

UNIVERSITY OF MINNESOTA
BOARD OF REGENTS
Facilities and Operations Committee

Thursday, June 13, 2013

1:30 - 3:30 p.m.

600 McNamara Alumni Center, West Committee Room

Committee Members

Dean Johnson, Chair
Clyde Allen, Vice Chair
Laura Brod
John Frobenius
David Larson
Peggy Lucas

AGENDA

1. UMD Campus Master Plan Update - Action - L. Black/P. Wheelock/M. MacKenzie (pp. 2-92)
2. Project Components of the President's Six-Year Capital Improvement Plan - Action - P. Wheelock/S. Smith/M. MacKenzie (pp. 93-95)
3. Project Components of the President's Recommended FY 2014 Capital Improvement Budget - Action - P. Wheelock/S. Smith/M. MacKenzie (pp. 96-98)
4. Schematic Plans - Review/Action - P. Wheelock/A. Friedman/M. Seymour/S. Smith (pp. 99-111)
 - A. UMD Campus Utility Building - Duluth Campus
 - B. Microbiology Research Facility - Twin Cities Campus
 - C. Glensheen June 20, 2012 Water Damage and Cleanup - Duluth Campus
5. University of Minnesota Landscape Arboretum Master Plan Update - Review/Action - P. Wheelock/E. Schneider (pp. 112-190)
6. Information Items - P. Wheelock (pp. 191-222)



**UNIVERSITY OF MINNESOTA
BOARD OF REGENTS**

Facilities and Operations Committee

June 13, 2013

Agenda Item: University of Minnesota Duluth Campus Master Plan Update

review review/action action discussion

Presenters: Chancellor Lendley Black
Vice President Pamela Wheelock
Monique MacKenzie, Director of Capital Planning

Purpose:

policy background/context oversight strategic positioning

Present to the Board of Regents an updated University of Minnesota Duluth Campus Master Plan that supports the University's Strategic Plan and mission to integrate liberal education, research, creative activity, and public engagement and prepare students to thrive as lifelong learners and globally engaged citizens. The updated Master Plan defines a conceptual and physical framework, guided by master plan principles and goals, for making physical changes to the campus over time. The plan describes the long-term vision for the campus as well as short-term implementation goals. This includes guidance on land use, buildings and infrastructure, open space, natural features, and circulation networks for movement to, from, and around the campus.

Outline of Key Points/Policy Issues:

Serving the people of Minnesota and beyond, the University of Minnesota Duluth (UMD) takes full advantage of its Northeast Minnesota location on the dramatic shores of Lake Superior to offer a quality living and learning experience. It nurtures student success in an academic culture of high expectations through a learning-centered environment characterized by innovative comprehensive undergraduate and graduate programs, student life initiatives, discipline-specific and interdisciplinary research opportunities, creative endeavors, and thriving international exchanges.

UMD's new vision focuses on students learning and growing through experience, critical inquiry, and interaction with other learners. It eagerly embraces a global future while maintaining a strong presence in the cultural, economic, and intellectual life of the Duluth community, the Northland, the state, and the nation.

UMD endeavors to become and remain a model of community engagement and service which improves the quality of life for all and deepens the understanding, meaning, and purpose of the UMD educational experience. This updated Master Plan provides the flexible framework to accommodate change while guiding the incremental physical manifestation of the University Strategic Plan.

Master Plan Guiding Principles and Goals

The intent of the Guiding Principles is to provide an overarching framework of ideas that ground future decision making. The Principles are commonly agreed upon ideas about how the campus should evolve and how implementation should be prioritized. The Master Plan Guiding Principles are as follows:

- Establish a clear campus edge on West College Street and Woodland Avenue
- Establish primary campus entries
- Maintain and strengthen the “academic core” of the campus
- Connect the campus to the regional environment
- Visibly manifest sustainability

The Master Plan Goals are supported by the Guiding Principles and provide a more focused set of expectations for implementation. The Master Plan Goals include:

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

Trends and Assumptions

This Master Plan update is predicated on a variety of assumptions that informed the underlying planning process, approach and methodology. These assumptions include:

- This plan describes strategies for change and growth; final solutions will require additional planning, design, and engineering to resolve specific programmatic and functional requirements.
- The 2005 Master Plan content and background inform this master plan. Changes to the 2005 plan are noted herein.
- Enrollment will continue to increase at a modest rate, approximately 1%-2% per year.
- The campus is essentially land-locked on all sides with the exception of several strategic expansion areas.
- Existing natural areas should be preserved.
- Recommendations should be fiscally responsible and achievable.
- Parking stall quantity should remain static.
- Transit service to and from the campus will continue.
- On campus sports and recreation fields must be preserved.
- On campus housing capacity is adequate; any future demand will be absorbed by the private sector.

Key Initiatives

The immediate focus of the Master Plan Update will be to design and construct the new “Visitor Gateway” entry on the south side of the campus off of West College Street. A second new entry, the “Grand Ped/Bike Gateway” will be designed and constructed off of Woodland Avenue. This Ped/Bike Gateway will provide a much stronger and safer access point to campus from the Blue Stone Commons residential and commercial (private) development as well as other areas east of Woodland Avenue.

Additional near-term activities involve working with the City of Duluth on a possible reconfiguration/relocation of the West College Street/Woodland Intersection to Clover Street, implementation of several “in-process” design/construction projects, and planning for future capital projects. These capital projects are aligned with the goals outlined in UMD’s Strategic Plan.

Strategic Plan Campus Goals

- Goal 1: Promote integrated curricular, co-curricular, and living-learning undergraduate experiences that achieve UMD’s student learning goals and prepare students for lifelong learning, globally engaged citizenship, and success in their academic, personal, and professional lives.
- Goal 2: Create a positive and inclusive campus climate for all by advancing equity, diversity, and social justice.
- Goal 3: Establish UMD as a center of excellence for graduate studies in the Upper Midwest.

- Goal 4: Advance UMD’s stature as a major campus for research and creative activities, leveraging our region’s unique natural, human, and cultural resources.
- Goal 5: Strengthen ties with Duluth and surrounding communities in an intentional, visible, and mutually beneficial partnership.
- Goal 6: Utilize UMD’s infrastructure; technologies; and information, human and financial resources to support the campus in a sustainable manner.

Plan Elements and Guidance

The plan recommendations are broken down into five main sections. Each section contains a general description of guidelines that should be taken into account when making decisions about future investments.

The sections in the plan are listed below:

1. Land use
 - The recommended land use plan generally follows the historic development pattern of the campus.
2. Public Spaces and Buildings
 - There should be a synergy between buildings and open space on campus.
 - Create a variety of open space types on campus.
 - The northern forest environment should be invited into the campus.
3. Movement and Circulation
 - Systems should work together to promote ease of access and clear routes to, and within, the campus.
 - Pedestrian movement should be of primary importance on campus.
 - Enhance routes, services, and storage for bicycles on campus.
 - Transit should be integrated into the campus movement systems, signage and amenities
 - Vehicular access should be clear for visitors and discreet for regular users.
4. Parking
 - De-emphasize parking as the primary first impression of the campus.
5. Additional Considerations
 - Internal Circulation—Legibility, Light and Views
 - Off-Campus Facilities—Ambassadors and Brand Steward

Background Information:

Included in the docket material is a copy of the University of Minnesota Duluth Master Plan. The full Plan can be found at: http://www.d.umn.edu/fm/construction/master_rev_2013.pdf

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

In September 1992 the Chair of the Board of Regents and the President of the University appointed a Master Planning Steering Committee to “design and recommend a set of principles which will discipline and inspire the development of a master planning process.”

In 1993 the Board of Regents adopted the following four Campus Master Planning principles as developed by the master Plan Steering Committee:

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

In September 1996, the Board of Regents adopted a resolution directing the campus master plans reviewed earlier in the year to be used to “guide the future development of the campuses

in accordance with the four planning principles and the policies, procedures, and strategies therein will be the basis for all future master planning decisions.”

In 2012, the University of Minnesota Duluth engaged Hay Dobbs Architects to undertake this Master Plan Update. This Master Plan Update is an update to the 2005 Campus Master plan and is predicated on much of the conceptual and strategic direction set by the 2005 plan. This update to the UMD Campus Master Plan was undertaken with ongoing involvement and participation by the UMD Physical Facilities Committee (PFC) as well as campus leadership.

The PFC was charged with the task of evaluating, researching, analyzing, planning, and recommending implementation of an updated Campus Master Plan to address a short and long term planning time frame. Committee members were chosen to represent specific areas of the University and to gather input from their respective constituents. The PFC held scheduled planning meetings, workshops and two on-campus forums as vehicles to both garner and communicate information. The committee members were:

Steve Bardolph, Assistant Professor, Art and Design
Lester Drewes, Professor, Biochemistry and Molecular Biology
Amanda Fudala, Program Associate, Facilities Management
Jodi Carlson Grebinoski, Associate Librarian
Ava Heinrich, Student Representative
Pat Keenan, Administrative Director, Student Life
John King, Director, Facilities Management
Bob Krumwiede, Associate Vice Chancellor, Academic Affairs
Joan Kwako, Associate Professor, Education
Mick McComber, Senior Administrative Director, Recreational Sports
Nik Hassan, Associate Professor, Finance and Management Information Sciences
Adam Pine, Assistant Professor, Geography
John Rashid, Associate Director, Facilities Management
Lisa Pratt, Director, Alumni Relations
Harlan Stech, Professor, Math and Statistics
Molly Tomfohrde, Student Representative
Matthew Weber, Student Representative
Drew Wimmer, Assistant Professor, Theater
Lorentz Wittmers, Interim Director, Center for American Indian and Minority Health;
Director, Animal Services; Associate Professor, Biomedical Sciences
Mark Zmudy, Assistant Professor, Health, Physical Education and Recreation

Additional participants included Lendley Black, Chancellor; Mike Seymour, Vice Chancellor, Finance and Operations; and Cheryl Love, Supervisor, Parking Services.

The Master Plan was presented to the UMD campus neighborhood at the Annual Neighbors meeting in October 2012 and to the UMD campus community (which included students, faculty, and staff) in October and December of 2012. It was also presented to the Duluth City Council in February 2013. The final documentation of the update was published and presented in early 2013, resulting in the document presented to the Facilities and Operations Committee in May.

University of Minnesota Duluth

Campus Master Plan Update 2013

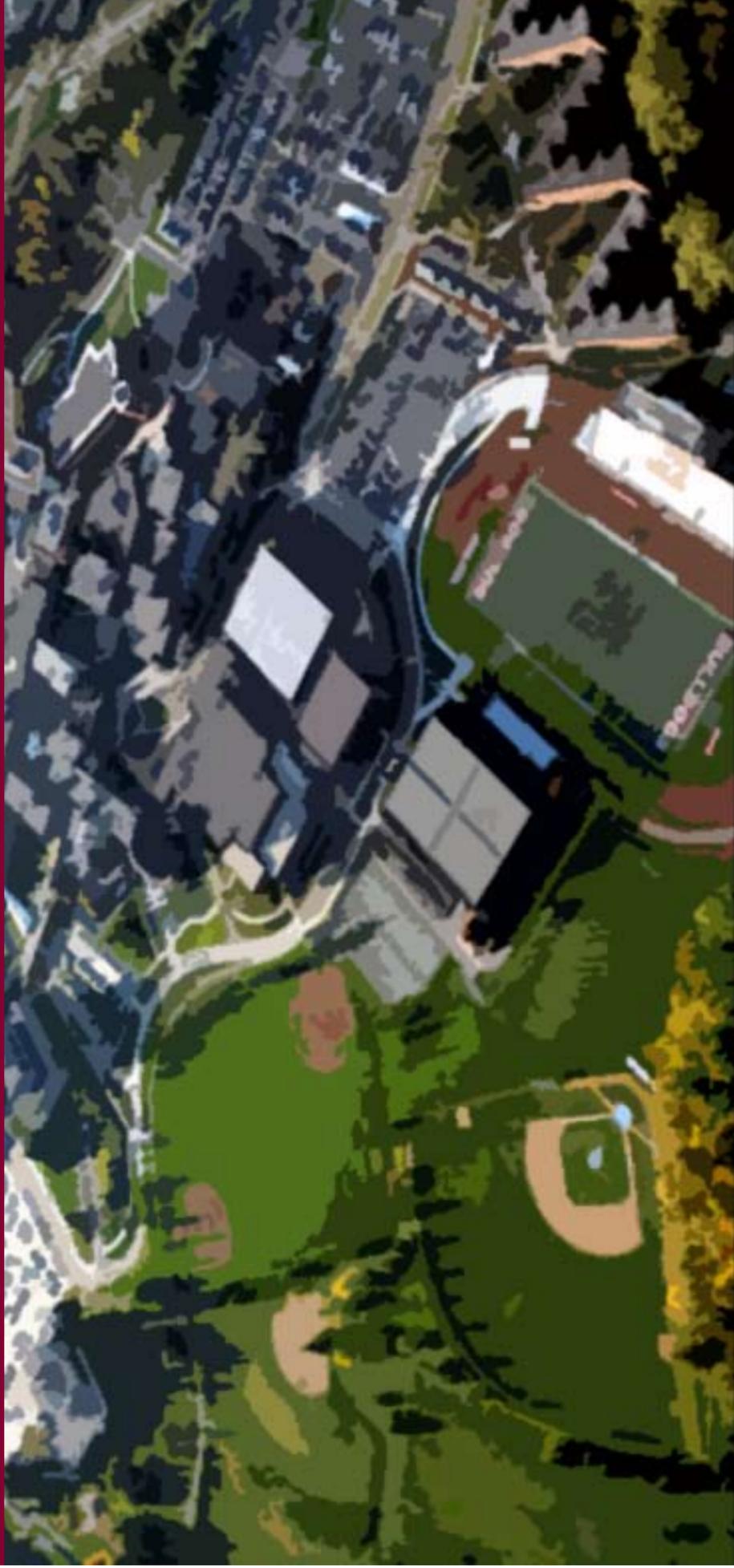


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 - Midwest Traffic Consulting, LLC
- Board of Regents Campus Master Planning Principles
 - Campus Master Planning Principles

Lead Master Plan Consulting Firm:



www.haydobbs.com



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ACKNOWLEDGEMENTS

This update to the UMD Campus Master Plan was undertaken with ongoing involvement and participation by the UMD Physical Facilities Committee (PFC) as well as campus leadership. The PFC was charged with the task of evaluating, researching, analyzing, planning, and recommending implementation of an updated Campus Master Plan to address a short and long term planning time frame. Committee members were chosen to represent specific areas of the University and to gather input from their respective constituents. The PFC held scheduled planning meetings, workshops and two on-campus forums as vehicles to both garner and communicate information relevant to the update of the broader University.

Physical Facilities Committee:

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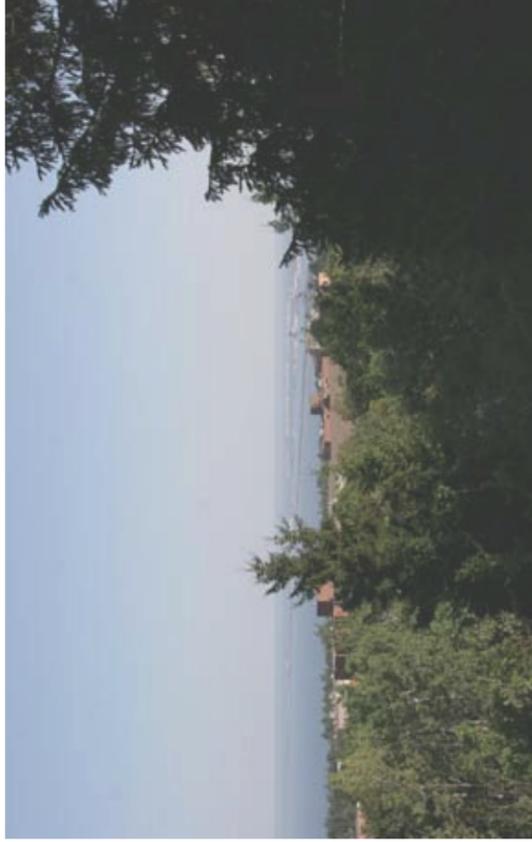


EXECUTIVE SUMMARY

Introduction

In 2012, the University of Minnesota Duluth engaged Hay Dobbs Architects to undertake this Master Plan Update. This Master Plan Update is an update to the 2005 Campus Master plan and is predicated on much of the conceptual and strategic direction set by the 2005 Plan. The Update was undertaken with ongoing involvement and participation by the UMD Physical Facilities Committee (PFC) as well as campus leadership. The Update will support the University's Strategic Plan and Academic Mission by guiding future land use and development decisions. The final documentation of the Update was published and presented in early 2013.

The UMD 2013 Campus Master Plan Update defines a conceptual and physical framework, guided by master plan principles and goals, for making physical changes to the campus over time. The plan describes the long term vision for the campus as well as short term implementation goals. This includes guidance on land use, buildings and infrastructure, open space, natural features, and circulation networks for movement to, from and around the campus.



Guiding Principles

The intent of the Guiding Principles is to provide an overarching framework of ideas that ground future decision making. The Principles are commonly agreed upon ideas about how the campus should evolve and how implementation should be prioritized. The Master Plan Guiding Principles are as follows:

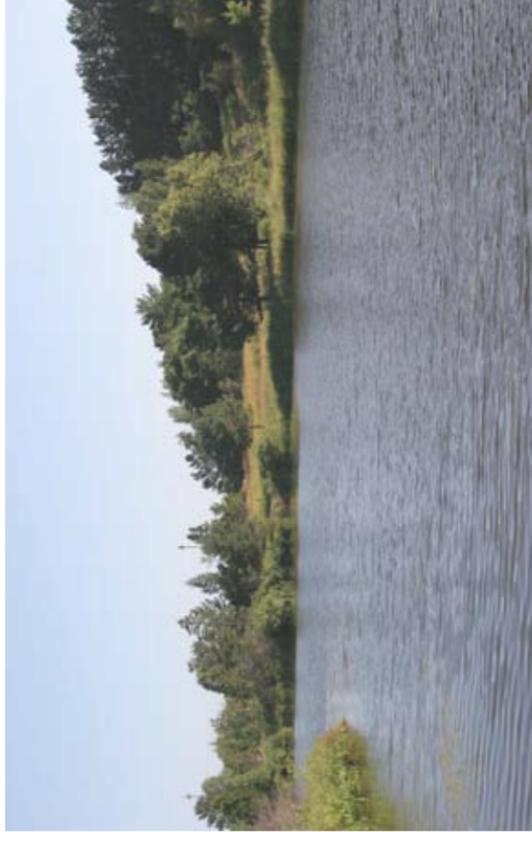
- Establish a clear campus edge on West College Street and Woodland Avenue
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Master Plan Goals

The Master Plan Goals are supported by the Guiding Principles and provide a more focused set of expectations for implementation. The Master Plan Goals include:

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Major Changes from 2005 Plan

1. Campus Entries

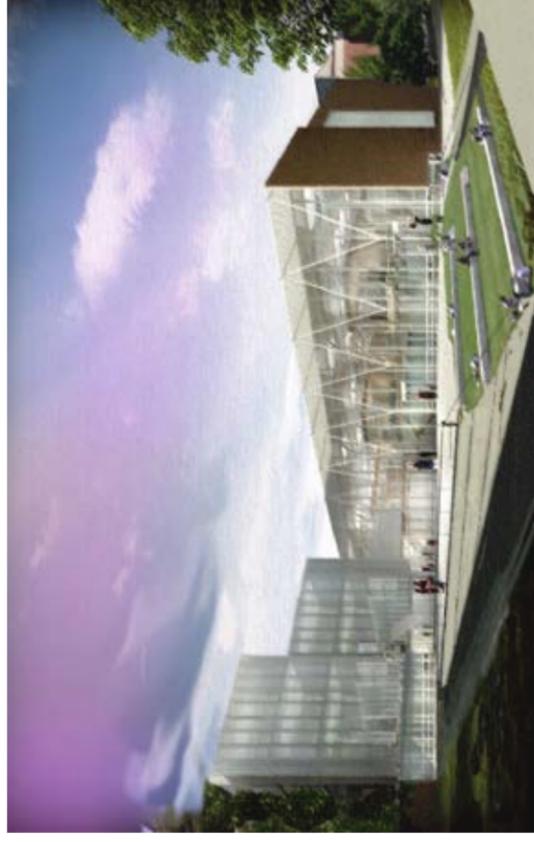
The 2005 Plan suggested a new primary campus entry off of Woodland Avenue. The Master Plan Update process revealed many impediments to implementation of a Woodland entry including displacing several critical ball fields, severing future growth from the primary campus, pedestrian safety, outdoor facility security and high costs. The Master Plan Update allows for orderly campus growth and preservation of on-campus ball fields by locating a new primary campus entry off of West College Street. This new entry will be the primary Visitor Entry and will connect with a re-aligned University Drive. The Update plans for many new buildings on campus to be located along this entry drive allowing the University to showcase these new facilities as the “front door” to the campus.

A new ped/bike entry on Woodland Avenue will create a Grand Pedestrian and Bicycle Entry from Woodland Avenue to University Drive.



2. Solon Lawn

The 2005 Plan suggested a large informal open space east of Solon Campus Center identified as “The Clearing”. The Update evolves this idea into a more structured public lawn known as “Solon Lawn”. Solon Lawn will be a large elevated lawn and plaza established at the east ground floor entry level of Solon Campus Center. This elevated lawn is envisioned to have several levels of structured parking below to allow for underground, climate controlled parking in the core of the campus near athletic, performing arts and visitor activities. A large drop-off area is envisioned surrounding the lawn and connecting University Drive to the Solon Student Center Visitor Entry. The east end of Solon Lawn is planned to have large stepped - amphitheater like - terraces allowing students and visitors to socialize, study and enjoy views of Lake Superior and on-campus recreational and athletic fields.



3. Perimeter Structured Parking

UMD currently relies entirely upon surface parking lots to accommodate campus parking needs. Many of these large surface lots are located along key arrival points to campus. This creates the first impression of the campus as that of parking lots.

Construction of new multilevel parking structures is recommended at the north and south campus perimeter to meet campus parking demands in the coming years. Parking should also be designed to be located under, or in the lower levels of, new facilities whenever possible. The northern parking deck top level can also be surfaced for athletic and recreation activities (soccer, tennis courts, etc.) and may even be roofed over for year round use. Because of the topography, this level should be designed to be at the same grade level as the existing ball diamond, thus creating contiguous space for related activities.



UMD

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Short Term Plan

The immediate focus of the Master Plan Update will be to design and construct the new “Visitor Gateway” entry on the south side of the campus off of West College Street. This new entry will become the primary vehicular access point to the campus for visitors. University Drive will be reconfigured to connect to this new entry and allow for campus building expansion eastward around the campus core.

A second new entry, the “Grand Ped/Bike Gateway” will be designed and constructed off of Woodland Avenue. This Ped/Bike Gateway will provide a much stronger and safer access point to campus from the Blue Stone Commons residential and commercial development as well as other areas east of Woodland Avenue.

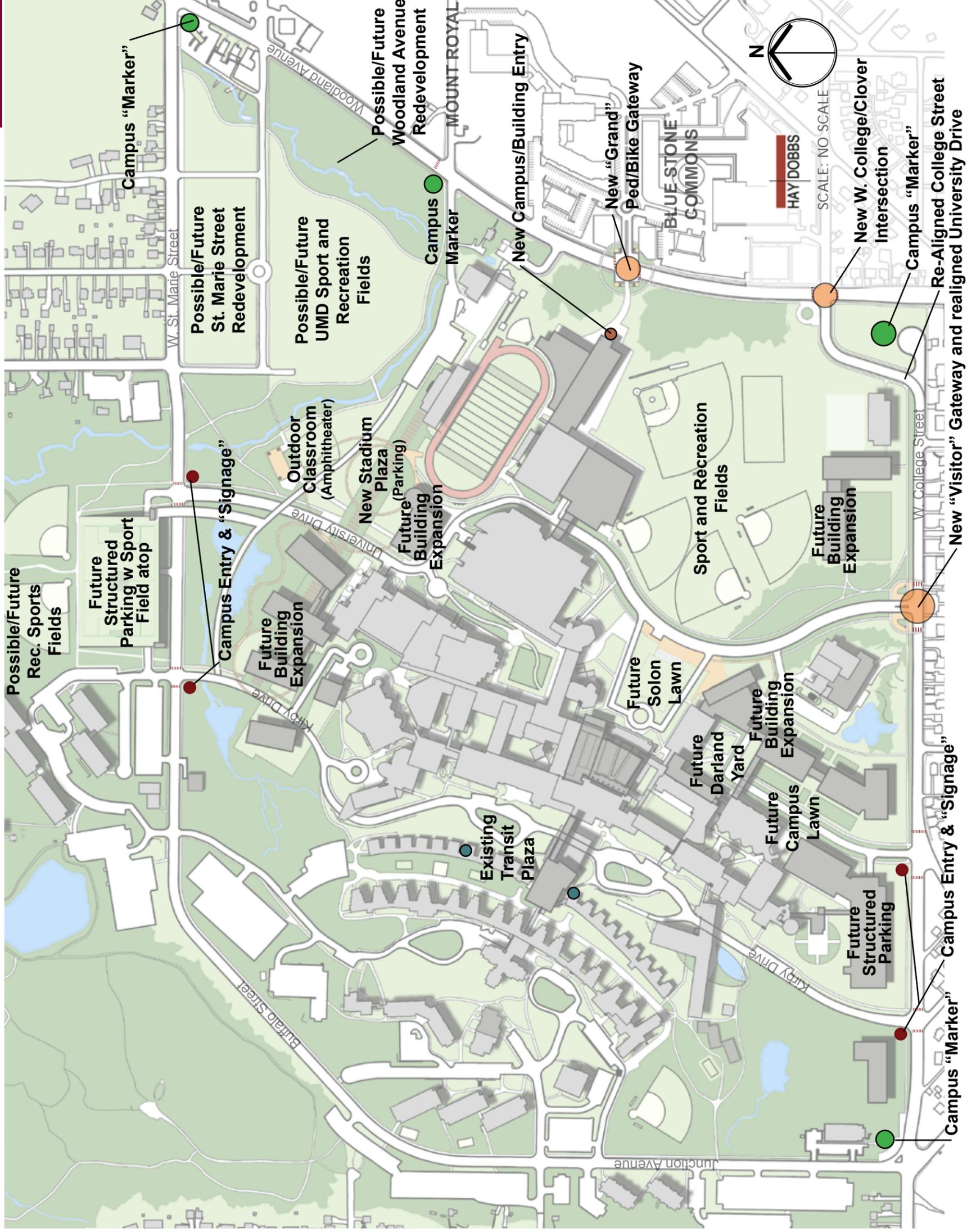
Already underway, additional wayfinding, signage and markers will supplement this effort.

Additional near-term activities involve working with the City of Duluth on a possible reconfiguration/relocation of the West College Street/Woodland intersection to Clover Street; implementation of several “in-process” design/construction projects; and planning for future capital projects.



Campus “Marker” Campus Entry & “Signage” New “Visitor” Gateway and realigned University Drive

Proposed UMD Master Plan - Short Term Plan



Long Term Plan

The long term plan for UMD grows the campus in a compact and walkable manner. Nature is invited in more fully on the north end of campus while the southeastern portions of campus become more regularized and urban. Parking is primarily located in perimeter structured parking facilities creating a more pedestrian friendly and visually appealing campus core. Academic, Student Service, Administrative, Recreational and Athletic facilities expand near similar related facilities following the campus land use plan. Buildings and open spaces work synergistically in support one another. Buildings are positioned to allow for views, vistas and solar access. Natural and sustainable features are tangibly present on campus and new campus facilities are showcased within their respective precincts and along major vehicular and pedestrian thoroughfares. Off campus UMD facilities become ambassadors to each host community, reinforcing the UMD brand and demonstrating the value UMD brings to the region.

The future of UMD is bright. This plan provides the flexible framework to accommodate change while guiding the incremental physical manifestation of the University Strategic Plan.

Proposed UMD Master Plan - Long Term Plan



University of Minnesota Duluth
Campus Master Plan
Update

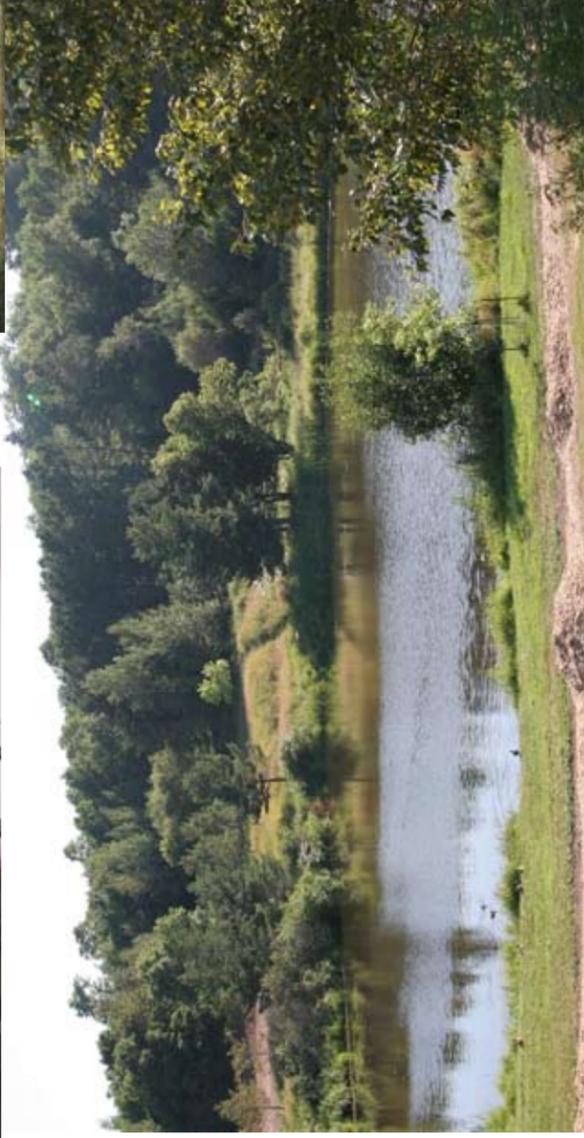


OVERVIEW

A campus master plan is a physical manifestation of a university's strategic plan. At its best, it is a road map for the future of a campus, and becomes a crucial tool in confirming that short-term projects are working in conjunction with long-term plans and goals. Without it, each decision made about a campus' facilities -- from new buildings to renovations to infrastructure improvements -- is made in isolation, without a bigger vision in mind. A good campus plan builds in flexibility, so that it can accommodate shifting academic priorities and economic conditions.

The UMD 2013 Campus Master Plan Update defines a conceptual and physical framework, guided by master plan principles and goals, for making physical changes to campus over time. The plan describes the long term vision for the campus as well as short term implementation goals. The plan includes guidance on land use, buildings and infrastructure, open space, natural features, and circulation networks for movement to, from and around the campus.





UMD Strategic Plan

An Inclusive and Collaborative Planning Process

The UMD Strategic Plan is the product of an inclusive, collaborative process involving the entire campus as well as Duluth community leaders. Because UMD’s planning is “rolling,” the document will be reviewed, assessed, and refined annually.

The plan includes these elements:

- UMD’s Core Values articulate the essential principles that guide our decision-making.
- UMD’s Mission Statement defines our purpose for being. It succinctly states why the institution exists.
- UMD’s Vision Statement describes our ideal future and the institution’s aspirations. It guides institutional decision-making and priority setting. The year 2020 serves as our target for achieving this new vision.
- UMD’s Campus Goals define the six major initiatives leading to the realization of our new vision. They focus on the primary programs and activities for moving us forward within the next three to five years.
- UMD’s Campus Action Plan delineates specific measurable steps for achieving the six goals. Some are short-term, to be completed within a year or two, while others are long-term, intended to be accomplished over a period of several years.

Continued,

UMD Strategic Plan, Continued

Introducing a New Vision

Serving the people of Minnesota and beyond, the University of Minnesota Duluth takes full advantage of its Northeast Minnesota location on the dramatic shores of Lake Superior to offer a quality living and learning experience. An integral part of the University of Minnesota System, UMD takes pride in its collaborative programs and initiatives with other System campuses. We nurture student success in an academic culture of high expectations through a learning-centered environment characterized by innovative comprehensive undergraduate and graduate programs, student life initiatives, discipline-specific and interdisciplinary research opportunities, creative endeavors, and thriving international exchanges.

Our new vision focuses on students learning and growing through experience, critical inquiry, and interaction with other learners. An enhanced research presence leading to regional accomplishments will ultimately result in UMD's recognition as a world-class center of scholarly outreach. At the same time, we build upon our reputation for excellence in recreational programs, student life, and intercollegiate athletics, thereby providing a holistic experience for students.

We encourage the ability to speak honestly about issues and ourselves by fostering a campus culture that welcomes students, faculty, staff, and guests to an inclusive learning climate committed to diversity, equity, and social justice. We serve the educational needs of indigenous peoples, their economic growth, their culture, and the sovereignty of the American Indian nations of the region, the state, and North America.

