dependents, and retirees; to stock various clinics at Boynton Health; or sold to other University departments for research or other needs.

The cost of goods purchased through this contract will be paid for from the sale of prescriptions and retail items to patients and from payments by University departments for pharmaceuticals. These purchases have been budgeted for in our current fiscal year budget.

Submitted by: Pepper N Meyer, PharmD
Boynton Health Pharmacy
Phone: 612-624-7655

Approval for this item requested by:

Calvin Phillips
Vice President for Student Affairs
(Signature on file in Purchasing Services)

August 14, 2023

Rationale for Exception to Competitive Bidding

This purchase has not been competitively bid by Purchasing Services because Cardinal Health was selected through a competitive process led by the State of Minnesota, Department of Administration, Materials Management Division, on behalf of MMCAP Infuse (formerly called Minnesota Multi-State Contracting Alliance for Pharmacy).

MMCAP Infuse is a national cooperative group purchasing organization (GPO) for government facilities that provide healthcare services. MMCAP Infuse was established in 1985, is operated by the State of Minnesota, Office of State Procurement, and is self-funded. It has over 13,000 members across all 50 states. Use of MMCAP Infuse is free for members and purchasing from their contracts is voluntary.

Because of the large purchasing volume, MMCAP Infuse members are able to get the most advantageous pricing available and next-day delivery for most items, thus enabling prompt service to Boynton's patients and other University departments.

The Director of Purchasing and the University Controller concluded that the process used resulted in a fair and reasonable price for the University.

Purchase of Goods and Services \$1,000,000 and over

To Envigo RMS, The Jackson Laboratory, and Charles River for an estimated \$18,000,000 for laboratory animals for Research Animal Resources (Twin Cities campus) for September 18, 2023 through June 30, 2028.

Research Animal Resources (RAR) is the University's centralized research service center for purchasing all laboratory animals by Twin Cities units. RAR is the conduit to third-party research animal suppliers and the initial point of entry for such animals into the University of Minnesota and the 400+ research team we serve. RAR also interfaces daily with the Institutional Animal Care and Use Committee (IACUC) protocol database to facilitate the monitoring of authorized animal usage.

The laboratory animal contract expired June 30, 2023, triggering a new request for a proposal for a 5-year term. A consistent, high-quality supply of laboratory animals with specific unique genotype backgrounds is required for the reliability, validity, and quality of research projects and their specific findings.

Through a competitive bid process, suppliers were scored according to their ability to fulfill the needs of the principal investigators and research teams supported by RAR at a price and under terms that were most beneficial to the University of Minnesota.

The bulk animal orders will be purchased with centralized departmental funds budgeted for these purchases.

Submitted by: Jeremey Stockinger, PhD, MBA
Interim Operations Director
Research Animal Resources
420 Delaware St SE, Minneapolis, MN 55455
(612) 625-6541

Approval of this item is requested by:

Kristin Charles
Finance Director, Office of the Vice President for Research
(Signature on file in Purchasing Services)

July 19, 2023

Purchase of Goods and Services \$1,000,000 and over

To LKO Enterprises, Inc., Northland Constructors of Duluth, Inc., and ATK for an estimated \$800,000 of contract snow removal labor and equipment services as needed for the University of Minnesota Duluth's (UMD) Department of Facilities Management and coordinate properties for the period of October 1, 2023 through September 30, 2024 with optional contract extensions of \$800,000 every year through September 30, 2028. The total contract value, if all options are extended, would be \$4,000,000.

UMD Facilities Management maintains, repairs, and restores grounds, roads, walks, parking lots, and underground utilities on UMD's primary 244-acre campus and other UMD facilities. These include the Research and Field Studies Center on 280 acres, Glensheen Mansion on 7.6 acres, Lower Campus on 3 acres, the Limnological Research Center, and the Natural Resources Research Institute.

These suppliers are needed to supplement the work of UMD staff to keep up with snow removal and ice control on sidewalks, paths, parking lots, and campus roadways. UMD also does not own enough heavy equipment to haul snow on or off campus when needed, contractors are needed. Keeping campus walks and streets free of snow and ice is a priority in order to keep campus safe for all faculty, staff, students, and visitors. It would not be financially feasible for UMD Facilities Management to employ enough staff nor to own and store all the equipment needed for this type of work.

These suppliers were selected as the result of a competitive RFP issued in June of 2023, which rated them highly in available equipment, response time, and price. This is a multiple-award contract so that enough suppliers will be available for the required work during the winter months. One supplier would not have the capacity to perform all the snow removal work for all locations to the standards and within the timelines required.

This purchase of contract labor and equipment services by Facilities Management has been budgeted for FY24. It will be funded through individual Repair & Replacement projects and Operation & Maintenance funds.

Submitted by: John Rashid, Facilities Management Director
241 Darland Administration Building
1049 University Drive
Duluth, MN 55812
Phone: 218-726-6930

Approval for this item requested by:

Sue Bosell
Interim UMD VCFO and Controller
(Signature of file in Purchasing Services)

July 23, 2023

Purchase of Goods and Services \$1,000,000 and over

To Nel Hydrogen US for an estimated \$1,190,400 for a hydrogen gas production system for the University of Minnesota West Central Research and Outreach Center in Morris, MN.

The University of Minnesota West Central Research and Outreach Center is in the process of developing a one-metric-ton-per-day renewable ammonia project which will use hydrogen derived from water electrolysis to produce anhydrous ammonia. The power for the project will come from a utility-scale wind turbine already on-site and producing electricity.

Through a competitive bid process, Nel Hydrogen US proposed the best system to operate with variability of wind energy to produce hydrogen via water electrolysis.

The source of funds for the purchase will come from a sponsored project funded by the United States Department of Energy APRA-E REFUEL+IT Program and is led by the Research Triangle Institute (dba RTI International).

Submitted by: Cory Marquart, Engineer
46352 State Highway 329
Morris, MN 56267
Phone: (320) 589-1711

Approval for this item requested by:

Brian Buhr
Dean, College of Food, Agricultural
& Natural Resources Science
(Signature on file in Purchasing Services)

August 14, 2023

Purchase of Goods and Services \$1,000,000 and over

To Videotronicx, Incorporated dba VTI Security for an additional \$6,000,000 for safety and security systems services for the Public Safety Emergency Communications Center (PSECC) for all University of Minnesota campuses for the period of May 2023 through April 2028.

In May 2023, the Board approved an original purchase request in the amount of \$1,000,000 to be spent over the course of approximately five years. With additional funding subsequently provided by the State of Minnesota, the contract will be increased by \$6,000,000, increasing the total value of the contract with VTI Security to \$7,000,000. The additional funding will allow PSECC to accelerate efforts to upgrade, enhance, and replace end-of-life (EOL) equipment on the University's security systems (video surveillance, card access, and alarms). The contract will provide dedicated service resources to the system campuses and bolster existing resources for the Twin Cities campuses.

Expanding, enhancing, and replacing the EOL equipment for the various systems improves the safety of the institution by better-securing facilities, increasing visibility for public safety responders during incidents, and improving abilities to solve and prevent crime on the University and surrounding properties.

The funds required for this contract are budgeted and will come from the additional funds from the State of Minnesota dedicated to these efforts.

Submitted by: Jeff Lessard, Director, Emergency Communications
Public Safety Emergency Communications Center (PSECC)
2221 University Ave SE
Minneapolis, MN 55414
Phone (Office): (612) 624-1583
Phone (Cell): (612) 202-1528

Approval for this item requested by:

Myron Frans
Senior Vice President for Finance and Operations
(Signature on file in Purchasing Services)

August 14, 2023

Rationale for Exception to Competitive Bidding

This purchase was not competitively bid because PSECC is receiving additional funding from the State of Minnesota to accelerate efforts to upgrade, enhance, and replace end-of-life (EOL) equipment on the University's security systems (video surveillance, card access, and alarms).

The pricing to upgrade, enhance, and replace end-of-life (EOL) equipment on the University's security systems remains the same as the original contract approved by the Board in May 2023.

The Director of Purchasing and the University Controller concluded that the process used resulted in a fair and reasonable price for the University.

Purchase of Goods and Services \$1,000,000 and over

To Zoom Video Communications, Inc. for an estimated \$1,868,850 to provide an enterprise online meeting solution for all University of Minnesota students, faculty, and staff for the Office of Information Technology (OIT) for the period of October 6, 2023 through October 7, 2028.

The uses of Zoom span several mission critical areas: teaching and learning, healthcare, research, outreach, and administration.

The estimated cost is for a five-year contract. The contract would provide web conferencing technology for students, faculty, and staff across all five system campuses. Zoom web conferencing technology supports student instruction in online courses, University outreach efforts, and facilitates over 75,000 meetings annually.

This contract is currently budgeted and will be funded utilizing O&M funds.

Submitted by: Michelle Rakos
2218 University Ave SE (Infotech)
Phone: 763-443-5959

Approval for this item requested by:

Bernard S. Gulachek
Vice President and Chief Information Officer
(Signature on file in Purchasing Services)

July 25, 2023

Rational for Exception to Competitive Bidding

This purchase was not competitively bid because this is an extension of the existing Zoom contract that was competitively bid in 2018, in compliance with the Board of Regents purchasing policy.

The pricing has remained unchanged since the initial competitive bid in 2018.

The Director of Purchasing and the University Controller concluded that the process used resulted in a fair and reasonable price to the University.

**Board of Regents
Finance & Operations Committee
September 7, 2023**

Approval of Use of UMore Legacy Fund Proceeds

The purpose of this item is to seek approval to use money from the UMore Legacy Fund to finance costs associated with the Future of Advanced Agricultural Research in Minnesota (FAARM) project. Future Board of Regents actions on FAARM (such as Capital Budget Amendments) will specify when UMore Legacy Funds will be used as a funding source.

UMore Park History

UMore Park is a parcel of land owned by the University of Minnesota in Rosemount, Minnesota, consisting of approximately 7,150 acres. During World War II, the land was used by the United States War Department for the development and production of smokeless powder munitions and was known as the Gopher Ordnance Works. After the war ended, the property was deeded to the University by the Federal Government. The land has since been used by the University for research and support of academic programs.

In 2006, approximately one-third of the land was designated as the Vermillion Highlands and became part of the financing plan for Huntington Bank Stadium. Vermillion Highlands will be made available to the State of Minnesota after the final appropriation payment that supports the debt issued for the stadium is made to the University in 2032.

In 2009, the Board of Regents approved a resolution authorizing the monetization of UMore assets, including market-based activities in the approximately 4,800 acres that at that time sat outside of the Vermillion Highlands. In October 2009, a second resolution established the UMore Legacy Fund (the Fund) within the Consolidated Endowment Fund (CEF) to hold the net proceeds from monetizing UMore Park and the related authorities for use of the Fund.

In February 2015, the Board approved another resolution that amended the 2009 approved plan, ending University-funded development at UMore Park and instead making land available for sale to private-sector buyers. This change effectively transferred the costs and risks of development activities from the University to the private sector. The 2015 resolution did not make changes to any of the authorities related to the Fund. Copies of those resolutions are included in the Board materials for reference.

UMore Legacy Fund

The Fund now holds approximately \$13.2 million from commercial activities at UMore Park, generated primarily from mining lease royalty payments and the sale of 435 acres for residential development in 2021. Before using any money in the Fund, the Senior Vice President's Office sought guidance on the 2009 and 2015 Board resolutions from the Office of the General Counsel (OGC). OGC determined that the October 2009 resolution establishing the Fund delegated authority for its use to the University president and that the February 2015 resolution did not affect those authorities.

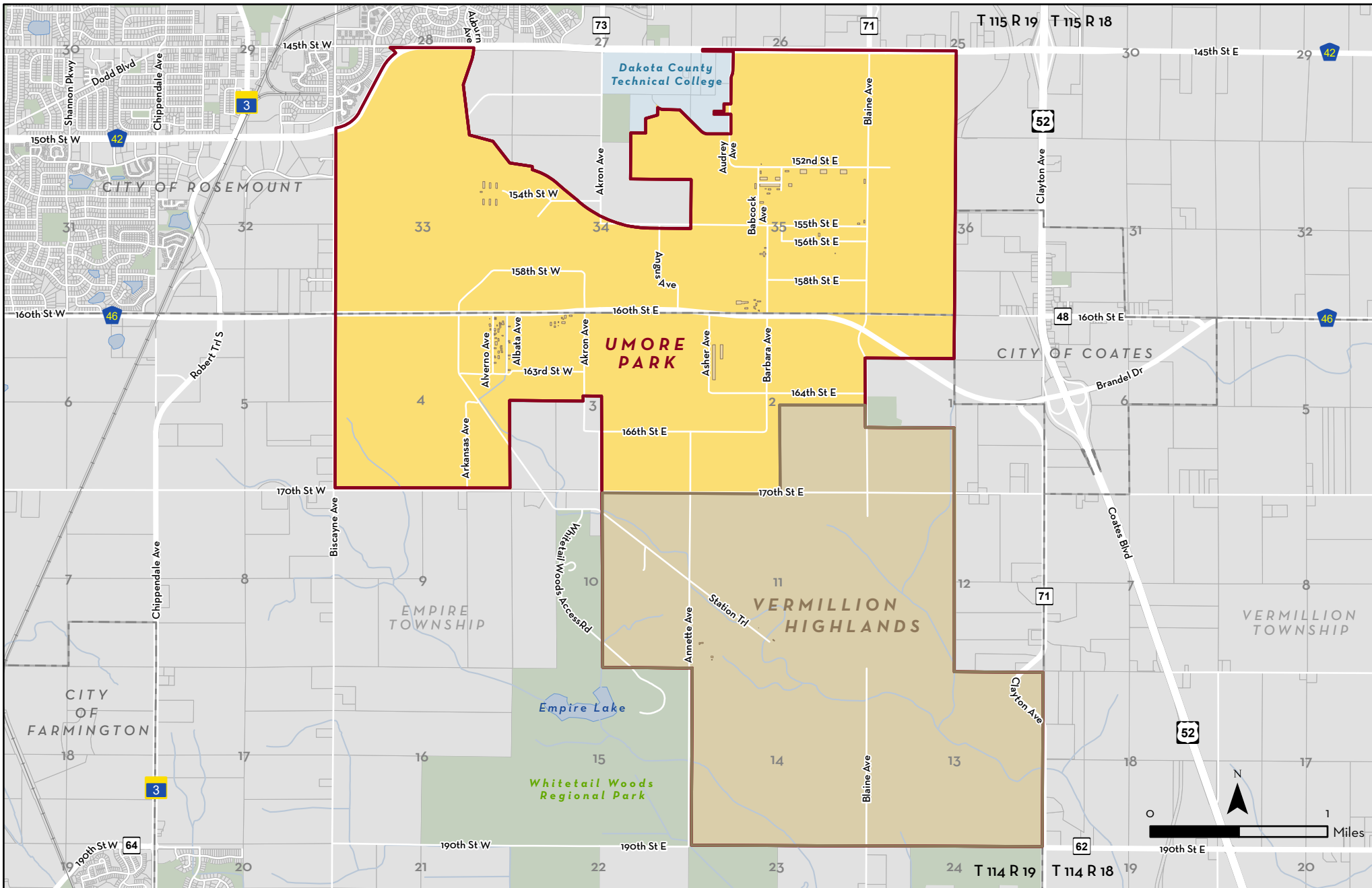
However, the OGC also noted that Interim President Ettinger has recused himself from any matters related to FAARM, so authority to use the Fund reverts to the Board of Regents.

Use of Funds for FAARM

FAARM is a key component of the MPact 2025 Systemwide Strategic Plan goal to develop and deploy new techniques and partnerships for smart farming and sustainable food supplies, as well as expanding, developing, and retaining agricultural and food system talent in rural communities and agribusinesses. FAARM centers around the development of an integrated and advanced agricultural research and education complex dedicated to improving the health of animals, humans, and the environment at local, regional, and global scales. The University, in collaboration with Minnesota State, will facilitate the development of a new digital, autonomous, and integrated advanced agricultural complex that studies the intersection of human, animal, plant, and environmental health.

An introduction to FAARM was presented during the February 10, 2022, Board of Regents' Mission Fulfillment Committee. The FAARM project is included in the Six-Year Capital Plan and was included in the University's 2023 State Capital Request. The University received a \$60 million pledge from the Hormel Foundation to support the financing of the FAARM project.

The Administration now recommends approval to use money from the UMore Legacy Fund to finance costs associated with the design and development of FAARM, including land acquisition, predesign, schematic designs, site preparation and infrastructure, construction, and acquisition of equipment. It also recommends that if debt financing is used, money from the Fund may be used to pay debt service on debt issued for FAARM. Future Board of Regent actions involving FAARM (such as Capital Budget Amendments) will specify when UMore Legacy Funds are to be used as a funding source.



PLANNING, SPACE,
AND REAL ESTATE

UNIVERSITY OF MINNESOTA
Driven to Discover®

UMore Park and Vermillion Highlands Dakota County

- UMore Park
- Vermillion Highlands

As of May 31, 2022

This map is intended to be used for planning purposes only and should not be relied upon where a survey is required.

Base Data: Real Estate Office
University Services GIS, MetroGIS,
MnDNR, MnGeo, Dakota County



**UNIVERSITY OF MINNESOTA
BOARD OF REGENTS**

Board of Regents

October 9, 2009

Agenda Item: Resolutions Related to: (1) Creation and Organization of UMore Development LLC; and (2) Creation, Capitalization and Use of the UMore Park Legacy Fund

review review/action action discussion

Presenters: Vice President/Chief of Staff Kathryn Brown
General Counsel Mark Rotenberg
Associate General Counsel Gregory Brown

Purpose:

policy background/context oversight strategic positioning

Outline of Key Points/Policy Issues:

I. Creation and Organization of UMore Development LLC. At the direction of the Board of Regents, the administration and the Office of the General Counsel have taken steps towards the creation and organization of UMore Development LLC ("Company"). The administration now is seeking Board of Regents' approval and authorization to create the Company.

The Company will act as the University's agent in the management and development of UMore Park. It will negotiate and manage the University's agreement with a private company to mine gravel from the parcel. It will oversee the commercial and residential development of UMore Park. It will identify and recommend to the University one or more private partners for the development of the parcel. It will negotiate the terms of development agreements with University-selected partners and manage performance under the agreements. Revenues earned from the agreement permitting gravel mining and the various development agreements and other funds earned from use or development of UMore Park will belong to the University, and will be deposited in University accounts.

The University will fund the Company's operations. Each year, the University and the Company will agree upon an amount to be paid to the Company to pay its personnel and other expenses. It is intended that the University will be the Company's primary source of money.

To create the Company, Articles of Organization ("Articles") must be submitted to the Minnesota Secretary of State. Pursuant to the Articles, the Company will be a single-member limited liability company, organized under Minnesota law. The University will be the Company's sole member. The University will be entitled to receive all of the Company's distributions. The Company is required to make a distribution to the University if permitted by law and at the request of the University president. Upon dissolution of the Company, the University is entitled to receive the Company's assets remaining after paying its creditors.

To organize the Company, the Oversight and Management Agreement (“OMA”) must be adopted by the Company and approved and executed by the University. Pursuant to the OMA, the Company has a limited purpose: to “oversee the management and development of UMore Park in conformance with the UMore Park Goal Statement and Guiding Principles, endorsed by the Board of Regents of the University on February 6, 2006.” The Company must “act at all times, directly or indirectly, solely to further or promote the University’s teaching, research and service mission.” For federal income tax purposes, the Company will be deemed an integral part of the University, which in turn is an integral part of the state of Minnesota.

A nine-person Board of Governors, appointed by the Board of Regents, will manage and direct the business of the Company. The Board of Governors will include two classes: five (5) “Community Governors,” and four (4) “University Governors.” A three-person committee of the Board of Governors, chaired by a University Governor, will nominate individuals to serve as governors. Once approved by the Board of Governors, the slate of nominated individuals is forwarded to the University president for approval and recommendation to the Board of Regents. The Board of Regents has the sole and final authority to appoint governors.

To ensure the Company has the talent and experience to effectively oversee the management and development of UMore Park, the OMA requires that at least one Community Governor be experienced in real estate development and one be experienced in managing or directing educational or non-profit organizations or projects.

The terms of office for Community Governors are staggered, with the terms of office of one or two Community Governors expiring each year. University employees may not serve as Community Governors. Community Governors will serve, in most cases, three-year terms; the Community Governors on the first board will serve terms of three, two and one year. The Board of Governors has the sole authority to remove an individual Community Governor; the University has the right to remove all the Community Governors as a group. The Company may choose to compensate Community Governors; University Governors are barred from receiving compensation from the Company. University Governors will be University employees who have “direct senior supervisory responsibility for some aspect of the management and development of UMore Park.”

The Board of Governors will act by simple majority in most instances and super-majority in a few specific situations. By requiring that certain acts and transactions be approved by a super-majority, the University ensures that for those significant matters, the Company will not act inconsistently with the University’s wishes. A majority of the University Governors and a majority of the Community Governors must approve the Company: (1) hiring a chief manager and a treasurer; (2) establishing its annual capital and operating budgets; (3) purchasing goods or services of more than \$100,000; (4) lending money; (5) borrowing more than \$50,000 (which also requires the University’s approval); or (6) agreeing to compensate Community Governors for their service.

The chief manager will oversee active, day-to-day management of the Company, assisted by a treasurer. As with all other individuals performing services for the company, the chief manager and the treasurer will be paid University employees. As a University employee, the chief manager will report to a senior University official.

II. Creation and Operation of the UMore Park Legacy Fund. The University will create a UMore Park Legacy Fund (“Fund”) as a University quasi-endowment. After deducting costs incurred by the University to manage and develop UMore Park, including funds for the operations of the Company and costs incurred prior to the creation of the Company to manage and develop the parcel, all net proceeds, revenues and income earned from the management and development of UMore Park or otherwise derived from UMore Park assets will be deposited into the Fund. Assets in the Fund shall be invested in compliance with University policy, including the Board of Regents Policy: Endowment Funds. As directed by the Board of Regents and the University president, all assets from the Fund will be designated and used for long-term support of special academic research, education and public engagement opportunities not otherwise adequately funded by state, federal or tuition resources. It is intended that the Fund will be used to leverage University resources with, but not be a substitute for, public or private support for the University. Fund resources will not be used to reduce or supplant government or private support of the University.