UMD eagerly embraces a global future while maintaining a strong presence in the cultural, economic, and intellectual life of the

Duluth community, the Northland, the state, and the nation. By strengthening and firmly establishing the centrality of international activities on and away from campus, we leverage our place within the global strategies of the University of Minnesota System. We endeavor to become and remain a model of community engagement and service which improves the quality of life for all and deepens the understanding, meaning, and purpose of the UMD educational experience.

Core Values

To promote student success and to enrich the educational experience, students, staff and faculty at UMD strive to learn, work, and live in accord with the following core values:

- **Learning.** We educate students through an integrative learning-centered environment that fosters a lifelong pursuit of wisdom.
- **Discovery.** We discover, create, and share knowledge.
- **Engagement.** We actively collaborate with each other and the larger community to identify and achieve common goals.
- **Inclusiveness.** We respect and embrace the diversity of individuals, perspectives, and ideas and promote social justice.
- **Sustainability.** We balance current environmental, economic, and social needs with those of future generations.
- **Integrity.** We adhere to the highest ethical standards and take responsibility for our ideas and actions.
- **Excellence.** We achieve excellence through creativity, continuous improvement, and innovation.

Mission Statement

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 Statement

The University of Minnesota Duluth will build upon its unique land-grant and sea-grant traditions to become a premier comprehensive university recognized as world class for its learning-centered student experiences, research, creative activities, and public engagement.

- We will educate students to be engaged, lifelong learners through our rich learning-centered and innovative curricular and student life experiences.
- We will prepare graduates who are sought after by employers because of their cultural, global, and professional competence.
- We will address issues central to the global society's scientific, cultural, economic, and artistic vitality through research and creative inquiry.
- We will become a world leader in learning and research opportunities by leveraging the region's unique natural, human, and cultural resources.
- We will serve the educational needs of indigenous peoples, as well as the economic growth, cultural preservation, and sovereignty of the American Indian nations of the region, the state and North America.
- We will create a campus that exemplifies resource sustainability, technology and information integration, global perspectives and connections, social justice, and collaboration.
- We will be central to the cultural, economic, and intellectual life of Duluth and surrounding communities.

Campus Goals

Goal 1: Promote integrated curricular, co-curricular, and living-learning undergraduate experiences that achieve UMD's student learning goals and prepare students for lifelong learning, globally engaged citizenship, and success in their academic, personal, and professional lives.

Goal 2: Create a positive and inclusive campus climate for all by advancing equity, diversity, and social justice.

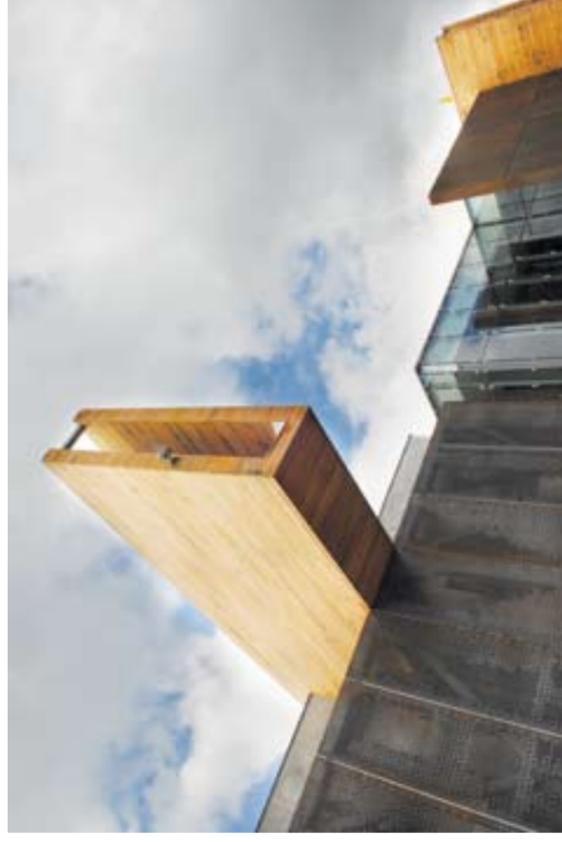
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Goal 4: Advance UMD's stature as a major campus for research and creative activities, leveraging our region's unique natural, human, and cultural resources.

Goal 5: Strengthen ties with Duluth and surrounding communities in an intentional, visible, and mutually beneficial partnership.

Goal 6: Utilize UMD's infrastructure; technologies; and information, human and financial resources to support the campus in a sustainable manner.

The UMD Strategic Planning Steering Committee unanimously recommended the endorsement of this version of the strategic plan on April 11, 2011.



Master Plan Assumptions

This Master Plan update is predicated on a variety of assumptions that informed the underlying planning process, approach and methodology. These assumptions include:

- This plan describes *strategies* for change and growth; Final solutions will require additional planning, design and engineering to resolve specific programmatic and functional requirements.
- The 2005 Master Plan content and background inform this master plan. Changes to the 2005 plan are noted herein.
- Enrollment will continue to increase at a modest rate, approximately, 1%-2% per year.
- The campus is essentially "land-locked" on all sides with the exception of several strategic expansion areas.
- Existing natural areas should be preserved.
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- Parking stall quantity should remain static.
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- On campus housing capacity is adequate; Any future demand will be absorbed by the private sector.

University of Minnesota Duluth Campus Master Plan Update



GUIDING PRINCIPLES



Establish a clear campus edge on West College Street and Woodland Avenue

West College Street and Woodland Avenue form the southern and eastern edges of the campus, respectively. Today, in many locations, there is a blurring of the campus and the surrounding neighborhoods. The University should seek to better define these edges to better distinguish the campus as a distinct district within the community. This may be achieved by many means including future building siting, landscaping, hardscaping, streetscaping including the use of lighting, signage, markers, monuments and gateways.



Establish primary campus entries

Currently, University Drive and Kirby Drive provide the primary vehicular access to the campus from West College Street and West St. Marie Street. These entries should be distinguished from other entries into the campus. Of utmost importance is relocating the southern University Drive entry - from West College Street, further to the east. This relocated entry drive should be designed to be the primary gateway into the campus. The other entries to campus should still provide functional access to campus but should take on a secondary character and scale.



Maintain and strengthen the “Academic Core” of the campus

The “Academic Core” of the campus is roughly centered around Kirby Student Center and Kirby Plaza. Currently, the Academic Core extends nearly 1/4 mile to the north and south of this center which allows pedestrians to travel from one end to the other in about 10 minutes, or 5 minutes from core to perimeter. Primary future academic, administrative and student service facilities and buildings should be located within this core to support campus walkability, sustainability and efficiency.



Connect the campus to the regional environment

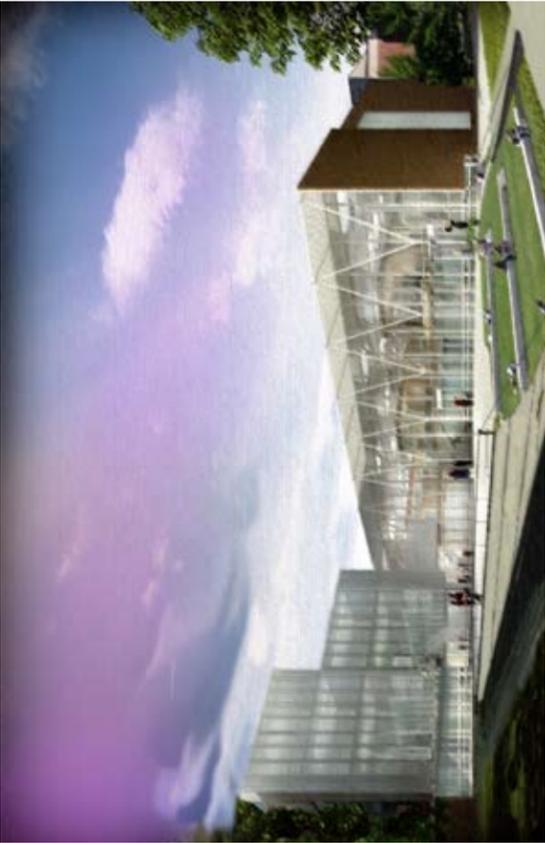
Duluth, Minnesota is located in the unique Lake Superior north shore natural environment. The Master Plan recognizes the landscape, topography and geology of this environment as a key component in building a unique campus. The campus should engage and connect with this environment through paths, trails, views and vistas, stewardship, programs and coursework, and a commitment to celebrate, and connect to, the natural environment both on and around the campus.



Visibly manifest sustainability

The Master Plan recognizes sustainability as a key component in building a unified and enduring campus. It is important that sustainability is not only practiced in policy, but that it is also manifested more visibly on the campus. The landscape is a major vehicle for realizing the University's commitment to environmental stewardship and sustainability. Landscape design elements contribute to student life with spaces for learning, recreation, relaxation, and connections to nature. The Landscape can also provide more functional support of sustainable practices including stormwater rate and flow control, biofiltration; solar control, erosion control, heat recovery, latent biomass, biodiversity and wildlife habitat. Buildings and constructs should also outwardly convey the University's commitment to sustainability through daylight harvesting, solar orientation, material use, density of usable square footage and parking, use/generation of renewable energy and conservation of existing assets.

GOALS



Create a “Front Door” for the UMD Campus

There should be a clear sense of arrival to the UMD campus that begins when nearing the campus and ends when one has the sense they have arrived at the “Front Door” to campus. A future “Solon Lawn” and expanded Kirby Student Center/Solon Hall should be designed to create this welcoming experience for visitors that signals that they have arrived at, and are welcome on, the UMD campus.



Develop a “Focal Point” for the UMD Campus

Buildings and open space on campus should be composed to create a focal point to the campus both visually and spatially. Selected buildings should be designed to punctuate the visual and spatial experience while other buildings should be designed as background buildings consistent with other buildings on campus. The design of open space should support this effort as well by creating primary public open spaces in key locations.



Make the UMD Campus more “Visible”

Today, in many locations, there is a blurring of the campus and the surrounding neighborhoods. The University should seek to better distinguish the campus as a distinct district within the community. This may be achieved by several means including future building siting, landscaping, hardscaping, streetscaping including the use of lighting, signage, markers, monuments and gateways. Additionally, UMD should better utilize off-campus locations as “ambassadors” within the region that signal a connection to the primary campus while conveying the value UMD brings to city, region and state.



Enhance the “Visual Quality” of UMD Campus

The Master Plan should make the campus easier to navigate and more visually cohesive.

The current UMD campus building style varies throughout the campus. Structures are scattered throughout the campus forming a fragmented and visually incoherent appearance. Buildings are not uniform in size or style. In addition, wayfinding for pedestrians and vehicles is difficult. Signage exists but is difficult to find and directions are not easily identifiable. The University should improve the visual cohesiveness and linkages on campus by defining a consistent architectural vocabulary for buildings, establishing strong building edges, open space and distinctive pedestrian pathways, and using landscaping and streetscaping to differentiate parts of the campus. Unified buildings and open space as well as lighting, paving, exterior furnishings and other features should improve wayfinding.



Create a “Pedestrian and Bicycle Friendly” UMD Campus

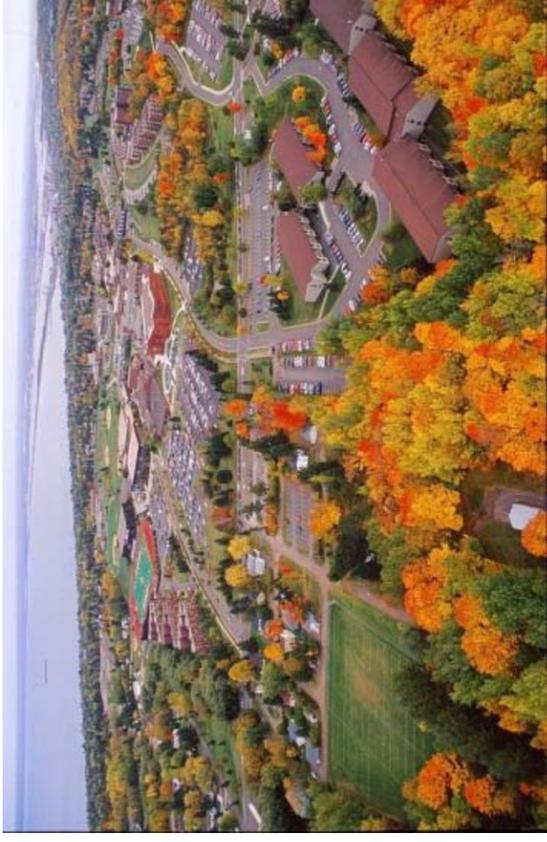
The plan should seek to resolve conflicting needs between vehicles, pedestrians and bicyclists on campus. Some students live on campus but many more students, and all faculty and staff, commute from the neighborhood and the entire Duluth region. The Master Plan should support multi-modal transportation options and clear and accessible connections to and through the campus in support of safety and function. Those living on campus or commuting to the campus should have transit and transportation options. UMD should create a culture that promotes walking and bicycling on campus. Parking should be limited primarily to the perimeter of the campus and bicycle facilities should be strategically located. The core of the campus should support pedestrian and bicycle access for easy, legible and safe movement across campus.



Connect and “Integrate” the UMD Campus into the City of Duluth

The University should continue to positively make its presence felt within the city and region. On-campus and off-campus programs, research, functions, events and conferences as well as off-campus facilities should build awareness and signal a connection to the University while conveying the synergistic and inherent value UMD brings to the city, region and state.

CITY OF DULUTH SMALL AREA PLAN



Background

With three colleges and over 20,000 students, Duluth is a college town. And as with other college towns, the growth of the student population and the changing characteristics of colleges have influenced the city's neighborhoods and economy. In light of these changes, the Higher Education Small Area Plan looks at ways to make Duluth an even more successful college town by balancing the needs of the colleges, students, businesses, and residents. It examines land use, transportation, demographics, and environmental considerations in the study area, which covers approximately six square miles of the city and includes the areas with highest concentrations of students living near the colleges.

In March 2012, the City of Duluth published the City of Duluth Higher Education District Small Area Plan. The study area includes the University of Minnesota Duluth as well as the College of St. Scholastica. A small area plan is a plan that is developed for a clearly defined area and gives more detailed recommendations than would be provided in the City of Duluth Comprehensive Plan.

The plan aims to:

- 1) Identify areas and strategies for residential and commercial development that meets market demand and includes places for students to dine and shop.
- 2) Identify strategies to alleviate pressure on established neighborhoods and to maintain their residential character.

The Five Goals of the Plan include:

- 1) Strengthen single-family neighborhoods through appropriate zoning tools and neighborhood stabilization efforts.
- 2) Minimize impacts on single-family neighborhoods from noise, light pollution, and visual impacts of student housing.
- 3) Promote mixed-use development and student housing along transit corridors and within walking distance of campus.
- 4) Increase use of alternate modes of transportation.
- 5) With leadership from The University of Minnesota Duluth and The College of St. Scholastica, integrate the colleges and students into the community.

Each goal has specific recommendations. Many require ongoing partnerships between the colleges, City, non-profit organizations, businesses, and neighbors. The recommendations continue the City's policy of strengthening neighborhoods through land use changes, neighborhood stabilization, and code enforcement. The plan supports the transition of the Woodland Avenue corridor to a mixed-use, pedestrian friendly area providing student housing, stores, restaurants, and neighborhood services. It also identifies social and physical ways to integrate the colleges and the community. An important part of this planning process was identifying win-win recommendations, such as bike trails and increased neighborhood retail. Importantly, the plan also finds that Duluth has already achieved success with such tools as the Duluth Transit Authority's UPASS program and the Social Host Ordinance. In recognition of efforts already underway, this plan's recommendations identify ways to build on these successes and increase collaboration across the city.



March 2012



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University of Minnesota Duluth
Campus Master Plan
Update



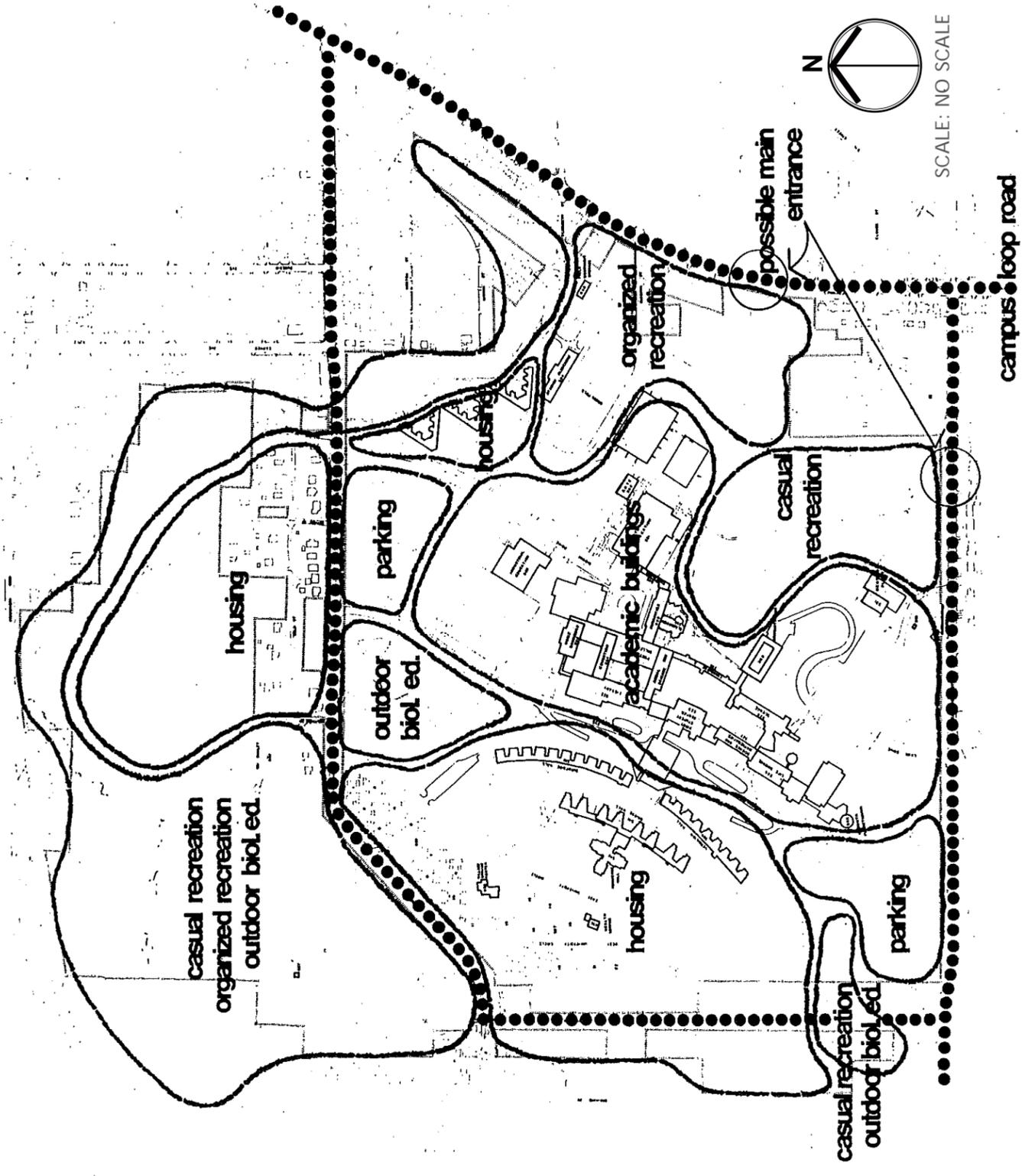
Plan Elements and Guidance

Land Use

Continuing traditions

The primary land uses on campus are academic, housing, recreation/athletics, natural open space and parking

General Description: The recommended land use plan generally follows the historic development pattern of the campus. This pattern concentrates academic facilities at the core of the campus while providing housing to the west, parking at the perimeter, and recreation, athletic and natural areas to the north and east.



Plan Elements and Guidance

Land Use

- a. Academic: Academic facilities should be concentrated within the “Academic Village” at the core of the campus. Administrative and student support services should also be located within this core area.
- b. Housing: Housing should continue to be located primarily on the west side of the campus.
- c. Recreation/Athletics: Recreation and Athletic facilities should, in general, remain proximate to one another for efficiency and ease of maintenance. These facilities should continue to be located on the east and north side of the campus.
- d. Natural Open Space: Natural Open Space should continue to be located on the north side of the campus and extend into the campus on the north side where possible and practical.
- e. Parking: Parking should primarily be concentrated on the north and south sides of the campus. Over time, parking should be accommodated with structured parking where possible. When surface parking is required it should be limited in size and screened from view as much as possible.



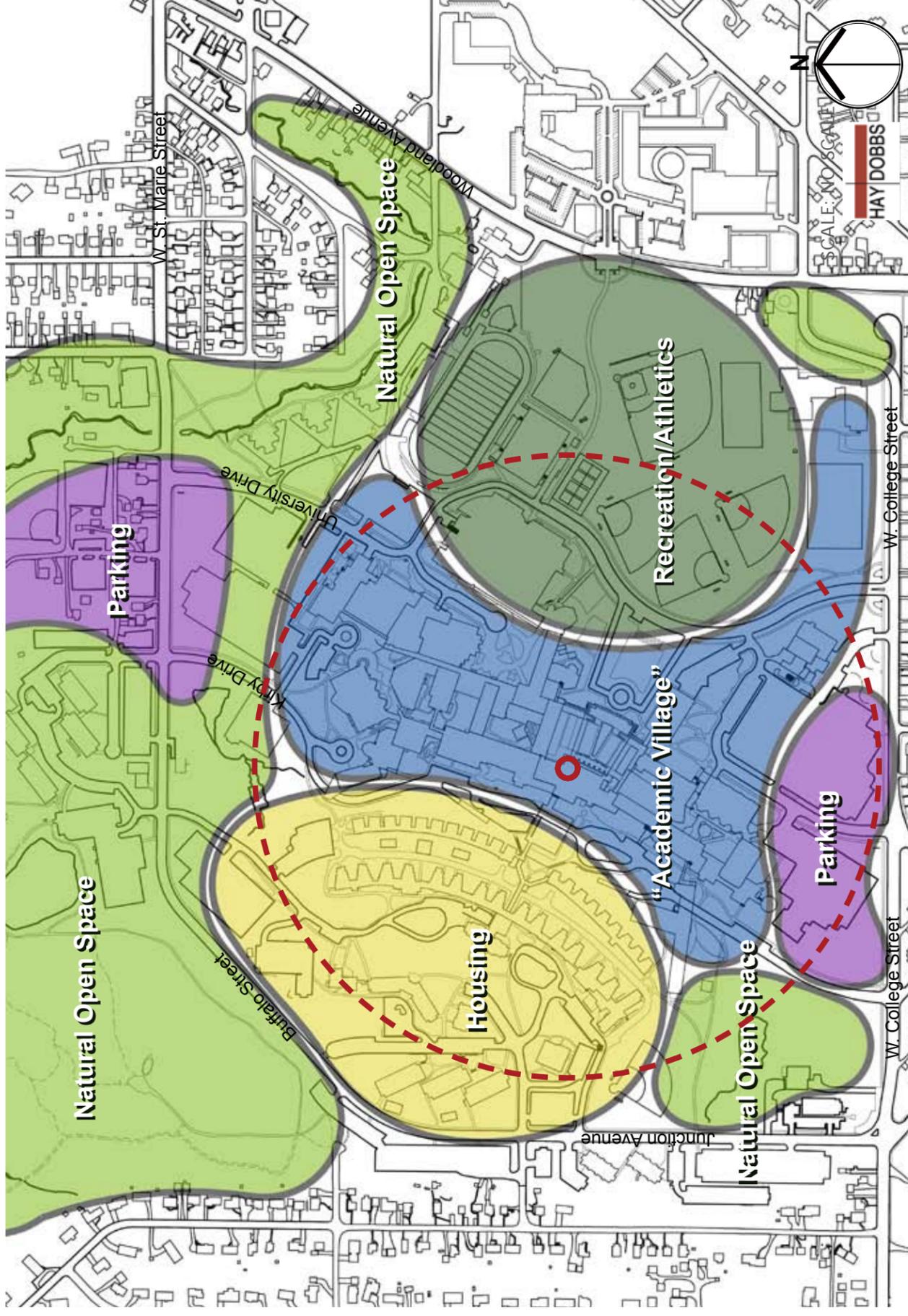
Recreation and Athletics



Housing



Academic



Plan Elements and Guidance

Public Spaces and Buildings

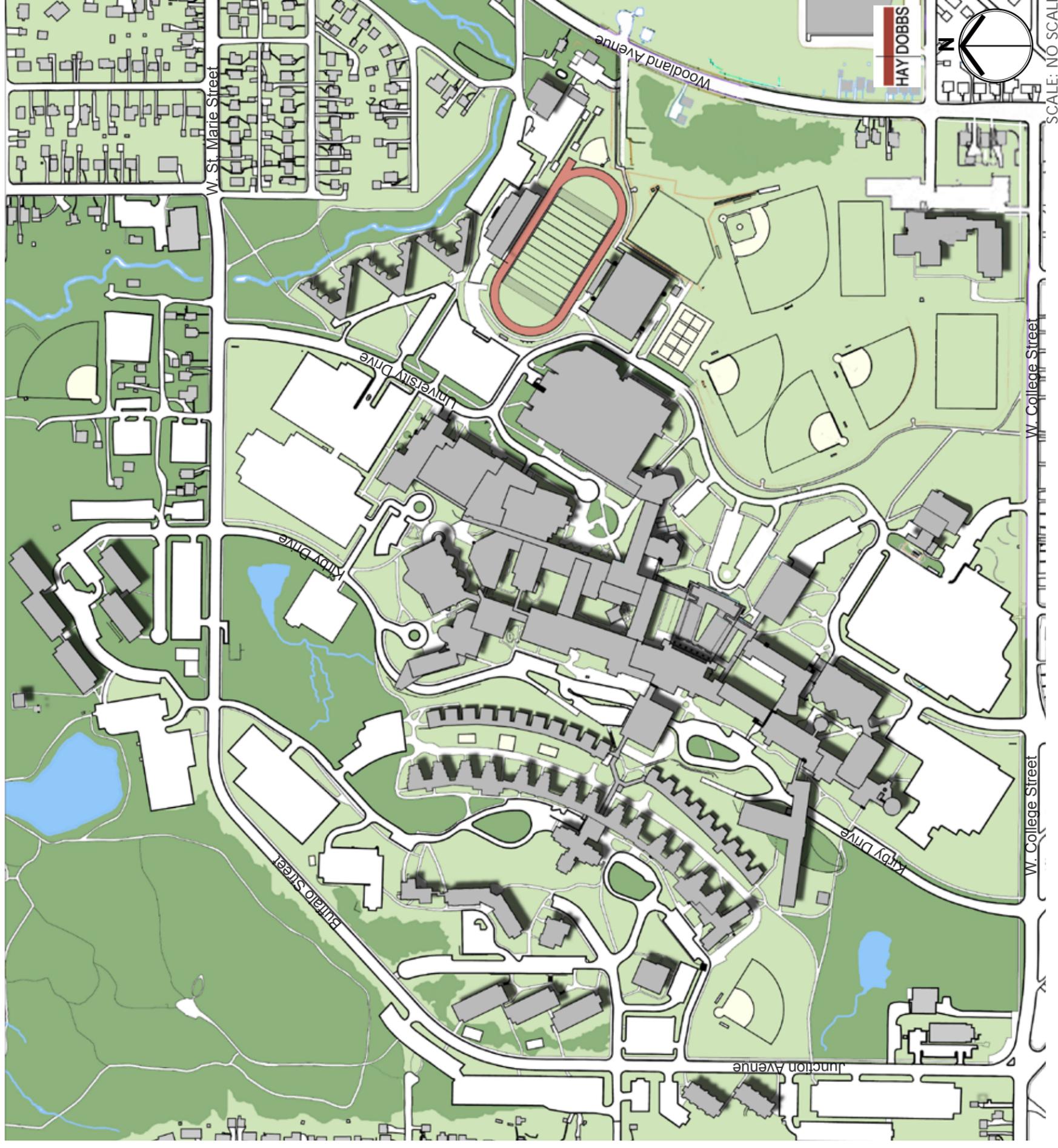
General Considerations

There should be a synergy between buildings and open space on campus

Buildings and open space should be designed to work together on the campus. As the UMD campus develops toward its target enrollment, a number of new buildings will be added and the density or intensity of development throughout the campus will increase. To prepare for this growth, open space can be designed and implemented early on in the process in anticipation of future building design and construction. These open spaces then form the development framework for future buildings while preserving the required area for the building. This approach has the added benefit of creating more usable open space on the campus regardless of the timing of future building construction.

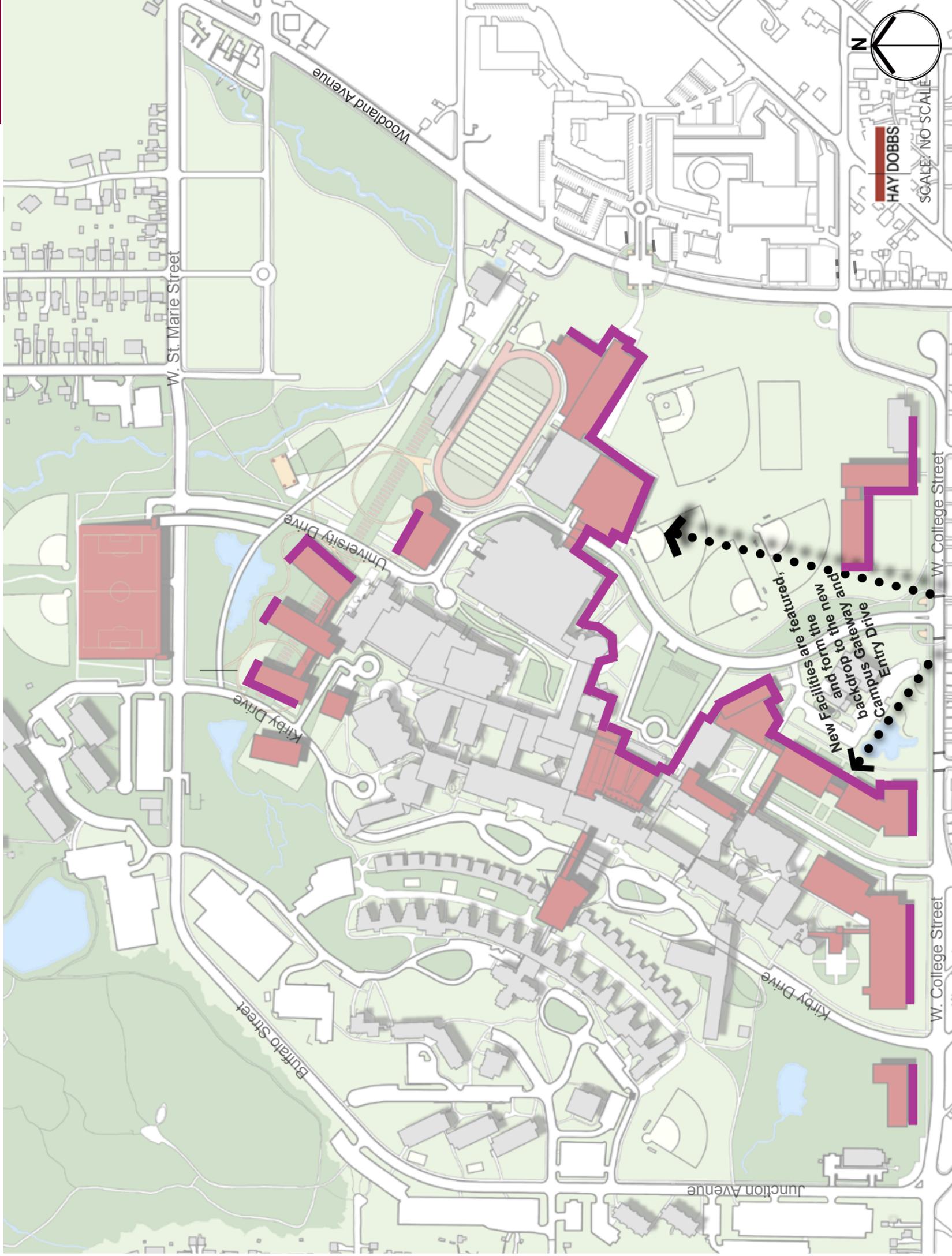
Conversely, if building design and construction is more immediate, then the building should seek to “create” meaningful and cohesive open space, of the proper character, by the careful siting and design of the building.

The primary formal public open space should be the future “Solon Lawn” on the east side of the campus. This area should be slowly revealed to the visitor as they enter the campus from West College Street on the new University Drive. Future buildings should frame this arrival sequence and provide the backdrop to the primary public open spaces.



Existing Conditions

Future Buildings Framework



New Facilities become the “face” of the University

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Plan Elements and Guidance

Public Spaces and Buildings

Open Space

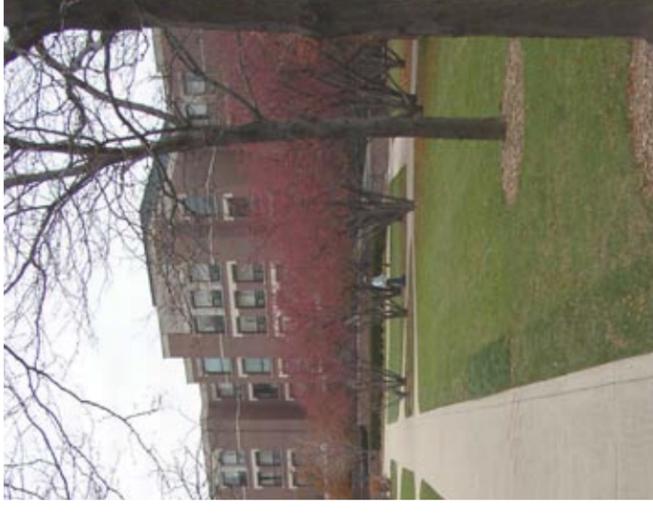
Create a variety of open space types on campus

The goal for the campus open space is to create a rich, supportive environment of open spaces and amenities that will support the academic and residence life components of the campus. Existing open spaces will be improved and new spaces added over time to improve the image of the campus, provide programmable and informal usable space, and contribute to a sustainable campus by conserving water and reintroducing native and other sustainable vegetation.

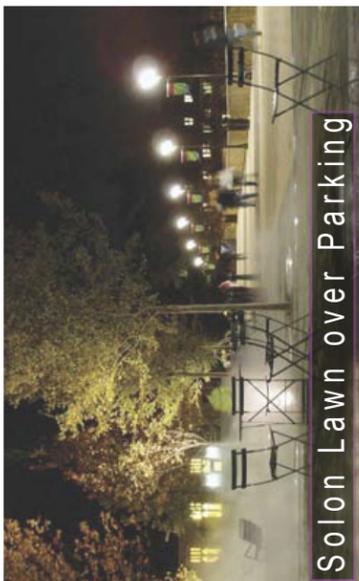
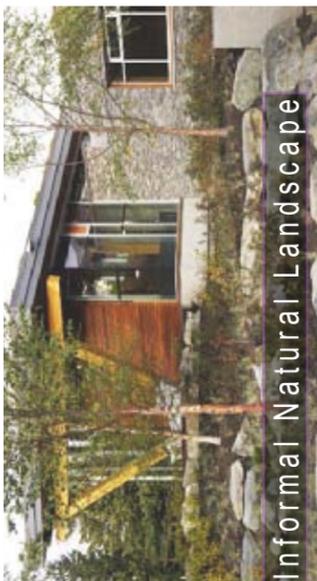
The campus today lacks a clear pattern of open space that was more present in the original campus plan concepts. The strategies in this master plan seek to reestablish some of the original patterns while supplementing them with spaces of varying scales and purposes. Careful implementation of these open, outdoor spaces will have an important impact on the character of the campus for decades to come.

Five types of open spaces are planned on campus:

- Primary Public Lawns
- Secondary Campus Yards
- Courtyards and Plazas
- Recreation and Athletic Fields
- Informal Natural Landscapes



Open Space Framework



- Informal Natural Landscape
- Primary Public Lawn
- Public Yard
- Rec/Athletics
- Court/Plaza



Plan Elements and Guidance

Public Spaces and Buildings

Natural Features and Systems

The northern forest environment should be invited into the campus

The Northern Minnesota landscape and nearby Lake Superior are powerful forces in creating a university with an authentic connection to place. Views to Lake Superior should be celebrated and enhanced wherever possible as a reminder of the campus proximity to this great lake.

Efforts should be made to more fully embrace the natural features already found on the northern portion of the campus and to integrate this landscape fully within the campus.

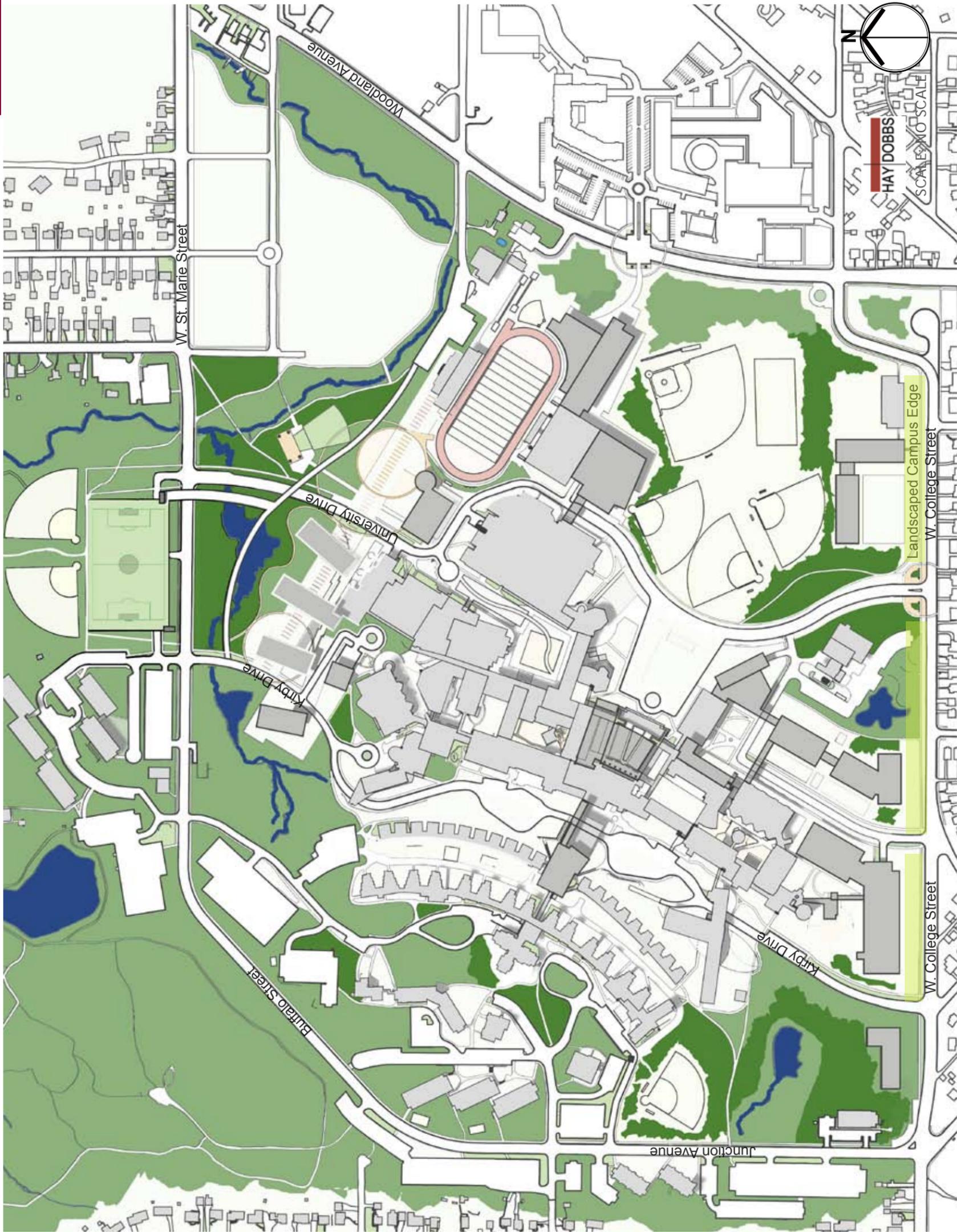
A Principle Goal of this master plan is to “Visibly Manifest Sustainability”. This can be achieved, in part, by a commitment to make restorative investments in:

- Hydrological systems: campus ponds and streams should be highlighted and used as natural amenities and rainwater biofilters, while still protecting them from degradation; and ecosystems;
- Geological systems: rock outcroppings, rip-rap, features;
- Ecosystems: local flora and fauna in and around campus;
- Open Space: lawns, yards, gardens and recreation fields;
- Trails and Paths: bike and pedestrian - on and beyond campus.

Natural features and systems should be used as a living laboratory, as is currently being done in Bagley Nature Center, to advance the University Mission and Strategic Plan.



Natural Features and Systems



■ Existing Northern Woodland Landscape
 ■ Proposed Constructed Northern Woodland Landscape

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Plan Elements and Guidance

Movement and Circulation

Gateways, Wayfinding and Orientation

Systems should work together to promote ease of access and clear routes to, and within, the campus

Wayfinding systems should be developed to create a series of layers that convey clearly to users that they are:

- 1) Approaching the campus,
- 2) Near the campus,
- 3) Arriving to campus,
- 4) On the campus,
- 5) At their first destination (often drop-off or parking),
- 6) At their final destination (building, room, event, etc.).

Tools such as banners, signage, lighting and appropriately scaled constructs should indicate proximity to the campus and should guide visitors to the major campus entries with simplicity and ease.

Major campus gateways should welcome visitors and embody the spirit of UMD in form, material and message. They must be significant enough to intuitively convey a sense of arrival to users. Phase one of this effort will include the development of a new major campus entry on the south side of campus off of College Drive. This gateway will allow entry to the campus to the east of the Lund Physical Plant and will reconnect with the existing University Drive near the Weber Music Hall. University Drive will be downgraded

to a service drive allowing for future building expansion and new open space to the southeast of the Medical School and Darland Hall. This will also provide the opportunity to create an arrival sequence that can express the natural beauty of the campus and showcase new facilities while minimizing the visibility of surface parking as the primary first impression upon arrival. The relocation of the entry drive will allow for the orderly and methodical expansion of academic buildings while preserving the recreation and athletic fields on the east side of the campus. Wayfinding on campus should be clear and easily understood. Pedestrian and vehicular circulation, landmarks, signage, and architecture should create a hierarchy of space that will add to imageability and wayfinding helping to facilitate travel to, from, and within buildings and parking areas.



Gateways



Primary Entries



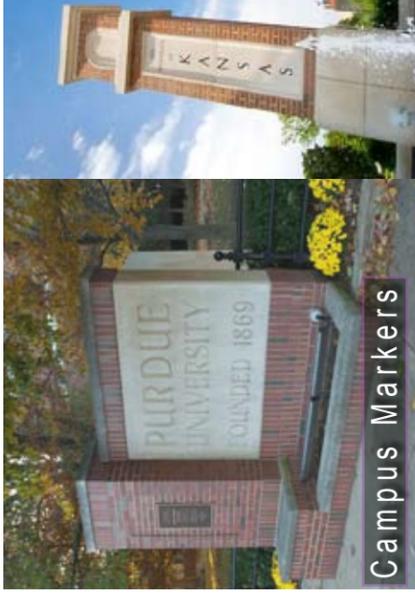
Edges

Secondary Entries, Wayfinding and Signage

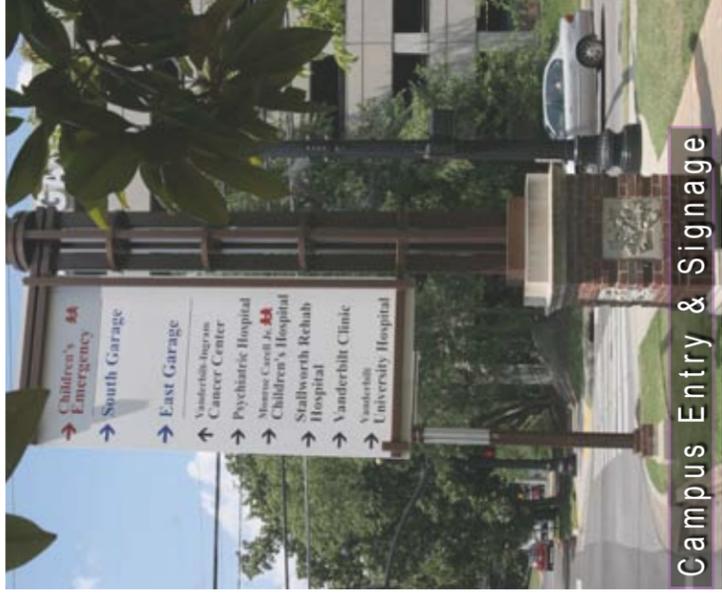
Gateways and Wayfinding



Campus Gateway



Campus Markers



Campus Entry & Signage



Plan Elements and Guidance

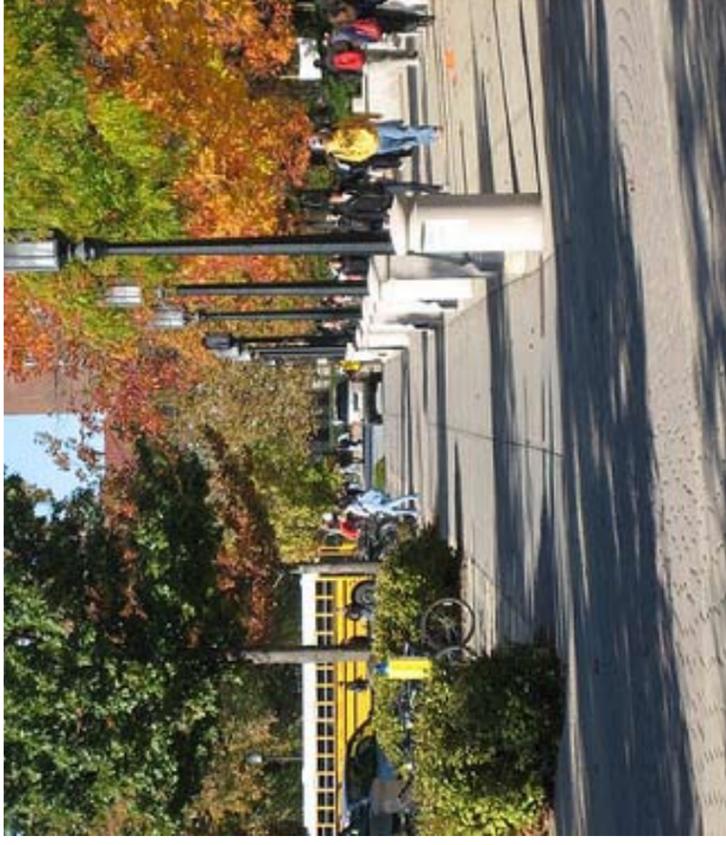
Movement and Circulation

Pedestrians

Pedestrian movement should be of primary importance on campus

Safe, reliable and convenient pedestrian access on campus is essential. However, pedestrian access should go beyond mere utility. A thriving academic community depends as much on the casual encounters that arise from well designed patterns of access, as it does on the more structured encounters of the classroom and laboratory. The ongoing trend toward interdisciplinary scholarship requires a campus sufficiently compact to allow for both formal and informal collaboration. Walking, the primary means of movement in and around the campus, should be encouraged both by upgrading major interior and exterior pedestrian routes to make them pleasant, legible, and secure day and night, and by minimizing conflicts with vehicles.

Capital investment should both optimize access to campus programs and resources and maintain the primacy of the pedestrian by: establishing a program of strategic investments to upgrade major pedestrian routes into and within the core campus - both externally and internally; consolidating campus parking in structures outside or at the edge of the core campus; collaborating with the city of Duluth on integrated landscape and access improvement programs at the campus perimeter and; restricting service and delivery vehicles to designated times and routes.

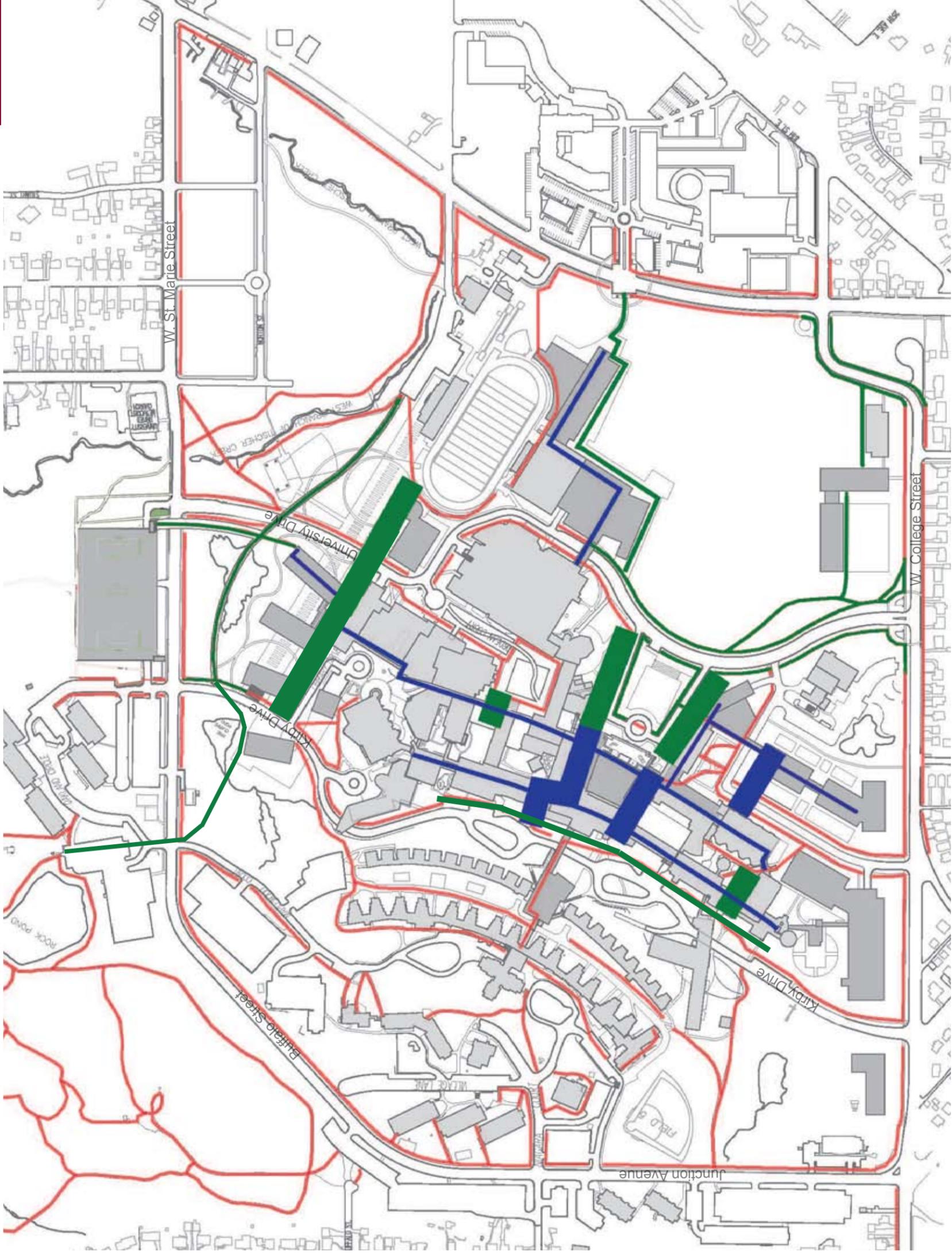


Formal



Informal

Pedestrian Framework



Primary Interior Routes

Exterior Routes

Future New/Improved Interior Routes

Future New/Improved Exterior Routes

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Plan Elements and Guidance

Movement and Circulation

Bicycles

Enhance routes, services and storage for bicycles on campus

Not only are more students, faculty, and staff opting for public transit rather than automobile to travel to and from the campus, but bicycle use has also increased. The Plan responds to this demand by recommending enhanced bike facilities on campus with connections to off-campus locations and City of Duluth bicycle trails. The UMD Campus should support an increase in the number of bike commuters. New bicycle facilities should be added including secure bike parking, covered storage and selected service/sales areas. It is also recommended that a stronger bike network be developed on campus along with these enhanced bicycle facilities. The Plan seeks to create stronger east-west bike routes along around and through the campus. These new connections should occur as either dedicated bike paths, on-street lanes or by sharing the roadway with traffic using a narrow symbol to mark space for bike riders (as the City of Duluth has already done in several locations). This use will need to be monitored to determine if additional sidewalk width is needed in the future, or if paths/trails separated from pedestrians is needed based on high use of these routes by both pedestrians and bikes. Pedestrian safety should be a paramount concern in all cases. These new connections are major improvements and will strengthen UMD's commitment to supporting all means of transportation.



Integrated Bike Paths

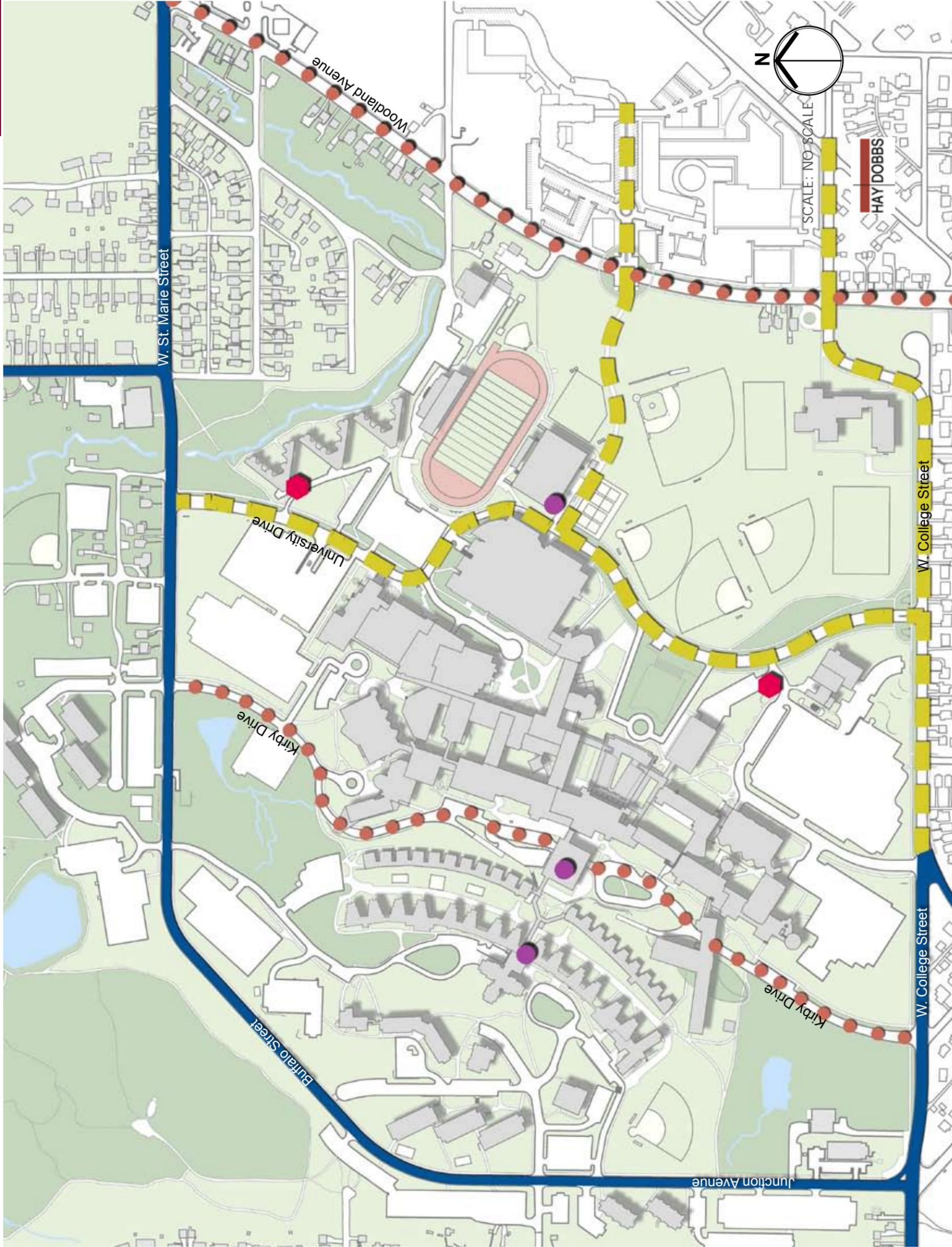


Integrate with Transit



Provide Amenities

Bicycle Framework



- █ Bike Route
- █ Proposed Routes
- Undesignated Routes
- ◆ ZAP Station
- Proposed Major Bike Facility



Plan Elements and Guidance

Movement and Circulation

Transit

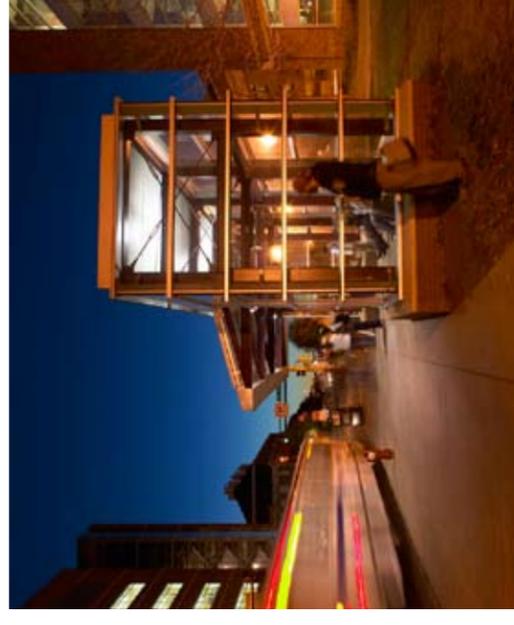
Transit should be integrated into the campus movement systems, signage and amenities

Thanks to a cooperative effort between UMD and the Duluth Transit Authority (DTA), UMD students, faculty and staff can ride DTA buses anytime, anywhere throughout the Twin Ports, free of charge with their UMD Photo I.D.

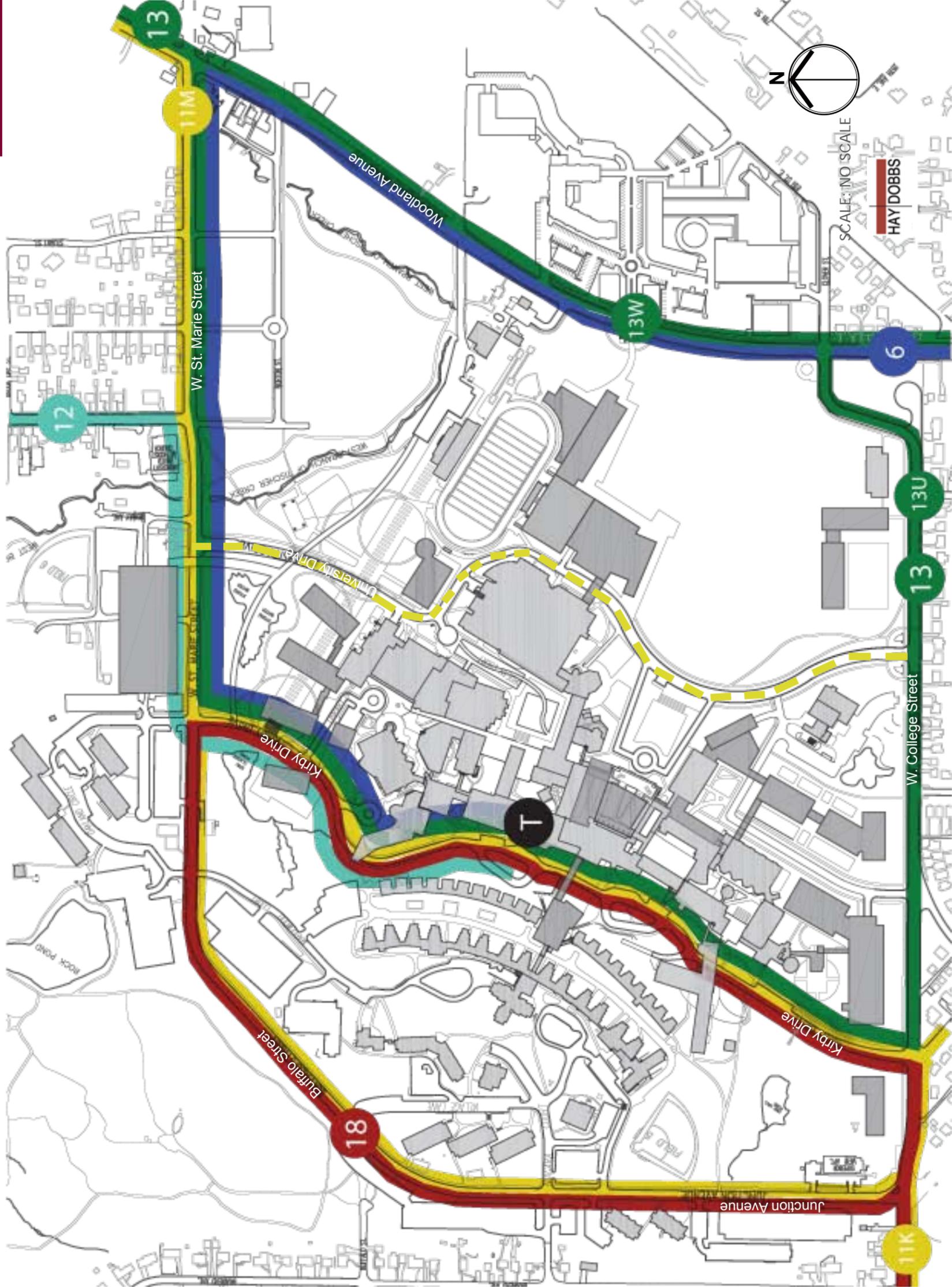
Users have realized that riding the DTA is a smart choice as they encounter no fees and no parking hassles.

The DTA has plans in place to increase safety and efficiency of bus service. By including adding additional buses during peak periods and improving routes, the DTA system will help to decrease vehicle congestion on and around campus. All buses should eventually be equipped with bike racks to better serve multi-modal passengers. Buses will eventually have global positioning devices, allowing passengers to monitor actual arrival times with smart phones and in-station real-time schedules.

The Kirby Transit Plaza on the UMD campus is anticipated to remain as the primary transit stop on campus. Future secondary stops should be considered on the east side of the campus as the campus grows physically to the east.



Transit Framework



-  Existing Routes
-  Potential Additional Routes/Circulator
-  Existing Transit Plaza

Plan Elements and Guidance

Movement and Circulation

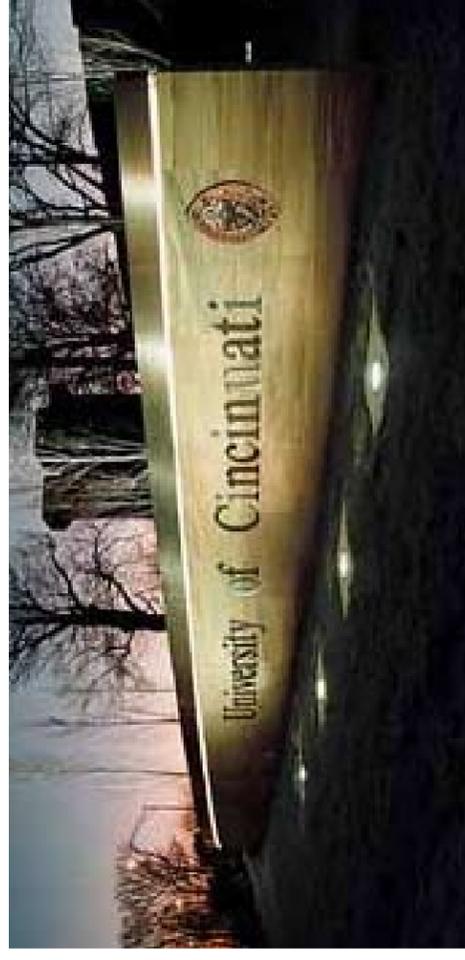
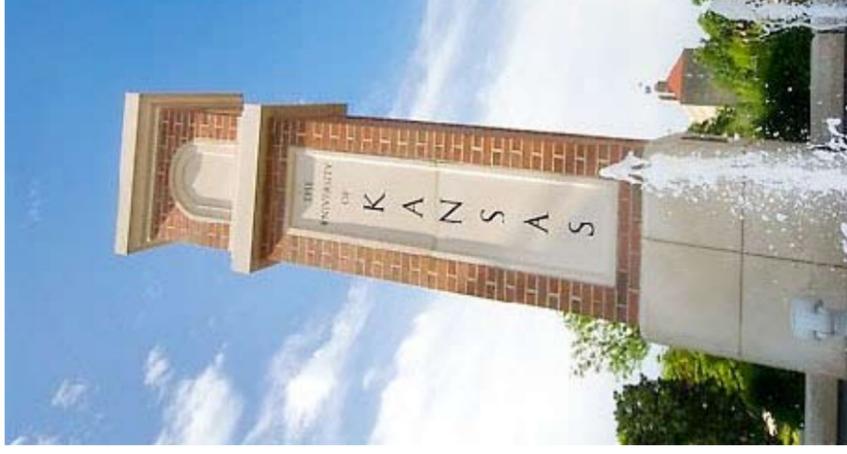
Vehicles

Vehicular access should be clear for visitors and discreet for regular users

The arrival sequence to campus makes a major impression on visitors to the campus. UMD events and destinations draw visitors from all over the region to the campus, as well as off campus venues. As such, a clear, layered, logical wayfinding system should be developed to greet those destined for the UMD campus. “Trail-blazer” signage and banners should be put in place within one-mile of the campus. More distinct signage and architectonic elements should be put in place near the campus and adjacent to the campus to confirm visitor’s proximity to the campus. Campus Markers and Gateway elements, supported by cohesive signage, should beckon visitors into the campus where they should be greeted by a cohesive on-campus wayfinding system that guides them to parking or drop-off locations and on to their final destination.