Background Information:

The Board of Regents agreed to a goals statement and guiding principles dated February 6, 2006 for the UMore Park project. Subsequently, by resolution dated December 8, 2006 the Board of Regents directed the administration to:

Maintain the 5000-acre UMore Park property as an intact whole parcel in a manner that supports the University's academic mission;

Prepare a concept master plan for the entire parcel; and

Pursue activities to make the land ready for development.

The Board of Regents has received updates from the administration and acted as follows:

November 10, 2005 – BOR Work Session – Realizing the Mission: Financing Strategies for University Assets

November 9, 2006 – Received UMore Park Report

December 8, 2006 – Adopted Resolution Related to the Planning for the Development of UMore Park

June 12, 2008 – BOR Work Session – UMore Park: Update and Status

December 12, 2008 – Adopted Resolution on UMore Park: Concept Master Plan, Governance Structure and Legacy Fund

President's Recommendation for Action:

The President recommends approval of the resolutions.



REGENTS OF THE UNIVERSITY OF MINNESOTA

RESOLUTION RELATED TO

CREATION AND ORGANIZATION OF UMORE DEVELOPMENT LLC

.....

WHEREAS, in February 2006 the Board of Regents established the goal of developing property at UMore Park, consisting of approximately 5,000 acres of land in Dakota County, Minnesota, in a manner that furthers the University's mission, and agreed to a Goal Statement and Guiding Principles for the project;

WHEREAS, the Board of Regents' Goal Statement declared: "The goal is to develop UMore Park in a manner that furthers the University's mission. A strategic long-range master plan for UMore Park will be developed that prioritizes University needs and considers current regional planning and development activities. This master plan will be developed in a timely manner, but the execution of the plan and the development of the UMore Park property are likely to require as much as 25 years."; and

WHEREAS, the Board of Regents' Guiding Principles stated that the development of UMore Park should:

"Protect and enhance the value of UMore Park through timely planning and action.

"Advance the University's research, education, and engagement mission through the physical and financial resources that UMore Park will provide over the long term.

"Improve the long-term financial health of the University through application of sound fiscal principles and stewardship, including investing the income generated through UMore Park in ways that support academic priorities to complement, supplement, and leverage state and private support.

"Retain oversight of UMore Park's planning and development and remain accountable for the master plan.

“Plan in such a way so as to optimize the value of UMore Park utilizing short-term strategies without restricting options for long-term strategies.

“Utilize market value as a benchmark in assessing alternative development strategies.

“Ensure that all planning and development activities are conducted with the highest standards fairness, integrity, and solid business practice.

“Respect the needs of neighboring communities and local, regional, and state governments”; and

WHEREAS, by resolution dated December 12, 2008 the Board of Regents found that “the creation of a single owner LLC to exercise day-to-day direction, management and supervision of the UMore Park project is consistent with the principles the Board has established, and directed the administration and the General Counsel to “bring to the Board for its further consideration the necessary legal documentation for this recommended structure”; and

WHEREAS, the administration and the General Counsel have prepared Articles of Organization of UMore Development LLC (“Articles”) to create UMore Development LLC as a single-member, Minnesota limited liability company, and an Oversight and Management Agreement for UMore Development LLC (“Oversight and Management Agreement”) to organize the company;

NOW, THEREFORE, BE IT RESOLVED that the Board of Regents approves the Articles and authorizes the General Counsel to file the Articles with the Minnesota Secretary of State, and authorizes the President to sign, deliver and carry out the Oversight and Management Agreement.

BE IT FURTHER RESOLVED, that the Board of Regents authorizes, empowers and directs the President and the General Counsel to undertake on behalf of the University all acts necessary and desirable to effectuate this resolution.



REGENTS OF THE UNIVERSITY OF MINNESOTA

RESOLUTION RELATED TO

**CREATION, CAPITALIZATION AND USE OF THE UMORE PARK
LEGACY FUND**

.....

WHEREAS, in February 2006 the Board of Regents established the goal of developing property at UMore Park, consisting of approximately 5,000 acres of land in Dakota County, Minnesota, in a manner that furthers the University’s mission, and agreed to a Goal Statement and Guiding Principles for the project; and

WHEREAS, by resolution dated December 8, 2008 the Board of Regents directed “the administration and the General Counsel to bring to the Board a legal framework to create a legacy fund from the proceeds, revenues and income derived from UMore Park assets, and that such fund shall be designated for long-term support of special academic research, education and public engagement opportunities not otherwise adequately funded by state federal or tuition resources, and that in no event shall such legacy fund supplant otherwise available government or private funds received by the University.”; and

WHEREAS, the administration and the General Counsel have prepared instruments to create a legacy fund as directed by the Board of Regents;

NOW, THEREFORE, BE IT RESOLVED that the Board of Regents authorizes the creation of a quasi-endowment within the consolidated endowment fund of the University of Minnesota named the UMore Park Legacy Fund (“Fund”); directs that all net proceeds, revenues and income earned from the management and development of UMore Park or otherwise derived from UMore Park assets be deposited into the Fund; directs that all assets in the Fund shall be managed and invested in compliance with University policy; and directs that all assets in the Fund shall be designated and used for long-term support of special University academic research, education and public engagement opportunities not otherwise adequately funded by tuition or state, federal or other resources as determined by the president of the University.

BE IT FURTHER RESOLVED that the Board of Regents directs that no assets in the Fund shall be designated or used to reduce or supplant government or private support of the University.

BE IT FURTHER RESOLVED that the Board of Regents authorizes, empowers and directs the President, the Treasurer, and the General Counsel of the University to undertake on behalf of the University all acts necessary and desirable to effectuate this resolution.



BOARD OF REGENTS DOCKET ITEM SUMMARY

Board of Regents

February, 13, 2015

Agenda Item: Resolution Related to the Reorganization of UMore Park Development Project

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

Presenters: President Eric W. Kaler
Brian Buhr, Dean, College of Food, Agriculture and Natural Resources Sciences
William Donohue, General Counsel
Richard Pfutzenreuter, Vice President and Chief Financial Officer
Pamela Wheelock, Vice President, University Services

Purpose & Key Points

To review and act on recommendations regarding the University of Minnesota Outreach, Research and Education (UMore) Park, representing 5,000 acres of land the University owns in Rosemount and Empire Townships.

The Board will review recent analyses of the University's interests in UMore Park related to agricultural research, remediating contaminated property, its role in development activity, costs associated with development, and the development, management and oversight roles. The Board will also review recommendations related to these issues.

In addition, the Board will act on a proposed new vision for future development of UMore Park and actions to facilitate ongoing University agricultural research on the property. The Board will also act to reassign development, management and oversight from the UMore Development LLC to a multi-disciplinary team of leaders from the University and University of Minnesota Foundation Real Estate Advisors.

Background Information

Current planning and development activities for UMore Park have been ongoing since 2006. In 2008, the Board adopted a master concept plan and vision for UMore Park calling for a sustainable, modern, University-founded community of 20,000 to 30,000 people developed over 25 to 30 years. The Board also authorized gravel mining on a portion of the property.

Since 2008, significant progress has been made to advance the gravel mining operation through appropriate permitting and complete all of the necessary planning with the City of Rosemount and Empire Township (concept master plan completed January 2009) and an Alternative Urban Area-wide Review (completed August 2013). The UMore Development LLC was instrumental in

advancing these efforts and has provided significant expertise during the early stages of this multi-decade project.

While much progress has been made in readying the property for development, given market changes since the 2008 recession, it is both timely and necessary for the University to pause to consider its options; answer critical outstanding questions; reset expectations given new market realities, and; clarify the University's critical interests in order to define the next phase of development activity on the property.

In October 2014, President Kaler charged a group of University leaders with responding to six questions related to outstanding issues and questions and to make recommendations about the future of UMore Park. In January 2015, the workgroup delivered a report to the President that included new analyses about the financial impact of agricultural research, pollution remediation and other financial impacts relating to development activities. The report also found and recommended that:

- The Board pivot from the 2008 vision and adopt a market-driven and market-sensitive approach to development at UMore Park.
- Releases of hazardous substances to soil and physical hazards are present in portions of the site. Total cost associated with addressing known environmental releases and removal of all above- and below-grade concrete structures to facilitate the level of redevelopment contemplated in the UMore Park Concept Master Plan is estimated to be \$20-28 million. The University should complete only the remediation required by the Minnesota Pollution Control Agency at this time. Any further cleanup should await future market-driven redevelopment or sale.
- Research at UMore Park generates significant external funding for the University. In 2014, 518 acres of land were used for research trials supported by grants totaling \$6.3 million. Over the 40-year life of the gravel-mining contract, the loss of agricultural research at UMore Park represents a present value loss of \$71.4 million. The most valuable and extensive land use for research is located in the western region of UMore Park. The University should pursue options with Dakota Aggregate to shield more critical research plots from mining activity for a longer period of time than is outlined in the current contract.
- The University should not be involved directly in vertical development and should only undertake horizontal development in an exceptional circumstance where a clear financial benefit exists.
- The development and management of UMore Park be reassigned to a multi-disciplinary staff team and the UMore Development LLC be dissolved, as the University's needs have changed since the LLC was created in 2009.

The University is deeply appreciative of the UMore Development LLC board members, who have contributed significant expertise, time and commitment, successfully advanced critical planning efforts, and launched the gravel mining operation. These activities leave the property well-positioned to shift towards a more market-driven approach to development in which financial return to support the University's mission is a clear and high priority.

Key Board actions 2006-present:

- October 2013: The Board receives a status report on the completion of elements of the December 2006 Board of Regents resolution that directed the Administration to prepare a concept master plan for the property and to make the land ready for development, and discusses next steps.
- November 2010: The Board affirms and determines that the final Environmental Impact Statement for the UMore Park Sand and Gravel Resources Project adequately addresses all potential environmental issues and concerns. The Board also authorizes the administration to execute a 40-year lease agreement to Dakota Aggregates LLC to conduct phased gravel mining and locate ancillary facilities on the UMore Park property.
- December 2009: The Board appoints the founding members of the UMore Development LLC Board of Governors.
- October 2009: The Board approves the articles of organization of the UMore Development LLC. The Board also authorizes the creation of the UMore Park Legacy Fund.
- December 2008: The Board affirms the concept master plan for UMore Park and directs the University to frame a Limited Liability Company (LLC) to manage development of the property and to pursue the formation of a legacy fund that would capture revenue from future development to support academic mission pursuits.
- November 2008: The Board discusses the UMore Park concept master plan, and a proposal for a governance structure and creation of a legacy fund.
- November 2007: The Board approves a contract with Design Workshop for development of a concept master plan for UMore Park.
- December 2006: The Board approves a resolution directing the University to (1) plan for the entire property, with attentiveness to the academic mission, (2) pursue concept master planning, and (3) make the land ready for development.
- February 2006: The Board establishes eight principles to guide deliberations and decisions regarding UMore Park.

President's Recommendation

The President recommends the Board of Regents review and approve the Resolution Related to the Reorganization of the UMore Park Development Project.



**REGENTS OF THE UNIVERSITY OF MINNESOTA
RESOLUTION RELATED TO THE
REORGANIZATION OF UMORE PARK DEVELOPMENT PROJECT**

WHEREAS, the University embraces UMore Park as a unique development and research opportunity in the region; and

WHEREAS, the University of Minnesota's primary focus is its historical commitment to the people of the State of Minnesota to deliver what the University does best: teaching, research and public service; and

WHEREAS, UMore Park represents a valuable asset that should be used to advance University teaching, research and public service mission and future sale and development of UMore Park land will achieve this goal; and

WHEREAS, the primacy of the University's mission, market conditions and financial realities have compelled the University to embark on a revised vision and strategy for UMore Park aimed at maximizing financial return, avoiding direct financial risk and reflecting the University's values; and

WHEREAS, the future development of UMore Park should be market-sensitive and delivered through market-based projects that represent the highest and best use of the land; and

WHEREAS, the activities, expertise and commitment of UMore Development LLC and its Board of Governors have materially assisted the University in beginning gravel mining operations and in its planning for the development of the land in Rosemount; and

WHEREAS, the president has determined that the University's interest in UMore Park are now best be served and maximized by allowing market forces and private actors to more directly affect the development of the land and therefore the need for the UMore Development LLC to lead future planning is diminished;

NOW, THEREFORE, BE IT RESOLVED that

- a) UMore Park will become a vibrant, market-driven community for residents and business.
- b) UMore Park development will proceed in stages spread across decades, focusing first on those parcels most ready to be developed.
- c) The University will prioritize retention of land determined to be essential for fulfilling our research mission, based upon academic research needs.
- d) UMore Park development that is market-based and led by business, commercial and residential real estate developers will produce the highest potential financial return to the University over time.
- e) Opportunities to incorporate the original Concept Master Plan (2008) vision will be considered when executing transactions involving the sale of UMore Park land, but only to the extent that there is a private market demand for such elements and that such concepts serve to protect or enhance the development value of the remaining site.
- f) The University will maximize its financial return selling land at UMore Park through public processes, at competitive prices, benchmarked to market rates.
- g) To achieve the highest value, the University will engage with city, county and townships and private developers in the planning of, and participation in, development projects at UMore Park.
- h) To protect the future value of the entire property, the University will be actively engaged with local jurisdictions and private parties in ensuring that development projects at UMore Park protect and enhance the value of subsequent development stages. Key strategies to achieve that goal may include site plan review to ensure that infrastructure, open spaces and amenities plans meet long-term development goals.
- i) The University will not take a direct role in vertical development activities. It may participate in horizontal development on an exceptional basis but only to the extent required to achieve a clearly identified University need or to address a University responsibility as part of a broader development activity, and when

such participation is also financially advantageous with an acceptable return on investment.

- j) All land sale proposals must be approved by the Board of Regents. The University intends to advance proposals that are economically sound, compatible with the vision articulated in this resolution, reflective of private sector demand, and in alignment with adjacent community needs, desires, and standards.
- k) Net proceeds derived from the mining of gravel and from land sale transactions will be deposited into the Legacy Endowment as directed by the Board of Regents in 2009.

NOW, THEREFORE, BE IT FURTHER RESOLVED that the Board of Regents authorizes and approves the dissolution of the UMore Development LLC and authorizes, empowers and directs the President to take all acts necessary including executing and delivering instruments in the name of the University, to realize this outcome.

**Capital Budget Amendment:
Main Production Kitchen Renovation, Residence Dining Center
Duluth Campus
Project No. 03-553-23-2339**

1. Basis for Project:

The Main Production Kitchen (MPK) was designed in 1971. The existing kitchen is more than fifty years old, and other than some equipment replacement and minor additions; the space is configured to support an operational model which no longer fits the culinary needs of the modern University student.

2. Scope of Project:

The focus of this project is a complete overhaul of the MPK to meet safety requirements, increase capacity, and achieve operational efficiency. The renovation includes restroom accessibility upgrades, hazardous material abatement, replacement of aging infrastructure, and more efficient storage. Utilizing existing duct space, a new mechanical penthouse will be constructed to house the upgraded HVAC equipment.

3. Campus Plan:

The project complies with the 2013 Duluth Campus Plan as well as the draft of the 2023 Duluth Campus Plan Update.

4. Environmental Issues:

Abatement will be performed as a part of this project. Additional destructive sampling will be needed prior to renovation for certain areas. The project budget includes the associated hazardous materials abatement costs.

5. Cost Estimate:

Construction Cost:	\$17,250,000
<u>Non-Construction Cost (fees, FFE, Tech, UMN Contingency):</u>	<u>\$7,750,000</u>
Project Cost:	\$25,000,000

6. Capital Funding:

UMD Dining:	\$7,500,000
<u>University Debt:</u>	<u>\$17,500,000</u>
Total Funding:	\$25,000,000

7. Capital Budget Approvals:

This project was included as a potential project in the 2024 Annual Capital Budget. The timing of the Predesign did not allow for inclusion in the Annual Capital Budget.

8. Annual Operating and Maintenance Cost:

Facility Operating Cost is not expected to change significantly.

9. Time Schedule:

Proposed Design Completion: April 2024

Proposed Substantial Completion: November 2024

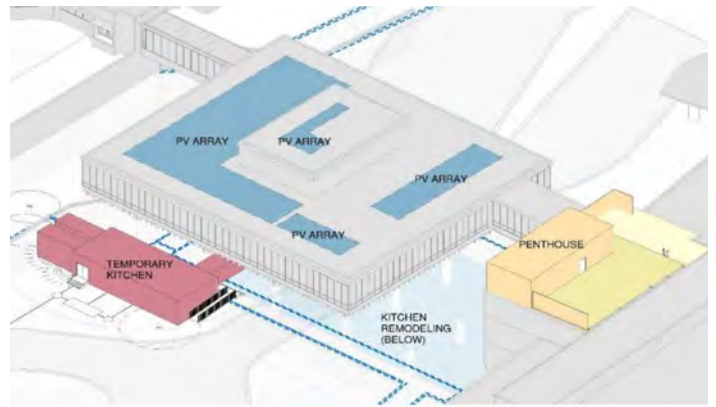
10. Project Team:

Architect: TKDA

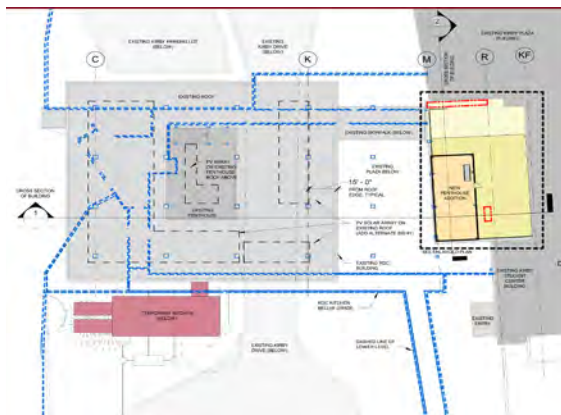
Construction Manager at Risk: TBD



LOCATION MAP



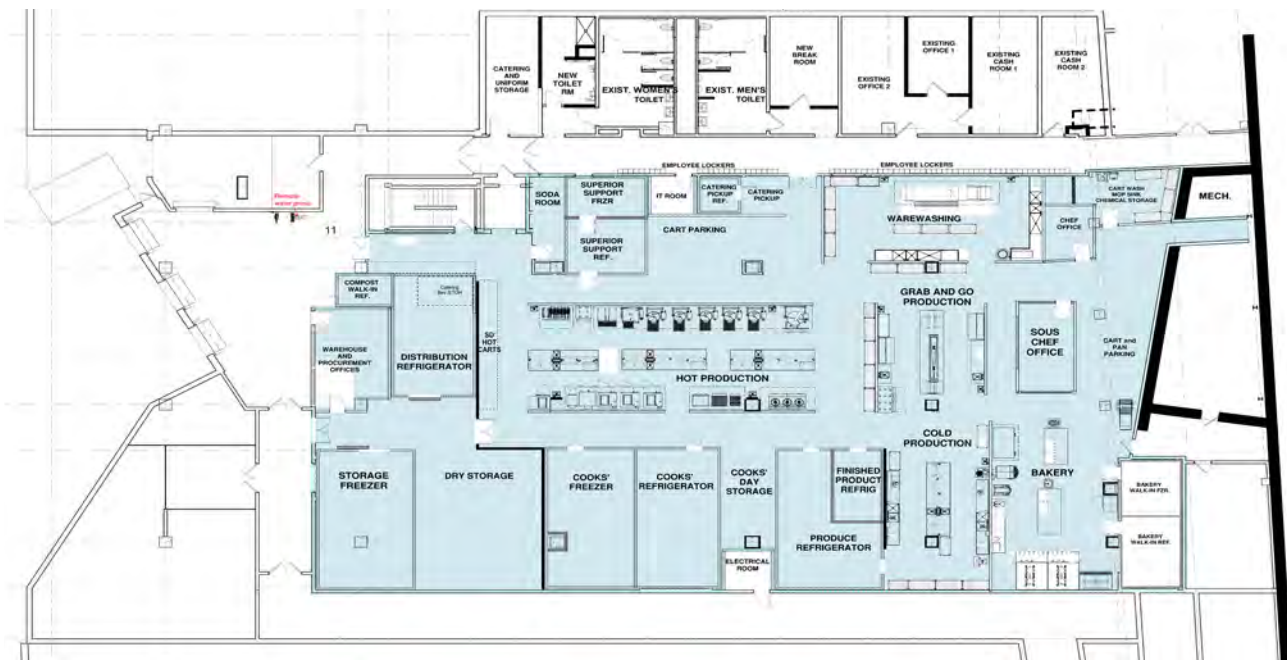
AXON VIEW



SITE PLAN - TEMP KITCHEN AT GROUND LEVEL



PENTHOUSE PLAN



BASEMENT FLOOR PLAN



PROPOSED DESIGN MODIFICATIONS

**Capital Budget Amendment:
Middlebrook Dining Renovation, West Bank
Twin Cities Campus
Project No. 01-208-23-2360**

1. Basis for Project:

Housing and Residential Life proposes to renovate Middlebrook Dining Hall, currently serving 900 first-year residents on the West Bank of the Twin Cities Campus. The original Middlebrook Dining Hall was constructed in 1967, with small upgrades within the last two decades.

The existing food service production and dining experiences do not meet the functional and programmatic goals of today's campus dining experiences. The current dining facility has space inefficiencies, outdated equipment, cluttered back of house organization, inefficiencies for both dining operations and student experience, and lacks an on-display kitchen concept.

The proposed design solutions focus on the functional requirements of a more efficient service model and an improved dining experience for users. The following priorities were established with key stakeholders to guide the project design solutions:

- Improve the dining experience through improved accessibility, circulation, furniture, fixtures, and finishes.
- Replace the traditional cooking and serving line with a "cooking on display" concept, to better align with the expectations of today's students, and provide continuity with other newly renovated dining halls on campus.
- Address outdated systems that support the kitchen and dining area
- Improve the food service employee's experience by focusing on efficiency and access to the back-of-house area.

2. Scope of Project:

The Middlebrook Dining Renovation proposes to renovate the kitchen, serving area and dining room, totaling approximately 16,000 square feet.