Signature Streets, as an extension of campus gateways, should be treated with a higher degree of design quality, attention and detail followed by Primary Routes. Service and utilitarian routes should be more discreet, intended primarily for regular users and service vehicles.

A balance must be maintained between public vehicular access and the need to limit vehicular access to selected areas of the campus.

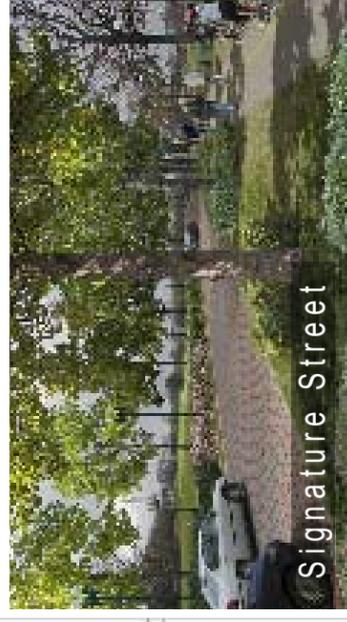
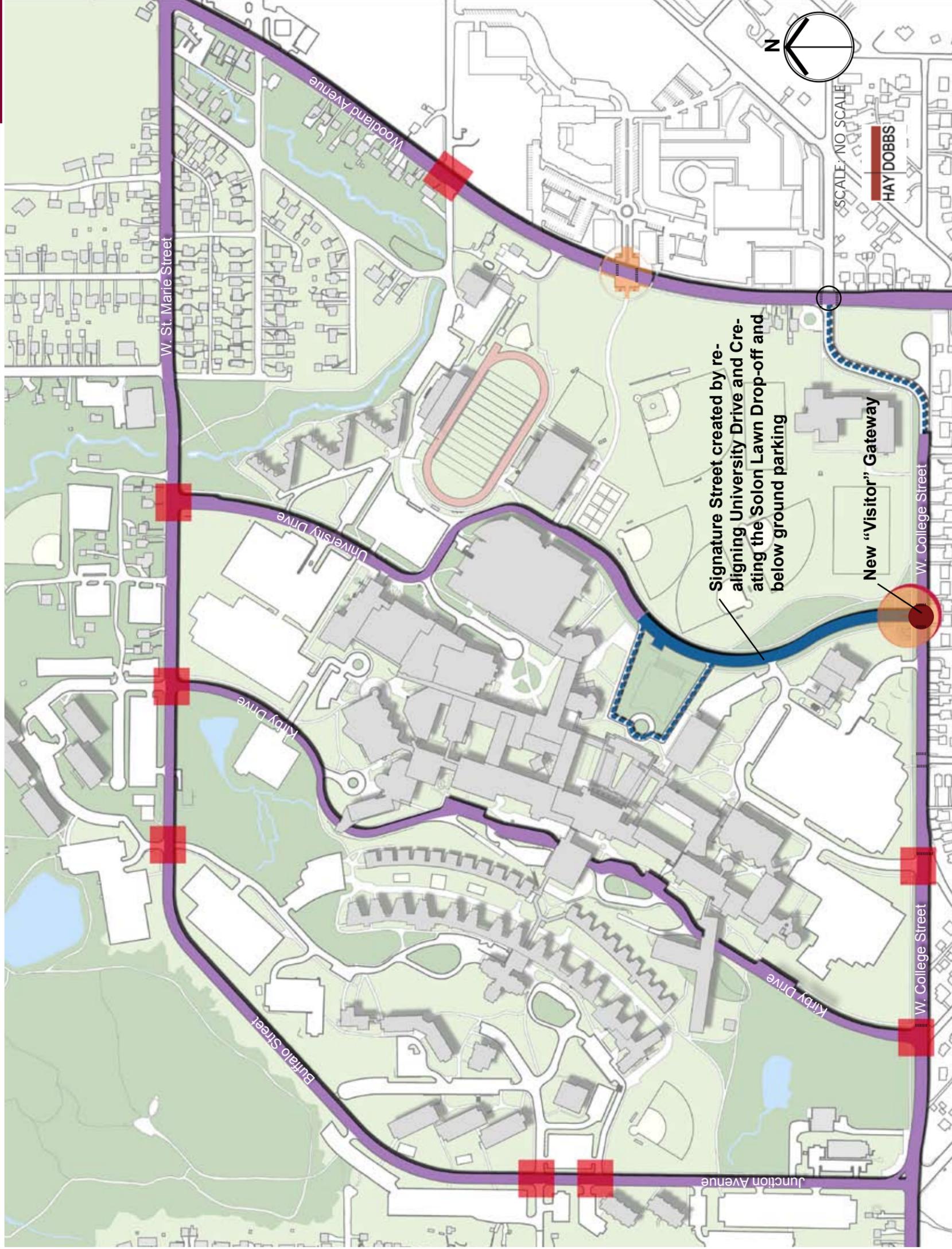


Markers



Gateways

Vehicle Framework



- Signature Street
- Primary Routes
- Future Streets
- Gateway
- Entry



Plan Elements and Guidance

Parking

A long term strategy

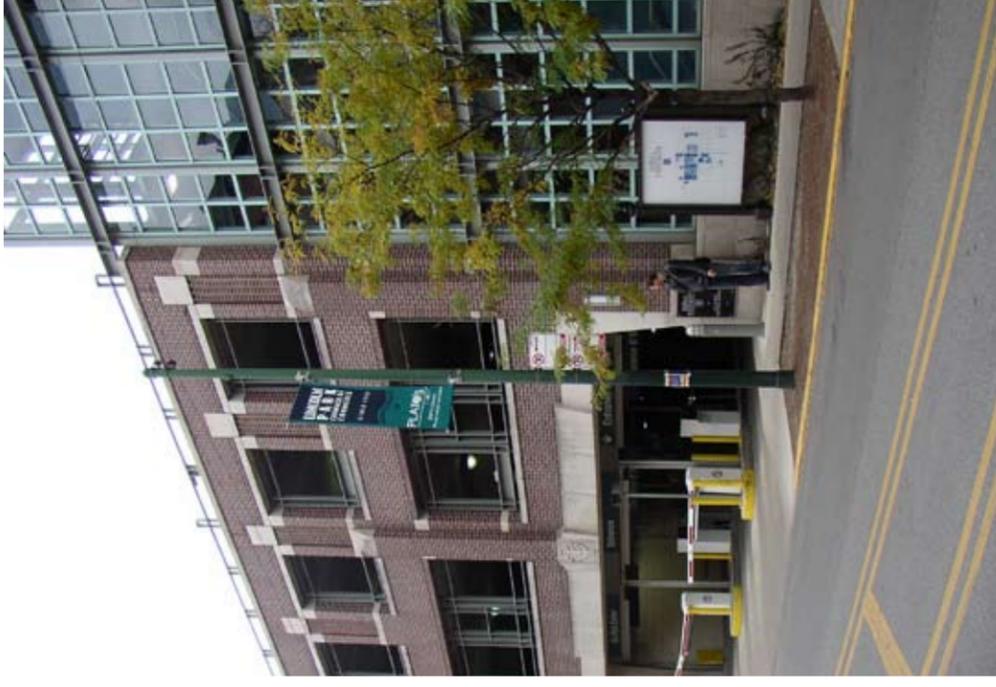
De-emphasize parking as the primary first impression of the campus

Existing conditions of transportation on the UMD campus were assessed and include traffic circulation and access, parking, transit, and pedestrian facilities. Regional transportation issues were also considered. UMD currently relies entirely upon surface parking lots to accommodate campus parking needs. Many of these large surface lots are located along key arrival points to campus. This creates the first impression of the campus as that of parking lots.

Parking demands will increase with future growth in student enrollment and development of new and expanded campus facilities. Construction of new multilevel parking structures is recommended at the north and south campus perimeter to meet campus parking demands in the coming years. Parking should also be designed to be located under, or in the lower levels of, new facilities whenever possible. Additionally, below grade parking should be designed into the future “Solon Lawn” to provide centralized structured parking for visitors to athletic, performing arts and other campus events. The northern parking deck top level can also be surfaced for athletic and recreation activities (soccer, tennis courts, etc.) and may even be roofed over for year round use. Because of the topography, this level should be designed to be at the same grade level as the existing ball diamond, thus creating contiguous space for related activities.

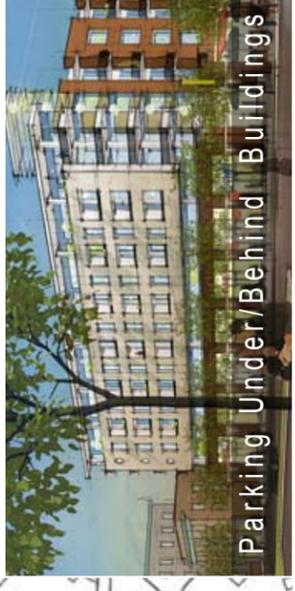
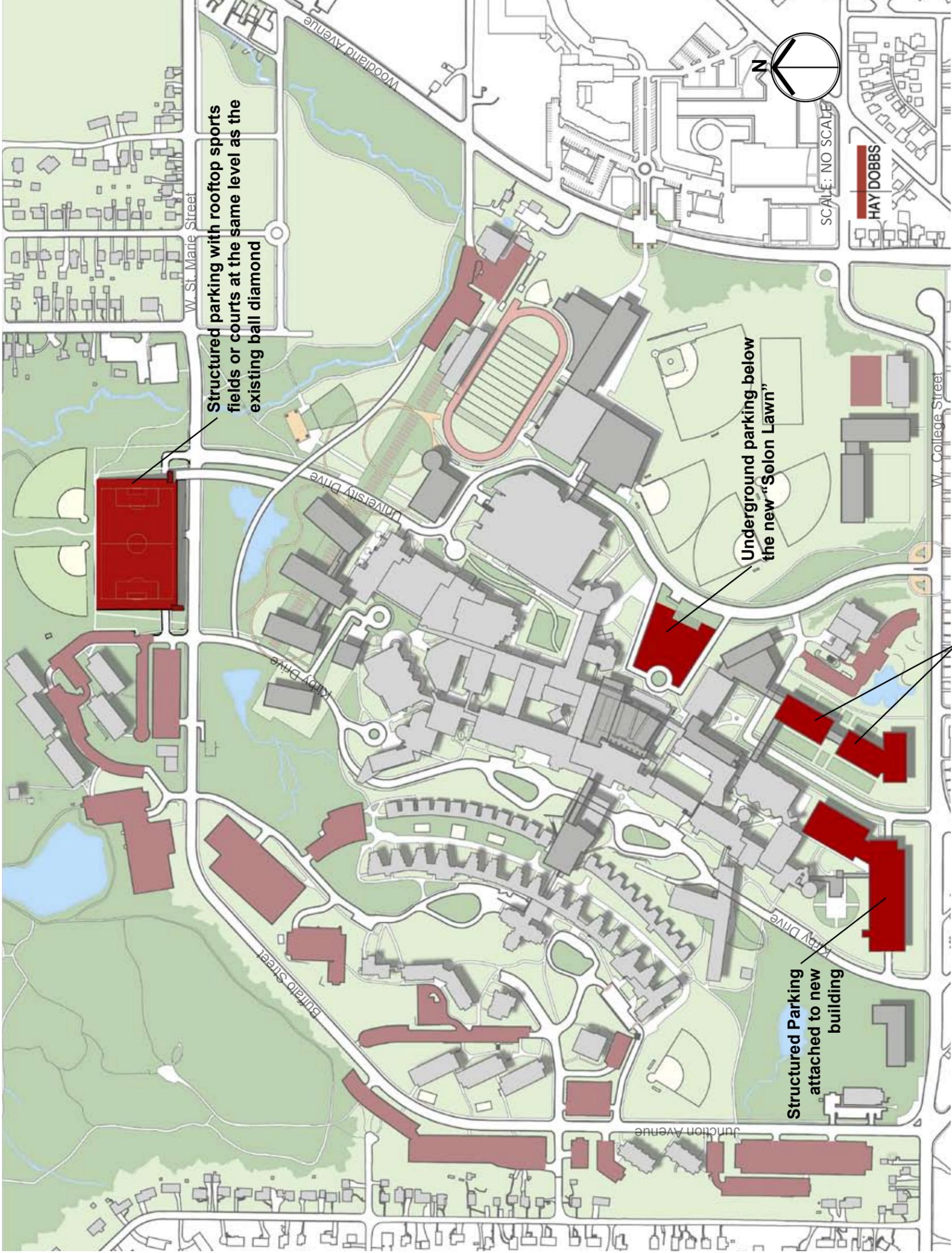


Structured parking can be decked, wrapped or located underground. Surface parking lots that remain should be screened with landscape and fencing treatments.



Lots should also be broken down in scale whenever possible by the introduction of islands, rainwater gardens, and other treatments.

Parking Framework



Plan Elements and Guidance

Additional Considerations

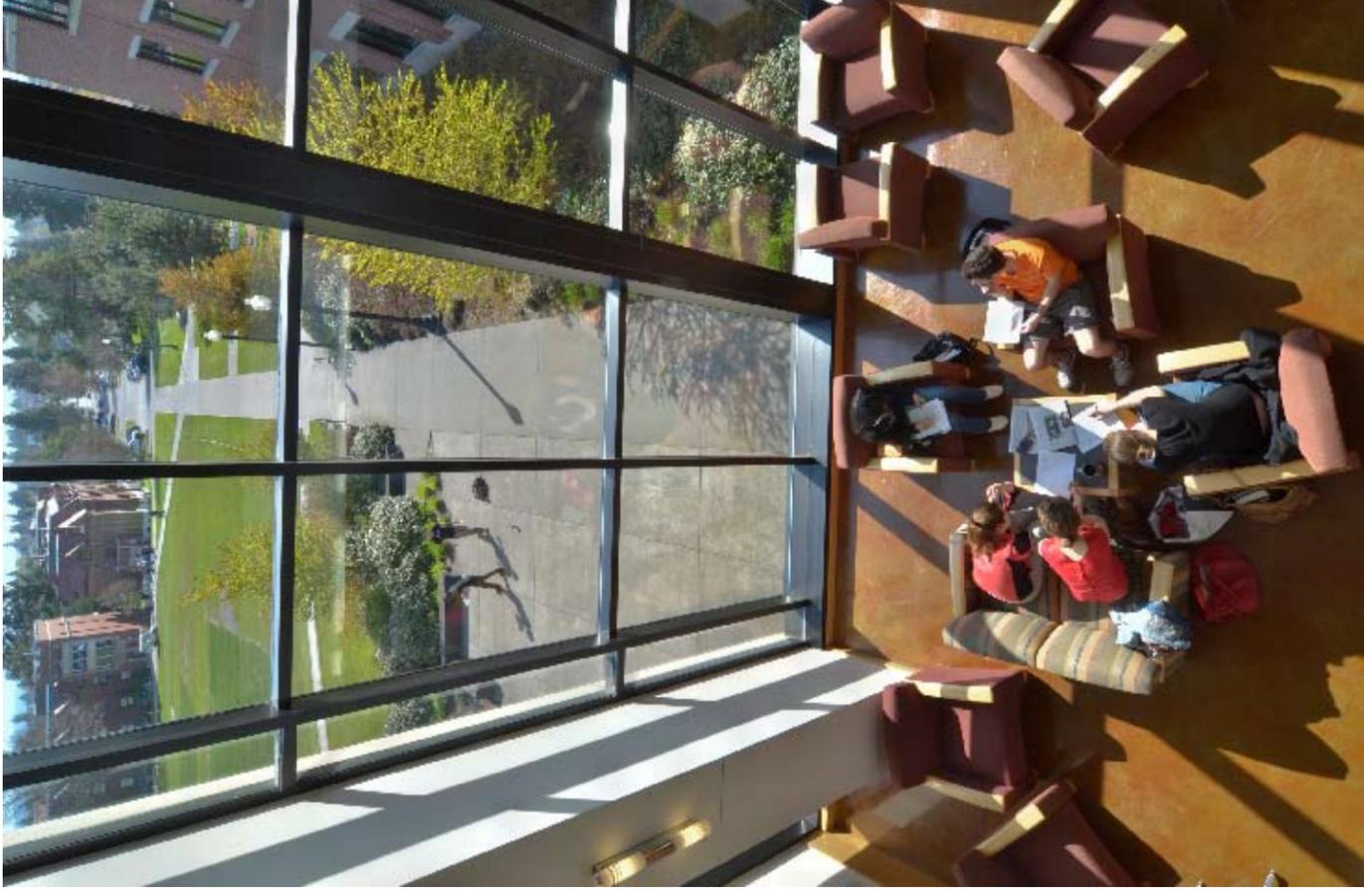
Internal Circulation

Legibility, Light and Views

Presently, the campus is very internalized. As a pedestrian, one can circulate throughout nearly all of the on-campus buildings without ever leaving the comfort of the interior environment. Although this practical response works quite well, it also can be quite disorienting. Many of the buildings are focused inward and there are limited opportunities to take advantage of natural daylighting, natural ventilation and views to the outdoors. Additionally, nearly all of the vertical circulation - stairs and elevators - are located internally with few or no windows, again limiting exposure to natural light and orienting views of surrounding buildings and landscape.

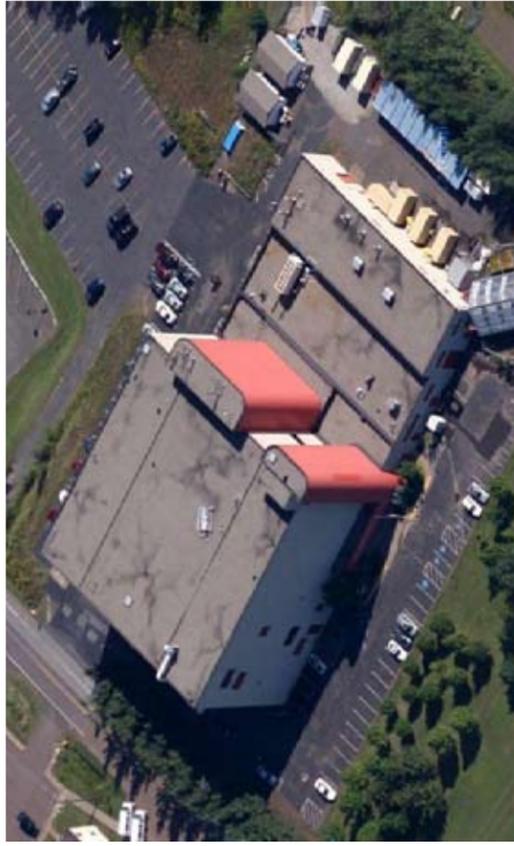
Daylighting is the controlled admission of natural light—direct sunlight and diffuse skylight—into a building to reduce electric lighting and save energy. By providing a direct link to the dynamic and every changing patterns of outdoor illumination, daylighting helps create a visually stimulating and productive environment for building occupants, while reducing as much as one-third of total building energy costs.

Whenever possible in both new and existing buildings and linkways, daylighting and views should be a design priority to enhance sustainability, reduce operating costs, support wayfinding and orientation, visually connect to the outdoors, and better connect public open space and natural features with internal spaces.





Research Lab Building - One of three remaining buildings on the former UMD lower campus on Fifth Street, this facility houses the Large Lakes Observatory (LLO), among others, and has strong ties to the NRRI and the Limnology Lab.



Natural Resources Research Institute (NRRI) - Located near the Duluth Airport, this high bay research facility also operates a research laboratory in Coleraine, Ely and Zim, MN.

Glensheen - Donated to UMD in 1968, the Glensheen Historic Estate is a historic mansion and 7.6 acre estate on Lake Superior constructed as the family home of Chester Adgate Congdon. Listed on the National Register of Historic Places, this facility today functions as a tourist destination, reception facility and event center.



Limnology Lab Building - Originally a Fish Hatchery and on the National Register of Historic Places, this highly visible facility sits directly on the shore of Lake Superior adjacent to London Road. Research is closely tied to the LLO as well as the NRRI.



Research and Field Studies Farm - 114 acre site located along Amity Creek approximately 4 miles from campus on Jean Duluth Road. This resource hosts educational and research-centered activities and also provides space to support other UMD Campus activities.



Plan Elements and Guidance

Additional Considerations Off-Campus Facilities

Ambassadors and Brand Stewards

UMD maintains and utilizes numerous off-campus facilities ranging from research facilities to historic properties located throughout northern Minnesota. These facilities have the ability to expand the UMD brand by functioning visually and programmatically in their respective locations. As such, these facilities can act as “ambassadors” for the University, positively connecting each remote facility back to the main UMD campus and demonstrating the value UMD brings to the region.

Specifically, these facilities include:

- Natural Resources Research Institute, Duluth
- Research Lab Building, Duluth
- Limnology Lab, Duluth
- Research and Field Studies Farm, Duluth
- Glensheen, Duluth

The first four facilities focus largely on research and learning related to Natural Resources and Environmental Issues. Collectively, these facilities can convey a powerful message of UMD’s commitment to sustainability, conservation and economic development of Minnesota’s natural resources in an environmentally sound manner.

The UMD brand should be manifested in these facilities by unified exterior, on-site and web based graphics/signage; consistent messaging, and synergistic programming. On campus efforts should also be made to raise awareness of these proximate facilities.



University of Minnesota Duluth
Campus Master Plan
Update



Implementation

Short Term Plan

Creating a Better Sense of Arrival

The immediate focus of the Master Plan Update will be to design and construct the new “Visitor Gateway” entry on the south side of the campus off of West College Street. This new entry will become the primary vehicular access point to the campus for visitors. University Drive will be reconfigured to connect to this new entry and to allow for campus building expansion eastward around the campus core.

A second new entry, the “Grand Ped/Bike Gateway” will be designed and constructed off of Woodland Avenue. This Ped/Bike Gateway will provide a much stronger and safer access point to campus from the Blue Stone Commons residential and commercial development as well as other areas east of Woodland Avenue.

Already underway, additional wayfinding, signage and markers will supplement this effort.

Additional near-term activities involve working with the City of Duluth on a possible reconfiguration/relocation of the West College Street/Woodland Intersection to Clover Street; implementation of several “in-process” design/construction projects; and planning for future capital projects.



Campus Gateway



Campus Marker



Bike/Ped Path



Ballfield Fencing

Campus "Marker" Campus Entry & "Signage" New "Visitor" Gateway and realigned University Drive

Proposed UMD Master Plan - Short Term Plan



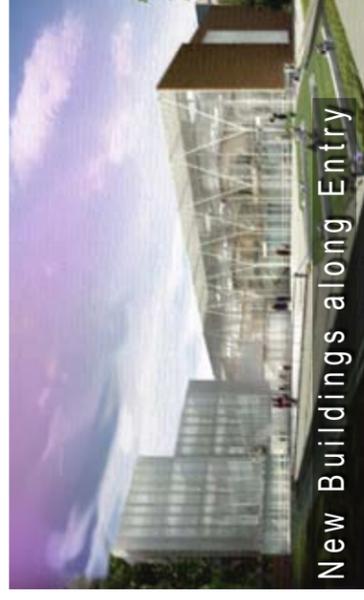
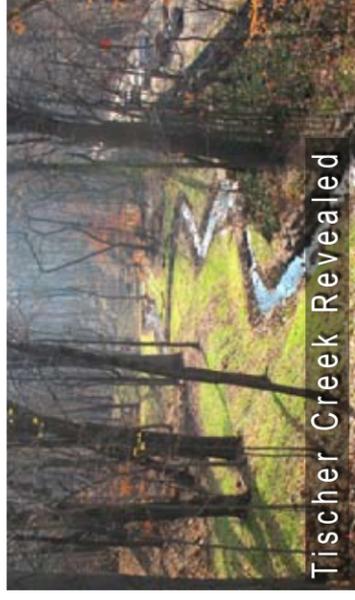
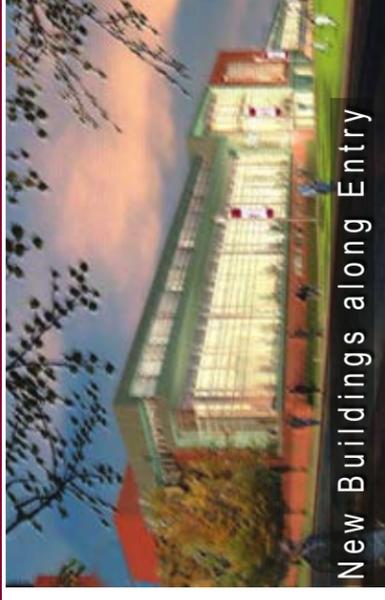
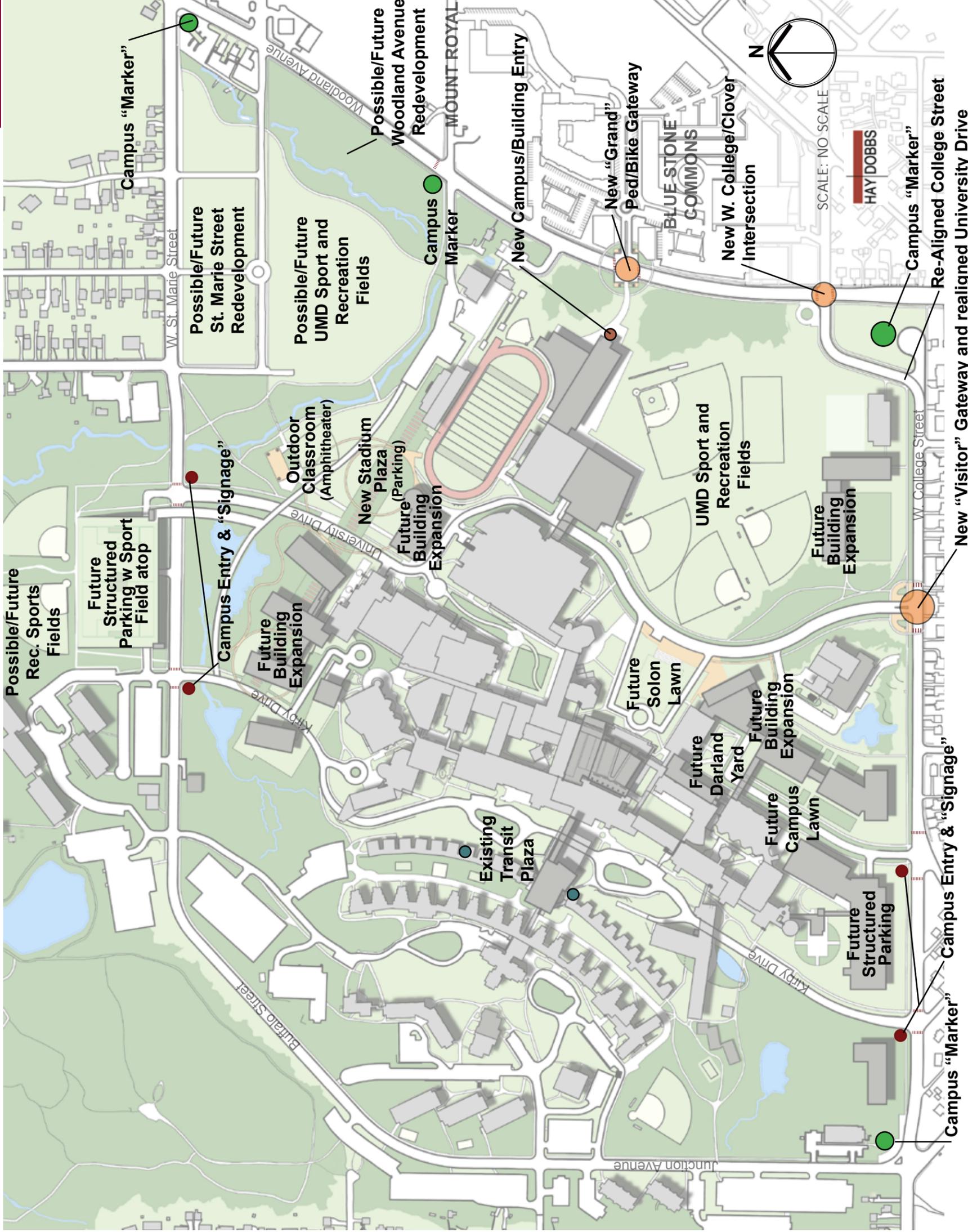
Implementation

Long Term Plan

Being thoughtful about growth and change

The long term plan for UMD grows the campus in a compact and walkable manner. Nature is invited in more fully on the north end of campus while the southeastern portions of campus become more regularized and urban. Parking is primarily located in perimeter structured parking facilities creating a more pedestrian friendly and visually appealing campus core. Academic, Student Service, Administrative, Recreational and Athletic facilities expand near similar related facilities following the campus land use plan. Buildings and open spaces work synergistically in support of one another. Buildings are positioned to allow for views, vistas and solar access. Natural and sustainable features are tangibly present on campus and new campus facilities are showcased within their respective precincts and along major vehicular and pedestrian thoroughfares. Off campus UMD facilities become ambassadors to each host community, reinforcing the UMD brand and demonstrating the value UMD brings to the region.

The future of UMD is bright. This plan provides the flexible framework to accommodate change while guiding the incremental physical manifestation of the University's strategic plan.



University of Minnesota Duluth

Campus Master Plan Update 2013

APPENDIX

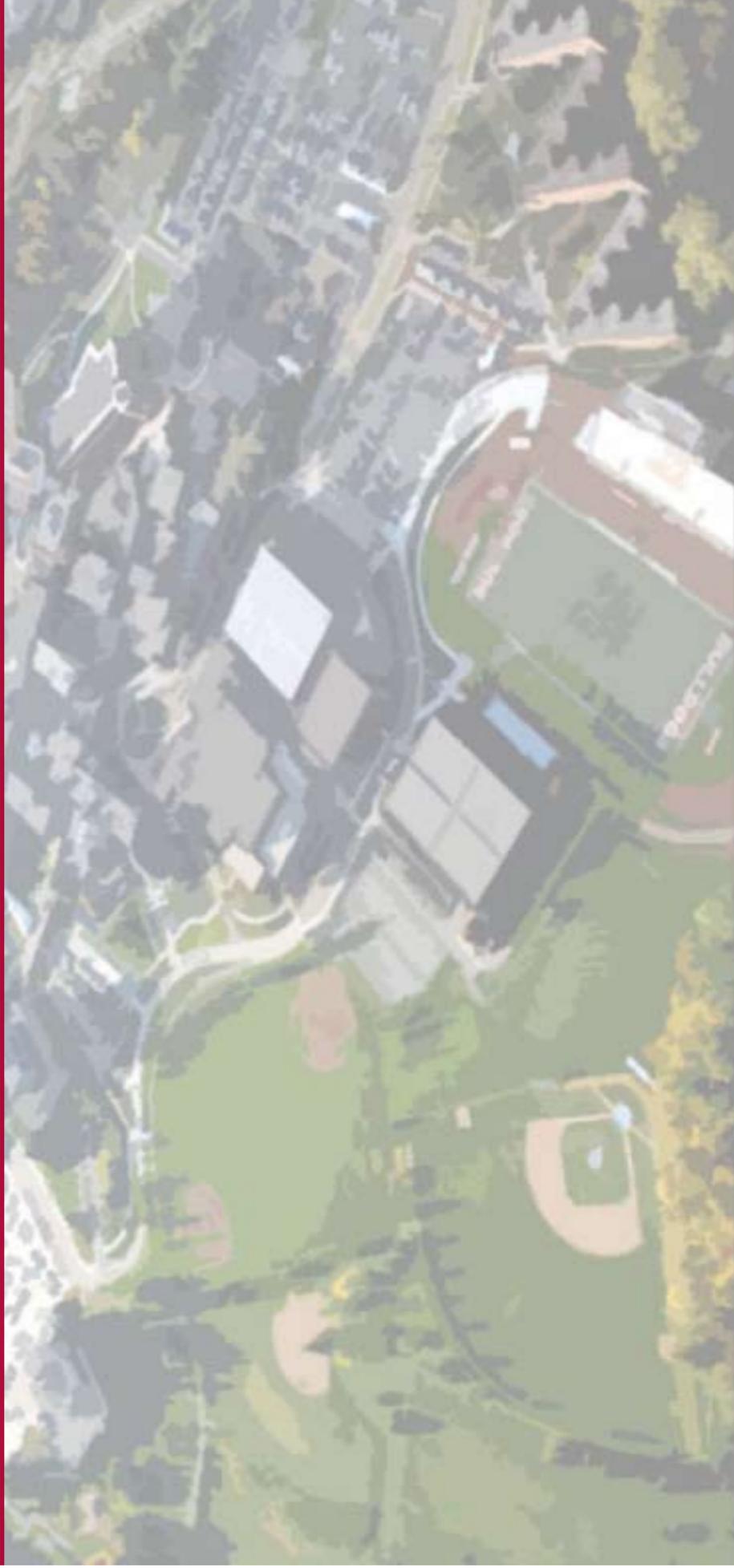


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 - Pierce Pini & Associates, Inc.
 - Midwest Traffic Consulting, LLC

- Board of Regents Campus Master Planning Principles
 - Campus Master Planning Principles

Lead Master Plan Consulting Firm:



www.haydobbs.com



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ACKNOWLEDGEMENTS

This update to the UMD Campus Master Plan was undertaken with ongoing involvement and participation by the UMD Physical Facilities Committee (PFC) as well as campus leadership. The PFC was charged with the task of evaluating, researching, analyzing, planning, and recommending implementation of an updated Campus Master Plan to address a short and long term planning time frame. Committee members were chosen to represent specific areas of the University and to gather input from their respective constituents. The PFC held scheduled planning meetings, workshops and two on-campus forums as vehicles to both garner and communicate information relevant to the update of the broader University.

Physical Facilities Committee:

Steve Bardolph, Assistant Professor, Art and Design
Lester Drewes, Professor, Biochemistry and Molecular Biology
Amanda Fudala, Program Associate, Facilities Management
Jodi Carlson Grebinoski, Associate Librarian
Ava Heinrich, Student Representative
Pat Keenan, Administrative Director, Student Life
John King, Director, Facilities Management
Bob Krumwiede, Associate Vice Chancellor, Academic Affairs
Joan Kwako, Associate Professor, Education
Mick McComber, Senior Administrative Director, Recreational Sports
Nik Hassan, Associate Professor, Finance and Management Information Sciences
Adam Pine, Assistant Professor, Geography
John Rashid, Associate Director, Facilities Management
Lisa Pratt, Director, Alumni Relations
Harlan Stech, Professor, Math and Statistics
Molly Tomfohrde, Student Representative
Matthew Weber, Student Representative
Drew Wimmer, Assistant Professor, Theater
Lorentz Wittmers, Interim Director, Center for American Indian and Minority Health; Director, Animal Services; Associate Professor, Biomedical Sciences
Mark Zmudy, Assistant Professor, Health, Physical Education and Recreation

Additional Participants:

Tom Ambrosi, Librarian
Lendley Black, Chancellor
Cheryl Love, Supervisor, Parking Services
Hannah Mumm, Student Body President
Mike Seymour, Vice Chancellor, Finance and Operations

Lead Master Plan Consulting Firm:



www.haydobbs.com

University of Minnesota Duluth
Campus Master Plan
Appendix



Meeting Called by: Hay Dobbs
Participants: Hay Dobbs, UMD PFC
Date: 06/07/12
Start Time: 9:00 am
Location: 520 Darland, UMD
Meeting Purpose: Master Plan Workshop
Project Name: UMD Campus Master Plan Update
Project Number: 12007.001

Agenda Items	Person(s) Responsible	Item Start Time
<ul style="list-style-type: none"> Opening Comments, Introductions, Contract Status, Agenda Review Campus insight workshop: <ul style="list-style-type: none"> Special Places UMD "bests" UMD "worsts" Arrival Sequence Experienced and Visitor Surrounding Context Advantages and Disadvantages What things make UMD Special? Guiding Principles Discussion Break Opportunities Lunch (brought in) Continued Discussion, 6 Year Capital Plan/Other Needs Community Outreach Digital/Social Media Next Meeting Proposed 07/10/12 Adjourn 	<p>All</p> <p>All</p> <p>All</p> <p>All</p> <p>All</p> <p>All</p> <p>All</p> <p>All</p> <p>All</p>	<p>9:00 am</p> <p>9:20 am</p> <p>10:00 am</p> <p>10:35 am</p> <p>10:45 am</p> <p>11:25 am</p> <p>11:45 am</p> <p>12:25 pm</p> <p>12:40 pm</p> <p>12:55 pm</p> <p>1:00 pm</p>

Project Name: UMD Campus Master Plan Update
HD Project #: 12007.001
Date: 06/07/12
Location: UMD, 520 Darland
Purpose of Meeting: Master Plan Workshop
Start time: 9:00 am
In Attendance: Thomas Dobbs
Gary Hay
Amanda Fudala
Patrick Keenan
Bob Krumweide
Cheryl Love
Mick McComber
Lisa Pratt
Harlan Stech
John Rashid
Tom Ambrosi
Hannah Mumm

Meeting # 2
End time: 1:15 pm
Firm/Abbreviation: Hay Dobbs
: Hay Dobbs
: UMD
Student Body President

Items	Discussion	Action By
Opening Comments	Gary Hay began the meeting by welcoming the participants and having them introduce themselves. Gary shared with the PFC (Physical Facilities Committee) that Hay Dobbs has now received a contract from the U of M and that Hay Dobbs is finalizing insurance and contract requirements. Gary then reviewed the agenda for the workshop and outlined general goals and expected outcomes.	
Campus Insights Exercise	Tom Dobbs and Gary Hay led a series of exercises wherein the PFC was requested to individually note, on 6 separate maps, their respective insights into: Special Places on the UMD campus; The "best" places on the UMD campus; The "worst" places on the UMD campus; The Arrival Sequence getting to/from campus for both the PFC member and visitors; The "front door" to UMD; and thoughts on "What makes UMD Special". Individuals then sequentially shared and explained their rationale for their choices/selections/notes captured on each site plan.	
Guiding Principles Discussion	Tom Dobbs and Gary Hay shared that they had thoroughly reviewed the past (2005) master plan and that Hay Dobbs has completed initial campus reconnaissance and analysis. They noted that the 3 key values and plan elements: "Concentrated Academic Core", "Outreach and Access", and "Regional Setting", along with their respective subsets, were still generally valid. After some discussion, Tom Dobbs proceeded to present Hay Dobbs' initial draft "Guiding Principles". Tom explained that these principles build upon the 2005 key values and that they are intended to be broad based touchstones from which future strategies and directions can be based. Tom also explained that although these principles need to be finalized at some point soon, they are open for review and comment by the PFC. After additional discussion Tom shared the 5 Guiding Principles: 1) Establish a clear campus edge on College and Woodland; 2) Establish a primary campus entry; 3) Maintain and strengthen the "Academic Village"; 4) Connect the campus to the regional environment; 5) Visibly manifest sustainability. Tom explained the rationale for the principles as well as conveying how various initiatives and projects nest within the principles. Harlan Stech inquired how the Campus Insights Exercise conducted prior informs the principles. It was explained that the Campus Insights Exercise provided insight and details that confirm Hay Dobbs' observations to date,	

	<p>or unveil to Hay Dobbs heretofore unknown information about the campus. It was also noted that entire master planning process is an iterative process, not a linear process, and that the insights will inform decision-making beyond today's meeting. Bob Krumweide questioned the need for a clear campus edge on College and Woodland and suggested that the campus shouldn't be an isolated island within the city but rather an inviting destination. Gary Hay noted that the edge may not be a hard physical edge but it is a more defined demarcation of where the city and the university come together. Mick McComber questioned the need for a primary entry and wanted to make sure that users can still get into the campus via other routes and entries. Tom Dobbs clarified that the intent of a primary entry was to add to the clarity and ease of the arrival sequence, but not to close off secondary or tertiary campus entry points. John Rashid inquired about the "academic village". Tom Dobbs clarified that "academic village" would include housing, athletics/recreation, administration, support and open space in addition to labs and classrooms. There was general agreement that the campus should connect for fully to the regional environment and that visibly manifesting sustainability is a good thing and that it continues the sustainability efforts already underway. There was continued discussion with the general sentiment that the 5 Guiding Principles were valid. No additional Principles, or edits to those proposed, were offered by the PFC.</p>	
<p>Opportunities</p>	<p>Tom Dobbs presented a diagram, prepared by Hay Dobbs, that showed with a 1000 foot radius (Kirby Hub being the focus) how the campus has grown to the north and south over time. Tom explained that the circle represented a 10 minute walk from end to end of the campus. The north and south limits to the main mass of the campus coincidentally extend to the edges of this circle. It was noted that the campus does not have much more room to grow in the north/south direction. Gary Hay and Tom Dobbs showed on the plan how the campus could begin to grow to the east while still remaining comfortably within the 1000 foot radius from Kirby. The diagram also suggested opportunities to bring the character similar to the natural environment found in Bagley Nature Area more fully down the hill into the campus. Hay Dobbs also suggested that the character of campus buildings may want to transition from more urban and formal in the southern and eastern parts of the campus to more distributed and "dispersed in the forest" in the northern portions of the campus. The diagram further described how a signature entrance off of West College Street could allow a symbolic campus entry without creating major disruptions to displacement of recreation and athletic fields and open space along Woodland Drive. Hay Dobbs also pointed out that a signature entry off of West College Drive will be less expensive than a new signature entry off of Woodland drive due to a shorter length and little to no impact on the recreation and athletic fields. There was much discussion about the merits and shortcomings of the described opportunities. John Rashid stated that decisions should be made the benefit the campus in the long run. Tom Dobbs stated that the City of Duluth has not yet been contacted by Hay Dobbs to discuss the viability of any new or relocated entries into campus and that that needs to occur as a next step. John Rashid suggested that we meet with the Mayor and City Staff soon to discuss. Hay Dobbs concurred and John volunteered to set up the meeting(s). The meetings are anticipated to take place within the next two weeks. It was also stated by the PFC that the Chancellor's Committee would have to make any final decisions about a new, improved or relocated campus entry. John Rashid stated that Hay Dobbs could likely present alternatives to the Committee for review and selection, on July 9th, a day before the next planned PFC meeting. Hay Dobbs will illustrate alternative campus entries and will articulate the pros and cons of each option for Committee review. Hay Dobbs pointed out that the strategic direction shown in diagrammatic form could accommodate all of the space needs described in the 6 Year Capital Plan as well as other needs beyond that timeframe.</p>	<p>John Rashid, Hay Dobbs</p>
<p>Community Outreach</p>	<p>Hay Dobbs inquired about the appropriate timeframe and forum to share master planning concepts and direction with the broader community. Lisa Pratt noted that community outreach is essential and that the PFC will determine the appropriate time frame and content to share with the community. The PFC generally agreed. Hay Dobbs requested a more definitive timeline and audience for the outreach.</p>	<p>PFC</p>
<p>Digital/Social Media</p>	<p>Hay Dobbs asked about the desire by the PFC to share master planning concepts with the greater University (students, staff, faculty, etc.) as well as the community via Social Media. It was discussed that</p>	<p>PFC</p>

<p>Next Meeting</p>	<p>this would be important and that the Student Affairs efforts/networks should be used as one vehicle for this effort. Hannah Mumm stated that this could be easily done and that Student Affairs could assist in the effort. Lisa Pratt noted that the Alumni Office could be integrated into this effort as well. Hay Dobbs requested that the PFC define more specifically the desire to implement this and the framework/management expectations for content sharing and management. The next workshop will be held on Tuesday, July 10 from 9 am to 1pm at a location TBD.</p>	<p>All/John Rashid to locate a room</p>
<p>Adjourn</p>	<p>The meeting was adjourned at 1:15 pm.</p>	

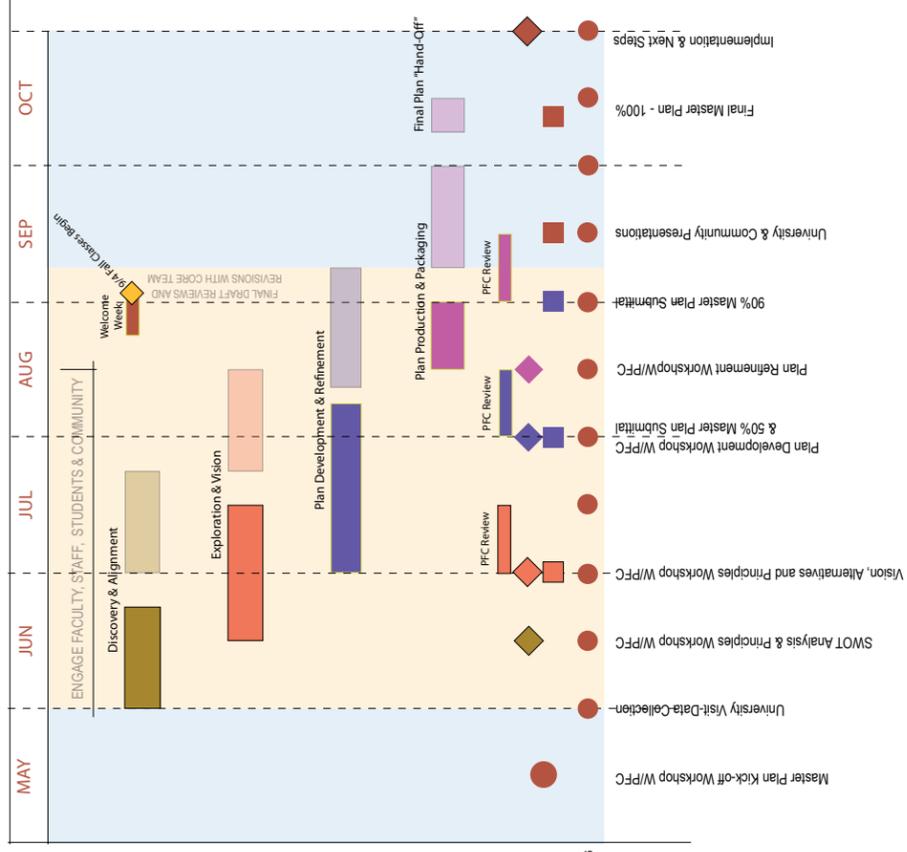
The writer believes this document accurately reflects the business transacted during the meeting. If any attendees believe there are inconsistencies, omissions or errors in the minutes, he should notify the writer within 3 business days. Unless objections arise, consider this account accurate and acceptable to all present.

Writer: Thomas Dobbs

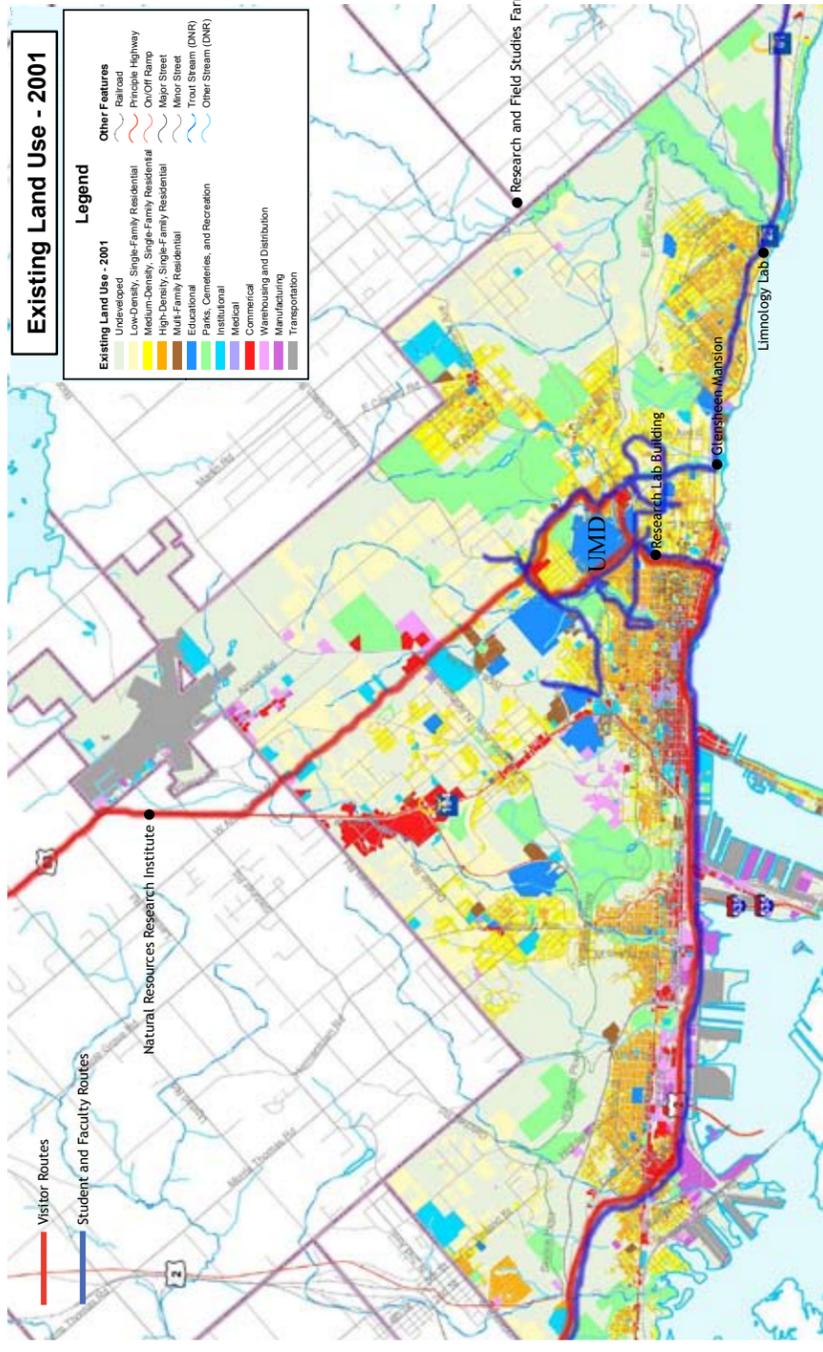
Cc: John Rashid for distribution; File.

PROPOSED SCHEDULE & WORKPLAN 2012
17 May 2012

- ◆ Proposed Workshops with Physical Facilities Committee
- Proposed Submittals and/or Presentations
- Proposed Project Management Updates and Reviews



Project Management Updates & Reviews



CAMPUS ARRIVAL SEQUENCE
CAMPUS MASTER PLAN UPDATE
University of Minnesota Duluth
Duluth, Minnesota

HAY DOBBS



UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

Project Name: UMD Campus Master Plan Update

HD Project #: 12007.001

Date: 07/10/12

Location: UMD, 520 Darland

Purpose of Meeting: Master Plan Workshop

Meeting # 4

Start time: 9:00 am End time: 1:00 pm

In Attendance: Thomas Dobbs Firm/ Hay Dobbs
 Gary Hay Abbreviation :
 Amanda Fudala : UMD
 Jodi Grebinoski UMD
 Patrick Keenan UMD
 John King UMD
 Cheryl Love UMD
 Mick McComber UMD
 Lisa Pratt UMD
 John Rashid UMD
 Harlan Stech UMD

Items	Discussion	Action By
Opening Comments	Gary Hay began the meeting by welcoming the participants. Gary then reviewed the agenda for the workshop and outlined general goals and expected outcomes. Gary also confirmed that the meeting minutes from the 06/07/12 PFC meetings were accurate.	
Chancellor's Cabinet Meeting Recap	Gary Hay shared that he participated in a meeting with Chancellor's Cabinet on 06/28/12 to share 4 options for a primary campus entry. He presented plans that described how each of the 4 options had various pros and cons. He went on to describe how the Chancellor's Cabinet advised that the PFC/Master Plan should proceed with Option #2. Option #2 is a new entry off of W. College Street east of the Lund Physical Plant Building and west of the existing ball diamond. Option #2 also would include pedestrian/bike trails/paths connecting Woodland Drive to the campus, a pedestrian bridge over Woodland Drive, as well as a monument sign at the corner of Woodland and College. Gary also shared that the Cabinet concurred with the prior Guiding Principles and reiterated the desire to develop a focal point to the campus, create a better "front door" to the campus and to make the UMD campus more visible and recognizable.	
Precedents Presentation and Discussion	Tom Dobbs and Gary Hay presented a series of precedent images to help the PFC understand how certain physical components of the Master Plan could take shape and be designed on the UMD campus. Specifically, these precedents included: Entries and Signs, Bridges, Lawns, Yards, Stairs, and Structured Parking.	
Opportunities	Gary Hay presented several concept plans based on Option #2, prepared by Hay Dobbs, that showed how a new entry drive and feature lawn in front of Solon Campus Center could work. The plans showed new entries, roadways, parking, monument signs, pedestrian bridge, sidewalks, trails, paths, open space and new building locations. Several illustrations were also presented describing the aforementioned elements of the plan.	

Future Campus Snapshot	Hay Dobbs inquired about future campus projections for enrollment and facility utilization related to academics, housing, support, recreation, athletics and parking. John King shared that the strategic enrollment plan is being undertaken by the University as an outgrowth of the Strategic Plan. He shared that that work will be completed in about a year and that for the purposes of this master plan a 1%-2% per year enrollment growth projection should be used. Hay Dobbs requested more detail related to facility needs as determined by the University. A subset of the PFC will meet the week of July 16 th to discuss this in more detail. The findings will be conveyed to Hay Dobbs, in a spreadsheet format, at or before the next PFC Meeting.	PFC
Community Outreach and Digital/Social Media	Hay Dobbs inquired about the appropriate timeframe and forum to share master planning concepts and direction with the broader community. John Rashid shared that the PFC will determine the appropriate time frame and content to share with the community and that no action is required at this time. Hay Dobbs requested a more definitive timeline and audience for the outreach. John King also noted that he will personally share the current plan principles and direction with the developer (Mark Lambert) of the mixed use project (Bluestone Commons) east of Woodland Drive.	PFC
City of Duluth Review Process	Hay Dobbs requested that John Rashid convene a meeting with the City of Duluth to review the concept plans and issues specifically related to campus entries, traffic and pedestrian/bike paths and street crossings (at grade and ped bridge). John stated that he will set up the meeting within 2 weeks or sooner.	John Rashid
Schedule Update	Gary Hay noted that due to the PFC request for Hay Dobbs to meet with the Chancellor's Cabinet to review entry options, (and the subsequent meeting), the schedule has been slightly impacted by approximately 2 weeks.	
Concept Plan Feedback	Hay Dobbs requested feedback on the direction of the master plan and specific plan components. The PFC, individually in turn, described general support of the plan direction. In summary, comments included: <u>Positives:</u> New Entry Location; New Entry can be implemented with little impact on existing facilities; The idea of transparent/glassy linkways between buildings/new buildings; A Ped Bridge over Woodland; More greenspace/open space/quads on campus; A monument/sign on the corner of Woodland and College; Keeping University Drive even with the introduction of a new entry drive; More Ped/Bike paths and their support of sustainability; A glass staircase/winter garden connection Kirby down to Solon and looking out (south facing) over a new open lawn and grand stair east of Solon; <u>Neutral/Need Exploration:</u> Better identification of corner of Junction and College as a campus edge; Potential roundabouts at intersections of College/Woodland and College/Junction; Crosswalks at Snelling and/or Lawn; View/Arrival from Woodland to Solon is the best but is impractical; Replace chain link fences around ballfields with more decorative fencing <u>Concerns:</u> Ped/Bike Paths from Woodland to campus may still disrupt/displace some of the ballfields; A bike/peped path from the campus to the Lambert development isn't as strong as a roadway connection; Traffic/Access at College/Woodland; Relocate some ballfields to north of St. Marie?; Removing/replacing chain link fences around ballfields may increase the likelihood of damage to the fields	All
Next Meeting	The next workshop will be held on Thursday, August 2 nd , from 9 am to 1pm in 520 Darland	All
Adjourn	The meeting was adjourned at 1:00 pm.	

The writer believes this document accurately reflects the business transacted during the meeting. If any attendees believe there are inconsistencies, omissions or errors in the minutes, he should notify the writer within 3 business days. Unless objections arise, consider this account accurate and acceptable to all present.

Writer: Thomas Dobbs

Cc: John Rashid for distribution; File.



Meeting Called by: Hay Dobbs
 Participants: Hay Dobbs, UMD PFC
 Date: 08/02/12
 Start Time: 9:00 am
 Location: UMD, Darland 520
 Meeting Purpose: Master Plan Workshop
 Project Name: UMD Campus Master Plan Update
 Project Number: 12007.001

Meeting Called by: Hay Dobbs
 Participants: Hay Dobbs, UMD PFC
 Date: 08/02/12
 Start Time: 9:00 am
 Location: UMD, Darland 520
 Meeting Purpose: Master Plan Workshop
 Project Name: UMD Campus Master Plan Update
 Project Number: 12007.001

Agenda Items	Person(s) Responsible	Item Start Time
• Opening Comments, Agenda Review, prior meeting Meeting Minutes	All	9:00 am
• City of Duluth Planning Department	Hay Dobbs	9:15 am
• Alignment	Hay Dobbs/All	9:30 am
• Break	All	10:35 am
• Priorities and Phasing	All	10:45 am
• Lunch (<i>brought in</i>)	All	12:00 pm
• Schedule Update & Campus Input Planning	Hay Dobbs	12:20 pm
• Community Outreach /Digital/Social Media	All	12:30 pm
• Next Meeting Proposed 08/23/12	All	12:50
• Adjourn	All	1:00 pm

Meeting Called by: Hay Dobbs
 Participants: Hay Dobbs, UMD, City of Duluth Staff/Electeds
 Date: 08/28/12
 Start Time: 10:00 am
 Location: UMD, Darland 430
 Meeting Purpose: UMD Master Plan Workshop/Follow up
 Project Name: UMD Campus Master Plan Update
 Project Number: 12007.001

Agenda Items	Person(s) Responsible	Item Start Time
<ul style="list-style-type: none"> • Introductions/Opening Comments, • Fundamentals of UMD Master Plan <ul style="list-style-type: none"> - Improve walkability and pedestrian safety on and around campus - Limit traffic and pedestrian street crossings in campus interior - Park on the campus perimeter - Retain/Expand number of ballfields - Allow for facilities expansion 	<p>All</p> <p>Hay Dobbs/UMD</p>	<p>10:00 am</p> <p>10:10 am</p>
<ul style="list-style-type: none"> • City of Duluth Staff Priorities 	<p>City of Duluth Staff</p>	<p>10:25 am</p>
<ul style="list-style-type: none"> • Alignment/Common Understandings <ul style="list-style-type: none"> - Embrace the Higher Education Small Area Plan - Address traffic issues throughout the neighborhood - Other 	<p>Hay Dobbs/UMD/City of Duluth</p>	<p>10:40 am</p>
<ul style="list-style-type: none"> • Break 	<p>All</p>	<p>10:55 am</p>
<ul style="list-style-type: none"> • Traffic Issues <ul style="list-style-type: none"> - Woodland; College; Junction; St. Marie; Clover; Other 	<p>UMD/City of Duluth</p>	<p>11:05 pm</p>
<ul style="list-style-type: none"> • Commitment to Financial Responsibility/Implementability 	<p>UMD/City of Duluth</p>	<p>11:30 pm</p>
<ul style="list-style-type: none"> • Lunch (<i>brought in</i>) 	<p>All</p>	<p>11:50 pm</p>
<ul style="list-style-type: none"> • Concepts 	<p>All</p>	<p>12:10 pm</p>
<ul style="list-style-type: none"> • Next Steps 	<p>All</p>	<p>12:45 pm</p>
<ul style="list-style-type: none"> • Adjourn 	<p>All</p>	<p>1:00 pm</p>



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Meeting Called by: Hay Dobbs
 Participants: Hay Dobbs, UMD, City of Duluth Staff/Electeds
 Date: 09/27/12
 Start Time: 10:30 am
 Location: UMD, Darland 520
 Meeting Purpose: UMD Master Plan Workshop/Follow up
 Project Name: UMD Campus Master Plan Update
 Project Number: 12007.001

Agenda Items	Person(s) Responsible	Item Start Time
<ul style="list-style-type: none"> • Introductions/Opening Comments, • City of Duluth Review Summary <ul style="list-style-type: none"> - 07/23/12 mtg at City Hall - 08/15/12 mtg at City Hall - 08/29/12 on-campus - Staff/Mayor/Council Member - +- 2 mo. schedule impact - City now supportive of plan • Public Outreach Discussion <ul style="list-style-type: none"> - Students - Faculty and Staff - Neighborhood - Other? - Physical/Digital tools • Schedule Review <ul style="list-style-type: none"> - Milestones to completion • Next Steps • Adjourn 	<p>All</p> <p>Hay Dobbs/UMD</p> <p>Hay Dobbs/UMD</p> <p>Hay Dobbs/UMD</p> <p>All</p> <p>All</p>	<p>10:30 am</p> <p>10:35 am</p> <p>11:00 am</p> <p>11:30 am</p> <p>11:50 am</p> <p>12:00 pm</p>



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Project Name: UMD Campus Master Plan Update
 HD Project #: 12007.001
 Date: 09/27/12
 Location: UMD, 520 Darland
 Purpose of Meeting: Master Plan Workshop
 Meeting # 5
 Start time: 10:30 am
 End time: 12:00 pm
 In Attendance: Thomas Dobbs, Hay Dobbs Firm/
 UMD PFC Abbreviation :
 Mike Seymour, Vice Chancellor UMD

Discussion	Action By
<p>Tom Dobbs began the meeting by welcoming the participants and asking everyone to introduce themselves as there a several new members of the PFC. Tom Dobbs then reviewed the agenda for the workshop and outlined general goals and expected outcomes.</p> <p>Tom Dobbs shared with the committee a summary of the work progress with the City of Duluth that has transpired over the last two months. Tom summarized the 07/23/12 mtg at City Hall, the 08/15/12 mtg at City Hall, and the 08/29/12 on-campus. He described how the City (Mayor, Councilor and Staff) is now supportive of plan as well as Mark Lambert, Developer of the Bluestone Commons project east of Woodland Avenue. Tom went on to describe how resolving traffic and access issues with the City of Duluth took about 2 months but that the study should still be completed by the end of the UMD Fall Semester. John Rashid pointed out that a bigger question will now be "when" will the University begins to undertake the entry/gateway project(s).</p>	<p>Hay Dobbs/John Rashid/John King</p>
<p>Tom Dobbs expressed the desire/need of bringing the master plan to broader community to get feedback. It was stated by several participants, that outreach is essential and should be undertaken. Various means/methods were discussed by committee members and it was determined that an open house format along with one or more scheduled presentations was the appropriate means to engage the surrounding neighborhood, known as Campus Neighbors, as well as the student body and greater UMD community. It was suggested that a 6pm presentation be scheduled on Wednesday, October 17th during the Campus Neighbors regularly scheduled meeting. Suggestions were made about additional Open House times and informal presentations preceding the 10/17 meeting or on the following day primarily focused on the UMD community. This will be discussed further by Hay Dobbs, John Rashid and John King to figure out the appropriate format and duration of additional outreach.</p> <p>Tom Dobbs reviewed the overall master plan process schedule in light of the 2 month effort with the City of Duluth. Tom pointed out major milestones that will be achieved to complete the plan, including 75% and 90% draft submittals, a final draft submittal date and several more reviews/workshops. It is anticipated that the next PFC meeting/workshop will take place no 10/25/12 from 10am to 12-pm.</p> <p>The meeting was adjourned at 12:03 pm.</p>	<p>All</p> <p>All</p>

The writer believes this document accurately reflects the business transacted during the meeting. If any attendees believe there are inconsistencies, omissions or errors in the minutes, he should notify the writer within 3 business days. Unless objections arise, consider this account accurate and acceptable to all present.

Writer: Thomas Dobbs

Cc: John Rashid for distribution; File.

HAY DOBBS

ARCHITECTURE
URBAN DESIGN
PLANNING
INTERIORS

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Project Name: UMD Campus Master Plan Update
 HD Project #: 12007.001
 Date: 11/01/12
 Location: UMD, 520 Darland
 Purpose of Meeting: Master Plan Workshop Meeting # 6
 Start time: 10:30 am End time: 12:00 pm
 In Attendance: Thomas Dobbs Firm/ Hay Dobbs
 Gary Hay Abbreviation Hay Dobbs
 UMD PFC, Sign In Sheet : UMD
 Attached

Discussion	Action By
John Rashid began the meeting conveying to Hay Dobbs and the PFC the positive feedback received regarding the on-campus presentations to the UMD and Campus Neighbors Communities on 10/17/12.	
Tom Dobbs shared with the committee a summary of the two presentations that were completed on 10/17/12. The first of which was held in Kirby over the lunch hour primarily for UMD faculty, staff and students. The second of which was held in Solon that evening during the Campus Neighbors Annual Meeting.	
Tom Dobbs presented to the PFC the final document format for comments. The proposed table of contents was distributed and the primary sections and content were presented.	
Tom Dobbs reviewed the overall master plan process schedule to complete the Draft Master Plan update and the Final Master Plan update.	
The meeting was adjourned at 11:45 am	

The writer believes this document accurately reflects the business transacted during the meeting. If any attendees believe there are inconsistencies, omissions or errors in the minutes, he should notify the writer within 3 business days. Unless objections arise, consider this account accurate and acceptable to all present.

Writer: Thomas Dobbs

Cc: Cheryl Anderson for distribution; File.