The project scope includes demolition and renovation of the dining hall, kitchen, and servery located on the basement of Middlebrook Hall. The project includes select mechanical and electrical infrastructure upgrades that directly service the program areas, replacement of kitchen equipment, improved circulation and accessible access, new finishes, and furniture.

3. Campus Plan:

The project complies with the Twin Cities Campus Plan Update, dated December 2021.

4. Environmental Issues:

The FM Hazardous Material Program completed a hazardous materials survey of the building areas subject to renovation; the project will abate all hazardous materials including asbestos. The budget includes anticipated costs.

5. Cost Estimate:

Construction Cost:	\$11,118,000
Non-Construction Cost:	\$3,953,000
Total Project Cost:	\$15,071,000

6. Capital Funding:

Housing Administration – Housing and Residential Life Reserve:	\$15,071,000
Total Capital Funding:	\$15,071,000

7. Capital Budget Approvals:

This project was identified as a potential project in the 2024 Annual Capital Budget. A capital budget amendment is requested so that construction can begin in 2024.

8. Annual Operating and Maintenance Cost:

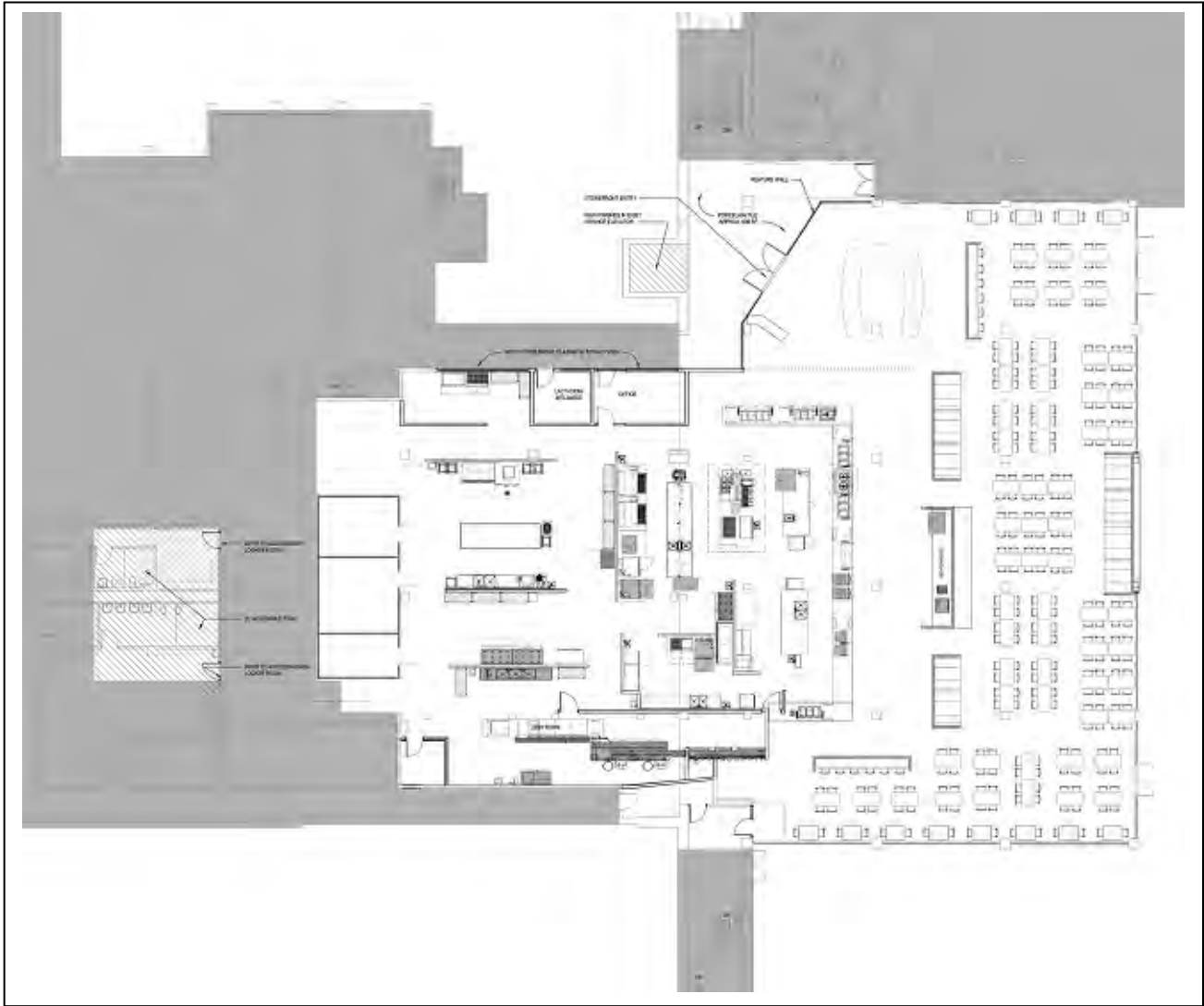
An increase in the operating and maintenance costs is not anticipated with the renovation of Middlebrook Dining Hall.

9. Time Schedule:

Proposed Design Completion: January 2024
Proposed Substantial Completion: August 2025

10. Project Team:

Architect: DLR Group
Construction Manager at Risk: TBD



**Board of Regents
Finance & Operations Committee
Consent Report
September 7, 2023**

Personnel Appointment

Pending approval by the Board of Regents, Melinda M. Pettigrew will be appointed dean of the School of Public Health, effective December 29, 2023.

Position Overview

As dean of the School of Public Health, Melinda Pettigrew will report to the executive vice president and provost and serve as the school's chief administrative and academic officer, providing collaborative leadership to maintain and enhance the School of Public Health as a leader in advancing population health and health equity in Minnesota and beyond. Building on the School's strengths and its strategic plan, the dean is responsible for providing intellectual leadership and administrative oversight of, and accountability for, the educational, research, service, and public engagement activities of the School. The dean oversees the responsible planning, stewardship, and management of fiscal, capital, and human resources of the School; administers top-rated graduate programs and a newly established undergraduate program; and collaborates with faculty, students, and staff to create and sustain a unified vision for the School and to advance the School's quality, reputation, stature, and goals.

The School of Public Health is currently ranked as the #6 public school of public health by U.S. News & World Report (#11 overall), with several programs ranked in the top 10 in their field. The School's academic programs include 15 master's programs, four doctoral programs, a newly established undergraduate program, and many dual degree and certificate programs. The dean provides leadership and aligns resources for the recruitment and retention of distinguished faculty, students, and staff; promotes and fosters diversity, equity, and inclusion as foundational values central to academic success; garners support from both internal and external stakeholders; leads efforts to secure philanthropic support for the School's academic mission; and enhances community partnerships and impact, promoting research and outreach efforts that engage the University and its partners appropriately in state, national, and international issues.

The dean represents the School of Public Health in University-level discussions and strategic initiatives and works with other collegiate deans as a member of the Twin Cities Deans Council to advance the educational mission of the University and to develop joint educational and research activities. The dean also collaborates with system leaders on programs to advance the University's collective mission and vision, including opportunities reflected in the MPact 2025 Systemwide Strategic Plan.

Appointee's Background and Qualifications

Melinda Pettigrew comes to the University of Minnesota from Yale University, where she is currently deputy dean of the School of Public Health and Anna M.R. Lauder Professor of Epidemiology. She previously served as interim dean of the Yale School of Public Health and, for nearly a decade, served as associate dean (2011–17) and senior associate dean for academic affairs (2017–22). Among other accomplishments, she has led the development of innovative degree and

certificate programs as well as multidisciplinary concentrations in U.S. health, justice, climate change, global health, and public health modeling. Her collaborative leadership experience includes strategic and budgetary planning, educational policy and program development, equity and diversity, faculty development, curricular review and reform, teaching and research alignment, and community-based public health practice opportunities for students. She has held numerous leadership roles centered on diversity, equity, and inclusion, including serving as deputy Title IX coordinator at Yale's School of Public Health and executive board member for the School of Medicine's Committee on the Status of Women in Medicine

Dr. Pettigrew holds a doctorate in epidemiology from Yale University and a bachelor's degree in biology from Grinnell College. An internationally recognized infectious disease epidemiologist, her research focuses on the growing global public health threat of antibiotic resistance, bringing together laboratory research, population-based analysis, and One Health approaches to identify factors that lead to the emergence and transmission of antimicrobial-resistant bacteria. An experienced academic leader and accomplished researcher, she is also a highly regarded teacher and educator who has received multiple teaching awards.

Recommended Salary and Appointment Type

Melinda Pettigrew's annual salary as dean of the School of Public Health will be \$360,000. Her appointment as dean is a 100%-time, A-term (12-month) L-type (limited) appointment in the academic professional and administrative personnel classification, an at-will employee position reporting to and serving at the pleasure of the Executive Vice President and Provost. The full employment agreement between the University of Minnesota and Melinda Pettigrew is attached as an exhibit. There are no individually negotiated terms of employment or separation agreements.

Comparable Market Data

Benchmarking with the University's Annual Review of Senior Leader Compensation, which was presented to the Board of Regents last year, shows comparative base salary data among University of Minnesota peers for the position of Dean, School of Public Health. The report provides market data from the CUPA-HR Administrators in Higher Education Salary Survey and the CUPA-HR Executive Compensation and Benefits in Higher Education survey, encompassing a broad range of participant institutions that includes both public and private institutions. The Office of Human Resources has further detailed comparable market data for base compensation for this position aged to July 2023 for FY23-24, benchmarked among Carnegie Class R1 peers, as follows:

10th percentile - \$315,817
25th percentile - \$356,407
50th percentile - \$404,796
75th percentile - \$450,941
90th percentile - \$590,298

Recommendation

The President recommends the appointment of Melinda Pettigrew to the position of dean of the School of Public Health at the University of Minnesota.

EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT is entered into as of this 5th day of July, 2023, by and between Regents of the University of Minnesota, a Minnesota constitutional educational corporation (the “University”), and Melinda M. Pettigrew (“Melinda Pettigrew,” “you”).

WHEREAS, the University wishes to employ Melinda M. Pettigrew as Dean of the School of Public Health and Melinda Pettigrew wishes to accept employment as Dean of the School of Public Health;

WHEREAS, this Employment Agreement is subject to the approval of the Board of Regents of the University of Minnesota and the completion of a background check satisfactory to the University;

THEREFORE, the University and Melinda Pettigrew agree as follows, subject to the approval of the Board of Regents:

I. EMPLOYMENT TERM AND DUTIES

Subject to the terms and conditions of this Agreement and University Policies and Procedures, the University appoints Melinda Pettigrew as Dean of the School of Public Health, and she agrees to be so employed by the University for a term commencing on December 29, 2023. The Dean of the School of Public Health is a 100-percent time, 12-month L appointment in the professional and academic personnel classification who serves as an at-will employee at the pleasure of the Executive Vice President and Provost. As such, you report to and serve at the pleasure of the Executive Vice President and Provost and your appointment may be terminated at any time without advance notification.

II. DUTIES

During the term of your employment as Dean of the School of Public Health, you will diligently and consciously devote your full-time attention and best efforts in performing and discharging the duties of Dean of the School of Public Health as they are set forth in the job description for this position (attached) including, but not limited to, the following duties:

A. Serving as the chief academic and executive officer for the School of Public Health, providing strategic and intellectual leadership and administrative oversight of, and accountability for, the educational, research, service, outreach and engagement activities of the school;

B. Overseeing the responsible planning, stewardship, and management of fiscal, capital, and human resources of School of Public Health;

C. Collaborating with faculty, students, and staff to create and sustain a unified vision for the School of Public Health and to maintain and enhance the school's quality, reputation, stature, and goals;

D. Providing leadership in, and aligning resources with, the recruitment and retention of excellent and diverse faculty, students, and staff;

E. Overseeing an inclusive culture and commitment to advancing diversity, equity, inclusion and belonging, and eliminating health disparity;

F. Deepening the School of Public Health's relationships with the state's world class health care delivery systems, and garnering support for the school from both internal and external stakeholders;

G. Leading efforts to secure philanthropic support and generate revenue for the School of Public Health's academic mission;

H. Enhancing community and industry partnerships and impact and promoting efforts that engage the University and its partners appropriately in state, national, and international issues;

I. Performing such other duties as related to your employment position and assigned to you by your appointing authority.

III. PERFORMANCE

In accordance with University policy, you will receive regular annual performance evaluations and, in accordance with University Policy on Reviewing the Performance of Senior Leaders, you will receive a broader systemic review of your performance no later than the end of your third year in the position.

IV. FACULTY APPOINTMENT

In addition to your appointment as Dean of the School of Public Health, you will also hold an appointment as a tenured professor in the school. During the time you serve as Dean of the School of Public Health, you will not receive any compensation for your faculty appointment, but a salary for this appointment will be established each

year by the University, based on the average increase to base of your same-ranked collegiate peers. In the event you no longer are employed as Dean of the School of Public Health and retain this faculty appointment, this will be your established faculty salary.

V. COMPENSATION

A. Subject to the terms of this Agreement for all services provided by you on behalf of the University, the University shall pay you an annual salary of Three Hundred Sixty Thousand and No/100 Dollars (\$360,000).

B. All base salary shall be paid in accordance with the University's regular payroll procedures for Professional and Administrative employees and shall be subject to withholding for applicable federal and state income taxes, federal social security taxes, and other applicable taxes and deductions.

C. In accordance with University policies and procedures, you shall be eligible for salary increases on an annual basis based upon the evaluation of the appointing authority or his/her designee.

D. The base salary is subject to furloughs, pay freezes, salary reductions or other adjustments to the same extent they are required of other employees of the University.

VI. BENEFITS

The University shall provide you with a benefits program as provided generally for its Professional and Administrative employees as described in its policies and Procedures (<http://www.umn.edu/ohr/benefits/summary/>). These programs shall be subject to amendments and modifications by the University.

VII. SEPARATION

A. Your appointment as Dean of the School of Public Health is an L appointment, which means you serve at the pleasure of your appointing authority. Your appointment may be terminated without any required notice period.

B. In the event you are separated from your administrative position, you may be eligible for certain benefits provided by the University, in accordance with University policy. Any exception from or waiver of University policy related to your separation must be approved by the Board of Regents.

C. If you are a faculty member at the end of your administrative appointment, you may return to the faculty at your established faculty salary.

VIII. UNIVERSITY POLICIES AND GENERAL CONDITIONS

A. Your appointment is subject to the University's policies and procedures that govern your position (<http://policy.umn.edu/>), which may be amended from time to time.

B. **Amendment.** Any amendment to this Agreement shall be in writing executed and delivered by the parties.

C. **Parties In Interest/Assignment.** This Agreement shall be binding upon and the benefits and obligations provided for herein shall inure to the parties hereto and their respective heirs, legal representatives, successors, assigns, transferees or donees, as the case may be. No portion of this Agreement shall be assignable without the prior written consent of the other party.

D. **Effect of Prior Agreements.** This Agreement is intended by the parties as the final and binding expression of their contract and agreement and as the complete and exclusive statement of the terms thereof. This Agreement supersedes and revokes all prior negotiations, representations, and agreements, whether oral or written, relating to the subject matter hereof.

E. **Enforceability.** If any provision contained herein shall be deemed or declared unenforceable, invalid, or void, the same shall not impair any of the other provisions contained herein, which shall be enforced in accordance with their respective terms.

F. **Construction.** The headings preceding and labeling the sections of this Agreement are for the purpose of identification only and shall not in any event be employed or used for the purpose of construction or interpretation of any portion of this Agreement. No waiver by any party of any default or nonperformance hereunder shall be deemed a waiver of any subsequent default or nonperformance. As used herein and where necessary, the singular shall include the plural and vice versa, and masculine, feminine and gender neutral expressions shall be interchangeable.

IX. BOARD OF REGENTS APPROVAL

This agreement is subject to formal approval by the Board of Regents and shall not be binding or effective until such approval is given. This agreement is also subject to the completion of a background check that is satisfactory to the University.

IN WITNESS WHEREOF, the undersigned have caused this Agreement to be executed as of the date first shown above.

By:



Melinda M. Pettigrew

REGENTS OF THE UNIVERSITY OF MINNESOTA

By:



Rachel T. A. Croson
Executive Vice President
and Provost

Approved as to Form and Execution

By:



Douglas R. Peterson
General Counsel

**LAND EXCHANGE FOR PROPERTIES ON
350TH AVENUE AND STATE HIGHWAY 14, WASECA
UNIVERSITY OF MINNESOTA
SOUTHERN RESEARCH AND OUTREACH CENTER (SROC)**

1. Recommended Action

The President recommends that the appropriate administrative officers receive authorization to complete a land exchange between the Regents of the University of Minnesota and Conagra Foods Packaged Foods, LLC, a Delaware limited liability company (Conagra).

2. Location and Description of the Property

Conagra owns approximately 227 acres at 11393 – 350th Avenue in the city of Waseca. Conagra proposes to split off and transfer to the University approximately 26 acres from their property. The 26 acre parcel is adjacent to other SROC property. See attached map.

The University owns approximately 12 acres on the SW corner of Highway 14 and 128th Street in Waseca. The parcel is separated from the core of the SROC campus by Highway 14. See attached map.

3. Basis for Request

The University was approached by Conagra requesting that the University consider a possible land exchange. Conagra proposes to transfer to the University approximately 26 acres in exchange for the 12 acre University property. Conagra wishes to acquire the parcel to install environmental monitoring infrastructure for their operations.

The proposal is for the University to receive more land than it is contributing to the exchange. This difference is due to the fact the land that the University will receive has been fallow for several years. The extra acreage received by the University is intended to offset the uncertainty regarding soil performance and how it may impact the SROC's research programs in the short-term. The additional acres that the University will receive as part of the exchange will advance the University's research mission and the University property to be exchanged will positively impact the community – allowing to advance our relationships with industry and supporting industry's environmental compliance.

4. Details of Transaction

Both the University and Conagra agree to convey all rights of their respective property to the other party, including mineral rights. It should be noted that the Administrative Policy/Procedure for Acquiring and Disposing of University Property states that “*The University reserves minerals and mineral rights when it conveys real estate.*” However, given the location, configuration, and size of the exchanged parcels the University has determined that it is in our best interests to exclude our reservation of mineral rights as part of this land exchange. Conagra will be responsible for all costs associated with the land exchange, including but not limited to closing costs and due diligence (title searches, surveys, entitlements, subdivision, environmental site assessments, etc.).

5. Use of Properties

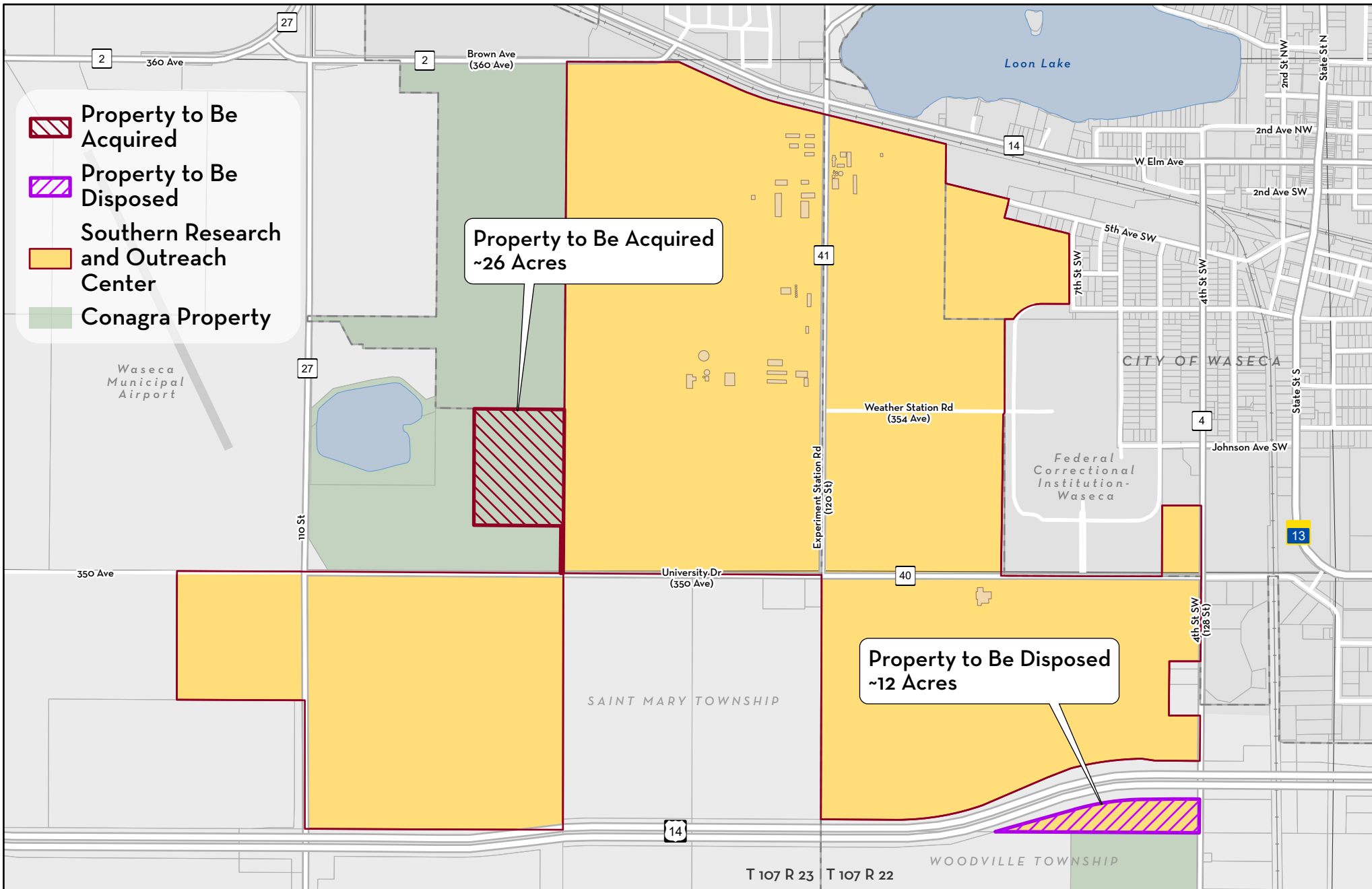
The College of Food, Agricultural, and Natural Resource Sciences (CFANS) has assessed the proposed exchange and has determined that it is in the best interest of the SROC. The SROC intends to rebuild the soil content of the received 26 acres to support vegetable and crop research and production over time.

6. Environmental

Conagra will complete a Phase I environmental site assessment for both properties subject to the exchange to confirm that properties are in acceptable environmental condition.

7. Source of Funding

The University will incur no expense as part of this land exchange.



PLANNING, SPACE,
AND REAL ESTATE

UNIVERSITY OF MINNESOTA
Driven to Discover®

Land Exchange with Conagra Southern Research and Outreach Center Waseca County



This map is intended to be used for planning purposes only and should not be relied upon where a survey is required.

Base Data: Real Estate Office
University Services GIS, MnDOT,
Waseca County, MnDNR

7/24/2023

**PURCHASE OF 160 ACRES – KENNETH AND LEONA ROBINSON
UDOLPHO TOWNSHIP, MOWER COUNTY, MN
(University’s FAARM Program)**

1. Recommended Action

The Senior Vice President for Finance and Operations recommends that the appropriate administrative officers receive authorization to purchase 160 acres of farmland in Udolpho Township, Mower County, Minnesota. President Ettinger has recused himself from this recommendation as is consistent with his conflict management plan.

2. Location and Description of the Property

The subject property is located south of 320th Street and west of 550th Avenue. It consists of approximately 160 acres of farmland with no on-site structures. The farmland has been tilled and rotated for corn and soybeans for many years.

The legal description of the property is as follows:

Tax parcel ID number is: 18.014.0010, Udolpho Township, Mower County, Minnesota. The legal description will be finalized upon completion of an ALTA land title survey.

3. Basis for Request

FAARM is a key component of the MPact 2025 Systemwide Strategic Plan goal to develop and deploy new techniques and partnerships for smart farming and sustainable food supplies, as well as expanding, developing, and retaining agricultural and food system talent in rural communities and agribusinesses. FAARM centers around the development of an integrated and advanced agricultural research and education complex dedicated to improving the health of animals, humans, and the environment at local, regional, and global scales. The University, in collaboration with Riverland Community College of Minnesota State, will facilitate the development of a new digital, autonomous, and integrated advanced agricultural complex that studies the intersection of human, animal, plant, and environmental health.

The FAARM feasibility study conducted by Flad Architects for the University identified the need to acquire approximately 1,600 of nearly contiguous acres of land in Mower County to support the FAARM program. Pursuant to this feasibility study, the University identified several potential areas in Mower County that met our location criteria. The University has been working with landowners in the area on this complex land assembly process. This 160-acre parcel is central to the University’s acquisition strategy.

4. Details of the Transaction

The owners/sellers are Kenneth and Leona Robinson, with Mae Cox (mother of Kenneth Robinson) having a life estate in the property.

Due to the life estate, the Robinsons will grant the University an option to purchase the property upon the death of Mae Cox. Concurrent with the execution of the Purchase Option Agreement, the University will also enter into a Lease Option Agreement for a ground lease with the Robinsons and Mae Cox to allow for University use while Mae Cox holds the life estate.

Under the Lease Option Agreement, within 3 days of the effective date (execution by both parties), the University will deposit a \$5,000 option payment with the Title Company. The option period runs through December 31, 2023 and the University may exercise its option at any time during the option period by providing notice to the sellers and depositing \$40,000 of earnest money.

Under the Lease Option Agreement, closing would occur within 30 days of exercising the option, at which time a ground lease would be entered into. The option payment and earnest money deposit will be applied to the initial payment of rent due under the ground lease at closing. If the University does not exercise its option, the \$5,000 option payment is retained by the sellers as compensation for restricting their ability to sell the property to another buyer during the option period.

If the University exercises the lease option, the initial term of the ground lease will be for five (5) years with the right to extend the term for one (1) additional five (5) year period. Ground rent will be \$75,000 each year of the term. If the University exercises the lease option, it is also obligated to exercise the purchase option (the purchase option period is concurrent with the lease option period).

The total purchase price associated with the Purchase Option Agreement for this transaction is \$2,000,000 or \$12,500 per acre (consistent with the appraisals obtained by the University for the properties in the area), provided that the closing occurs on or before the third-year anniversary of the Effective Date. Following the third-year anniversary, the purchase price will be increased by three percent (3%) on each successive anniversary of the Effective Date. The purchase closing will occur no later than six (6) months following the death of Mae Cox, at which time the ground lease will terminate.

The University will use the concurrent option periods to complete its due diligence and obtain Board of Regents approval.

5. Use of Property

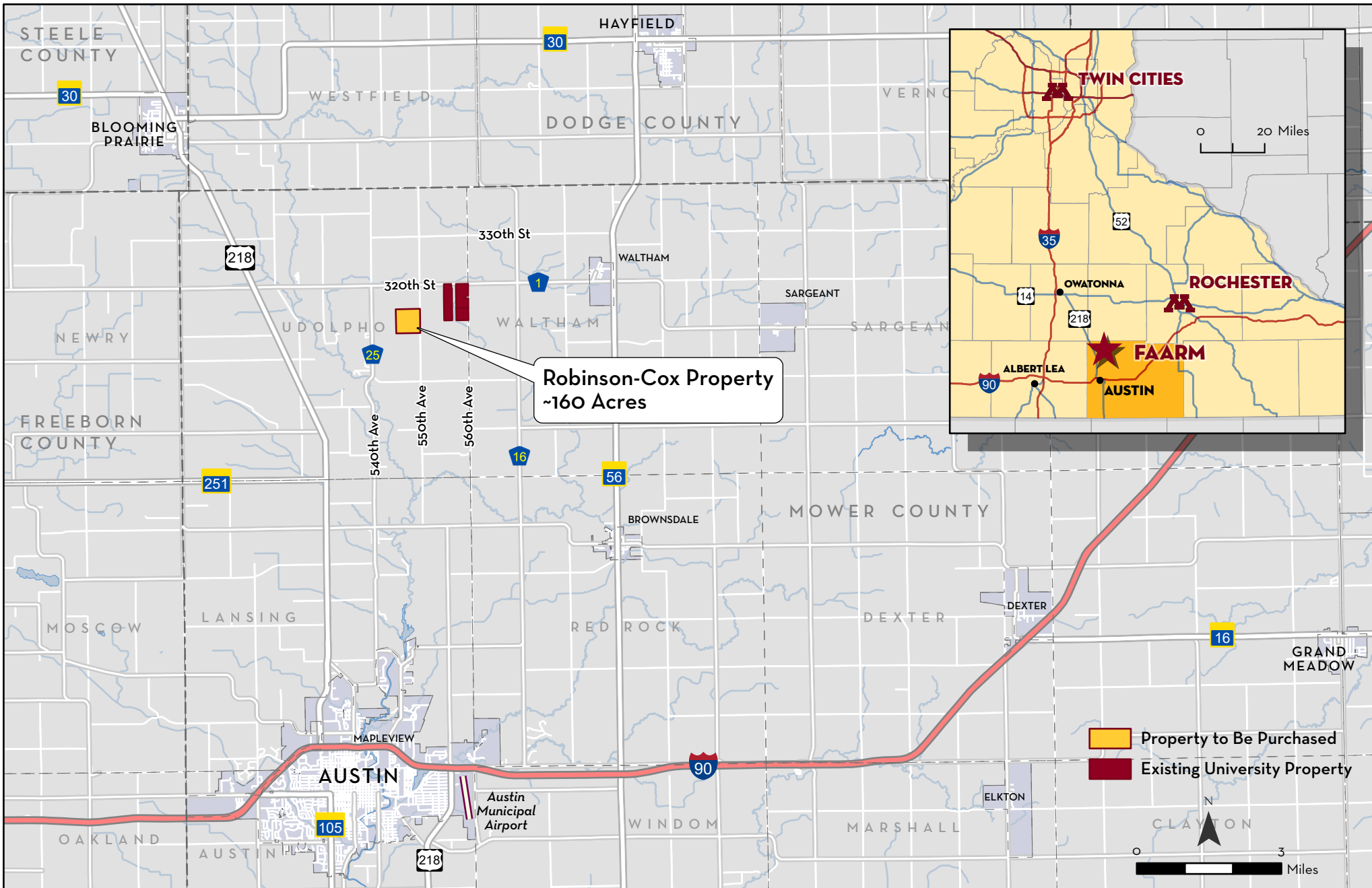
The University will use the property for the FAARM program. The specific use of the site will be determined during the design process.

6. Environmental

The University will complete the necessary environmental due diligence prior to closing on the ground lease.

7. Source of Funds

The University will use a combination of debt and cash to fund the lease and purchase.



PLANNING, SPACE,
AND REAL ESTATE

UNIVERSITY OF MINNESOTA
Driven to Discover®

**FAARM Acquisition:
Kenneth and Leona Robinson and Mae Cox
~160 Acres, Sec. 14, Udolpho Twp, Mower County**

This map is intended to be used for planning purposes only and should not be relied upon where a survey is required.

Base Data: Real Estate Office,
University Services GIS, MnDOT,
MnDNR, MnGeo

6/14/2023

**NINE-YEAR OFFICE LEASE FOR
LEARNING ABROAD CENTER
11 AVENUE D'ASSAS 34000 MONTPELLIER, FRANCE**

1. Recommended Action

The President recommends that the appropriate administrative officers receive authorization to execute a lease agreement to University Student Services Association through the University of Minnesota Learning Abroad Center for a 9-year lease term of September 15, 2023 to September 14, 2032.

2. Description of Leased Premises

The proposed leased premises consists of 1,066 (99 m²) square feet of training center space on the ground floor and 1,646 (153 m²) of office on the first floor for a total of 2,712 (252 m²) square feet, including 2 parking spaces in the basement of the Acreaux Office Building, located at 11 Avenue d'Assas, 34000 Montpellier, France. (see attached map).

3. Basis for Request

The Learning Abroad Center has been running a successful study abroad program in Montpellier, France for forty (40) years. In 2004, the University of Minnesota established the University Student Services Association (USSA), a legal entity in France, to operate the Montpellier Program Center. The Learning Abroad Center currently leases and plans to vacate 2,583 (240 m²) rentable square feet at 6 Impasse Cité Gelly, 34000 Montpellier, France. Their current lease is expiring, and new lease terms would include a significant increase in costs and new use restrictions for the premises that impair the operation of the Center's program.

4. Details of Transaction

The new lease for approximately 2,712 square feet will be a 9-year lease from September 15, 2023 through September 14, 2032. The standard commercial lease in France is a mandatory minimum of nine years, with the tenant's right to terminate prior to the third year and sixth year.

5. Lease Costs

The base rent for the leased premises for year one will be \$20.33 per square foot (SF) or \$55,145. Base rent will increase annually per the Tertiary Activity Rent Index (ILAT) published by the National Institute of Statistics and Economic Studies (INSEE). The total base rent over the 9-year term is \$530,740. The total base rent includes a 11.5 month base rent concession of \$52,846 from the Landlord.

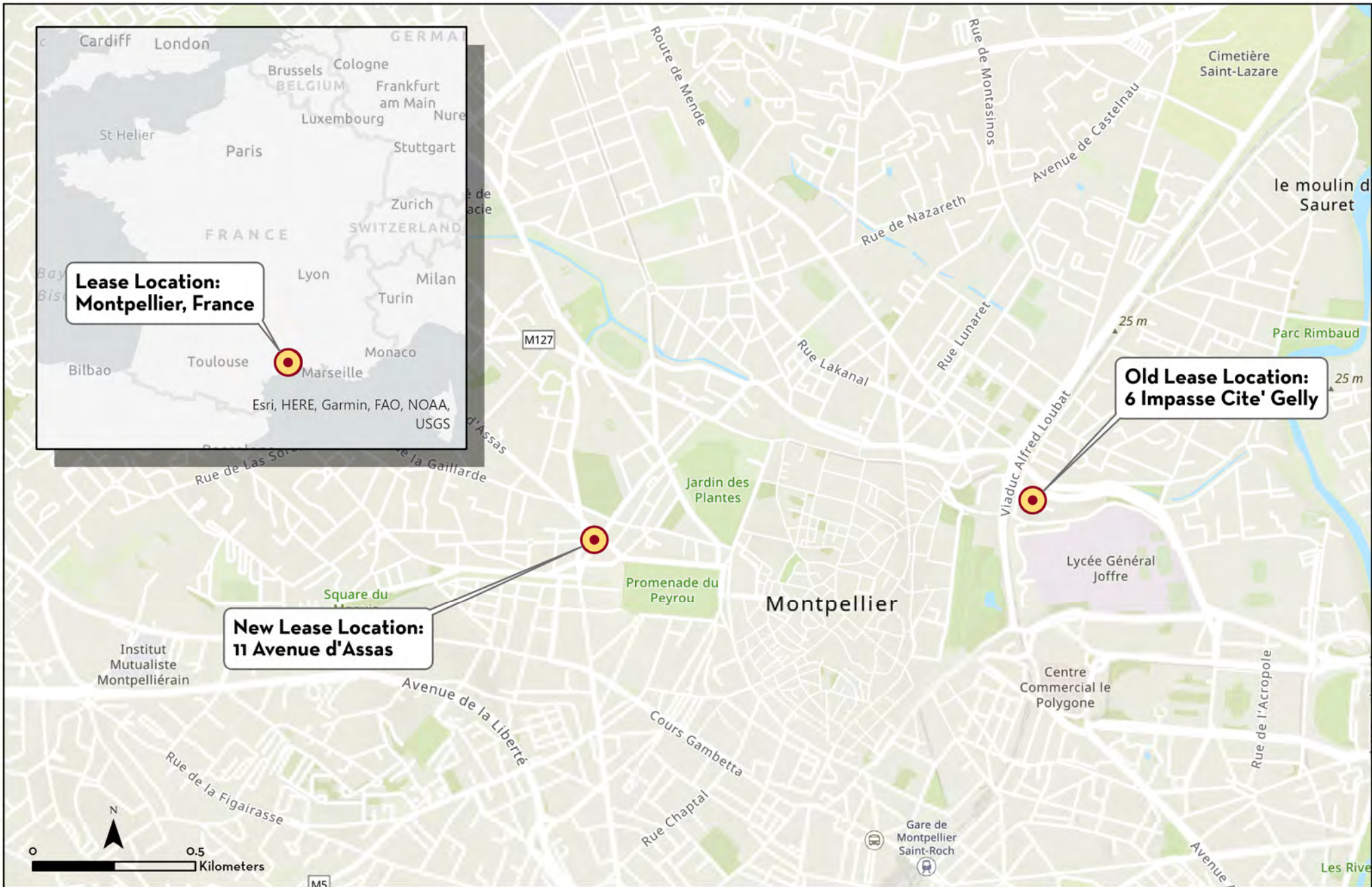
The University will also pay as additional rent its pro-rata share of operating expenses, common area maintenance costs (CAM), utilities, and property taxes for the building. The current estimate for this additional rent is \$6.24 per square foot or approximately \$16,935 per year. A 3-month base rent security deposit of \$13,786 is required per the terms of the agreement. Additionally, CBRE Toulouse France was engaged to facilitate the search for new premises and lease negotiations which results in their fee of \$9,264.

Per standard real estate practices in France, the University will be completing the design and leasehold improvements to renovate the space at an estimated cost of \$280,934 to meet the programs needs for faculty, staff, and students.

The estimated total lease cost (including tenant improvements) over the course of the 9-year term to be approximately \$1,006,800. Total lease costs will vary based upon the ILAT increases and the Dollar to Euro exchange rate.

6. Source of Funds

The renovation and ongoing lease costs for the 2,712 (252 m²) square feet of space will be funded through the Learning Abroad Centers' Minnesota Studies in International Development (MSID) Montpellier Program budget.



PLANNING, SPACE,
AND REAL ESTATE

UNIVERSITY OF MINNESOTA
Driven to Discover®

Learning Abroad Center France Office Lease Montpellier, France

This map is intended to be used for planning purposes only and should not be relied upon where a survey is required.

Base Data: Real Estate Office, ESRI
8/10/2023

**Schematic Design
Cedar Creek Classroom Expansion
Cedar Creek Reserve
Project No. 25-120-21-1281**

1. Basis for Project:

The College of Biological Sciences (CBS) proposes to construct an addition to the existing 6,000 GSF Raymond L. Lindeman Research and Discovery Center at the Cedar Creek Ecosystem Science Reserve biological field station in East Bethel, Minnesota. The donor-funded project will add two new classrooms, restrooms, a lactation room, service, and circulation areas to support the continuous outreach and growth of K-12 educational field trips, communal events, programs, and ongoing lab/field research.

2. Scope of Project:

The fully accessible single-story addition to the Lindeman Center is 3,320 GSF. The addition will encompass site improvement, utility upgrades, and replacing the existing septic system.

3. Campus Plan:

This project is not applicable to a Campus Plan.

4. Environmental Issues:

No known soil or subsurface environmental issues.

5. Cost Estimate:

Construction Cost:	\$2,091,000
<u>Non-Construction Cost (fees, FFE, Tech):</u>	<u>\$799,000</u>
Project Cost:	\$2,890,000

6. Capital Funding:

<u>CBS Donor Funds:</u>	<u>\$2,890,000</u>
Total:	\$2,890,000

7. Capital Budget Approvals:

This project was approved as a part of the FY 2024 Annual Capital Budget at the June 2023 Board of Regents meeting.

8. Annual Operating and Maintenance Cost:

Estimated Facility Operating Cost (*net increase*) \$3,500/ year

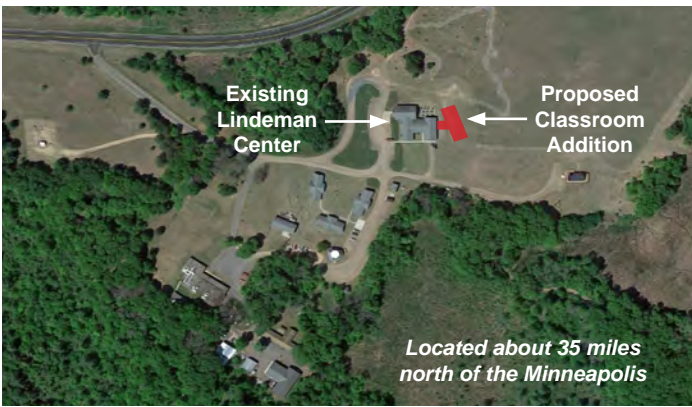
9. Time Schedule:

Proposed Design Completion: October 2023

Proposed Substantial Completion: August 2024

10. Project Team:

Design-Build: H+U Construction with U+B Architecture



LOCATION MAP



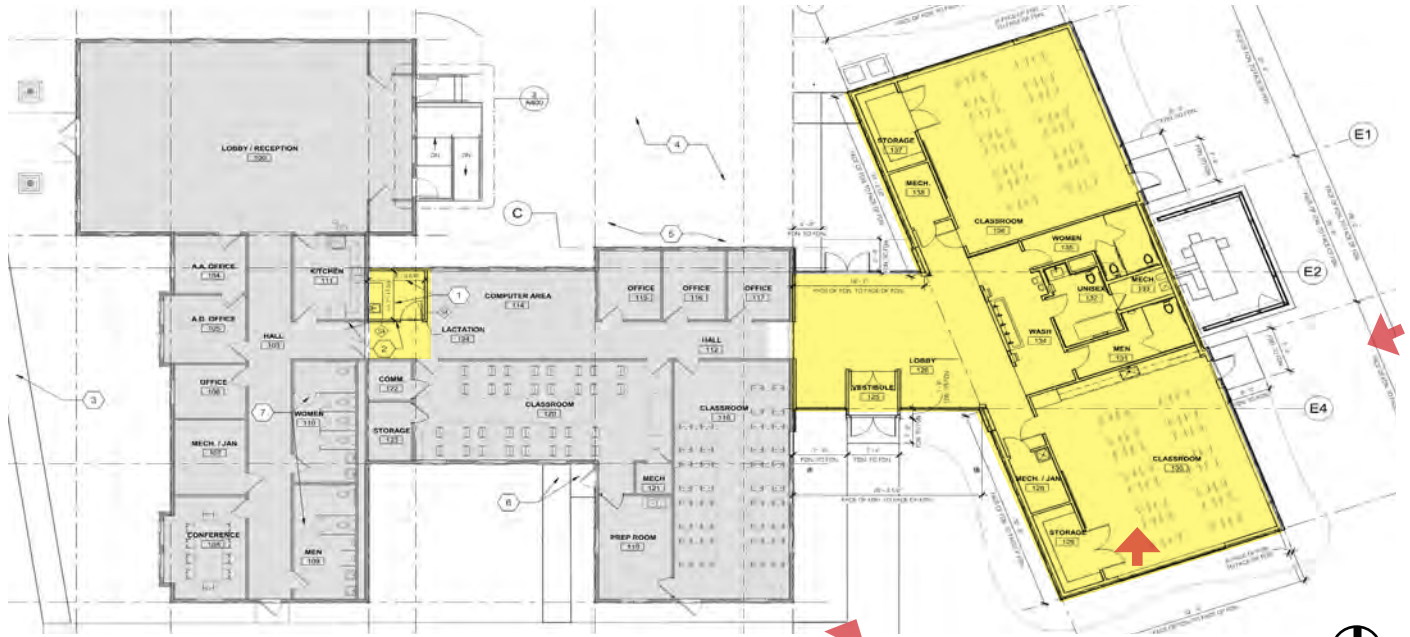
EXTERIOR RENDERING - EAST FACADE



EXTERIOR RENDERING - SOUTH ENTRANCE



INTERIOR RENDERING - CLASSROOM



FLOOR PLAN

PROPOSED DESIGN MODIFICATIONS

INDICATES RENDERING LOCATIONS

**Schematic Design
Shepherd Lab Renovation (3-5 Floors), East Bank
Twin Cities Campus
Project No. 01-125-22-1956**

1. Basis for Project:

The College of Science and Engineering (CSE) is a continued leader in the fields of Science, Engineering, and Robotics and has experienced exceptional growth over the past 25 years. With the completion of the Lind Hall Renovation in 2022, vacated critical space within Shepherd Laboratory became available, allowing the opportunity to accommodate the growth and consolidation of the Computer Sciences and Engineering Department (CS&E) and revitalization of the Aerospace Engineering and Mechanics Department (AEM). Objectives include:

- Develop spaces to pioneer research and service delivery approaches to improve research; provide flexibility in space design to accommodate changes in types of research and users; create welcoming workspaces that provide collaboration between groups; consolidate dispersed programs to allow future strategic department moves.
- Complete the building renovation begun in 2017 (1st, 2nd and partial 5th floors).
- Relocate the CEGE lab to the first floor of the Civil Engineering Building.
- Review MEP infrastructure requirements to support long-term building needs.
- Address required code upgrades at select floors.
- Create an energy-efficient building infrastructure that meets SB2030 B3 3.2v requirements.