Attachments: 1 – 11/01/12 PFC Meeting Sign-in sheet



University of Minnesota Duluth
Campus Master Plan
Appendix





18th June 2021
PROJECT NO. 1004-000
UMD
LAWNS
CAMPUS MASTER PLAN UPDATE
University of Minnesota South
Duluth, Minnesota
HAYDOBB
SK. 8



18th June 2021
PROJECT NO. 1004-000
UMD
LAWNS
CAMPUS MASTER PLAN UPDATE
University of Minnesota South
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YARDS
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University of Minnesota South
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SEINFEL
CAMPUS MASTER PLAN UPDATE
University of Minnesota South
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PARKING
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18th June 2021
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UMD
PARKING
CAMPUS MASTER PLAN UPDATE
University of Minnesota South
Duluth, Minnesota
HAYDOBB
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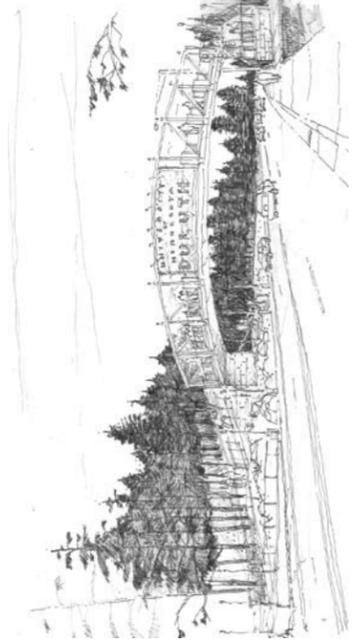
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CAMPUS MASTER PLAN UPDATE
University of Minnesota South
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HAYDOBB
SK. 18



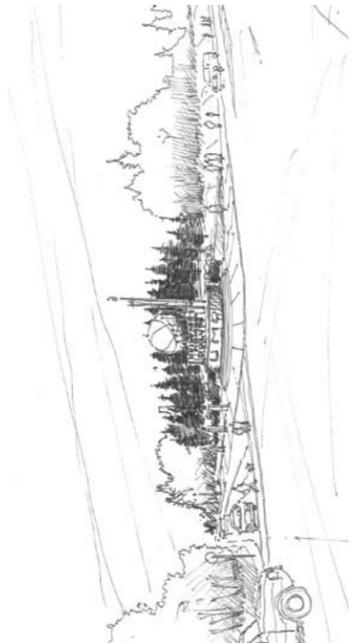
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PROJECT NO. 1004-000
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DATE: 11/04/2013
 PROJECT NO: 13000000
Proposed New Campus Entries & Road Location
 CAMPUS MASTER PLAN UPDATE
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DATE: 11/04/2013
 PROJECT NO: 13000000
Illustrative View of New Campus Entry & Bridge
 CAMPUS MASTER PLAN UPDATE
 University of Minnesota Duluth
 Duluth, Minnesota
 HNTB/CORBIS
 SK. 21

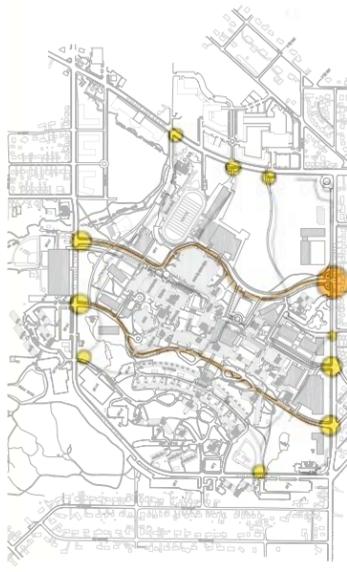


DATE: 11/04/2013
 PROJECT NO: 13000000
Illustrative View of New Campus Monument Sign
 CAMPUS MASTER PLAN UPDATE
 University of Minnesota Duluth
 Duluth, Minnesota
 HNTB/CORBIS
 SK. 22



DATE: 11/04/2013
 PROJECT NO: 13000000
Illustrative View of New Campus Entry Drive
 CAMPUS MASTER PLAN UPDATE
 University of Minnesota Duluth
 Duluth, Minnesota
 HNTB/CORBIS
 SK. 23

CAMPUS MASTER PLAN WORKSHOP
University of Minnesota Duluth
02 August, 2012



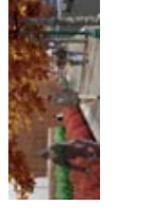
Master Plan Alignment - Entries
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
Duluth, Minnesota
SK. 27



Master Plan Alignment - Parking
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
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Develop a "Focal Point" for the UMD Campus
Create a "Front Door" for the UMD Campus
Make the UMD Campus more "Visible"
"Connect" the UMD Campus to Woodland Avenue
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Connect the UMD Campus to the "Regional Environment"
Visibly manifest "Sustainability"

UMD Strategic Plan Goals Review
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
Duluth, Minnesota
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Primary Entries
Secondary Entries
Master Plan Alignment - Entries
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
Duluth, Minnesota
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Master Plan Alignment - New Building Locations
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
Duluth, Minnesota
SK. 32

UMD Strategic Plan Goals

Goal 1. Promote integrated curricular, co-curricular, and living-learning undergraduate experiences that achieve UMD's student learning goals and prepare students for lifelong learning, globally engaged citizenship, and success in their academic, personal, and professional lives.

Goal 2. Create a positive and inclusive campus climate for all by advancing equity, diversity, and social justice.

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Goal 5. Strengthen ties with Duluth and surrounding communities in an intentional, visible and mutually beneficial partnership.

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UMD Strategic Plan Goals
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
Duluth, Minnesota
SK. 25



Master Plan Alignment - Entries
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
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SK. 29



Master Plan Alignment - New Building Locations
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
Duluth, Minnesota
SK. 33

City of Duluth Higher Education Small Area Plan Goals

Goal 1. Strengthen single-family neighborhoods through appropriate zoning tools and neighborhood stabilization efforts.

Goal 2. Minimize impacts on single-family neighborhoods from noise, light pollution, and visual impacts of student housing.

Goal 3. Promote mixed-use development and student housing along transit corridors and within walking distance of campus.

Goal 4. Increase use of alternate modes of transportation.

Goal 5. With leadership from The University of Minnesota Duluth and The College of St. Scholastica, integrate the colleges and students into the community.

CITY OF DULUTH HIGHER EDUCATION SMALL AREA PLAN GOALS
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
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Master Plan Alignment - Parking
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
Duluth, Minnesota
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Master Plan Alignment - Ped/Bike Connections
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
Duluth, Minnesota
SK. 34



City of Duluth Higher Education Small Area Plan Goals

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City of Duluth Higher Education Small Area Plan Goals
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
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"Within Walking Distance" to campus... p. 6

... mixed-use projects to spur "More Walking" and less driving, use of transit, relative to access to campus p. 33

Maintain a "Unique Sense of Place" while being "Resourceful" in the ways public dollars are spent. p. 35

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... part of the solution "Reducing the Number of Trips" made to campus by car p. 51

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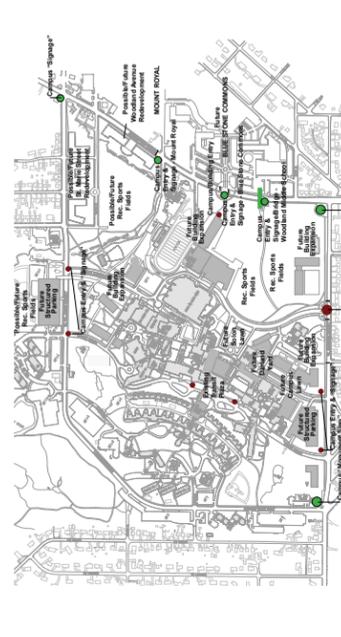
Paramount to providing pedestrian access... a new "Main Entrance Along Woodland"

as shown in the 2009 campus plan... p. 51

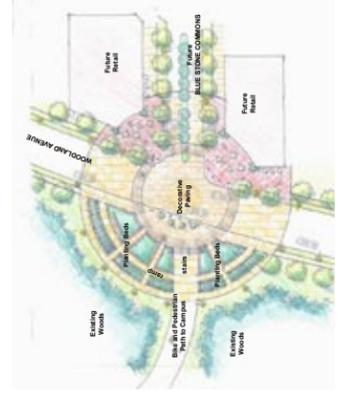
City of Duluth Higher Education Small Area Plan Goals
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
DULUTH, MINNESOTA



Proposed UMD Master Plan - W. College Street Entry
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
DULUTH, MINNESOTA



Proposed UMD Master Plan - Loss Range Plan
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
DULUTH, MINNESOTA



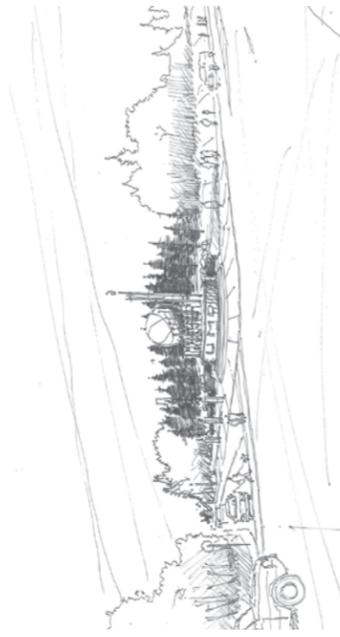
Illustrative Concept Plan of Campus Entry - Blue Stone Commons
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
DULUTH, MINNESOTA



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UNIVERSITY OF MINNESOTA DULUTH
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UNIVERSITY OF MINNESOTA DULUTH
DULUTH, MINNESOTA



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UNIVERSITY OF MINNESOTA DULUTH
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UNIVERSITY OF MINNESOTA DULUTH
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UNIVERSITY OF MINNESOTA DULUTH
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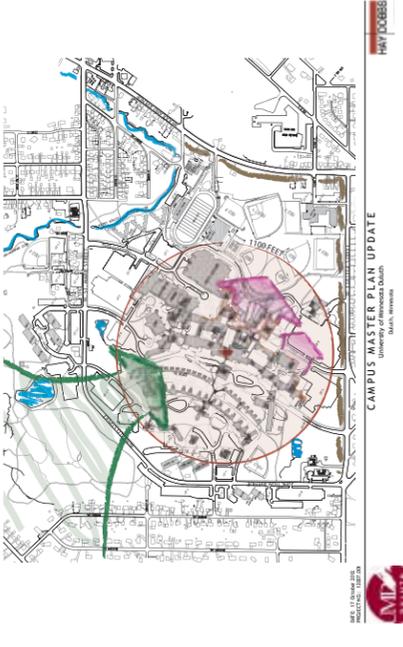
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UMD Strategic Plan Goals
CAMPUS MASTER PLAN UPDATE
UNIVERSITY OF MINNESOTA DULUTH
DULUTH, MINNESOTA



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- 5) Visibly manifest sustainability

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UMD Master Plan Goals Review

UMD Strategic Plan Goals

UMD Master Plan Principles

UMD Strategic Plan Goals



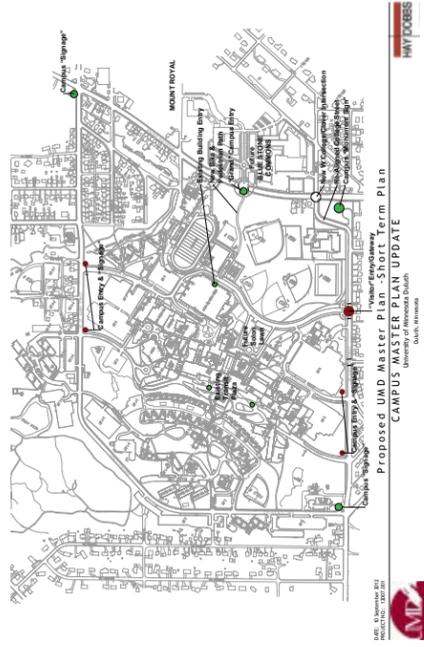
Master Plan Alignment - New Building Locations
 CAMPUS MASTER PLAN UPDATE
 University of Minnesota Duluth
 Duluth, Minnesota



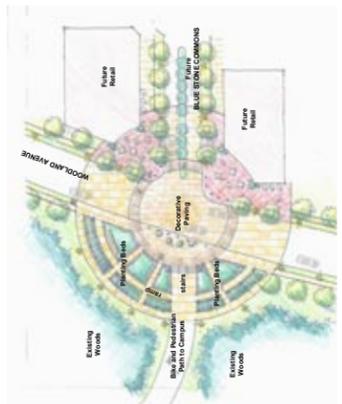
Master Plan Alignment - Engage the Landscape
 CAMPUS MASTER PLAN UPDATE
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Master Plan Alignment - Ped/Bike Connections
 CAMPUS MASTER PLAN UPDATE
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Proposed UMD Master Plan - Short Term Plan
 CAMPUS MASTER PLAN UPDATE
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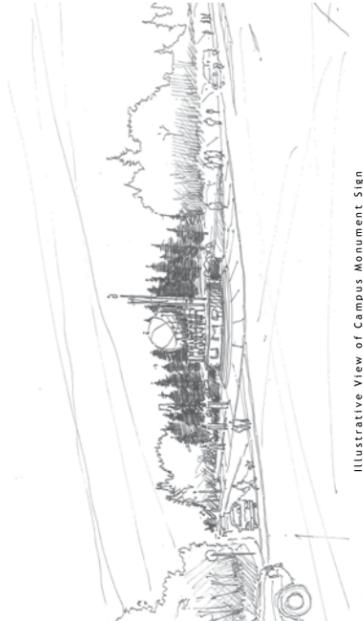
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 University of Minnesota Duluth
 Duluth, Minnesota



Illustrative View of Blue Stone Commons at Campus Entry
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 University of Minnesota Duluth
 Duluth, Minnesota



Master Plan Alignment - Open Space
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 University of Minnesota Duluth
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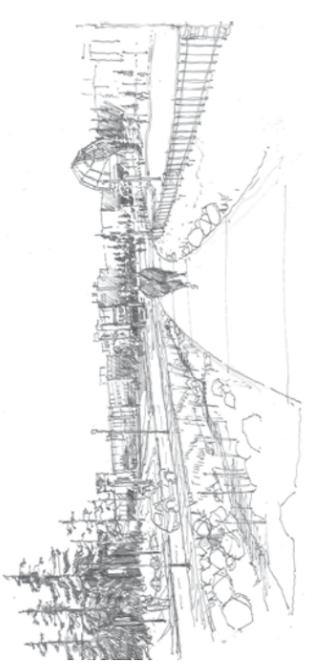
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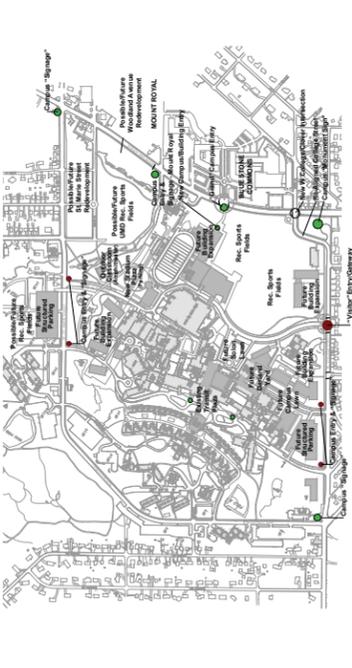
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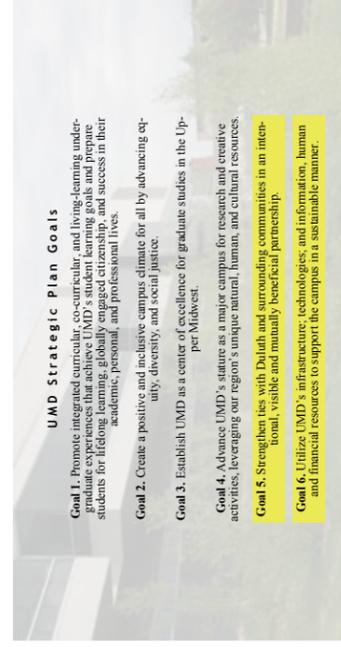
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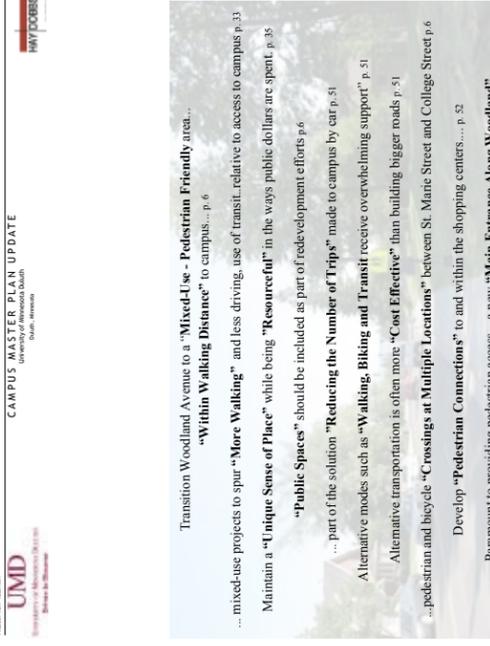
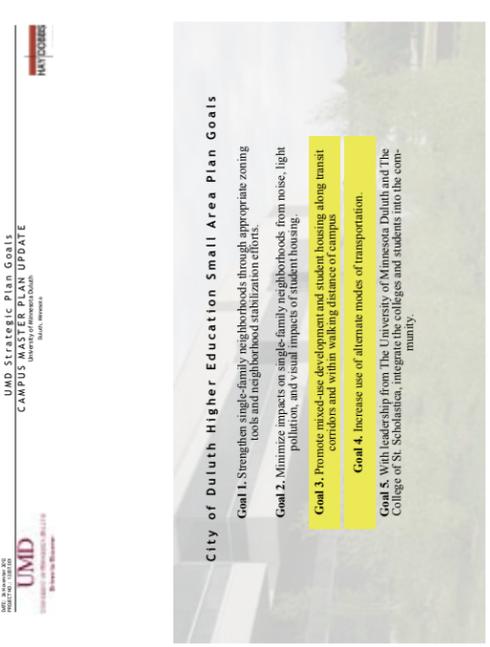
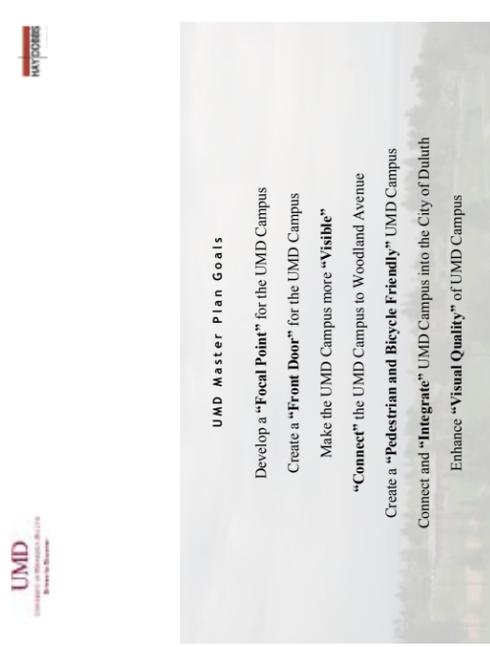
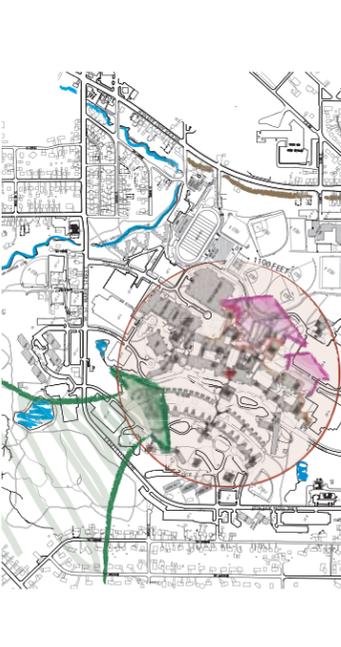
Illustrative View of Solon Lawn at The Campus Entry Drive
 CAMPUS MASTER PLAN UPDATE
 University of Minnesota Duluth
 Duluth, Minnesota



Proposed UMD Master Plan - Long Range Plan
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 University of Minnesota Duluth
 Duluth, Minnesota

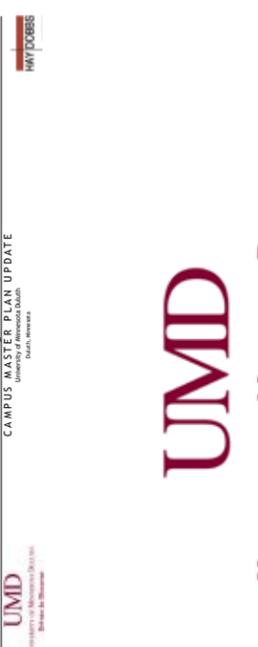
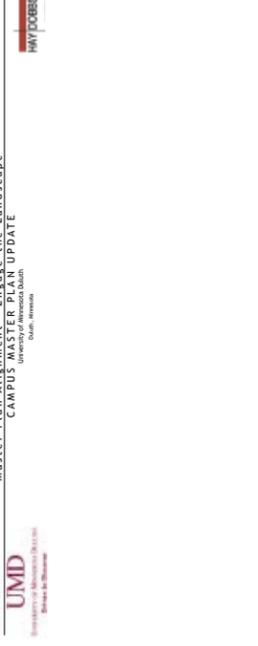
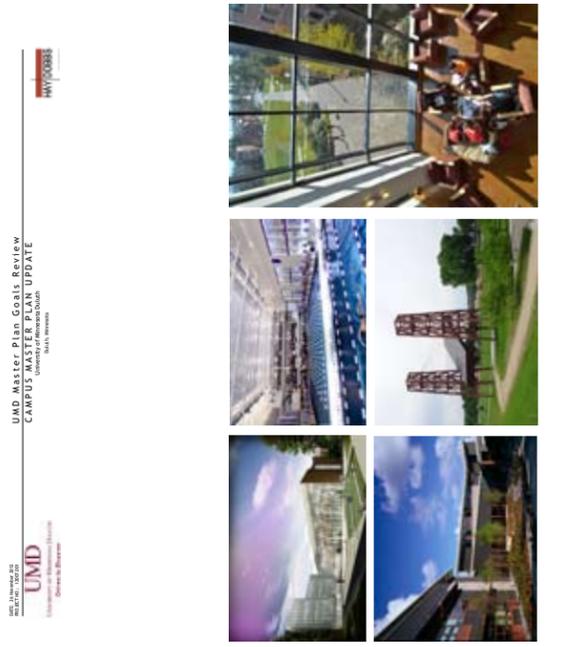


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UMD Master Plan Document Content

Table of Contents	Master Plan Update Contents	Appendix
Introduction	Plan Elements and Guidance	1 Acknowledgments
Overview	Land Use	2 Process Summary
Planning Framework	Buildings	3 Board of Regents Principles for Master Plans
Design Principles	Public Spaces	4 Design Objectives
City of Duluth Small Area Plan	Natural Features/Systems	5 Title
Changes/New Directions	Movement and Circulation	6 Title
	Pedestrians	7 Title
	Bicycles	8 Title
	Vehicles	9 Title
	Parking	
	Community Connections	
	Additional Considerations	
	Implementation	
	Phasing	
	Long Term	





UMD Master Plan Update Purpose

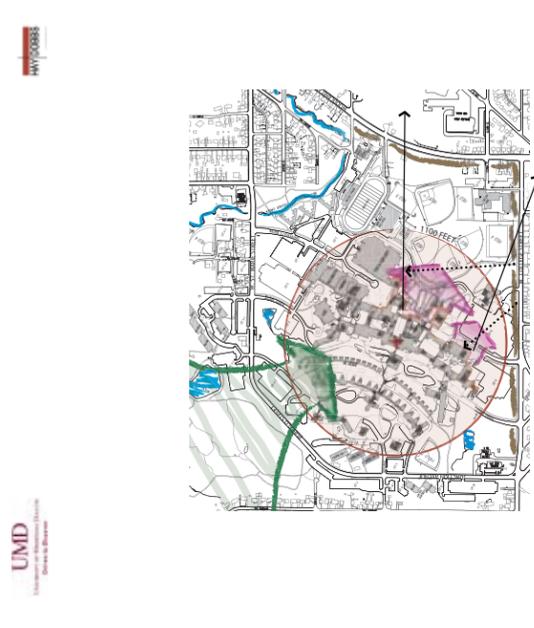
- 1) Develop Strategies for Campus Change and Growth
- 2) Create agreed upon Guiding Principles
- 3) Establish Priorities
- 4) Document Ideas
- 5) Build Support and Enthusiasm

UMD Master Plan Principles

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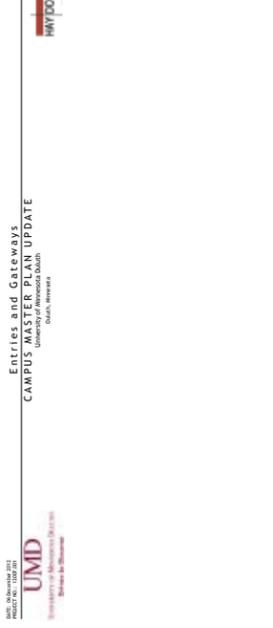
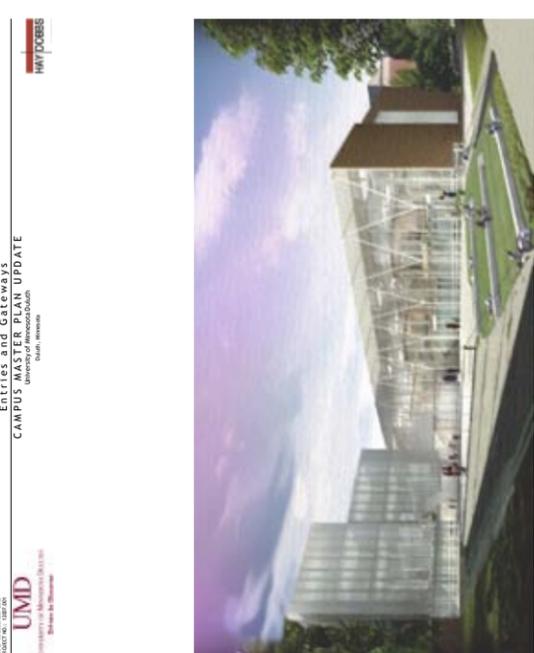
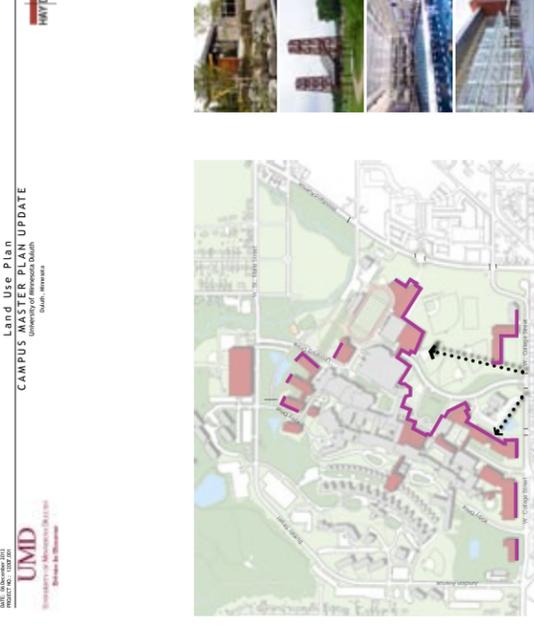
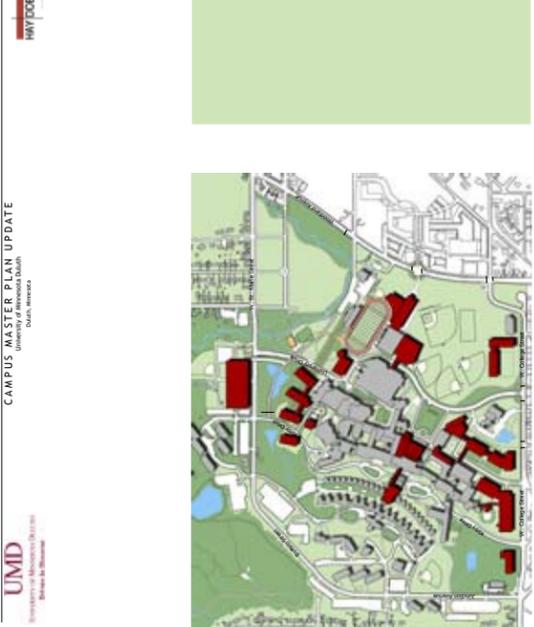
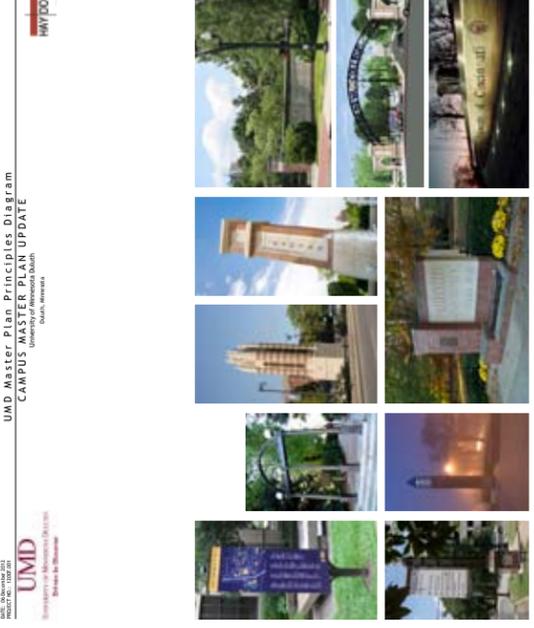
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UMD Master Plan Document Content

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Planning Framework	
• Guiding Principles	Plan Elements and Guidance
• City of Duluth Small Area Plan	• Buildings
• Campus New Directions	• Open Space
	• Landmarks/Systems
	• Movement and Circulation
	• Pedestrians
	• Bicycles
	• Transit
	• Community Connections
	• Additional Considerations
	Implementation
	• Prioritizing/Phasing
	• Long Term





UMD
 Illustrative View of Potential Future Athletic Facility
 CAMPUS MASTER PLAN UPDATE
 UNIVERSITY OF MINNESOTA DULUTH
 Duluth, Minnesota
 HNTB DOBBES



UMD
 Existing Routes
 Potential Additional Routes
 CAMPUS MASTER PLAN UPDATE
 UNIVERSITY OF MINNESOTA DULUTH
 Duluth, Minnesota
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UMD
 Existing Northern Woodland Landscapes
 Proposed Landscaped Natural Features and Systems
 CAMPUS MASTER PLAN UPDATE
 UNIVERSITY OF MINNESOTA DULUTH
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UMD
 Primary Interior Routes
 Exterior Bicycle Routes
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 UNIVERSITY OF MINNESOTA DULUTH
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UMD
 Bike Route
 Proposed Major Bicycle Routes
 Proposed Bicycle Lanes
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UMD
 Existing Routes
 Potential Additional Routes
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UMD
 Signature Street
 Primary Routes
 Future Streets
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UMD
 Structured Parking
 Surface Parking
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UMD
 Proposed UMD Master Plan - Short Term Plan
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 Illustrative View of New Campus Entry Drive
 CAMPUS MASTER PLAN UPDATE
 UNIVERSITY OF MINNESOTA DULUTH
 Duluth, Minnesota
 HNTB DOBBES



UMD
 Illustrative View of Future Building along Campus Entry Drive
 CAMPUS MASTER PLAN UPDATE
 UNIVERSITY OF MINNESOTA DULUTH
 Duluth, Minnesota
 HNTB DOBBES



UMD
 Illustrative View of Campus Entry at Blue Stone Commons
 CAMPUS MASTER PLAN UPDATE
 UNIVERSITY OF MINNESOTA DULUTH
 Duluth, Minnesota
 HNTB DOBBES



ILLUSTRATIVE VIEW OF BLUE STONE COMMONS AT CAMPUS ENTRY
 CAMPUS MASTER PLAN UPDATE
 UNIVERSITY OF MINNESOTA DULUTH
 Duluth, Minnesota



PROPOSED UMD MASTER PLAN - LONG RANGE PLAN
 CAMPUS MASTER PLAN UPDATE
 UNIVERSITY OF MINNESOTA DULUTH
 Duluth, Minnesota



PROPOSED UMD MASTER PLAN - LONG RANGE PLAN
 CAMPUS MASTER PLAN UPDATE
 UNIVERSITY OF MINNESOTA DULUTH
 Duluth, Minnesota





Campus Goals

Goal 1: Increase integrated academic, recreational and living learning goals and program students for living learning, globally engaged and professional goals.

Goal 2: Create a positive and inclusive campus climate for all by addressing equity, diversity and social justice.

Goal 3: Establish UMD as a center of excellence for graduate education, research, innovation, and entrepreneurship, and create a culture, learning and support system that best meets our student interests.