2. Scope of Project:

This project fully renovates the existing third and fourth floors and approximately two-thirds of the fifth floor in Shepherd Laboratories (located at 100 Union St SE) for the College of Science and Engineering. The 33,000 GSF renovation will accommodate new robotics, virtual reality, augmented reality and graphics visualization, human-computer interaction, social computing, and natural language processing.

The project includes select mechanical and electrical infrastructure upgrades to support program and long-term building infrastructure requirements.

3. Campus Plan:

The project complies with the Twin Cities Campus Plan dated December 2021.

4. Environmental Issues:

The FM-Hazardous Material Program has completed a full hazardous materials survey of the building subject to renovation. The project will abate all hazardous materials, which include but are not limited to asbestos and mercury.

5. Cost Estimate:

Construction Cost:	\$ 26,820,000
<u>Non-Construction Cost:</u>	<u>\$ 3,080,000</u>
Total Project Cost:	\$ 29,900,000

6. Capital Funding:

CSE Dean's Office Admin-Program:	\$ 5,000,000
CSE University Debt:	\$ 19,400,000
UMTC FM Repair and Replacement (R&R):	\$ 1,802,200
UMTC Utility ISO:	\$ 75,800
UMTC HEAPR:	\$ 3,622,000
<hr/>	
Total Capital Funding:	\$ 29,900,000

7. Capital Budget Approvals:

This project was approved as a part of the FY 2024 Annual Capital Budget at the June 2023 Board of Regents meeting.

8. Annual Operating and Maintenance Cost:

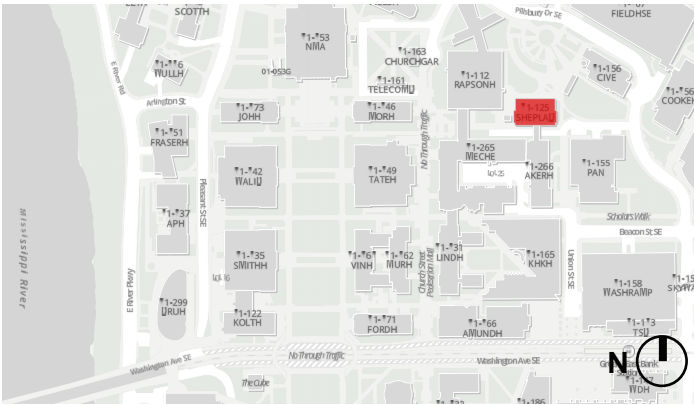
Estimated Facility Operating Cost (net decrease) (\$247,000)

9. Time Schedule:

Proposed Construction Start: June 2024
Proposed Substantial Completion: April 2025

10. Project Team:

Architect: BWBR
Contractor (CMaR): Knutson Construction



LOCATION MAP



NORTH FACADE



4TH FLOOR PLAN



5TH FLOOR PLAN



3RD FLOOR PLAN

LEGEND

- CONFERENCE
- OFFICES
- SHARED LAB
- COLLABORATION
- STORAGE
- EXISTING
- CORRIDOR
- BUILDING SUPPORT



PROPOSED DESIGN MODIFICATIONS

**Schematic Design
Women's Gymnastics Building, East Bank
Twin Cities Campus
Project No. 01-184-23-2320**

1. Basis for Project:

This project provides a new 18,600 GSF practice facility and support space for Women's Gymnastics in line with peer institutions and other Gopher Athletic programs. Peik Gym, where the team currently practices, is on the University's Do Not Invest list and slated for demolition. Design and construction are scheduled to allow for a transition to the new facility in January 2025.

2. Scope of Project:

Athlete's Village offers a clean site. The proposed structure adjoins the south side of the existing Indoor Football Performance Facility. The Football facility's electrical, hot water, and stormwater management systems are sized to accommodate the gymnastics addition (per the unbuilt Lineman's Addition), resulting in cost savings to this project. In addition, gymnastics athletes can take full advantage of the cafeteria, training rooms, and other amenities offered in the Village.

3. Campus Plan:

The project complies with the Twin Cities Campus Plan Update dated December 2021. Building out Athlete's Village was a core concept and allows for shared athletic resources.

4. Environmental Issues:

The site was prepared and cleaned for the unbuilt Lineman's Addition. The project will follow B3 guidelines and the SB2030 energy target.

5. Cost Estimate:

Construction Cost:	\$ 12,130,000
<u>Non-Construction Cost (Design Fees, FFE, Tech, Equipment):</u>	<u>\$ 3,545,000</u>
Total Project Cost:	\$15,675,000

6. Capital Funding:

Athletics Funding (Predesign Fees):	\$175,000
<u>University Debt:</u>	<u>\$15,500,000</u>
Total Capital Funding:	\$15,675,000

7. Capital Budget Approvals:

This project was approved as a part of the FY 2024 Annual Capital Budget at the June 2023 Board of Regents meeting.

8. Annual Operating and Maintenance Cost:

The annual operating cost for this facility is estimated to be \$12.00/SF.

9. Schedule:

Proposed Design Completion: January 2024
Proposed Substantial Completion: January 2025

10. Project Team:

Architect: BWBR
Construction Manager at Risk: Mortenson



LOCATION MAP



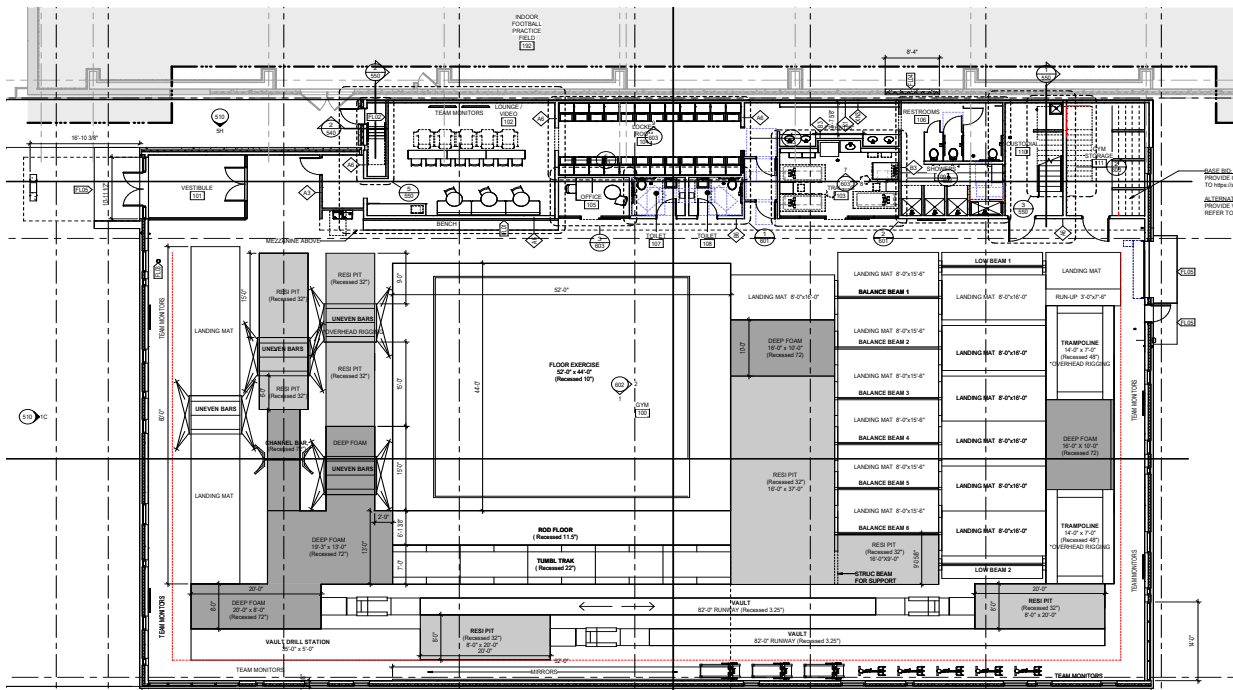
EXTERIOR RENDERING - SW CORNER



INTERIOR RENDERING



EXTERIOR RENDERING - WEST ENTRANCE



1st FLOOR PLAN - PRACTICE GYM & LOCKER ROOMS



PROPOSED DESIGN MODIFICATIONS



BOARD OF REGENTS DOCKET ITEM SUMMARY

Finance & Operations

September 7, 2023

AGENDA ITEM: Information Items

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Myron Frans, Senior Vice President

PURPOSE & KEY POINTS

- A. Central Reserves General Contingency Allocations
- B. Capital Finance and Debt Management Report
- C. Strategic Facilities & Real Estate Report

A. Central Reserves General Contingency Allocations

Allocations from the Central Reserves General Contingency greater than \$250,000 require Board approval. There are no items requiring approval this period.

B. Capital Finance and Debt Management Report

The purpose of this item is to provide the Annual Capital Financing and Debt Management Report for FY 2023. The University is rated Aa1 by Moody’s Investors Service and AA by S&P Global Ratings. As of June 30, 2023, the overall debt portfolio totals approximately \$1.8 billion in outstanding debt, with about 85 percent of that being fixed rate and about 15 percent representing variable rate instruments. The weighted average cost of capital at fiscal year-end was approximately 3.62 percent.

This report is prepared and provided to the Finance & Operations Committee annually as required by Board of Regents Policy: *Board Operations and Agenda Guidelines* and Board of Regents Policy: *Debt Transactions and Long-Term Capital Financing Program*.

C. Strategic Facilities & Real Estate Report

The purpose of this item is to provide a comprehensive summary of the University’s physical assets. It includes updates on the University’s facilities condition assessment and space utilization, real estate transactions from the past fiscal year, and capital project management updates for projects in process that have been approved in the annual capital improvement budget and have a value equal to or greater than \$1,000,000. This report was new for FY 2022 and serves to consolidate these

previously separate, standalone reports: Facilities Condition Assessment, Real Estate Report, Space Utilization Report, and the Semi-Annual Capital Project Management Report.

Central Reserves General Contingency Allocations
Finance & Operations Committee
September 2023

	Recipient	Amount	Running Balance	Purpose
1	Fiscal Year 2023 (7/1/2022-6/30/2023)			
2	Carryforward from FY22 to FY23		\$1,173,773	
3	FY23 General Contingency Allocation	\$1,000,000	\$2,173,773	
4	Capital Project Management	(\$70,440)	\$2,103,333	Duluth Health Sciences Project: Preliminary planning and site visits for Academic Health Center in downtown Duluth.
5	Capital Project Management	(\$55,811)	\$2,047,522	Morrill Hall Project: Staff programming and location analysis for relocation of building occupants. Initial transfer.
6	University Health & Safety	(\$31,457)	\$2,016,065	Mondale Memorial Service: Support for event on May 1, 2022 at Northrup Auditorium.
7	Capital Project Management	(\$73,819)	\$1,942,247	Eastcliff: Replace mechanical service gate and repave service driveway.
8	Capital Project Management	(\$47,760)	\$1,894,486	Morrill Hall Project: Staff programming and location analysis for relocation of building occupants. Final transfer.
9	University Health & Safety	\$31,457	\$1,925,943	Mondale Memorial Service: Support for event on May 1, 2022 at Northrup Auditorium covered by University of Minnesota Foundation. General Contingency funds returned.
10	UHS Health Emergency Response Office	(\$85,994)	\$1,839,950	COVID Testing: Payment to Vault Health for COVID testing services denied/unpaid insurance claims to provide equitable availability to students. Final payment.
11	New FY23 items this reporting period:			
12	MPact Healthcare Innovation	(\$152,095)	\$1,687,854	MPact Healthcare Innovation: Support FY23 government relations activities.
13	FY23 Ending Balance		\$1,687,854	
14	Fiscal Year 2024 (7/1/2023-6/30/2024)			
15	Carryforward from FY23 to FY24		\$1,687,854	
17	FY24 General Contingency Allocation	\$1,000,000	\$2,687,854	
16	New FY24 items this reporting period:			
17	n/a		\$2,687,854	
18	Current Balance		\$2,687,854	

* Items \$250,000 or more subject to Board approval.

Annual Capital Financing and Debt Management Report Fiscal Year 2023

Executive Summary and Highlights

The University of Minnesota (the “University”) enjoys a very favorable credit profile which results in low borrowing costs to finance capital projects. The University’s debt is highly rated by two rating agencies – **Aa1** by Moody’s Investors Service (“Moody’s”) and **AA** by S&P Global Ratings (“S&P”) – which provides strong demand and competitive pricing in the marketplace for the University’s bonds.

Key debt-related metrics **as of June 30, 2023**, are listed below:

- Total long-term debt outstanding - approximately **\$1.8 billion**.
- Weighted average cost of capital - **3.62%**.
- The mix of tax-exempt to taxable debt was **53.25% tax-exempt to 46.75% taxable**.
- The mix of fixed-rate and variable rate debt was **85% fixed** and **15% variable**.
- The University’s debt is rated **Aa1** by Moody’s and **AA** by S&P.
- Debt service paid during FY2022 was approximately \$150.0 million, of which **\$74 million** was applied to paying down principal.
- The University has realized net present value savings of **\$84.0 million** since 2015 by refinancing previously issued debt on or before optional redemption dates.

Long-Term Debt Overview

Debt financing allows the University to pay for an asset over a period of time, rather than pay for it at the time of purchase. Per Board policy, debt shall be used to finance the purchase of land and buildings, construction of and remodeling projects to University facilities, and acquisition of and installation of equipment. Debt may not be used to fund University operating purposes without Board approval. Each debt transaction of the University is completed in the most effective and professional manner, in accordance with the highest standards of the industry, laws and governmental practices, guided by the following principles:

- Minimize borrowing costs at acceptable levels of risk over the life of the debt;
- Maintain key financial metrics to assure continued access to capital markets and manage credit-related risks;
- Exhibit a maturity profile that meets liquidity requirements and manages the balance sheet of the institution; and
- Provide financial and budgetary flexibility and stability.

University’s Current Debt Profile

The University uses different financing tools to support the University’s mission on capital investment in the most cost-efficient way. The University’s **average cost of capital** as of June 30, 2023 is approximately **3.62%**.

Most of the University’s outstanding debt can be categorized in one of the following three designations:

General Obligation Bonds

General Obligation Bonds (GO Bonds) are secured by the full faith and credit of the University. GO Bonds are the most common type of debt used to finance improvements, acquisitions, and new construction projects. University's GO Bonds have been issued as either tax-exempt or taxable with 20-, 25-, or 30-year maturities. Approximately 88% of all bonds have been issued with a 10-year optional redemption and 4% of the taxable bonds have been issued with a make-whole call redemption option. Only 8% of the bonds are not callable due to their short maturity. Each series, except for the Series 2022 Bonds, has been structured with equal annual debt service payments over the life of each bond. The Series 2022 Bonds were structured as interest only bonds, with the full amount of principal due at maturity. The total par amount of GO Bonds outstanding as of June 30, 2023 is \$1,391,275,000.

State Supported Debt - Special Purpose Revenue Bonds

Bonds issued as Special Purpose Revenue Bonds (SPRB) are special limited obligations of the University payable from revenues received from the State of Minnesota. These bonds were issued by the University for the Huntington Bank Stadium and the Biomedical Science Research Facilities, but Minnesota law provides for an annual appropriation to reimburse the University for the annual debt service on these bonds. No other revenues or assets of the University, nor the full faith and credit of the University, is pledged for the payment of the principal or interest on these bonds. The total par amount of Special Purpose Revenue Bonds outstanding as of June 30, 2023 is \$170,295,000.

Commercial Paper (CP)

On October 12, 2017, the Board authorized a revolving commercial paper facility (the "Facility") through which the University may issue tax-exempt and taxable variable rate debt from time to time as general obligation indebtedness for the short or long-term financing of capital projects. The Facility is backed by the full faith and credit of the University and is supported by the University's self-liquidity. The amount of the Facility cannot exceed \$400 million at any point. Since the Facility is considered revolving in nature, CP can be issued for approved projects, paid off, and then re-issued for new approved projects, so long as the total amount of CP issued and outstanding does not exceed the Board's maximum authorization of \$400.0 million. As of June 30, 2023, the outstanding balance of the facility was \$280,365,000.

The Facility is currently rated "P-1" by Moody's and "A-1+" by S&P, both the highest short-term rating possible from each rating agency.

There are two types of risk associated with CP. The first relates to interest rate sensitivity. As a short-term debt obligation, CP is more susceptible to interest rate fluctuations as compared to long-term, fixed rate debt. The second is counter-party risk, which is defined as the risk that a CP dealer with whom the University contracts to remarket the CP could default on its obligations under that contract. This risk has been mitigated by utilizing two separate dealers for the sale and remarketing of new notes, thereby spreading counter-party risk among dealers.

CP is an effective and efficient debt-financing tool for short-term capital financing needs. It also serves to diversify the University's debt mix within the overall debt portfolio, with the goal of lowering overall cost of capital. It can be restructured into long-term debt quickly and efficiently since it is short-term in duration. The weighted average rate of the CP outstanding on June 30, 2023 was approximately 2.34% as compared to 1.16% on June 30, 2022.

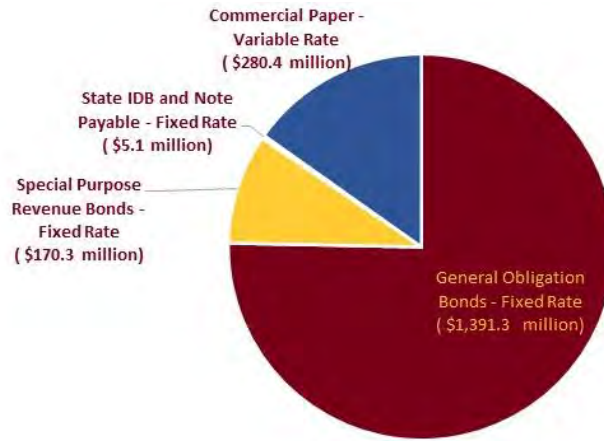
Other Debt

Long-term debt of the University contains a small outstanding balance of State of Minnesota Infrastructure Development Bonds (IDB), a note payable, and the unamortized premiums and discounts on the bonds. The balance of IDB as of June 30, 2023 is \$567,360.

The University does not hold any swaps or hedge transactions in the debt portfolio.

The mix of the components of outstanding long-term debt is shown in the pie chart below.

Debt Profile As of June 30, 2023
\$1.84 Billion Par Outstanding; \$1.67 Billion University Supported

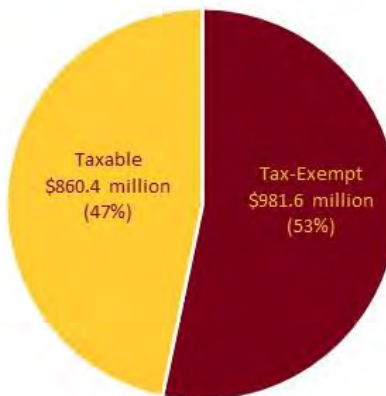


Taxable vs. Tax-Exempt Debt

Debt is generally issued as tax-exempt bonds unless there are conditions that prohibit the use of tax-exempt debt, or when other considerations indicate the use of taxable debt is in the best interest of the University. Tax-exempt bonds provide tax benefits to investors which translates to a lower cost of borrowing to the University, but also carry strict tax compliance requirements for the life of the Bonds. Taxable bonds are less restrictive and provide greatest flexibility in how proceeds can be used, but usually (although not always) result in slightly higher cost of borrowing.

The mix of tax-exempt to taxable debt outstanding as of June 30, 2023, is approximately **53.25% tax-exempt to 46.75% taxable.**

Tax Status of Outstanding Bonds
As of June 30, 2023



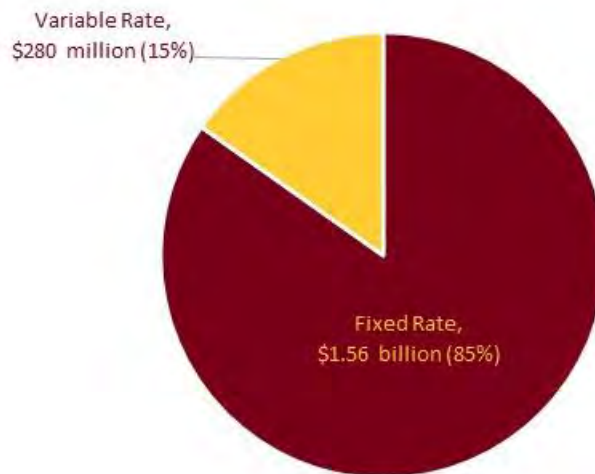
Fixed Rate vs. Variable Rate Debt

Long-term, fixed-rate, tax-exempt debt is the most common form of debt issued by institutions of higher education, in which interest rates are fixed for a single or multiple maturities. This type of debt allows institutions to lock into certain debt service obligations at tax-advantaged interest rates over a long period of time. Long-term fixed rate debt generally includes a call option after 10 years after the issuance to allow for refinancing opportunities. Depending on market conditions, the University may choose to exercise the Bonds' call options to reduce interest rate and annual debt service payments.

Variable rate debt can lower overall cost of capital, but has some risks including interest rate risk, credit risk, tax law risk and remarketing risk. All the University's variable rate debt is currently in the form of commercial paper.

The mix of fixed rate to variable rate as of June 30, 2023, is approximately **85% fixed** to **15% variable**.

Interest Rate Profile of University Debt
As of June 30, 2023



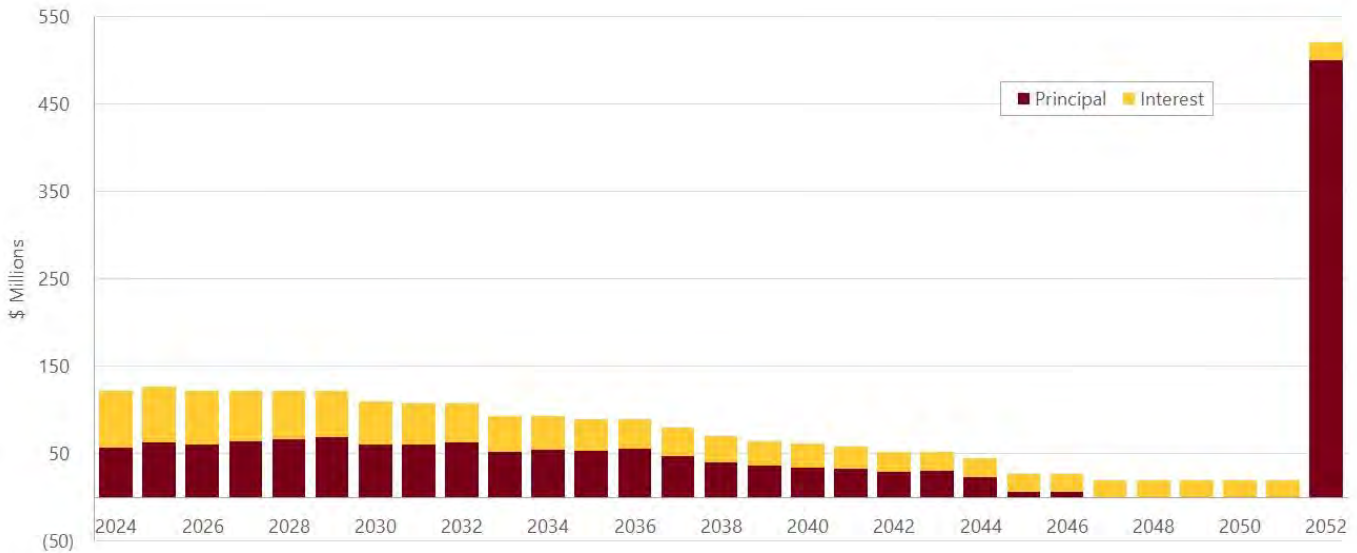
Refinancings

Refunding of bonds involves the issuance of new bonds for the purpose of retiring an already outstanding bond issue. Outstanding debt may be refunded to achieve interest rate savings, restructure principal and/or interest payments, or eliminate burdensome covenants with bondholders. The University actively monitors refunding opportunities and has taken advantage of the swings in the municipal market to exercise the Bonds' call options and generate significant savings. The University has realized savings of approximately **\$84.0 million** on debt that has been refunded and defeased since 2015.

Amortization Structure

The debt service structure for each bond issue is determined on a case-by-case basis. The University has typically structured its debt so that the annual debt service payments for each bond issue comes due at equal payments. The exception is the Series 2022 Bonds, which were structured as interest only bonds, with the full amount of principal due at maturity. The following graph reflects the scheduled amortization of the bonds outstanding as of June 30, 2023. It does not include the commercial paper facility.

General Obligation and Special Purpose Revenue Bonds
Annual Maturity Schedule
As of June 30, 2023



Long-Term Bond Credit Ratings

Credit ratings are financial indicators of an institution’s ability to pay its outstanding obligations. Investors rely on credit ratings to assess an institution’s creditworthiness. The University’s debt is currently rated “**Aa1**” by Moody’s Investor Services and “**AA**” by S&P Global Ratings. These are excellent rating scores which provide strong demand and competitive pricing for bonds issued by the University and traded in the investment community.

Each rating agency has its own methodology and factors to consider to arrive at their final scoring. The scoring is standardized using an alpha numerical system. The table below presents the meaning of the different scores.

Moody’s	S&P	Rating Description	
Aaa	AAA	Prime	Investment Grade
Aa1	AA+	High Grade	
Aa2	AA		
Aa3	AA-		
A1	A+	Upper Medium Grade	
A2	A		
A3	A-		
Baa1, Baa2, Baa3	BBB+, BBB, BBB-	Lower Medium Grade	
Ratings below triple B, including C ratings and D ratings are considered non-investment grade and highly speculative.			

Moody’s uses the broad weighting factors of market profile, leverage, wealth and liquidity, and operating performance, with subsets of each. Other credit considerations include multi-year trends, governance & management, debt structure, liquidity quality, government relationship, pension and other post-employment obligations, and healthcare operations. This methodology does not include an exhaustive treatment of all factors that might be relevant when evaluating an individual university’s credit attributes.

S&P's methodology results in a convergence of a detailed analysis of a university's "Enterprise Profile" and "Financial Profile" with qualitative adjustments for compelling factors or qualifiers. The "enterprise profile" includes market position and demand, management and governance, industry risk, and economic fundamentals. The "financial profile" includes debt and contingent liabilities, financial resources, financial performance, and financial management policies.

The University is in regular communication with the rating agencies, providing updates on liquidity and debt-related changes. At least once a year, or on every bond issuance, the University provides a comprehensive update to the rating agencies, resulting in complete credit review and the publication of a new rating report, which is published and distributed to the investment community.

The most recent credit rating publications are available on the University Finance Webpage under Debt Management.

Debt Management Oversight

The Board of Regents has delegated primary responsibility for debt activities to the University Treasurer, who has delegated day-to-day responsibility and management to the Associate Vice President, Finance & Assistant CFO and the Director of Debt Management. In addition, the University relies on a team of individuals throughout the University and external to the University to ensure compliance with policies, laws, and regulations.

Debt Management Advisory Committee

The Debt Management Advisory Committee (the "Committee") was established for the purpose of advising the Finance Committee of the Board of Regents and the Treasurer on the issuance and ongoing management of debt. In doing so, the Committee evaluates, recommends, and monitors debt management policies, strategies and guidelines and provides advice on their implementation. Committee membership includes the Chair or Vice Chair of the Board of Regents Finance & Operations Committee (or a designee), the Treasurer of the University, a faculty member of the Carlson School of Management and up to six members of the local business community. The Committee meets a minimum of two times per year.

Independent Municipal Advisor

The University retains an independent registered municipal advisor to assist the University with a variety of debt related services, including but not limited to debt issuance and general municipal market advice. The University's current municipal advisor is Janney Montgomery Scott, LLC (Janney). Janney was selected through a request for proposal process and was awarded the role of debt advisor effective July 1, 2022 for a three-year period.

Bond Counsel

During the bond issuance process, the University relies on the law firm Dorsey & Whitney LLP, as Bond Counsel, to provide legal opinion on taxability and ensure conformity with municipal tax laws and regulations.

Fiscal 2023 Debt Activity

Refunding Authorization

During the June, 2023 Board of Regents meeting, the Board approved the Resolution Related to Refunding General Obligation Debt. The purpose of the resolution is to act on refinancing certain general obligation bonds outstanding that are currently callable and can be refinanced as market conditions permit. Refunding bonds may be sold in either a negotiated sale, a competitive process, or by a direct purchase by a bank, as determined by the Treasurer as long as the savings generated by the refunding is at least 3.00% on an aggregate present value basis for all bonds to be refunded.

Key Financial Indicators

Debt capacity and credit ratings are not a function of ratios alone. The University monitors certain ratios used by ratings agencies such as Moody's, which factor into debt capacity and credit ratings for the University. The University focuses on three ratios:

- Total Cash & Investments to Total Debt – measures “coverage” of total debt by assets that generate investment return.
- Spendable Cash & Investments to Total Debt – measures the university’s ability to repay bondholders from wealth that can be accessed over time or for a specific purpose.
- Debt Service to Operating Expenses – measures annual debt service burden on the annual operating budget.

Definitions for the numerators and denominators in these three ratios as calculated by Moody's are provided below.

Total cash & investments – total cash and cash equivalents plus short-term investments plus noncurrent investments of the University, UMF and UMP (does not include the restricted cash and cash equivalents)

Spendable cash and investments – total cash and investments as computed above less restricted, nonexpendable net assets of the University, less the permanently restricted net assets of UMF and UMP

Total debt – the sum of the University’s outstanding debt as shown on the financials, less net unamortized premium/discount on the bonds, plus UMF bonds payable

Debt service – the sum of the principal paid and interest expense on capital debt by the University

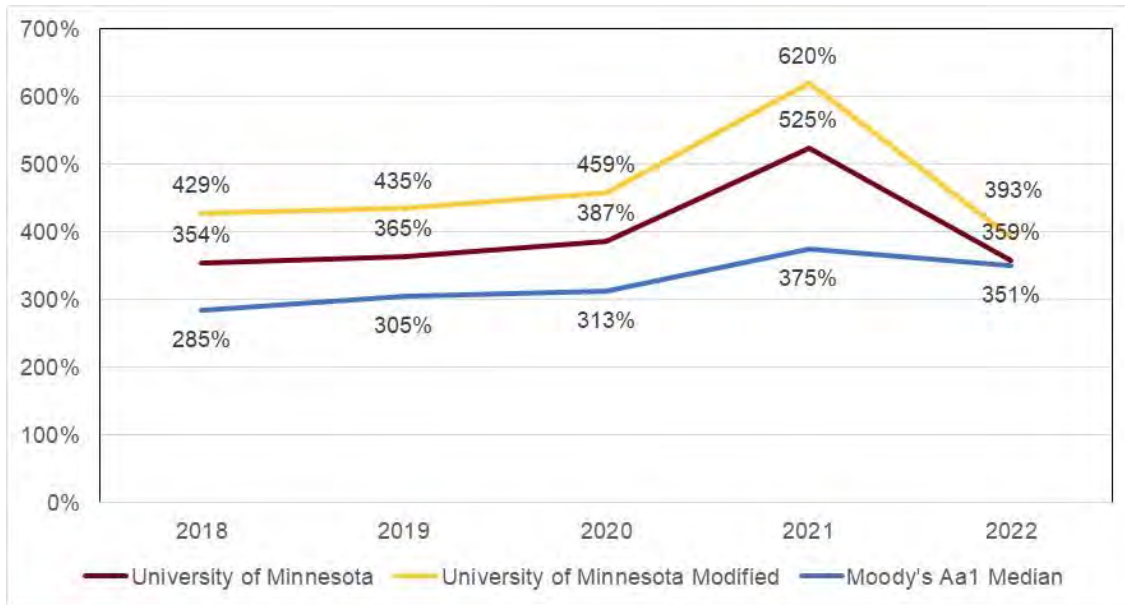
Operating Expenses – University operating expenses less scholarships & fellowships, plus interest on capital asset-related debt

In addition, the University performs a second calculation of the ratios but adjusts them to exclude the “special purpose debt” that has been issued by the University but is supported by state appropriations. These second calculations are referred to as “Modified Debt Ratios”.

The graphs on the following three pages reflect the three key ratios for the last five years for the University of Minnesota (both unmodified and modified) and the median of the 14 public universities rated Aa1 by Moody's for each of the years 2018 – 2022 (the most recent years for which information is publicly available). The 14 Aa1-rated public Universities are:

- North Carolina State University at Raleigh
- Pennsylvania State University
- Texas Tech University System
- University of Delaware
- University of Missouri System
- University of Pittsburgh
- University System of Maryland
- Ohio State University
- State University of Iowa
- University of Colorado
- University of Minnesota
- University of Nebraska
- University of Utah
- Virginia Polytechnic Institute & State University

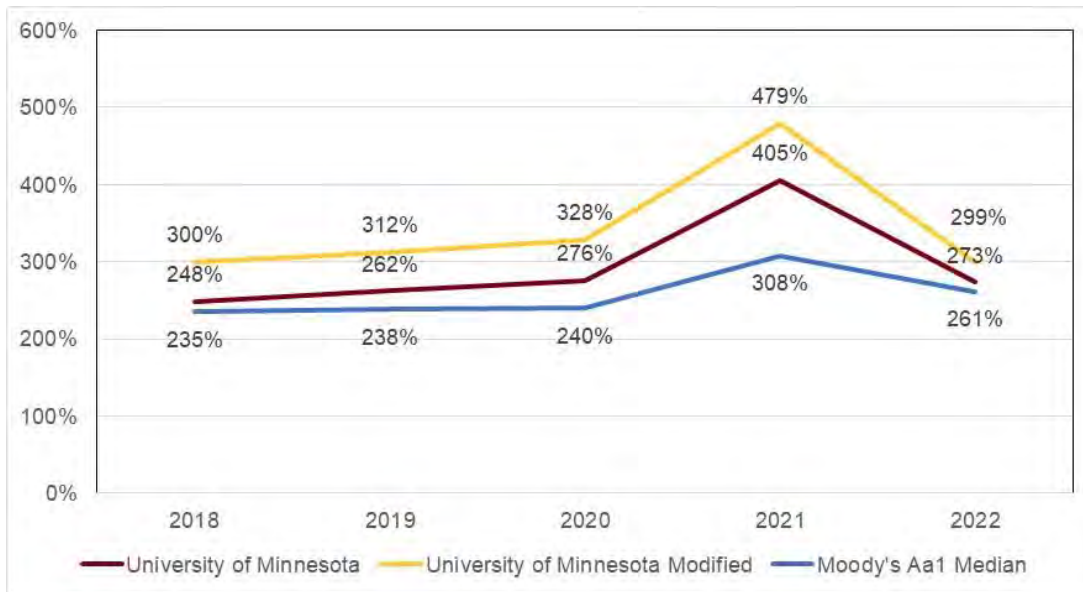
Total Cash and Investments to Total Debt



DESIRED TREND ↑

As shown above, the University is above the median in its peer group of Aa1-rated institutions. In addition, when the state-supported debt is taken out of the calculations, the calculated ratio is better.

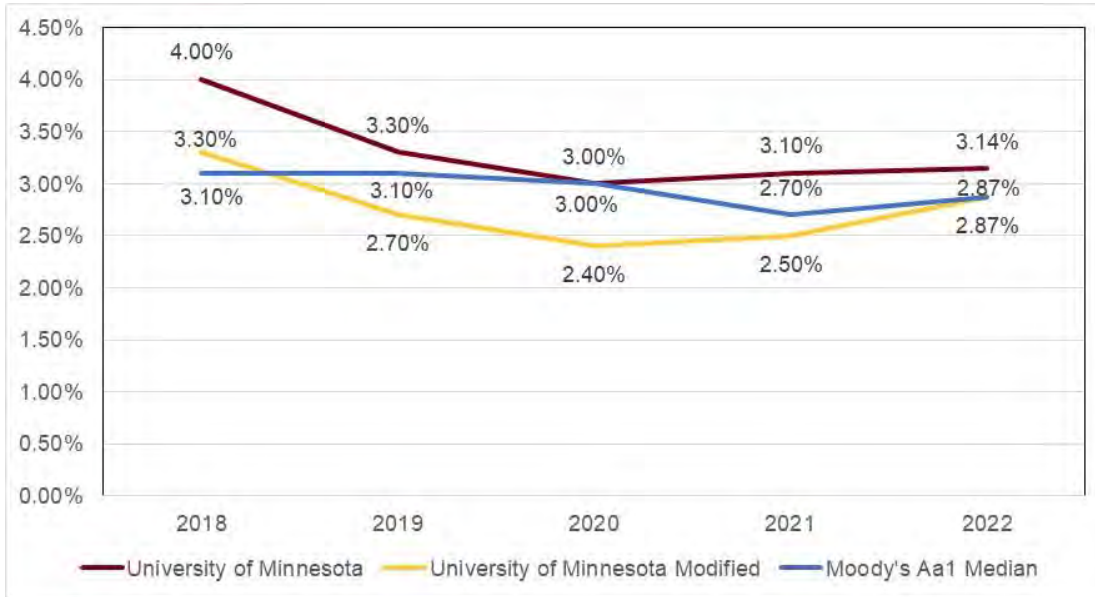
Spendable Cash and Investments to Total Debt



DESIRED TREND ↑

Like the first ratio, the University is again solidly in the middle of the range for Aa1-rated public institutions and above the median for this group of institutions. In addition, when the state-supported debt is taken out of the calculations, the calculated ratio is better.

Debt Service to Operations



DESIRED TREND

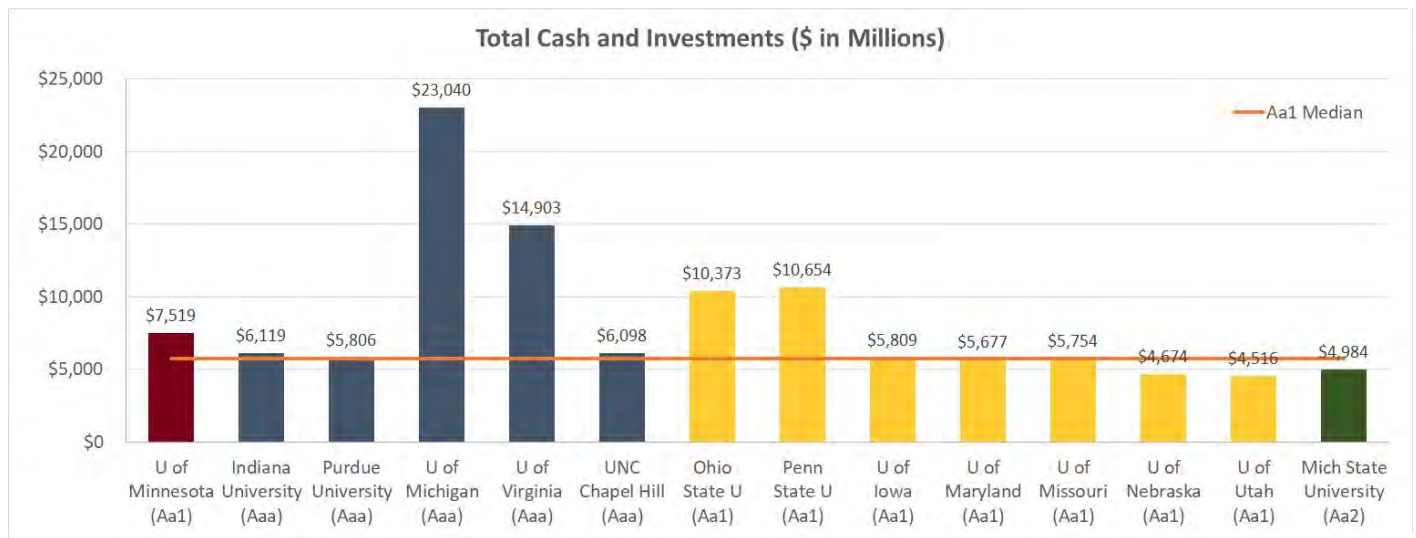


The University is above the median for this ratio but is fairly consistent from year-to-year. In addition, as also shown in the previous two ratios, when the state-supported debt is removed from the calculation, the ratio improves – in this case, by decreasing – which is the desired direction for this ratio.

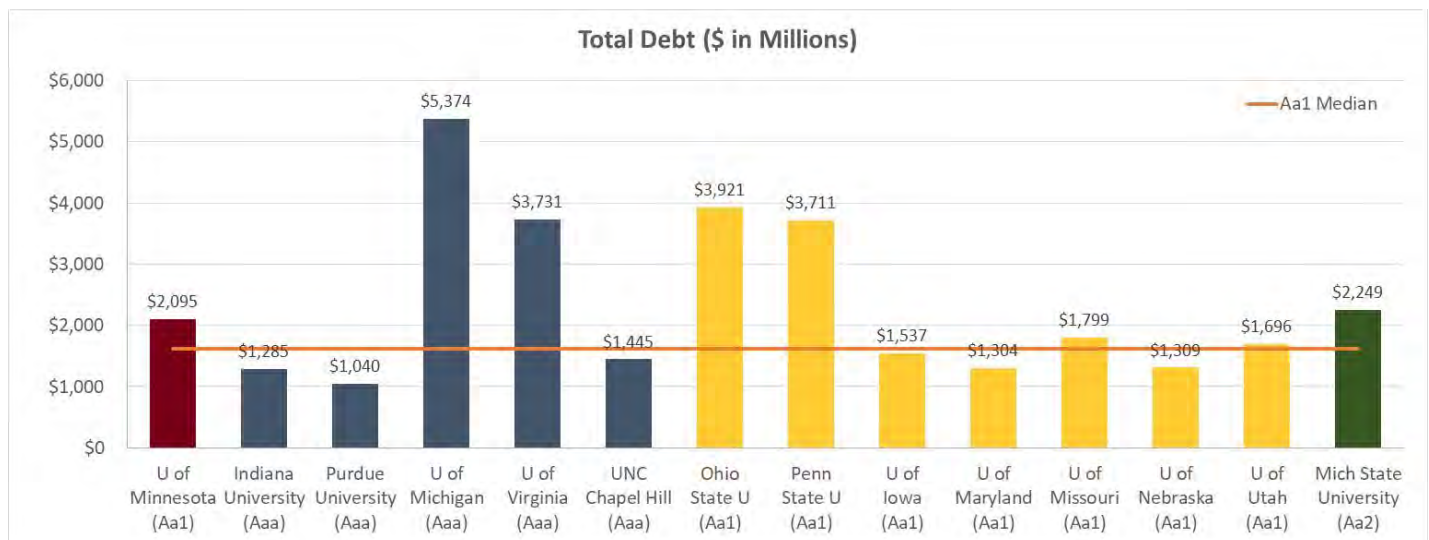
Peer Analysis

The University annually compares selected financial ratios, consistent with major credit rating agency criteria, to other Big 10 institutions and to other higher education public institutions with the same or higher credit rating. This peer group consists of highly rated preeminent public research universities. The following charts provide the comparisons **as of June 30, 2022**, the most recent year-end that is available for all institutions. The different colors of the bars represent the University of Minnesota (maroon), Aaa-rated institutions (navy), Aa1-rated institutions (gold), and one Aa2-rated institution (green).