Goal 4: Strengthen ties with Duluth and surrounding communities and create a vibrant, thriving community for our partnership.

Goal 5: Create a positive and inclusive campus climate for all by addressing equity, diversity and social justice.

Goal 6: Create a positive and inclusive campus climate for all by addressing equity, diversity and social justice.

Goal 7: Create a positive and inclusive campus climate for all by addressing equity, diversity and social justice.

Goal 8: Create a positive and inclusive campus climate for all by addressing equity, diversity and social justice.

Goal 9: Create a positive and inclusive campus climate for all by addressing equity, diversity and social justice.

Goal 10: Create a positive and inclusive campus climate for all by addressing equity, diversity and social justice.



The UMD Strategic Planning Steering Committee is currently reviewing the draft Strategic Plan for the year of the Strategic Plan 2017-2021.

Master Plan Assumptions

- The Master Plan update is presented as a series of strategic goals and objectives that are intended to guide the university's future development.
- The plan focuses on the following areas:
 - Academic excellence
 - Research and innovation
 - Student success
 - Community engagement
 - Financial sustainability
 - Operational excellence
- The 2017 Master Plan update is based on the following assumptions:
 - Enrollment will continue to increase at a modest rate, approximately 1% per year.
 - The campus is generally well-served and will continue to be well-served by existing infrastructure.
 - Climate change is a significant concern and will require proactive planning and action.
 - Technology is a key driver of innovation and will continue to shape the future of the university.
 - Community engagement is essential for the success of the university and will be a focus of the plan.
 - Financial sustainability is a top priority and will be a focus of the plan.
 - Operational excellence is a key to the success of the university and will be a focus of the plan.

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INTRODUCTION OVERVIEW PLANNING FRAMEWORK

Update Campus Master Plan
University of Minnesota Duluth



Establish a clear campus edge on West College Drive and Woodland Avenue

West College Drive and Woodland Avenue form the southern boundary of the campus. The plan calls for a clear campus edge along these streets to define the campus boundary and create a sense of place. This includes landscaping, signage, and architectural details that distinguish the campus from the surrounding community.

Establish primary campus entries

Clear, well-defined primary campus entries are essential for a functional and welcoming campus. The plan identifies key entry points and calls for improvements in signage, landscaping, and building design to enhance the campus experience. These entries should be clearly marked and provide a sense of direction and orientation for visitors and students alike.



Maintain and strengthen the 'Academic Core' of the campus

The 'Academic Core' is the heart of the campus, where the majority of academic buildings and research facilities are located. The plan emphasizes the importance of maintaining and strengthening this core to ensure the highest quality of education and research. This includes preserving existing buildings, upgrading infrastructure, and creating new academic spaces that support the university's mission.

Connect the campus to the region

The Master Plan recognizes the university's role as a regional leader and calls for improved connectivity with the surrounding community. This includes enhancing public transportation options, creating pedestrian and bicycle-friendly routes, and fostering partnerships with local businesses and organizations. The goal is to create a vibrant, integrated campus that is accessible and welcoming to all.



Visibly manifest sustainability

Sustainability is a core value of the university, and the Master Plan calls for this commitment to be visibly manifest across the campus. This includes implementing green building practices, reducing energy and water consumption, and promoting sustainable transportation. The goal is to create a campus that is not only environmentally responsible but also a model for sustainability in higher education.

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GOALS



Create a 'Front Door' for the UMD Campus

The 'Front Door' is the primary point of contact for visitors and students entering the campus. The plan calls for the creation of a prominent, welcoming 'Front Door' that reflects the university's identity and values. This could include a new building, a landscaped plaza, or a combination of both. The goal is to create a strong first impression and a sense of arrival on campus.

Develop a 'Focal Point' for the UMD Campus

A 'Focal Point' is a central location on campus that serves as a gathering place and a landmark. The plan identifies potential focal points and calls for their development. These could include a new building, a landscaped plaza, or a combination of both. The goal is to create a central hub that fosters community and provides a sense of direction on campus.



Enhance the 'Visual Quality' of UMD Campus

The visual quality of the campus is an important factor in creating a pleasant and functional environment. The plan calls for improvements in landscaping, building design, and signage to enhance the visual quality of the campus. This includes planting trees, creating green spaces, and ensuring that buildings and signage are aesthetically pleasing and functional.

Make the UMD Campus more 'Visible'

The UMD campus should be more visible to the surrounding community and serve as a landmark. The plan calls for improvements in signage, landscaping, and building design to make the campus more visible and recognizable. This includes creating clear entry points, using distinctive colors and materials, and ensuring that the campus is easily accessible and welcoming to all.



Create a 'Pedestrian and Bicycle Friendly' UMD Campus

A pedestrian and bicycle friendly campus is essential for a healthy and sustainable environment. The plan calls for improvements in walking and biking infrastructure, including sidewalks, crosswalks, and bike lanes. This includes ensuring that paths are safe, well-maintained, and clearly marked, and that buildings and signage are designed to be accessible and welcoming to all.

Connect and 'Integrate' the UMD Campus into the City of Duluth

The UMD campus is an integral part of the City of Duluth, and the plan calls for improved connectivity and integration with the surrounding community. This includes enhancing public transportation options, creating pedestrian and bicycle-friendly routes, and fostering partnerships with local businesses and organizations. The goal is to create a vibrant, integrated campus that is accessible and welcoming to all.



CITY OF DULUTH SMALL AREA PLAN

Background

The City of Duluth is currently reviewing its Small Area Plan for the UMD campus. The plan calls for improvements in infrastructure, landscaping, and building design to enhance the visual quality of the campus and make it more pedestrian and bicycle friendly. This includes creating clear entry points, using distinctive colors and materials, and ensuring that the campus is easily accessible and welcoming to all.

UMD
University of Minnesota Duluth



The Five Goals of the Plan include:

1. Strengthen the 'Academic Core' through strategic investments in academic buildings and research facilities.
2. Enhance the 'Visual Quality' of the campus through landscaping, building design, and signage improvements.
3. Create a 'Pedestrian and Bicycle Friendly' campus through improved walking and biking infrastructure.
4. Connect and 'Integrate' the campus into the City of Duluth through enhanced public transportation and community partnerships.
5. Make the UMD campus more 'Visible' through improved signage, landscaping, and building design.

UMD
University of Minnesota Duluth



Plan Elements and Guidance

Public Spaces and Buildings

Public spaces and buildings are key elements of a vibrant campus. The plan calls for improvements in these areas to create a more functional and welcoming environment. This includes creating clear entry points, using distinctive colors and materials, and ensuring that buildings and signage are designed to be accessible and welcoming to all.

UMD
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PLAN ELEMENTS AND GUIDANCE IMPLEMENTATION

Update Campus Master Plan
University of Minnesota Duluth

Plan Elements and Guidance

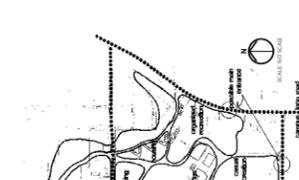
Land Use

Continuing traditions

The primary land uses on campus are academic, housing, recreation/athletics, natural open space and parking. The plan calls for the continuation and enhancement of these land uses to create a functional and welcoming campus environment. This includes preserving existing buildings, upgrading infrastructure, and creating new academic spaces that support the university's mission.

UMD
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Plan Elements and Guidance



Land Use Plan 2013

Plan Elements and Guidance

Land Use

Academic

Academic facilities should be concentrated in the central core of the campus, with support spaces located nearby. The plan calls for improvements in academic buildings and research facilities to create a more functional and welcoming environment. This includes creating clear entry points, using distinctive colors and materials, and ensuring that buildings and signage are designed to be accessible and welcoming to all.

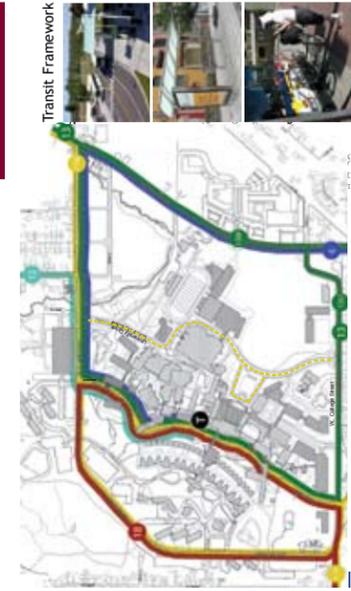
UMD
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UMD
University of Minnesota Duluth



Transit Framework

Plan Elements and Guidance

Movement and Circulation

Vehicles

The most important to campus is a major improvement on existing routes. The map shows several key routes and potential improvements. The map includes a legend for 'Existing Routes' (yellow line) and 'Potential Additional Routes/Circular' (dashed yellow line). Key locations like 'Campus' and 'City' are marked. A scale bar indicates 0 to 100 feet.



Vehicle Framework

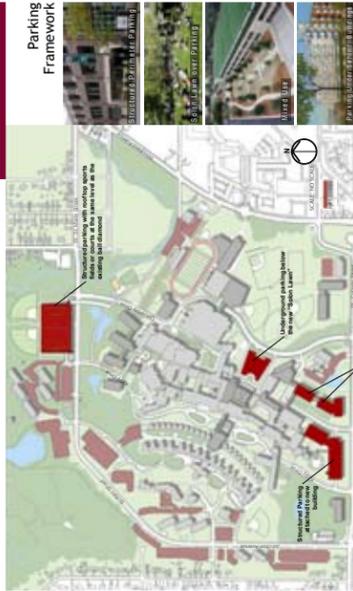
Plan Elements and Guidance

Parking

Long-term strategy

De-emphasize parking as the primary first impression of the campus

Existing conditions of parking on the UMD campus were developed in the 1960s and 1970s. The campus has a long history of parking, but the current conditions are outdated and inefficient. The plan aims to reduce the reliance on cars and improve the overall campus experience.

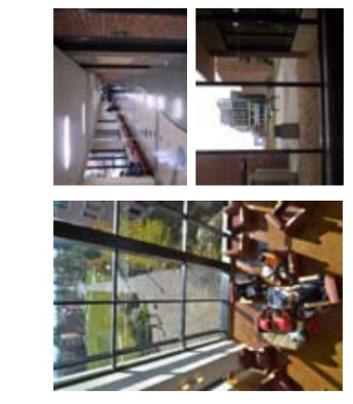


Parking Framework

Plan Elements and Guidance

Legibility, Light and Views

Legibility, light and views are important for creating a welcoming and functional campus environment. The plan focuses on enhancing these elements through thoughtful design and placement of buildings and open spaces.



Campus Master Plan Update

Plan Elements and Guidance

Additional Considerations

Off-Campus Facilities

Ambassadors and Brand Stewards

The plan addresses the need for additional off-campus facilities and the role of ambassadors and brand stewards in representing the university. It focuses on creating a cohesive and professional image across all campus-related activities.



Implementation Short Term Plan

Creating a Better Sense of Arrival

The plan focuses on creating a better sense of arrival through strategic placement of buildings, landscaping, and signage. The goal is to create a welcoming and memorable first experience for visitors and students alike.



Implementation Long Term Plan

Being thoughtful about growth and change

The long-term plan for UMD focuses on thoughtful growth and change, ensuring that the campus remains a vibrant and functional community. The plan emphasizes sustainable development and the integration of new technologies and infrastructure.



Proposed UMD Master Plan - Long Range Plan

Plan Elements and Guidance

Additional Considerations

Off-Campus Facilities

Ambassadors and Brand Stewards

The long-range plan provides a comprehensive vision for the future of the University of Minnesota Duluth. It addresses the need for long-term infrastructure, sustainability, and community engagement, ensuring the university's success for generations to come.



Plan Elements and Guidance

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Campus Master Plan Update

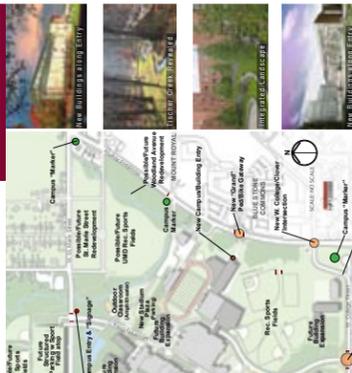
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Proposed UMD Master Plan - Long Range Plan

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University of Minnesota Duluth
Campus Master Plan
Appendix



Engineering Systems Review Summary

Chiller Plant

The current chiller plant consists of five chillers with a total capacity of 3200 tons. Several existing buildings have been added to the chilled water plant in recent years which have used up the available capacity. On a peak day when the temperatures reach the upper 80's or 90's all five chillers need to run. When the outdoor temperatures reach into the 90's with high humidity the chiller plant begins to lose capacity and can't keep up with the current loads. A chiller plant study was conducted and in that study they estimated a peak load on campus of 3368 tons which confirmed the observed shortage of capacity at peak times. The same study predicted an additional load of 1870 tons would be needed in the future for new buildings and existing buildings not currently air conditioned.

A new chiller plant on the north side of campus is being planned for construction in 2013. The new chiller plant is anticipated to provide 2400 tons of additional capacity with one 1200 ton chiller installed now and one 1200 ton chiller in the future. The 1220 ton chiller would be able to accommodate and additional 400,000 SF of new and existing building. As more building area added to the chiller plant, the second 1200 ton chiller should be added to provide redundant capacity in the event of a chiller failure. This new chiller plant will be connected into the campus distribution.

Chilled Water Distribution

There are chilled water mains leaving the heating plant building. The pipes leave the heating plant and head north. One set of pipes branches and is routed north of Darlin, the other set of pipes crosses the athletic fields on its way to Sports and Health Center. Any new construction anticipated in these areas should account for the relocation of these chiller water pipes.

New construction that might occur in the vicinity of lot A and lot B would be handled from the heating plant to the south east. Buildings in these areas would have new pipes from the chiller/heating plant and eventually provide a piping connection to Marshall north of lot A completing a chilled water loop.

Heating Plant

The heating for campus is currently handled by three high pressure steam boilers. Two of the boilers have a nominal reading of 80,000 lbs per hour and the third boiler is used primarily in the summer and is rated at 40,000 lbs per hour.

Peak demand in the winter is estimated to be 85,000 lbs per hour. One of the large boilers is needed for the campus winter loads and the other large boiler is standby. The smaller boiler is used primarily for the summer loads and is available for use in winter if needed to meet peak loads.

The current boiler plant does not have capacity to handle very much additional load and still have boiler for standby. Any major new construction would require an additional boiler to be added to the boiler plant. There is a six year capital plan for the boiler plant which adds a fourth boiler in year five or six which would provide the capacity and standby boiler for future buildings.

Heating Distribution System

The steam pipe distribution system has had continuous upgrades in recent years to replace older piping and increase pipe sizes where restrictions occurred. In general the distribution piping is adequate to handle the new buildings proposed in the master plan.

One pipe is in need of repair. It is the direct buried high pressure steam pipe that travels from the boiler plant to the Sports Health Center. This pipe is only ten years old but is beginning to show signs of failure in the outer casing. This pipe needs to eventually be repaired or replaced. Any master plan concepts that would facilitate the replacement of this pipe would be an opportunity to combine some projects and save some money.

To other pipes may be in the way of proposed future buildings. One leaves the steam plant and is routed in a tunnel north of the Darlin lot, and another goes under lot B toward the School of Medicine. Any buildings anticipated to be built in either of these two areas would need to relocate these pipes into tunnels, route them through the new buildings or other some way accommodate the steam pipe.

Electrical Distribution

The campus is currently served through two substations located on the northwest and east ends of the campus. Distribution is a basic parallel looped 13.8 KV medium voltage distribution feeder system supplying mostly double primary fed single ended substations located inside of buildings. The campus utilizes two primary loops with one loop feeding housing loads and the second feeding the remaining campus building loads. The campus distribution loop supplies all areas of the campus and is readily available for extension at the expansions sites being considered. Maximum campus demand occurred August of 2011 and was measured at 6.6 MVA. The existing medium voltage infrastructure has adequate capacity for the future expansion plans for the campus.

Civil Engineering Review of potential realignment of College/Woodland Intersection to Clover/Woodland.

Gary + Tom,

Attached please find the alignment adjustments we've made. This is assuming a 30 mph roadway and we've shown the radii' larger and allowed for longer tangent segments.

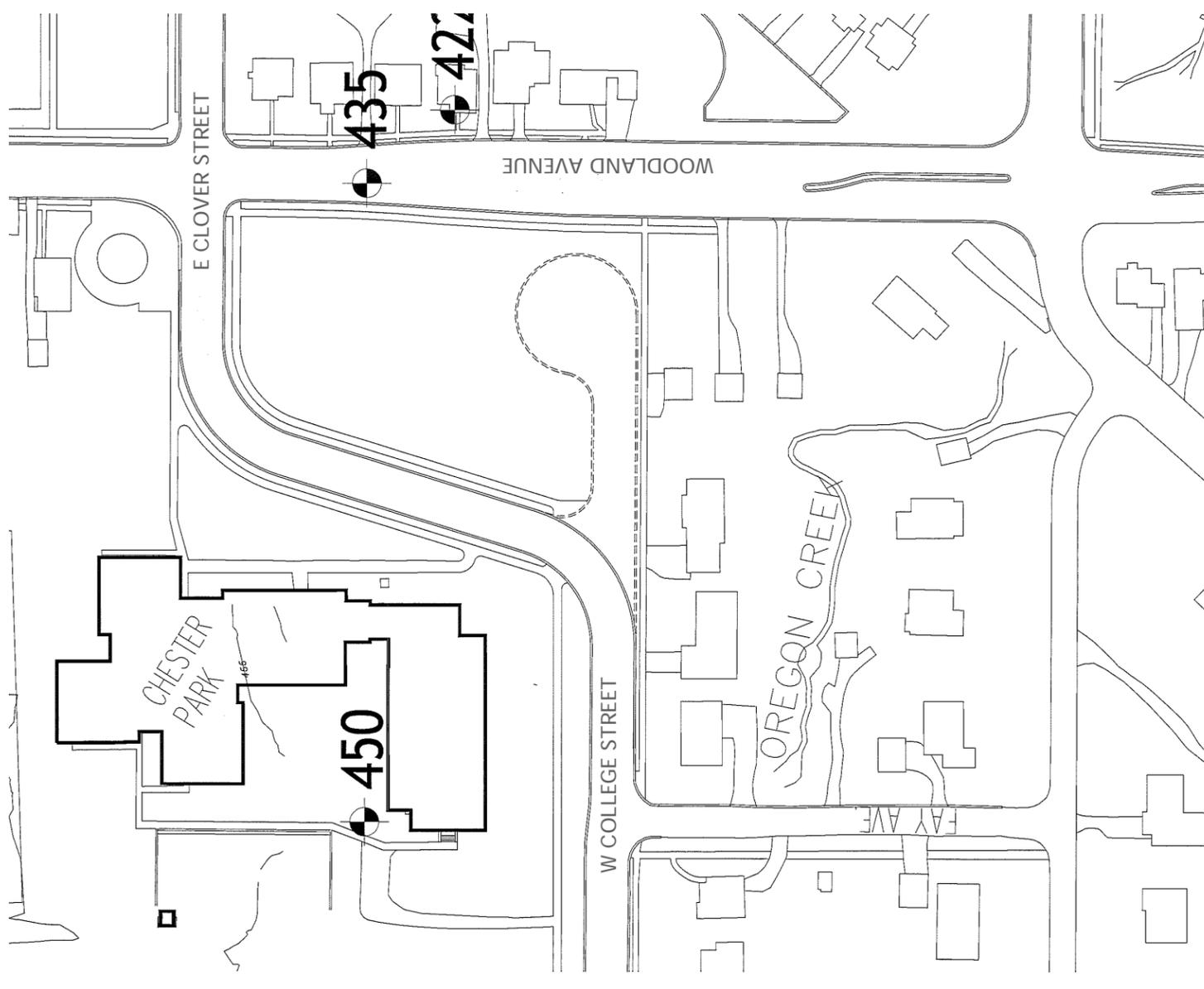
As shown in the drawing to the right, the roadway and cul-de-sac area would be best to have a gutter line or a speed bump or something to discourage entering this road. This is just to accommodate the couple houses that are there.

We don't have any grade information in this area but I was "walking" around on Google maps and it seems like the grade change elements would be manageable.

There is some re-grading that is involved that will feather back from the road into the site. There are some ball fields close to the realignment but the grading of the road can be managed with respect to the fields even if a low wall needs to be installed mid-way between the two to account for re-grading.

I don't see anything in terms of the grades and civil given the site information we have on the campus to make this a deal breaker or cause really expensive/extensive civil impacts.

Rhonda S. Pierce, P.E.
Pierce Pini + Associates, Inc. / 9298 Central Avenue, Suite 202 Blaine, MN 55434
phone 763.537.1311 / fax 763.537.1354 / cell 763.242.9039 / email rhonda@piercepini.com
PPA hours: M-Th 8-5, F 8-12



Bluestone Commons Traffic Study review

The Bluestone Commons property owner has expressed concerns about the viability of the development without alignment of the University of Minnesota-Duluth Main Entrance with the Bluestone Commons main access. This review examines this assertion with respect to the traffic analysis performed by the owner's own consultant.

This brief review serves to summarize the Bluestone Commons traffic study and to highlight some key assumptions made by the consultant. With respect to the developer's concerns, this review also examines how vehicular traffic to and from the UMD Main Entrance affects the Bluestone Commons development.

Conclusions

Overall, the study made a few assumptions that have overestimated vehicular trips generated by the development. It is recommended to analyze the intersection of Woodland Avenue & main development access with more accurate vehicular trip estimates, accounting for reductions for bike/ped/transit/internal capture, and also without the UMD Main Entrance.

The study states that 5% of development trips head to and from the UMD Main Entrance, which equates to 13 cars entering and 15 cars exiting the development in the PM peak hour. Although many of the development trips will be student-oriented, it can be said that the majority of development trips would not use the UMD Main Entrance.

Introduction

The Bluestone Commons traffic study looked at the intersections of Woodland Avenue & College Street, and Woodland Avenue & Clover Street. Also included were three accesses on Woodland Avenue, one of which will be the main development access as well as a proposed main UMD entrance.

The study examined 6-phase construction consisting of a grocery store, restaurants, apartments, general retail, a health club, and educational classrooms. Construction is expected to be complete by 2016.

The study recommended signalized control for the main access/UMD main entrance intersection.

Traffic Forecast Assumptions

The study determined development-generated trips using the *ITE Trip Generation Manual*, and determined the amount of non-primary trips for retail uses based on the *ITE Trip Generation Handbook*. A background traffic growth rate of 1% per year was added to account for increased traffic in future year scenarios.

The development was estimated to generate 11,265 vehicular trips, with 191 trips entering and 284 exiting in the AM peak hour, and 475 entering and 515 exiting in the PM peak hour.

The study assigned development trips to the roadway network using the following:

- 35% to and from the north (Woodland Avenue)
- 35% to and from the south (Woodland Avenue)
- 15% to and from the west (College Street)
- 10% to and from the east (Clover Street)
- 5% to and from the UMD Main Entrance

Capacity Analysis

According to the study's analysis, the Woodland Avenue & College Street currently experiences LOS F for the eastbound left-turn movement.

The intersection of Woodland Avenue & Clover Street would operate acceptably after development.

The study states that the proposed intersection of Woodland Avenue & development main access/UMD Main Entrance would see failing conditions without a traffic signal.

Study Review

Overall, there are a few assumptions in the study that result in an overestimation of development-generated trips.

- With its proximity to the UMD Campus, and the goals laid out in the Duluth Higher Education Small Area Plan, this development would be expected to see very high percentages of non-vehicular usage. With apartments primarily oriented towards student housing, its direct access to transit, and the general nature of campus life, we can reasonably expect residential trips to be reduced by 50% when compared with *ITE Trip Generation* estimates. There would also be considerable reductions to the retail/restaurant estimates to account for bicycle, pedestrian, and transit users.
- Internal Capture is the phenomenon by which traffic engineers estimate trip reduction based on mixed-use developments. When residential, retail, and restaurant land uses are combined within a single development, these uses tend to interact with each other, and thus attract a portion of each other's trip generation rate. This study did not include internal capture trip reduction and we can reasonably expect a further 5% to 10% reduction in vehicular trips.

The owner has expressed concerns about the location of the UMD Main Entrance, particularly with respect to its alignment with the development main access.

- With respect to the UMD Main Entrance, the study assumed origin/destination of **5%** to and from the development. This results in **13 cars entering and 15 cars exiting** during the PM peak hour. The vast majority of development trips will not travel on the UMD campus.

Recommendations

The study assumed that the UMD Main Entrance would align with the development main access on Woodland Avenue. At the time of the study, this Main Entrance was not certain but conceptual, so the study should have reviewed the intersection without the UMD Main Entrance to determine the most appropriate form of control if the UMD entrance is located elsewhere.

Without appropriate reduction in vehicular trips, the study exaggerated the impacts of development on the roadway network. Since the study recommended signalization of the Woodland Avenue & main development access intersection, it would be worth revisiting the analysis with more accurate trip estimates and without the UMD Main Entrance.

With removal of the school, the intersection of Woodland Avenue & Clover Street may no longer meet warrants for signalized control. This signal should be evaluated for signal warrants after development.

University of Minnesota Duluth
Campus Master Plan
Appendix



BOARD OF REGENTS CAMPUS MASTER PLANNING PRINCIPLES



Board of Regents

Campus Master Planning Principles

In 1993, the Board of Regents determined that all campuses of the University of Minnesota should have master plans, and adopted four principles to guide the preparation and implementation of those plans. The principles and an explanation of how each is to be applied are:

1. Create and maintain a distinctive and aspiring vision for the physical development of each campus.

The campus master plan should:

- 1.1 Establish how the physical setting will embody the distinctive missions of each campus.

- 1.2 Highlight and celebrate the special realities of each campus, including its natural setting and ecological structure, architectural and landscape heritage, and its surrounding settlement patterns. The unique and special qualities of each place should be made an integral part of the educational experience.

- 1.3 Organize the landscape and places to establish a coherent circulation and infrastructure pattern for the campus as a whole.

- 1.4 Determine building location and design guidelines so each incremental addition to the campus will contribute to a distinctive and inspiring vision of the whole.

- 1.5 Encourage exemplary architecture and landscape architecture which demonstrates sensitivity to local conditions and contributes to the master plan vision.

2. Enrich the experience of all who come to campus.

The campus master plan should:

- 2.1 Accommodate the specific needs, experiences and requirements of the various user groups, giving highest priority to students, faculty and staff, while extending hospitality to visitors, surrounding communities, and the people of Minnesota.

- 2.2 Provide coherence to the campus entrances, movement systems, landscape spaces and architectural vocabulary in order to create a sense of welcome, orientation and presence for a special community which celebrates learning.

- 2.3 Create a positive system of campus circulation. This necessitates minimizing conflict between pedestrians and the needs of other vehicular circulation including bicycles, cars, service vehicles, parking and other transit modes, especially buses and LRT. The pedestrian environment should be given special priority and be made comfortable, secure, pleasant, and acceptable so as to dignify and show respect for all participants in campus life.

- 2.4 In creating a positive pedestrian environment, integrate all supporting amenities including information, signage, lighting, phones, outdoor furnishings, landscape into the overall master plan concept.

- 2.5 Organize campus activities into functional and or organizational affinities while supporting the overall aesthetic character and intent of the campus plan.

- 2.6 Devote special attention to non-scheduled campus use by providing informal spaces (interior and exterior) for study, meeting, and participation in campus life. The purpose is to create a campus community where people “want to be” rather than one where they “have to be”.

3. Maximize the value of existing physical assets while responding to emerging and changing physical needs.

The campus master plan should:

- 3.1 Be based on a realistic assessment of all the physical and financial constraints and opportunities on each campus – the assets and liabilities. The assessment should include: a determination of the unique physical assets and enduring features of each campus; a determination of the most significant physical liabilities; an evaluation of the quality and level of maintenance of buildings, landscapes and infrastructure; a determination of which buildings and landscapes are historically significant and worth maintaining and enhancing, and which structures are obsolete and not capable of or worth the investment in adaptive reuse; a determination of priorities for the maintenance of existing buildings, landscapes and infrastructure; and evaluation of the most significant opportunities for physical enhancement of lasting value.

- 3.2 Measure and determine the need for new construction against the following criteria: the need for deferred maintenance; the demand of changing student enrollments; the need for appropriate teaching and research facilities; the opportunities for adaptive reuse and renovation; the opportunities for attracting new capital resources; the need of the pedestrian environment, landscape or vistas.
- 3.3 Anticipate and allow for rapidly evolving development in instructional technology.
- 3.4 Require that each capital improvement project demonstrate how it contributes to enhancing the specific goals of its campus master plan and adds long-term value to the University. One of the measures of long-term value should be a careful analysis of life cycle costs for any capital project.
- 3.5. Pay attention to the special role and value of the natural landscape in creating and enhancing the quality of experience on each campus. The natural landscape is one physical asset which, with appropriate maintenance, grows in value.
4. Ensure an inclusive, accountable and timely process for creating and implementing the master plan vision.
- The campus master plan should:
- 4.1 Be developed by an open and inclusive process representing each constituency of campus community. Such representation requires ample time for input and feedback during the entire process.
- 4.2 Be guided by a Campus Planning Committee representing those important constituents, appointed by the Senior Officers for the Twin Cities Campus or the Chancellors for Duluth, Morris, Crookston and Rochester Campuses, and prepared by professional consultants with staff support.
- 4.3 Be prepared in conformance with these principles and recommended procedures.
- 4.4 Be approved by the Senior Office for the Twin Cities Campus or the Chancellors for the Duluth, Morris, Crookston and Rochester Campuses, by a separate Master Plan Oversight Committee and the Board of Regents.
- Once the master plan has been completed and approved:
- 4.5 Each campus must continue to be involved in the implementation of the mast plan. Therefore a procedure must be established whereby the plan can be continuously applied to the dynamics of change; subjecting such change to an open and inclusive forum for campus and community participation.
- 4.6 Each capital project must be in conformance with the master plan. A process for uniformly determining conformance must be established by the Senior Officers, the Chancellors and the President.
- 4.7 The President, the Senior Officers, and the Chancellors must be held accountable to the Board of Regents for progress in implementing the master plan. For this purpose the Board of Regents needs to be provided an Annual Report which assesses implementation of the campus plan, recommends adoption of minor amendments, cyclical revisions to the plans, and advises on the criteria for designer selection.



**UNIVERSITY OF MINNESOTA
BOARD OF REGENTS**

Facilities and Operations Committee

June 13, 2013

Agenda Item: Project Components of the President’s Six-Year Capital Improvement Plan

review review/action action discussion

Presenters: Vice President Pamela Wheelock
Assistant Vice President Suzanne Smith
Monique MacKenzie, Director of Capital Planning

Purpose:

policy background/context oversight strategic positioning

Board of Regents Policy requires a Six-Year Capital Plan that sets priorities and direction for ongoing academic and capital planning efforts.

Outline of Key Points/Policy Issues:

The President’s recommended Six-Year Capital Plan includes major capital improvements planned for fiscal years 2014 through 2019. The Six-Year Capital Plan includes projects to be funded with state capital support as well as projects funded by the University through a combination of University debt obligations, local unit resources, fundraising, and public/private partnerships.

The complete 2013 Six-Year Capital Plan documents are included in the Board of Regents Meeting portion of the docket.

Background Information:

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

Part I is the six-year capital plan, which is updated annually and identifies capital projects approved to proceed with preliminary project planning but not authorized to proceed with design and construction.

Part II is the annual capital improvement budget, which authorizes the completion of design and construction projects with approved financing and schematic design, consistent with Board policies.

The updated Six-Year Capital Plan was presented to the Facilities and Operations Committee in May for Review.

President's Recommendation for Action:

The President recommends that the Board approve the University of Minnesota Six-Year Capital Plan for Fiscal Years 2014–2019.



REGENTS OF THE UNIVERSITY OF MINNESOTA

RESOLUTION RELATED TO

THE PRESIDENT'S SIX-YEAR CAPITAL IMPROVEMENT PLAN

WHEREAS, preserving the University campuses through stewardship of public investments that have been made over 150 years is a commitment the Board has made to the 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 of Minnesota; 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 Facilities and Operations Committee and the Finance Committee of the Board of Regents approves the President's Six-Year Capital Improvement Plan in order to create and maintain facilities that serve as tools in accomplishing the University's education, research and outreach objectives.



UNIVERSITY OF MINNESOTA BOARD OF REGENTS

Facilities and Operations Committee

June 13, 2013

Agenda Item: Project Components of the President's Recommended FY 2014 Capital Improvement Budget

review review/action action discussion

Presenters: Vice President Pamela Wheelock
Assistant Vice President Suzanne Smith
Monique MacKenzie, Director of Capital Planning

Purpose:

policy background/context oversight strategic positioning

The University adopts an annual capital improvement budget which authorizes projects costing more than \$500,000 to begin design and construction during the upcoming fiscal year.

The purpose of the committee discussion is to provide additional detail regarding projects included in the annual capital budget.