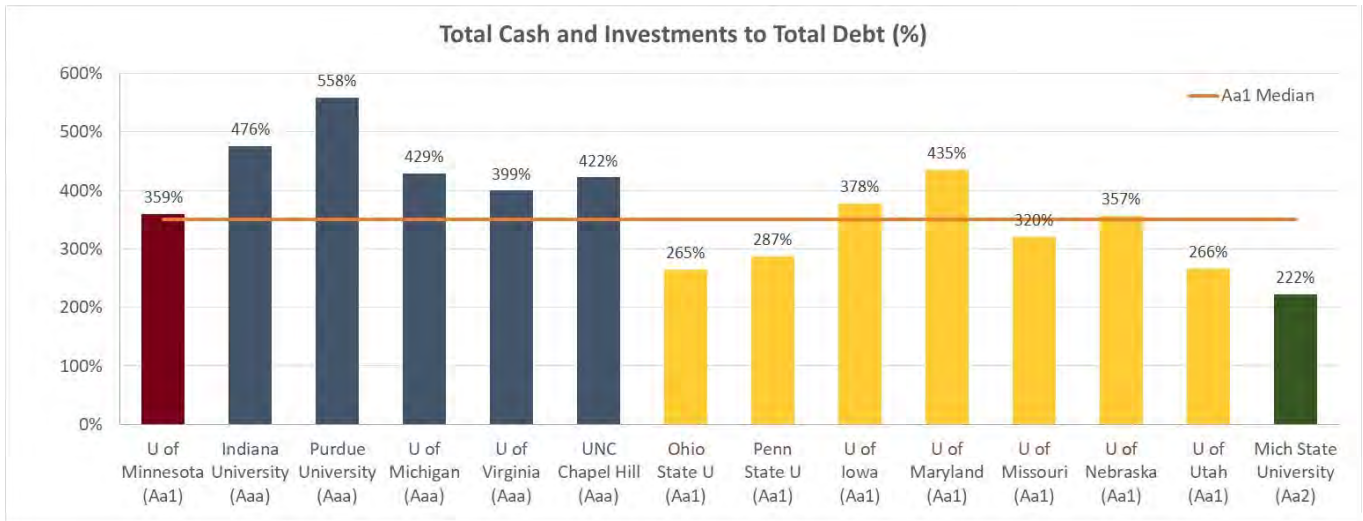
Total Cash and Investments measure the wealth of a university and its affiliated foundation(s).



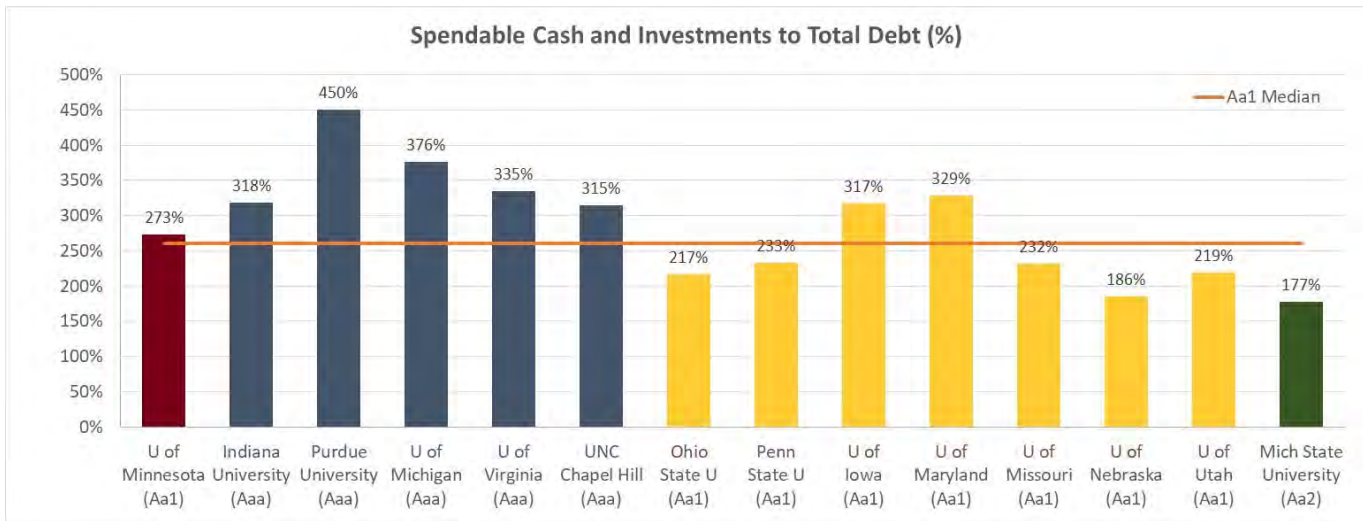
Total Debt measures direct obligations of a university and its affiliated foundation(s).



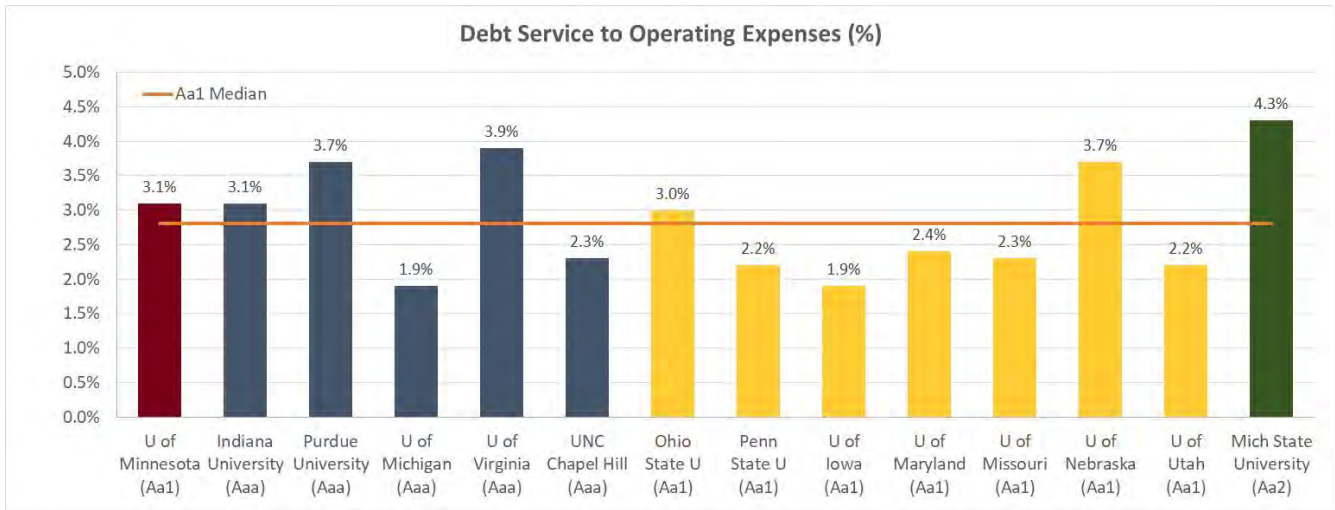
Total Cash and Investments to Total Debt measures coverage of total debt by assets that generate investment return. Higher percentages are more desirable.



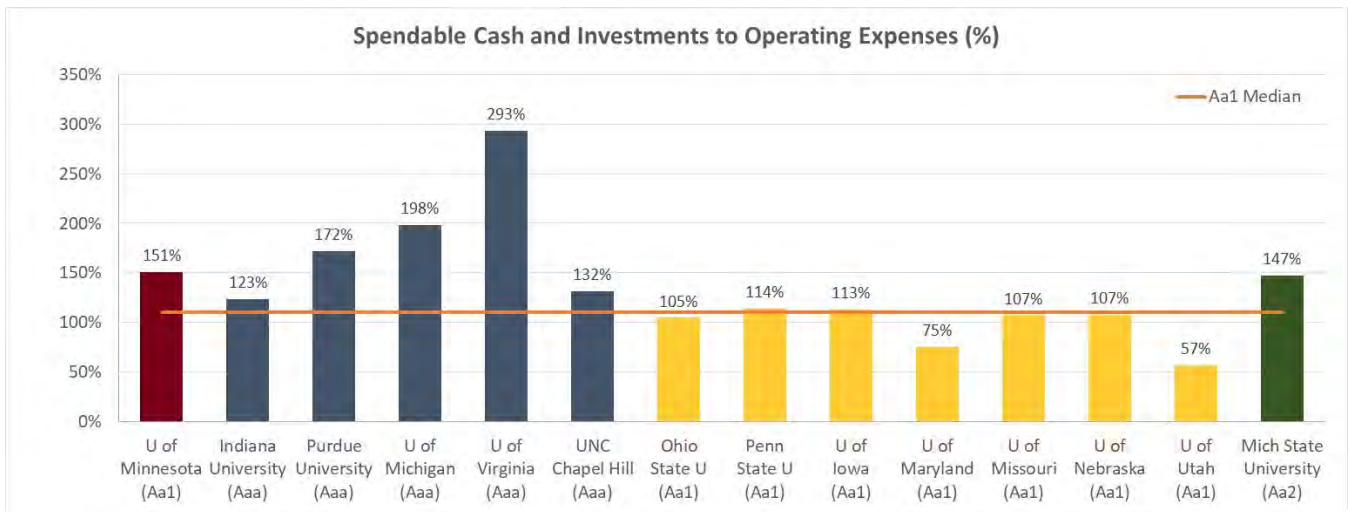
Spendable Cash and Investments to Total Debt measures the university's ability to repay bondholders from wealth that can be accessed over time or for a specific purpose. Higher percentages are more desirable.



Debt Service to Operating Expenses measures annual debt service burden on the annual operating budget. Lower percentages are more desirable.



Spendable Cash and Investments to Operating Expenses measures the extent to which a university can rely on wealth than can be accessed over time or for a specific purpose to operate without earning any additional revenue. Higher percentages are more desirable.



Required Reporting of Debt information

The following provides information required by Board of Regents Policy: *Debt Transactions and Long-Term Capital Financing Program* adopted on July 13, 2022. The policy requires the reporting of certain information relevant to the University's long-term capital financing program on an annual basis.

Long-Term Capital Financing Program

The Long-Term Capital Financing Program's funding is bond proceeds from General Obligation Taxable Bonds Series 2022 (Series 2022), issued on April 19, 2022 as a 30-year interest-only bond for a total of \$500 million. As required by Board policy, Board approval is required to allocate those proceeds to finance capital projects. Below is a summary of approved allocations by project, amount of funds actually deployed for spending, and loans made from funds in the internal lending program.

Long-Term Capital Financing Program Funds Allocation Update as of August 15, 2023

	Funds Allocated	Funds Deployed*
Projects approved by Board in FY22		
Main Energy Plant Chilled Water	\$ 28,500,000	\$ 18,000,000
Masonic Institute for the Developing Brain	20,200,000	20,200,000
Lind Hall Renovation	27,250,000	21,500,000
Microbial Cell Production Facility	86,482,000	
Offsite Library Collection Facility	66,700,000	3,700,000
Institute for Child Development	1,000,000	
Ridder Arena Ice Refrigerant Replacement	14,000,000	
Murphy Hall Media Lab	2,800,000	2,500,000
Total Projects Approved in FY22	\$ 246,932,000	
Projects approved by Board in FY23		
Chemistry Undergraduate Teaching Lab Facility	\$ 46,300,000	
Shepherd Laboratories Renovation	19,400,000	
Women's Gymnastics Training Facility	15,500,000	
Total Projects Approved in FY23	\$ 81,200,000	
Total	\$ 328,132,000	\$ 65,900,000

* Note: Funds were deployed in FY24, once projects were substantially completed. Funds deployed are rounded to the nearest thousand.

Long-Term Capital Financing Program Available Funds As of June 30, 2023

Series 2022 Bond Proceeds (after cost of issuance)	\$ 497,882,000
Minus: Funds Allocated (from total above)	<u>(328,132,000)</u>
Total Unallocated Funds	<u>\$ 169,750,000</u>

As of June 30, 2023 there have not been any loans issued from the internal lending program. Loans will not be made until funds allocated to projects commence repayment into the internal loan pool.

FY 2023

Strategic Facilities and Real Estate Report

*Prepared for the
Board of Regents,
as required by Board policy.*

September 2023

UNIVERSITY OF MINNESOTA

ORIGIN AND SCOPE OF THIS REPORT

Board of Regents Policy: *Board Operations and Agenda Guidelines* requires an annual report titled “Strategic Facilities and Real Estate Report.” This consolidated report provides a comprehensive summary of the University’s physical assets. It includes updates on the University’s facilities condition assessment and space utilization, real estate transactions from the past fiscal year, and capital project management updates for projects in process that have been approved in the annual capital improvement budget and have a value equal to or greater than \$1,000,000.

This report covers fiscal year 2023 and summarizes University physical asset information from July 1, 2022 through June 30, 2023. The content of this report has been prepared by University Services leadership, with responsibility for each of the four respective areas, and reflects the information available at the time of publication.

Respectfully submitted,

Bruce Gritters, Assistant Vice President for Capital Project Management
Leslie Krueger, Assistant Vice President for Planning, Space, and Real Estate
Brian Swanson, Assistant Vice President for Finance and Systems, University Services

LAND ACKNOWLEDGMENT

We acknowledge that the University of Minnesota system has campuses that are located on the homelands of the Dakota and Anishinaabe peoples, and acknowledge the eleven Tribal Nations of Minnesota. It is important to acknowledge the peoples on whose land we live, learn, and work as we seek to improve and strengthen our relations with our tribal nations. We also acknowledge that words are not enough. We must ensure that our institution provides support, resources, and programs that increase access to all aspects of higher education for our American Indian students, staff, faculty, and community members.

REAL ESTATE

Board of Regents Policy *Reservation and Delegation of Authority*, Section VIII includes the following provisions related to real estate:

Subd.1. The Board reserves to itself authority to approve the purchase or sale of real property (a) with a value greater than \$1,000,000; (b) located on or within 2 miles of a University campus; or (c) larger than 10 acres.

Subd. 2. The Board reserves to itself authority to approve leases of real property, easements, and other interests in real property if the initial term amount to be paid by or to the University exceeds \$1,000,000.

Subd.3. The Board reserves to itself authority to exercise the power of eminent domain to acquire land for University purposes.

In May 2022, the Board of Regents approved an amended Real Estate and Facilities Policy, which includes a set of four guiding principles that seek to inform and direct the University of Minnesota's real estate strategy. These principles address a multitude of factors that drive acquisitions and dispositions of real estate across the University system and clarify the University of Minnesota's strategic position as one of mission critical stewardship, fiscal discernment, and geographic alignment with our campus master plans.

In practice, these principles will guide the University's long-term vision for its system campuses and other properties, while balancing the day-to-day operational liabilities of its large real estate portfolio. As the University disposes or acquires real estate, the following principles are considered:

1. Support the University's teaching, research, and service mission and align with the Systemwide Strategic Plan, MPact 2025
2. Align with campus master plans
3. Provide strategic value when balanced against scarce resources and minimize financial liability
4. Positively impact areas adjacent to the University or limit negative impact

This section of the report provides a summary of real estate transactions in FY 2023 that met Board thresholds for approval (a) with a value greater than \$1,000,000; (b) located on or within 2 miles of a University campus; or (c) larger than 10 acres.

Real Estate Transaction	Amount received or to be received	Amount paid or to be paid	Regents Approval
Purchase of the controlling interest in 2407 University Investment LLC (Twin Cities Campus)		Approved issuance of up to \$8 million of taxable commercial paper for the 51% interest in the LLC	July 2022
Purchase of 512 Ontario St. SE, Minneapolis (Twin Cities Campus)		\$1,884,000	September 2022
Purchase of 639 Erie St. SE, Minneapolis (Twin Cities Campus)		\$437,875	September 2022
Purchase of 325-329 14th Ave SE, Minneapolis and Establishment of and Investment in 325 14th Ave SE LLC (Twin Cities Campus)		Up to \$3.5 million to fund the purchase price, due diligence, closing costs, and initial working capital needs	December 2022
Seven-year lease for collaborative/classroom space relocation to Two Discovery Square, Rochester (Rochester Campus)		First-year total rent to be received including utilities and operational services: ~\$169,000 and total of ~ \$1.1 million	December 2022
Amendment to Twelve Year Lease at 150 Broadway Ave S, Rochester (Rochester Campus)		Additional annual rent of \$122,000 and leasehold improvements of approximately \$4,002,500	December 2022
Ten-year lease for Department of Orthopedic Surgery at Riverside Professional Building, 606 24th Avenue South, Minneapolis (Twin Cities Campus)		First-year total rent to be received including utilities and operational services: ~\$271,000 and total of ~ \$5.8 million including tenant improvements and internal Univesrity costs	December 2022

Real Estate Transaction	Amount received or to be received	Amount paid or to be paid	Regents Approval
Sale of 2050 Roselawn Ave W (Falcon Heights Community Park), Falcon Heights, MN (Twin Cities Campus)	Approximately \$1,107,127		February 2023
FAARM related acquisitions in Mower County (all are purchase options): <ul style="list-style-type: none"> ● 80 acres ● 118 acres ● 395 acres ● 36 acres ● 80 acres ● 119 acres ● 150 acres ● 78 acres 		\$1,000,000 \$1,593,000 \$5,530,000 \$504,000 \$1,120,000 \$1,606,500 \$2,025,000 \$975,000	February 2023 March 2023 March 2023 March 2023 March 2023 March 2023 May 2023 May 2023
Ten-year lease for Department of Pediatrics at Rehabilitation Building, 2512 South 7th Street, Minneapolis (Twin Cities Campus)		First-year gross rent to be received including utilities and operational services: ~\$101,150 and total of ~ \$2.85 million including tenant improvements and internal U costs	May 2023
Purchase of YMCA Parking Lot Parcel on First Ave SW, Rochester (Rochester Campus)		\$2.1 million	May 2023

CAPITAL PROJECTS

Capital Project Management (CPM) has systemwide responsibility for the design and construction of all new and renovated buildings, as well as major campus infrastructure. Project costs and schedules continue to be adversely impacted by materials shortages, supply chain disruptions, labor shortages, extreme escalation/inflation, and market volatility, although conditions are showing signs of moderating.

PROJECTS IN DESIGN

Women's Gymnastics Practice Facility

This project will provide a new practice facility and support space for Women's Gymnastics to align University of Minnesota gymnastic facilities with Big Ten and national programs for recruiting, training, and development of student-athletes.

Location: Twin Cities - East Bank
 Estimated Project Cost: \$15,675,000
 Substantial Completion: December 2024



Cedar Creek Classroom Expansion

This project will construct an addition to the [Lindeman Center](#), adding two new classrooms, restrooms, service, and circulation areas to support ongoing lab/field research, community programming, and K-12 educational field trips for the College of Biological Sciences.

Location: Cedar Creek Ecosystem Science Reserve (East Bethel)
 Estimated Project Cost: \$2,890,000
 Substantial Completion: August 2024



Shepherd Laboratories Renovation, Floors 3-5

This project will renovate 3rd, 4th, and 5th floor spaces, finishing a complete building renovation started in 2017. The renovated areas will accommodate flexible and collaborative research spaces for robotics, virtual reality, graphics and visualization, human computer interaction, and natural language processing. Project scope includes infrastructure system upgrades and compliance with B3/SB2030 sustainability goals.

Location: Twin Cities - East Bank
 Estimated Project Cost: \$29,900,000
 Substantial Completion: April 2025



Territorial Hall HVAC System Replacement

This project will replace existing heating and cooling systems at resident rooms with modern components to improve indoor air quality, provide additional humidity control, and meet current codes and standards. Additional scope includes full roof replacement and new building electrical service.

Location: Twin Cities - East Bank
 Estimated Project Cost: \$32,000,000
 Substantial Completion: August 2025



Veterinary Diagnostics Lab Equipment Replacement

This project will replace existing process equipment at the end of its lifecycle and upgrade related building and infrastructure components to better support future operations.

Location: Twin Cities - Saint Paul
 Estimated Project Cost: \$7,500,000
 Substantial Completion: January 2025



Advanced Operations Center

Formerly titled Network Operations Center Relocation, Phase 1 of the project will expedite the design and construction of a new facility for network operations and data center services, ultimately relocating the existing Network Operations Center at 2218 University Avenue and the West Bank Office Building Data Center to a new, combined facility located on the East Bank.

Location: Twin Cities - East Bank
 Estimated Project Cost: \$11,500,000 (Phase 1)
 Substantial Completion: November 2025



Griggs Hall HVAC Upgrades

This project will consist of abatement, roof replacement, code upgrades, and new interior finishes in Griggs Hall.

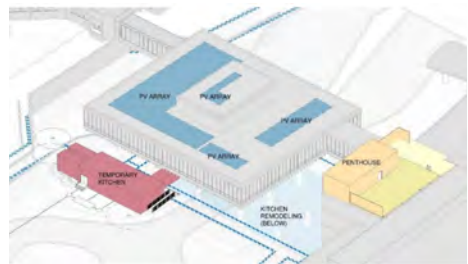
Location: Duluth
 Estimated Project Cost: \$6,000,000
 Substantial Completion: August 2024



UMD Residence Dining Center Addition

This project will renovate the basement level production kitchen in the Residence Dining Center. Project scope includes abatement, temporary kitchen, infrastructure upgrades, and a small mechanical penthouse for new equipment.

Location: Duluth
 Estimated Project Cost: \$25,000,000
 Substantial Completion: November 2024



Middlebrook Hall Dining Renovation

This project will renovate all areas of Middlebrook dining, including kitchen servery, dining room, offices, and storage areas.

Location: Twin Cities - West Bank
 Estimated Project Cost: \$15,071,000
 Substantial Completion: August 2025



Supercomputing Institute Power Supply Replacement

This project will replace three Uninterrupted Power Supplies within the Minnesota Supercomputing Institute that are at the end of their useful life. These will be consolidated into a secure, code-compliant location in alignment with the OIT strategic plan for addressing obsolete infrastructure.



Location: Twin Cities - East Bank
 Estimated Project Cost: \$2,100,000
 Substantial Completion: March 2024

PROJECTS IN CONSTRUCTION

Chemistry Undergraduate Teaching Laboratories

The Chemistry Undergraduate Teaching Laboratories project will augment a renovated Fraser Hall to provide general chemistry, life sciences, and organic chemistry teaching labs with associated student collaboration and updated general purpose classrooms.



Location: Twin Cities - East Bank
 Estimated Project Cost: \$143,829,000
 Substantial Completion: July 2025

Offsite Collections Facility

The Offsite Collections Facility (OCF) will provide initial shelving capacity for 2.5 million library volumes with the ability to provide a total capacity of 3.3 million volumes in the future. Support spaces within the OCF will accommodate processing and timely delivery of collections, including accessioning space.



Location: Twin Cities - Como District
 Estimated Project Cost: \$66,700,000
 Substantial Completion: April 2024

New Entrance and Parking at Farm at the Arb

This project includes a new public entry with expanded parking from 82nd Street, and will accommodate 1,500+ daily visitors to the Farm at the Arb. The new entry will have a gate which provides access to members via card access, and also allows digital ticketed entry to gain entry during events at Farm at the Arb.

Location: Minnesota Landscape Arboretum,
(Chanhassen)

Estimated Project Cost: \$1,795,000

Substantial Completion: October 2023



Center for Magnetic Resonance Research – Minnesota Discovery Team (MDT) Optical Imaging Shell Space Buildout

This project provides tenant improvement buildout to accommodate MDT researchers' specific research requirements as well as support space.

Location: Twin Cities - East Bank

Estimated Project Cost: \$2,866,000

Substantial Completion: November 2023



3M Arena at Mariucci and Ridder Arena – Centennial Improvements (Phase 1)

The existing ice sheets at 3MAM and Ridder utilize an R-22 refrigerant system which has been banned federally for production. The new ice design will utilize an ammonia based refrigerant system serving both arenas. The combined system will lower the maintenance and energy costs vs. a standalone system for each arena. phases. Phase 1 scope will replace the ice refrigerant systems in 3MAM and Ridder Arenas along with reducing the ice size and upgraded ice lighting in 3MAM.

Location: Twin Cities - East Bank

Estimated Project Cost: \$14,000,000

Substantial Completion: November 2023



Dwan Variety Club Cardiovascular Research Center/Masonic Cancer Research Building Third Floor Lab Renovation

The renovation will support research that is developing new perspectives of how metabolism adapts to obesity, diabetes, non alcoholic fatty liver (NAFLD/NASH), and cardiomyopathy; how these adaptations ultimately prove harmful, and how innovative and personalized nutritional and pharmacological therapies may mitigate these adverse responses.

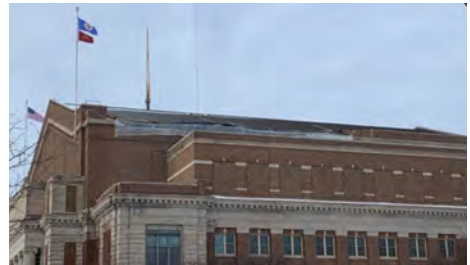
Location: Twin Cities - East Bank
 Estimated Project Cost: \$12,125,000
 Substantial Completion: February 2024



Northrop Auditorium Parapet Wall Repair

This project is for the repair of damage caused by excessive ice and snow buildup on the upper east roof of Northrop Auditorium.

Location: Twin Cities - East Bank
 Estimated Project Cost: \$10,100,000
 Substantial Completion: December 2023



AB Anderson Hall (Phase 2)

The existing facility will be renovated to include a revised mechanical system, new life safety systems (including fire protection), and architectural finishes.

Location: Duluth
 Estimated Project Cost: \$6,500,000
 Substantial Completion: May 2024



Main Energy / Chilled Water Plant

This project expands the chilled water capacity in the East Bank loop by adding steam-driven chillers and a future boiler addition in the existing Main Energy Plant.

Location: Twin Cities - East Bank
 Estimated Project Cost: \$29,900,000
 Substantial Completion: May 2023



Microbial Cell Production Facility

The Microbial Cell Production Facility will expand the Biotechnical Resource Center (BRC) for the College of Biological Sciences and provide shelled tenant space for future programs that complement the BRC program on the second floor.

Location: Twin Cities - Saint Paul
 Estimated Project Cost: \$92,300,000
 Substantial Completion: November 2023



Dwan Variety Club Cardiovascular Research Center/Masonic Cancer Research Building Level 2 Wet Bench Lab Renovation

The renovation will co-locate research laboratories for the faculty of Pulmonary, Allergy, Critical Care, and Sleep Division of Cardiology (Resuscitation Medicine) and Division of Transplantation in the Department of Surgery.

Location: Twin Cities - East Bank
 Estimated Project Cost: \$9,100,000
 Substantial Completion: November 2023



PROJECTS COMPLETED IN FY 2023

Institute of Child Development / Campbell Hall

The Campbell Hall project renovated, and expanded the existing 1913 Institute of Child Development building for the College of Education and Human Development to provide cutting-edge research, teaching, and learning space to advance the science of human development while also addressing infrastructure, code, and accessibility.

Location: Twin Cities - East Bank
 Estimated Project Cost: \$43,200,000
 Substantial Completion: August 2022



Lind Hall Renovation

The renovated facility provides an academic home for the College of Science and Engineering's newest department, Industrial and Systems Engineering, and space relief for the growing Computer Science and Engineering department. The project addressed building code, infrastructure, and accessibility issues while investing in the historic campus core.



Location: Twin Cities - East Bank
 Estimated Project Cost: \$33,700,000
 Substantial Completion: August 2022

PWB 4th Floor - Teaching Lab Renovation

This project renovated the 4th floor of the Phillips-Wangenstein Building, creating new teaching classrooms to serve the College of Science and Engineering's Department of Biomedical Engineering and the Medical School's Department of Integrative Biology and Physiology.



Location: Twin Cities - East Bank
 Estimated Project Cost: \$10,600,000
 Substantial Completion: December 2022

Burton and Virginia Myers Education Center

The Burton and Virginia Myers Education Center represents an important collaboration among the University of Minnesota Landscape Arboretum, Extension, and the College of Food, Agriculture, and Natural Resource Sciences to consolidate and support the continuing education of volunteers, staff, and the public at the Arboretum.



Location: Minnesota Landscape Arboretum (Chanhassen)
 Estimated Project Cost: \$2,980,000
 Substantial Completion: February 2023

McNeal Hall Suite 32 Reconfiguration

The Suite 32 Reconfiguration project involves interior demolition and renovation of the existing McNeal Hall to create a signature departmental teaching studio space for the College of Design.

Location: Twin Cities - Saint Paul

Estimated Project Cost: \$1,800,000

Substantial Completion: January 2023

**Murphy Hall**

This project renovated existing space in the Hubbard School of Journalism and Mass Communication to include classroom spaces, media lab library, broadcast studio, and adjacent support space.

Location: Twin Cities - East Bank

Estimated Project Cost: \$4,300,000

Substantial Completion: December 2022

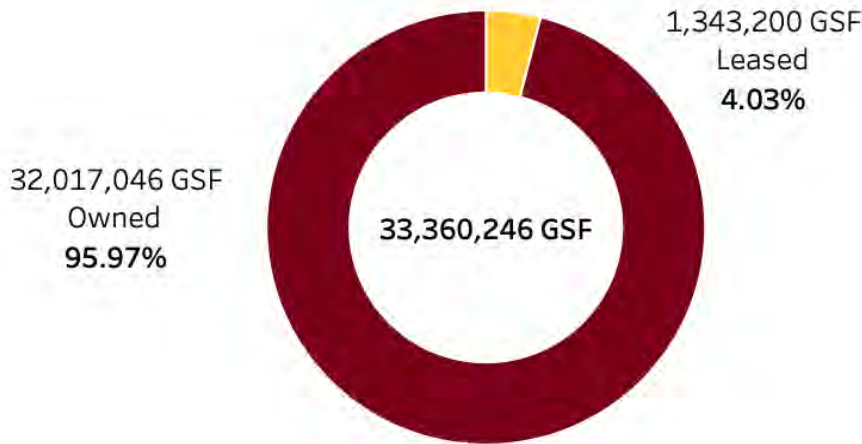


SPACE PORTFOLIO

The University’s portfolio of space totals 33.4 million gross square feet throughout the state of Minnesota. The cost to operate, maintain, and improve space is commonly recognized as the largest non-personnel expense to the University.

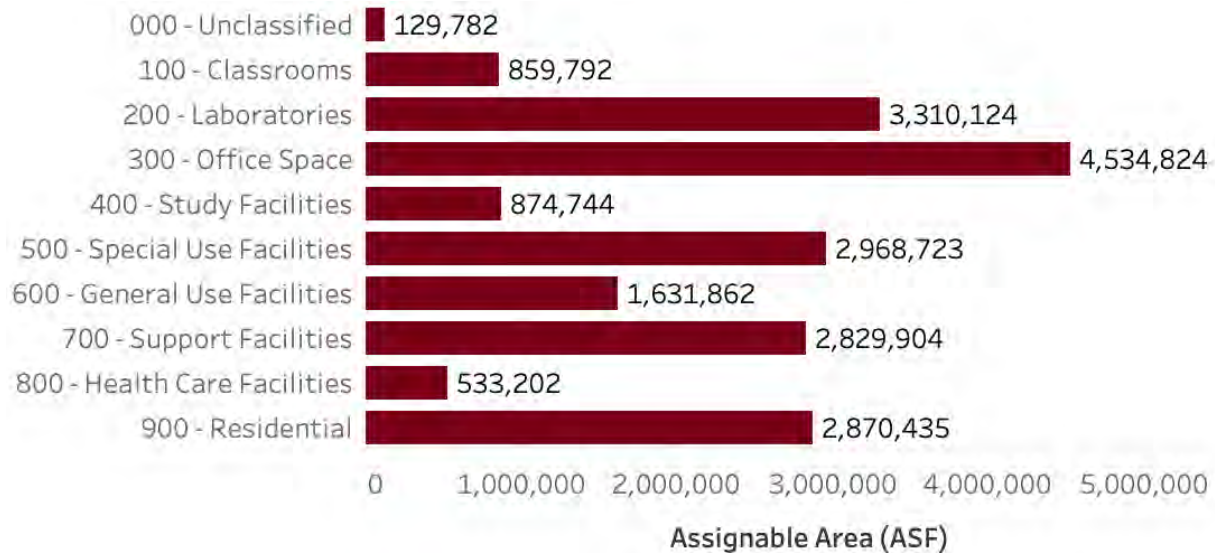
The University owns the majority of its facilities across the system. The Rochester campus is unique in this regard, with all facilities currently being leased. Systemwide, leased buildings represent 4% of the space portfolio.

Gross Area by Building Tenure, 2023



The University categorizes space following rubrics defined at the Federal level. At the end of FY 2023, the assignable space, the amount of space that is usable for University programs, (excluding walls, mechanical spaces, circulation, and building service) is categorized as follows:

Assignable Area by Space Classification, 2023



Coupled with facility condition data (see next section), the classification data are a key component to managing the quality and quantity of space. Among these categories, office

space is the largest use by quantity but the most underutilized by activity. Conversely, classroom space represents just 4% of the portfolio, and yet it is the most intensely utilized space we have. This is largely due to the intentional and structured management of this space use. A similar approach is possible in other categories but requires a larger cultural shift.

The COVID-19 pandemic changed how people think about work: where they work, how they work, and what they need to get their work done. While many faculty and other instructors already worked in a type of hybrid model, it was not as common for staff. 2020's pivot to remote work accelerated the conversation about how to think differently about workspace at the institutional level. Historically, work rules and environments required employees to come to campus five days a week for forty or more hours. Single person, assigned space was provided to meet multiple needs, including personal work effort, meeting and collaboration space, and storage space for books, paper, etc. Yet most faculty and staff have multiple places to go other than their offices or cubicles, such as classrooms, labs, meeting rooms, etc. This regular use of multiple spaces makes office space the least utilized space on campus. For staff in cubicles, the space is even more sub-optimal: too public for confidential work, too open for quiet work, and too small for team or collaboration work.

Human Resources and University Services are leading a systemwide effort to advance the University's hybrid workplace and strategic space initiative. A staff team, led by Planning, Space, and Real Estate has been charged with developing a strategic planning framework to enhance employee workplace productivity and satisfaction through developing a comprehensive set of work rules and practices, IT support, and creative new space designs. The anticipated outcomes of their work are improved recruitment/retention and employee engagement, work productivity, optimized utilization of existing space, and possibly a reduction in the overall space footprint of facilities across the University system. Initial demonstration projects, known as campus hubs, are in the conceptual phase and will be brought to the Board for approval through the capital budget process.

Changes in this area will take time. Historically, cultural changes were viewed as the largest hurdle in this arena. In a post-pandemic work environment, that hurdle is now a financial one, as refitting large amounts of space will take millions of dollars upfront to reduce space and the associated carrying cost over the longer term.

Overall, the past fiscal year has resulted in less than 1% total change in the space portfolio. The largest increase on any one campus occurred at Rochester. This growth can be attributed primarily to an expanded lease for housing in the Residence at Discovery Square. The new Student Life Center at UMR is not yet reflected the figures for 2023. On the Twin Cities campus, roughly 40,000 GSF was added with the completion of the Campbell Hall renovation. However, this increase was offset by reductions in leased space at the Minnesota Tech Center and the Dinnaken Office Building. The remaining changes to campus gross area are largely attributable to staff efforts to regularly review and ensure the highest accuracy of our data, rather than a specific capital project, lease change or acquisition.

Gross Area by Campus, 2022 - 2023

Campus	2022	2023
Crookston Campus	727,341	729,384
Duluth Campus	3,421,085	3,418,465
Morris Campus	1,001,394	1,001,394
Rochester Campus	216,021	241,638
Twin Cities Campus - Minneapolis	21,675,830	21,684,672
Twin Cities Campus - St. Paul	4,271,109	4,271,108
Twin Cities Campus - Remote Locations	1,994,431	2,016,881
Systemwide	33,307,211	33,363,542

A look at the largest increases and decreases among RRCs reflects other renovation work, and transfers of space that took place over the past fiscal year. The College of Science and Engineering completed a renovation of Lind Hall and moved into this space prior to the start of the 2023 spring semester. Growth in assignable area for the College of Education and Human Development is less than the total gross area change on campus, as the college was able to vacate temporary use space while taking on new space in Campbell Hall. The College of Continuing and Professional Studies achieved the greatest reduction in assignable area by vacating the Continuing Education and Conference Center on the Saint Paul campus. The reduction in space for Health Sciences Administration reflects the transfer of health sciences classrooms to the Office of Academic Clinical Affairs. Undergraduate Education vacated Fraser Hall for the Chemistry Undergraduate Teaching Lab project. Through the application of flex work practices and office sharing, staff were able to consolidate into recently renovated space in Williamson Hall.

Assignable Area by RRC, Largest Increases and Decreases 2022 - 2023

RRC	2022	2023	Net Change	
College of Science and Engineering	1,185,800	1,225,362	39,563	↑
Rochester Campus	153,245	183,379	30,134	↑
College of Education/Human Development	334,864	351,482	16,618	↑
Undergraduate Education (UMTC)	619,801	586,196	-33,605	↓
Health Sciences Administration	482,612	448,710	-33,902	↓
College of Continuing/Professional Studies	73,116	37,346	-35,770	↓

FACILITY CONDITION ASSESSMENT

Facilities Condition Assessment (FCA) is the central repository of building and utility infrastructure conditions and needs that are systematically codified, prioritized, and cost estimated. FCA information produces a high-level description of overall campus needs, supports prioritization and budgeting of annual renewal programs, and provides an order of magnitude scoping for capital projects.

FCA meets the requirements of Minnesota Statute 135A.046 “Asset Preservation and Replacement.” The statute compels the University to establish priorities for Higher Education Asset Preservation and Replacement (HEAPR) funding. HEAPR funds are used throughout the University of Minnesota system and are allocated to campuses and research stations based on facility needs and overall space. The FCA also supports statute 16A.633, subd. 3, which states, “The Board of Regents of the University of Minnesota is requested to establish and maintain data on the location, description, and condition of university-owned facilities that is comparable with the database established by the Department of Administration. The university is requested to update the data annually and maintain both current inventory data and historical data. The Board of Regents is not eligible to receive capital funding unless the board has established and maintains the data required.”

FCA data informs the six-year planning process to align facility needs with academic priorities. The plan strongly emphasizes fixing or replacing some of the University’s worst buildings. High-priority projects reinforce the commitments made in the Systemwide Strategic Plan MPact 2025 by complementing institutional values and optimizing how resources are used across the campus system. HEAPR funding remains at the core of this strategy.

The FCA process identifies deferred, non-recurring, and projected renewal needs - collectively referred to as “Projected Ten-Year Needs” - to determine a facility condition needs index (FCNI). The FCNI (the ten-year projected needs divided by the estimated replacement value) determines where a building is rated on a scale of 0.0 (excellent) to 1.0+ (critical). The table below is updated annually to monitor year-over-year condition as well as progress towards reducing poor and critical space. The same table in last year’s report was based on fall 2021 data; the updated 2023 figures include cost escalation from the University’s assessment vendor for 2022 and 2023, resulting in an increase to replacement values and projected ten-year needs of approximately 19%. During the same time period, major renewal investments did account for some reduction of ten-year needs. However, the rate of ongoing deferral continues to exceed available resources for renewal, so the ten-year need continues to grow.

Fall 2023 Enterprise Facility Condition

CAMPUS	TOTAL GSF ¹	ESTIMATED REPLACEMENT VALUE ²	PROJECTED 10-YEAR NEEDS ²	10-YEAR NEEDS / REPLACEMENT VALUE (FCNI)	GSF POOR / CRITICAL
Twin Cities	25,183,826	\$13,066,424,466	\$4,995,271,164	0.38	7,605,765
Duluth	3,388,417	\$1,449,171,780	\$532,028,099	0.37	588,330
Morris	1,000,464	\$524,089,731	\$218,499,881	0.42	481,564
Crookston	726,565	\$425,823,548	\$117,845,574	0.28	106,981
ROCs	1,718,286	\$382,516,509	\$132,013,217	0.35	130,992
TOTALS	32,017,558	\$15,848,026,034	\$5,995,657,935	0.38	8,913,632

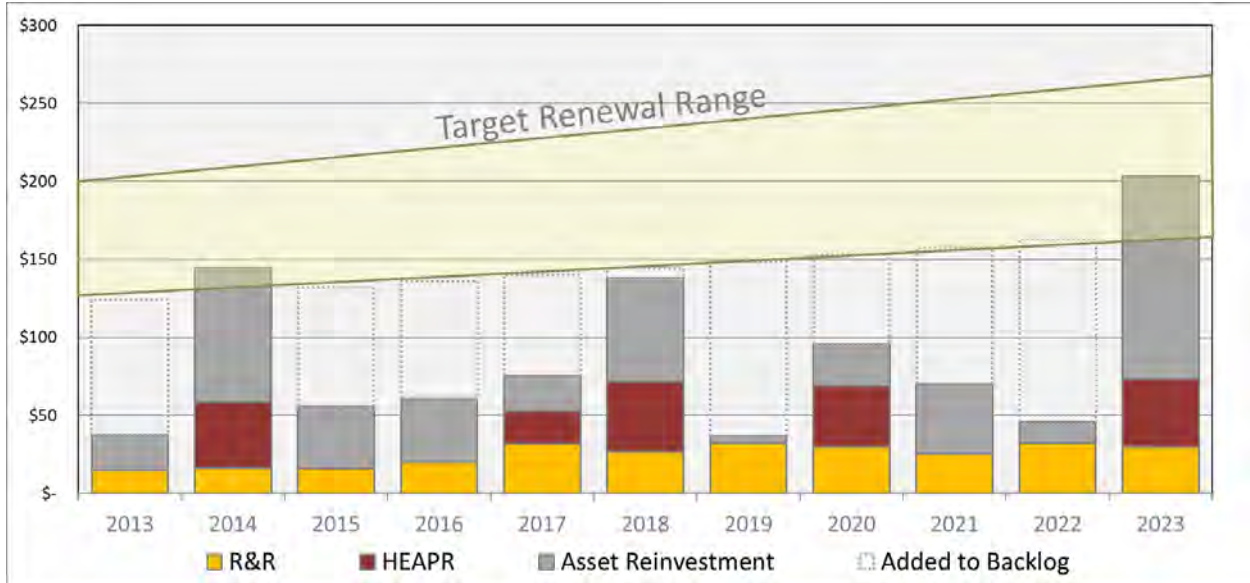
¹ Total Gross Square Feet from UM Analytics. Excludes Rochester Campus and parking ramp decks.

² Figures include formally assessed facilities plus actual or modeled values for non-assessed facilities less than 10 years old.

³ Increase of approximately 1% from previous reporting year.

In 2022, University leadership directed that a systemwide update to the FCA be a part of its coordinated planning process, which includes campus plans, climate action plans, facility condition assessments, and utility assessments. Updated assessments incorporate new buildings that have been constructed in the last 5-10 years, update and re-prioritize information about renewal needs in previously assessed buildings, and assess major utility infrastructure assets for the first time to round out the comprehensive picture of the University's physical asset condition and needs. This effort is expected to span three years, with all assessments complete by 2025. To date, assessments at Duluth and Crookston campuses have been completed, and teams are now focusing on Twin Cities campus. Updated findings will be reflected in next year's report.

FCA inspections, studies, and models tell us how much and where we should be investing to be good stewards of our public assets. The chart that follows compares what the University, in partnership with the State, has been able to invest each year against what the FCA data says we should be investing. The bottom of the yellow range shows the minimum annual investment needed just to sustain the status quo. The top of the yellow range shows the amount needed to address all of the building issues that have added to the deferred renewal backlog. The University asks for at least \$200 million per year, because that is our need. Notably, reinvestment in calendar 2023 (FY 2024) marks only the second time in a decade where reinvestment has reached target levels. We estimate that a net balance of more than \$750 million has been added to our backlog of needs over the time period charted.



Facility renewal, replacement, and decommissioning will need to remain the University's primary focus for its capital program if progress is to be made on addressing the deferred renewal challenge. The University needs to minimize the amount of new net space it adds to the portfolio. This will also be critical to meet greenhouse gas reduction targets.