Additional information for projects included in the annual capital budget is included in the docket materials for the full Board of Regents

Outline of Key Points/Policy Issues:

The Annual Capital Budget is reflective of the following planning principles.

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

Background Information:

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

- Part 1, approved by the Board in June, is the annual Capital Improvement Budget for the coming fiscal year in which projects with completed predesigns and financing plans are approved to proceed with design and construction.
- Part 2 is a Capital Improvement Plan that establishes the institutions’ capital priorities for an additional five years into the future. This plan will become the basis for continued capital and financial planning.

This item was reviewed by the full Board and the Facilities and Operations Committee in May.

President's Recommendation for Action:

The President recommends approval of the University Capital Improvement Budget and reaffirmation of its prior year capital expenditure authorization.



REGENTS OF THE UNIVERSITY OF MINNESOTA

RESOLUTION RELATED TO

**THE PRESIDENT'S RECOMMENDED
FY 2014 CAPITAL IMPROVEMENT BUDGET**

WHEREAS, the Board of Regents directed the administration to annually submit a capital improvement budget and a 6-year capital improvement plan; and

WHEREAS, the Board has adopted principles to guide the formulation of the capital improvement budget and 6-year capital improvement plan; 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 toward projects that support the University's institutional priorities within a financial strategy that is realistic;

NOW, THEREFORE, BE IT RESOLVED, that the Facilities and Operations Committee and the Finance Committee of the Board of Regents approves the FY 2014 Capital Improvement Budget and reaffirms its prior year capital expenditure authorizations.



UNIVERSITY OF MINNESOTA BOARD OF REGENTS

Facilities and Operations Committee

June 13, 2013

Agenda Item: Schematic Plans: UMD Campus Utility Building

review review/action action discussion

Presenters: Vice President Pamela Wheelock
Vice Chancellor Mike Seymour
Assistant Vice President Suzanne Smith

Purpose:

policy background/context oversight strategic positioning

In accordance with the Board of Regents Policy: *Reservation and Delegation of Authority*, review and act on the Schematic Plan for the Campus Utility Building located on the Duluth Campus.

Outline of Key Points/Policy Issues:

A Project Data Sheet addressing the basis for request, project scope, cost estimate, funding, and schedule is attached for the project. A map locating the project on its respective campus is also included.

Campus Utility Building, Duluth Campus

The Duluth Campus is reaching capacity with the current chilled water infrastructure. As existing buildings are upgraded and new buildings added, additional cooling capacity is required to keep up with demand. The design of the chilled water system includes three separate chiller pods connected to the existing piping infrastructure on campus. The first two pods are complete, one is located in the basement of the Lund Building and the second is located in the Swenson Science Building. This third chiller pod is located on the opposite side of campus from the first two pods to help balance the chilled water load entering the piping system.

Background Information:

Funding for this project was included in the FY 2013 Capital Improvement Budget approved by the Board of Regents in June 2012 for \$4,000,000. An additional \$500,000 is included in the FY 2014 Capital Improvement Budget for the purchase of a second chiller for the building.

President's Recommendation for Action:

The President recommends approval of schematic plans for the Campus Utility Building located on the Duluth Campus and of the appropriate administrative officers proceeding with the completion of the design and construction for this project.

**Campus Utility Building
Duluth Campus
Project No. 03-545-12-2015, Capital Budget No. 3084**

1. Basis for Request:

The UMD campus is reaching capacity with the current chilled water infrastructure. As existing buildings are upgraded and new buildings added, additional cooling capacity is required to keep up with demand. The design of the chilled water system includes three separate chiller pods connected to the existing piping infrastructure on campus. The first two pods are complete, one is located in the basement of the Lund Building and the second is located in the Swenson Science Building. This third chiller pod is located on the opposite side of campus from the first two pods to help balance the chilled water load entering the piping system.

Current design of this building includes installation of two 1000 ton chillers. One chiller, cooling tower, and associated pumps will be operational when the project is completed. To reduce future construction costs, the second chiller will be purchased and set in the building for future demand. For security reasons, the electrical substation located on the site will also be enclosed.

The design and construction of this utility building is in accordance with the campus utility master plan and the UMD campus master plan.

Capital Budget Metrics addressed by this project:

Protecting public assets and investment by:

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

2. Scope of Project:

This building will be located on the northwest edge of the UMD campus off of St. Marie Street. The scope of the project includes a new 5000 gross square foot facility designed to house an additional 2000 tons of cooling capacity for the campus. This building will enclose the pad mounted electrical substation located on site. This electrical substation is one of two main electrical feeds to campus.

3. Environmental Issues:

Site evaluations were completed and there are no known environmental issues.

4. Cost Estimate:

Construction Cost	\$ 3,500,000
Non-Construction Cost	\$500,000
Second Chiller Equipment Purchase	\$500,000
Total Project Cost	\$ 4,500,000

5. Capital Funding:

UMD Facilities Management Utility Infrastructure	\$4,500,000
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6. Capital Budget Approvals:

This project was approved in June 2012 as a part of the FY 2013 Capital Improvement Budget for \$4,000,000. An additional \$500,000 is requested in the FY 2014 Capital Budget to purchase a second 1000 ton chiller.

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

Annual operating costs are anticipated to be \$29,000 and will be paid for with existing campus operating budget.

8. Time Schedule:

Complete design	June 2013
Anticipated construction start	June/July 2013
Anticipated construction complete	January 2014

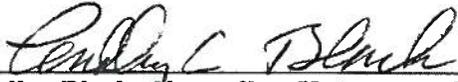
9. Architect / Engineer:

This project will be delivered using the Construction Manager at Risk project delivery method.

Architect (Utility Building):	Perkins + Will Architects
Engineer (Chilled Water Plant):	Dunham and Associates
Construction Manager at Risk:	Kraus Anderson Construction

10. Recommendation:

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



Lendley Black, Chancellor, University of Minnesota - Duluth Campus

 5/31/13

Richard Pfutzenreuter, Vice President & Chief Financial Officer

 5.31.13

Pamela Wheelock, Vice President for University Services



UNIVERSITY OF MINNESOTA BOARD OF REGENTS

Facilities and Operations Committee

June 13, 2013

Agenda Item: Schematic Plans: Microbiology Research Facility

review review/action action discussion

Presenters: Vice President Pamela Wheelock
Vice President Suzanne Smith
Senior Vice President Aaron Friedman

Purpose:

policy background/context oversight strategic positioning

In accordance with the Board of Regents Policy: *Reservation and Delegation of Authority*, review and act on the Schematic Plans for the Microbiology Research Facility Project located on the Twin Cities East Bank Campus.

Outline of Key Points/Policy Issues:

The attached Project Data Sheet addresses the basis for request, project scope, cost estimate, funding, and schedule. A map locating the project is also included.

The 80,000 gross square foot Microbiology Research Facility, the fourth and final building funded under the Biomedical Facility Program, will house the laboratories, offices, and collaborative work spaces for the faculty, staff, and graduate students of the Department of Microbiology. The building will house research labs and lab support, a research commons, and office and collaborative/office support. Special environmental controls, clean, and standby power will be provided to select rooms based on programmatic need. This project will also provide district circulation and utility infrastructure. This new facility will be located north of the Cancer/Cardio facility, which is nearing completion.

Project funding in the amount of \$63,000,000 is provided through the Biomedical Discovery District (BDD) funding. This project was approved in June 2012 as a part of the FY 2013 Capital Improvement Budget for \$52,000,000. An additional \$11,000,000 is for funds being transferred to the Microbiology project upon completion of the Cancer/Cardio project as requested in the FY2014 Capital Budget.

Background Information:

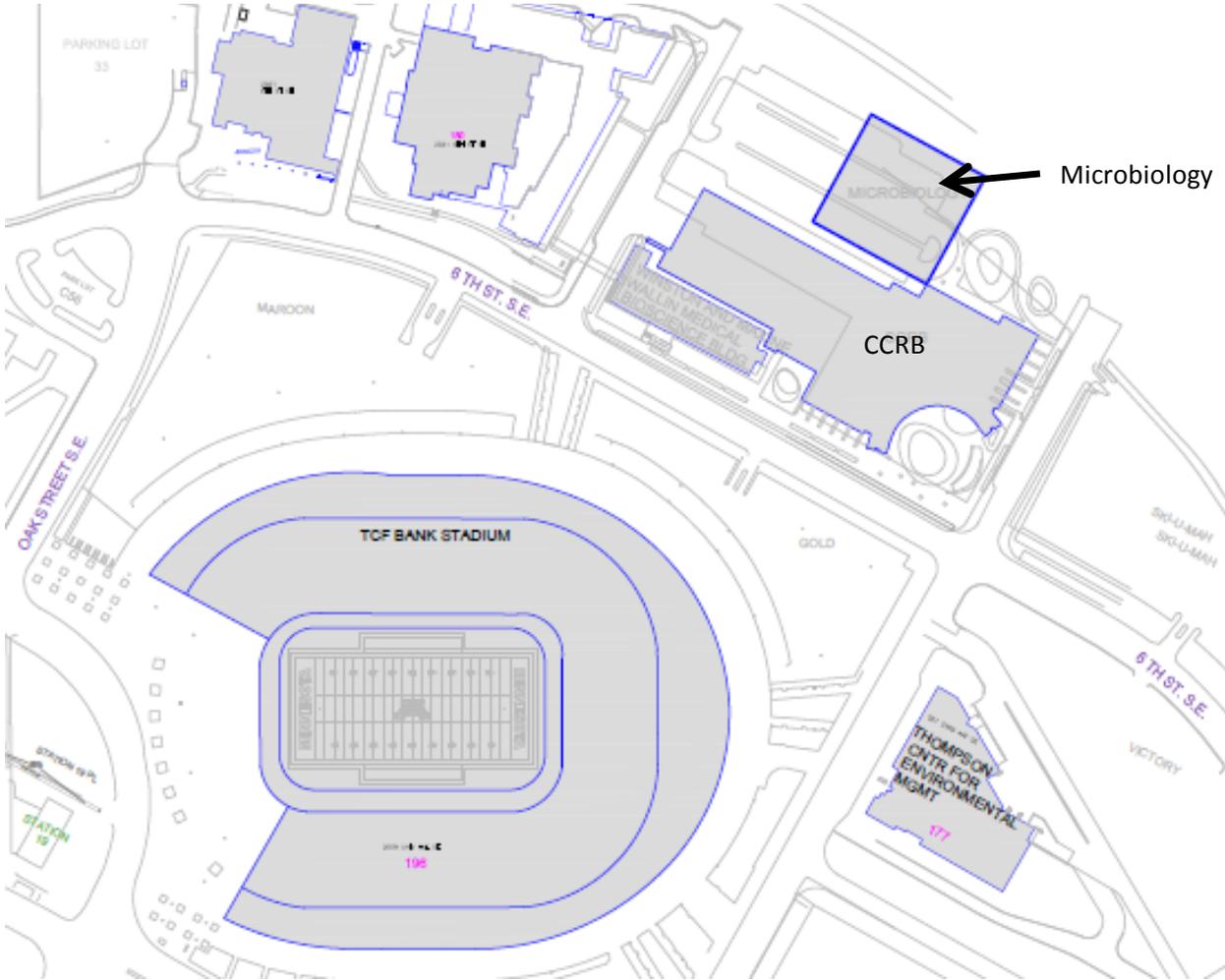
The 2008 Minnesota Legislature enacted as part of the Omnibus Capital Appropriations bill legislation to provide for a biomedical science research-funding program to further the investment in biomedical science research facilities. The Minnesota Biomedical Facilities Program allows the University to bond for \$292 million - split 75/25 with State of Minnesota - to finance new research buildings and associated infrastructure in the East Gateway district of the Twin Cities campus. The Microbiology Research Facility, the fourth and final facility

under the Biomedical Discovery District authorization project funding, was approved in June 2012 as a part of the FY 2013 Capital Improvement Budget (\$52,000,000).

President's Recommendation for Action:

The President recommends approval of schematic design plans for the Microbiology Research Facility on the Twin Cities East Bank Campus and of the appropriate administrative officers proceeding with the completion of the design and construction for this project.

Microbiology Research Facility
Twin Cities Campus



**Biomedical Facilities Program – Microbiology Research Facility
Twin Cities Campus
Project No. 01-149-12-2107**

1. Basis for Request:

The 2008 Minnesota Legislature enacted as part of the Omnibus Capital Appropriations bill legislation to “provide for a biomedical science research funding program to further the investment in biomedical science research facilities in Minnesota to benefit the state's economy, advance the biomedical technology industry, benefit human health, and facilitate research collaboration between the University of Minnesota and other private and public institutions in this state.”

The Minnesota Biomedical Facilities Program allows the University to bond for \$292 million - split 75/25 with State of Minnesota - to finance new research buildings and associated infrastructure in the East Gateway district of the Twin Cities campus. The first of these four projects, the Center for Magnetic Resonance Research (CMRR), is complete. The second and third combined project, the Cancer and Cardiovascular Research Building, is substantially complete, pending commissioning and occupancy.

This schematic design review for the Microbiology Research Facility requests authorization for design to proceed. This project includes utility infrastructure, district circulation, research laboratories, offices, research support services, and common space for the Microbiology Research Facility.

2. Scope of Project:

The 80,000 gross square foot Microbiology Research Facility, the fourth and final building funded under the Biomedical Facility Program, will house the laboratories, offices, and collaborative work spaces for the faculty, staff, and graduate students of the Department of Microbiology. The building will be comprised of research labs and lab support, a research commons, and office and collaborative/office support. Special environmental controls, clean, and standby power will be provided to select rooms based on programmatic need. This project will also provide district circulation and utility infrastructure.

3. Master Plan or Precinct/District Plan:

The project is in compliance with the Campus District Plan dated March 2009

4. Environmental Issues:

There are no environmental issues associated with the design of this new facility.

5. **Cost Estimate:**

Construction Cost	\$49,040,000
<u>Non-Construction Cost</u>	<u>\$13,960,000</u>
Total Project Cost	\$63,000,000

6. **Capital Funding:**

<u>Biomedical Facilities Program Debt</u>	<u>\$63,000,000</u>
Total Project Funding	

7. **Capital Budget Approvals:**

This project was approved in the 2013 Capital Budget at \$52,000,000 and \$11,000,000 is requested in the 2014 Capital Budget.

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

Annual operating and maintenance costs are anticipated to be approximately \$927,000.

9. **Time Schedule:**

Construction is anticipated to start October 2013 with a substantial completion date of December 2014.

10. **Architect / Construction Manager:**

This project will be delivered using the Construction Manager at Risk project delivery method.

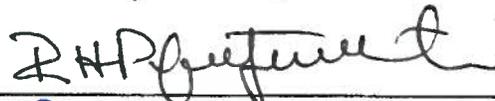
Architect:	BWBR Architects
Construction Manager:	M. A. Mortenson Construction

11. **Recommendation:**

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



Aaron Friedman, Senior Vice President Health Sciences

 5/31/13

Richard Putzenreuter, Vice President and Chief Financial Officer

 5.31.13

Pamela Wheelock, Vice President, University Services



**UNIVERSITY OF MINNESOTA
BOARD OF REGENTS**

Facilities and Operations Committee

June 13, 2013

Agenda Item: Schematic Plans: Glensheen June 20, 2012 Water Damage and Cleanup

review review/action action discussion

Presenters: Vice President Pamela Wheelock
Vice Chancellor Michael Seymour
Assistant Vice President Suzanne Smith

Purpose:

policy background/context oversight strategic positioning

In accordance with the Board of Regents Policy: *Reservation and Delegation of Authority*, review and act on the Schematic Plan for the Glensheen June 20, 2012 Water Damage and Cleanup Project located in Duluth.

Outline of Key Points/Policy Issues:

A Project Data Sheet addressing the basis for request, project scope, cost estimate, funding, and schedule is attached. A map locating the project is also included.

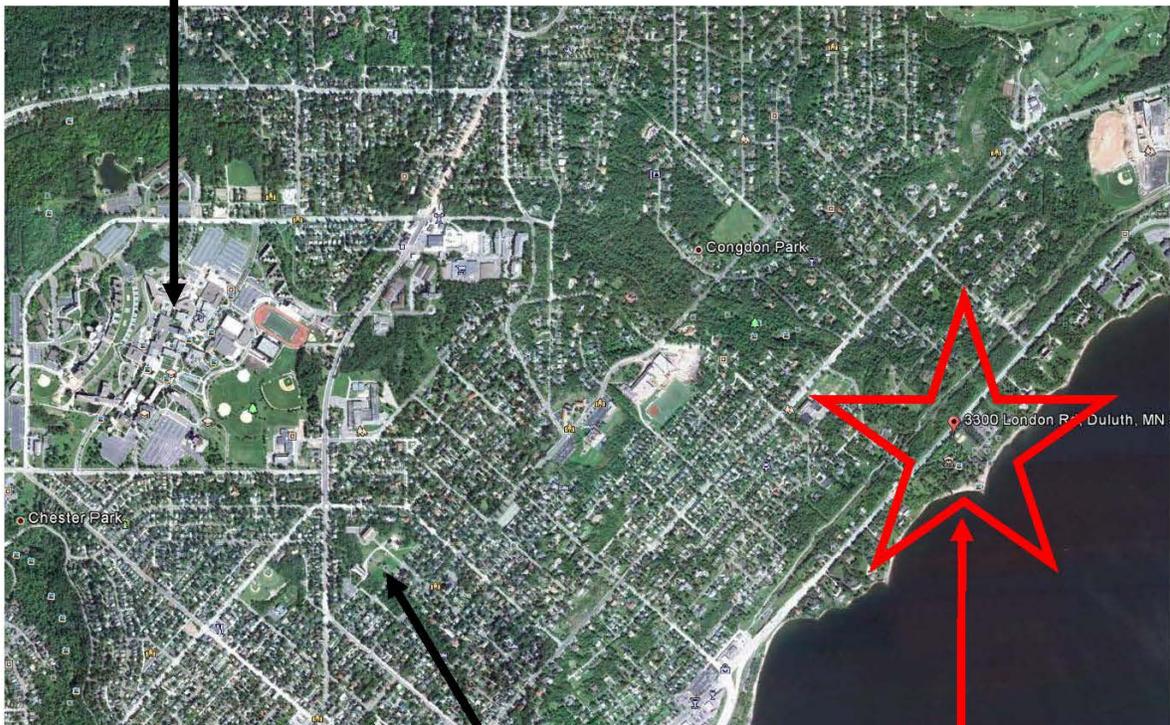
Background Information:

The University of Minnesota Duluth Glensheen Historic Estate property experienced extensive damage due to severe four-county wide storms on June 19-20, 2012. This emergency required immediate forensic analysis of damage and recommendations for necessary temporary repairs and public safety protection efforts as well as long-term repairs.

President's Recommendation for Action:

The President recommends approval of schematic design plans for the Glensheen June 20, 2012 Water Damage and Cleanup Project located in Duluth and of the appropriate administrative offices proceeding with the completion of the design and construction for this project.

UNIVERSITY OF MINNESOTA DULUTH CAMPUS



UMD OLD MAIN CAMPUS

NORTH



**UNIVERSITY OF MINNESOTA
GLENSHEEN HISTORIC ESTATE
3300 LONDON ROAD. DULUTH MINNESOTA**

**Glensheen June 19-20, 2012 Water Damage and Cleanup
Duluth Campus
Project No. 03-567-12-2735**

1. Basis for Request:

The University of Minnesota Duluth Glensheen Historic Estate property experienced extensive damage due to severe four-county wide storms on June 19-20, 2012. This emergency required immediate forensic analysis of damage and recommendations for necessary temporary repairs and public safety protection efforts as well as long-term repairs.

Capital Budget Metrics addressed by this project:

Fulfill our statewide mission by:

- Maintaining specific facilities and spaces needed to achieve unique mission elements on coordinate campuses, research and outreach centers, and field stations.
- Investing in facilities that leverage unique regional assets.

Protecting public assets and investment by:

- Leveraging facility investment to advance the academic mission and priorities.
- Making infrastructure investments that ensure reliability over the long term, lower energy and operating costs, and advance environmental stewardship.

Recognize current extraordinary financial realities by:

- Honoring projects that have an identified source of payment for debt costs.

2. Scope of Project:

The Glensheen Historic Estate (Glensheen) was designed by Clarence H. Johnston Sr. of St. Paul, architect of multiple University of Minnesota buildings statewide. Completed in 1908, Glensheen's manor house and grounds are a highly visible presence for tourism in Duluth. Moreover, as an emerging key academic element for the School of Fine Arts, Glensheen contributes to UMD's mission in the education, outreach, research, and regional economic partnerships.

Glensheen is listed on the National Register of Historic Places and is a Partner Place of the National Trust for Historic Preservation. Glensheen stewardship requires compliance with the University of Minnesota Board of Regents 2010 Historic Preservation Policy and applicable federal and state laws and regulations. The form and detailing of materials that are important defining elements of the property's overall character (interior, exterior, and site) must be retained and preserved.

In specific key areas, emergency barriers and signage were deployed immediately after the event as public safety protection and then replaced by longer term temporary safety fencing in September, 2012. The damaged areas that are included in this project are listed below. The Tischer Creek is a designated trout stream and construction can only occur July 1st - September 15th.

- a. Collapsed masonry wall at London Road
- b. London Road embankment washout
- c. Sanitary lift station (restoration work has been completed)
- d. Tischer Creek stabilization, streambed, and retaining wall washout
- e. Bent Brook streambed and masonry bridges
- f. Retaining wall along the service court drive
- g. Rain garden
- h. Manor house area wells
- i. Service entrance court masonry walls
- j. West entry drive serpentine retaining wall and stairs.

3. Master Plan or Precinct/District Plan:

The Glensheen Water Damage and Cleanup project is in compliance with the University of Minnesota Duluth 2005 Campus Master Plan and Update dated 2009.

4. Environmental Issues:

Hazardous materials (asbestos, lead, mercury, indoor air quality, mold, etc.) are not anticipated at the project site or in the event affected elements of the main building. However, Archaeological site services to monitor soil disturbance will be required for recovery work when Tischer Creek restoration is undertaken.

5. Cost Estimate:

Construction Cost	\$2,954,026
<u>Non-Construction Cost</u>	<u>458,531</u>
Total Project Cost	\$3,412,557

6. Capital Funding:

FEMA Funds Commitment*	\$1,259,208
Insurance Funds	1,961,349
University of Minnesota Duluth**	100,500
<u>University of Minnesota General Contingency**</u>	<u>91,500</u>
Total Current Project Funding Available***	\$3,412,557

* FEMA funds and Insurance funds may be revised to match actual costs.

** For scope not covered by FEMA or Insurance.

*** The final funding available will match project cost and scope.

7. Capital Budget Approvals:

This project is included in the Fiscal Year 2014 Capital Budget scheduled to be approved in June 2013.

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

Operating and maintenance costs will remain approximately the same as the project is primarily for site and infrastructure restoration.

9. Time Schedule:

Complete Construction Documents	June 2013
Establish Construction Bid Price	June 2013
Begin construction	July 2013
Complete construction	September 2014

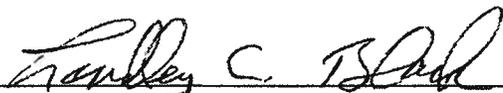
10. Architect, and Contractor:

The Construction Manager at Risk project delivery method will be used to deliver this project.

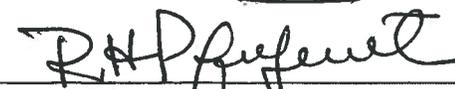
Architect:	Miller Dunwiddie Architecture
Construction Manager at Risk:	To be determined

11. Recommendation:

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



 Lendley Black, Chancellor, University of Minnesota - Duluth Campus

 5/31/13

 Richard Pfitzenreuter, Vice President and Chief Financial Officer

 5.31.13

 Pamela Wheelock, Vice President for University Services



UNIVERSITY OF MINNESOTA BOARD OF REGENTS

Facilities and Operations Committee

June 13, 2013

Agenda Item: University of Minnesota Landscape Arboretum Master Plan Update

review review/action action discussion

Presenters: Vice President Pamela Wheelock
Dr. Edward Schneider, Director Minnesota Landscape Arboretum

Purpose:

policy background/context oversight strategic positioning

Present to the Board of Regents an updated University of Minnesota Landscape Arboretum Master Plan. This update consists of a Circulation and Development Framework document, which is proposed as an amendment to the 1998 approved Master Plan.

Overall goals and objectives in the Master Plan are reaffirmed. The Framework Plan anticipates open space development, facilities growth and replacement parking upgrades, and includes landscape improvements that will unify and beautify the Arboretum. The plan describes the long-term vision for the campus as well as short-term implementation goals, referred to as "immediate impact projects." Implementation of the plan will help the Arboretum express its unique mission through its physical presence.

Outline of Key Points/Policy Issues:

The University of Minnesota Landscape Arboretum is part of the College of Food, Agricultural, and Natural Resource Sciences (CFANS). The organization's mission is to serve as a community resource for horticultural science, cold-hardy plant research, and the environment; to actively engage in plant conservation and education; and to inspire and delight visitors with display gardens, plant collections, programs, and experiences.

As an outgrowth of the Arboretum Strategic Plan FY 2012-2016, an update to the 1998 Master Plan was undertaken in 2011. While the Master Plan provides overall guidance for the growth of the Arboretum, dedicated attention to visitor access and egress, parking accommodation, circulation drives, and an improved pedestrian/bicyclist experience were considered necessary to expand the Arboretum's success and increase visitor use of the facility.

Circulation and Development Framework Guiding Principles

The intent of the Guiding Principles is to provide an overarching framework of ideas that ground future decision-making. The Principles are commonly agreed-upon ideas about how the Arboretum facility should evolve and how implementation should be prioritized.

The Guiding Principles are as follows:

1. Maintain the Arboretum's character and beauty while addressing future program needs and revenue generation.

2. Provide greater physical access to the Arboretum.
3. Ensure a safe and secure arboretum environment for guests, volunteers, staff, exhibits, and collections.
4. Create a clear pedestrian, bicycle, and vehicular circulation system with a hierarchy of trails, roads, and walks.

Framework Relationship to 1998 Master Plan

A number of key findings from the 1998 Master Plan timeframe remain valid today:

- Many collections are near or have met limits on available land area for further expansion.
- Collections with available land area for growth typically lack access or sufficient signage and could benefit from better orientation.
- Traffic lights are desired at Minnewashta Parkway and at Highway 41 to reduce vehicle speeds and provide safe crossings.
- A new Visitor Center should become the hub of visitor activities.
- A significant portion of the visitor experience should be as a pedestrian. Interconnected, accessible walkways should link collections, exhibits, and services.
- Acquisition of all land within the boundaries of Highway 5, Highway 41, W. 82nd Street and Bavaria Road is critical to protect the watershed around the Arboretum, to maintain the continuity of the environment, and to provide land for expansion.

Many of the 1998 Master Plan's Goals and Objectives that define the overall approach to Arboretum development are still relevant and useful in planning for the facility today. Including a focus on visitor services, land acquisition, circulation, research, gardens, and collections.

Trends and Assumptions

This Master Plan update is predicated on a number of assumptions that informed the underlying planning process, approach, and methodology. These assumptions include:

- Increasing attendance, given national and regional recognition as a destination and in concert with peak demand in spring and fall seasons.
- Evolving communications that can support the visitor self-guided experience, using mobile applications and mobile-accessible information about the holdings of the Arboretum. This interest requires development of way finding and signage systems, informational resources, and web development efforts previously not undertaken at the Arboretum.
- Metropolitan growth in the western metro area continues to exert development pressure around the edges of the Arboretum. The opening of Highway 212 within the last five years has furthered the conversion of formerly agricultural land to other, more intensive uses. The Arboretum's potential to offer visitors an opportunity to connect with nature and actively experience the grounds is of increasing interest to the broader community.
- Donor support and interest remains strong but is increasingly challenged in an uncertain economy. Securing participation from multiple sources to complete priority Arboretum improvements will advance the responsible use of financial resources.
- Use of the Arboretum as an on-site research "lab" will continue, focusing on woody plant breeding, in the vicinity of tree and shrub specimens accessed by Three Mile Drive. Conservation of rare and threatened plants is an important component of the Arboretum's commitment to sustainability and environmental education. Conservation research on these subjects would occur in native forests and wetlands and gradually, when acceptable, be introduced into public gardens and grounds.
- Events that engage visitors in nature and the outdoors are paired with seasonal themes and are supported by indoor art galleries and the Anderson Horticultural Library. Continued delivery of highly successful events is highly desirable to maintain target levels of visitors throughout the year.

Key Initiatives

Most of the Arboretum's facilities, exhibits, and activities are concentrated around the visitor center and along the Three Mile Drive. The expansion of accessibility by auto, bicycle, and pedestrians, in conjunction with the decentralization of venues, allows for flexibility of implementation as funds become available. In December 2011, the Arboretum Foundation Board of Trustees approved the following Circulation and Parking Improvements as a priority for implementation over the next five years:

- **East Gateway and Parking**
Improving the capacity to move visitors through the gate and providing sufficient parking during high turnout events are essential first steps to increasing attendance.
- **West Gateway and Linkage Roadway**
A new entrance drive with two points of entry/egress will move more people through the Arboretum in a safer and less confusing manner.
- **Eastern Drive**
A new 1.9 mile Eastern Drive will be added with an adjacent combined walk and bike path. The expanded road network will provide access to the Arboretum's eastern property, the Red Barn, and Spring Peeper Meadow.

Circulation improvements are the first priority for the Arboretum's continued success. Visitors need to be able to enter the Arboretum safely and efficiently and find a place to park before they can experience the Arboretum's gardens, grounds, facilities, and programs. In addition, proposed new venues including the Woodland Performance Stage and Garden, the Farm Garden, and Bee Discovery Center all require access roads, parking, and utility infrastructure before they can be developed.

Development opportunities are defined in the Framework document by program, conceptual cost estimate, and general site location. They do not have a prescribed horizon for achievement given that they are expected to advance based on available donor resources.

For reference, each of these projects is described in the Plan document:

- Woodland Performance Center and Gardens p.33
- Tree Top Canopy Walk, p. 37
- Chinese Garden, p. 41
- Bee Discovery Center, p. 59
- Sculpture Garden, p. 63
- The Farm Gardens, p. 45
- Meyers-Deats Conservatory Expansion
- Maintenance Facility Improvements

Background Information:

Included in the docket material is a copy of the University of Minnesota Landscape Arboretum Circulation and Development Framework. Board of Regents Policy: *Reservation and Delegation of Authority*, section VIII, subdivision 5, states "The Board of Regents reserves to itself authority to approve campus master plans and amendments thereto."

In September 1992 the Chair of the Board of Regents and the President of the University appointed a Master Planning Steering Committee to "design and recommend a set of principles which will discipline and inspire the development of a master planning process."

In 1993 the Board of Regents adopted the following four Campus Master Planning principles as developed by the master Plan Steering Committee:

- Creating and maintaining a distinctive and aspiring vision for the physical development of each campus;
- Enriching the experience of all who come to the campus;
- Maximizing the value of existing physical assets while responding to emerging/changing physical needs; and

- An inclusive, accountable, and timely process for creating and implementing a master plan vision.

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



University of Minnesota Landscape Arboretum

Circulation & Development Framework



Letter from the Director

University of Minnesota Landscape Arboretum

Dear friends, faculty, staff, and supporters,

The 2012 Minnesota Landscape Arboretum Circulation and Development Framework is the culmination of a year and a half of critical examination, discourse, and insightful explorations. Our master planning process sought the involvement of the Arboretum community within and beyond our borders through a combination of committee discussions, staff interviews and board input.

As you will see, the framework creates a flexible plan to guide future physical development of the Arboretum as needs prescribe and funding allows. This document describes the objectives of the University of Minnesota Landscape Arboretum and juxtaposes the Arboretum of today with what we hope it will become in the future. It articulates major planning opportunities for all areas of the property. Major gateways, improved circulation and access, additional development opportunities, and the relationship with the surrounding community are addressed.

The plan anticipates open space development, facilities growth and replacement, parking upgrades, and landscape improvements that will unify and beautify the Arboretum. Immediate Impact Projects that could reasonably be achieved in the near future are proposed as a starting point as funding becomes available. The document highlights the University of Minnesota Landscape Arboretum's commitment to sustainability and planned growth.

Implementation of this plan will help the Minnesota Landscape Arboretum to express, through its physical presence, our unique mission.

We would like to thank the members, volunteers, and visitors, The Minnesota Landscape Arboretum Foundation and Arboretum staff for their participation, vision, and hard work.

Sincerely,

Ed Schneider, Director, Minnesota Landscape Arboretum

Dave Maiser, President, Minnesota Landscape Arboretum Foundation

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University of Minnesota Landscape Arboretum

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Executive Summary

University of Minnesota Landscape Arboretum

Introduction

The University of Minnesota Landscape Arboretum is part of the College of Food, Agricultural and Natural Resource Sciences at the University of Minnesota. Its mission is to be a growing resource for horticultural and environmental information, plant conservation, research and education; to inspire and delight a growing visitorship with quality plants in well-designed and maintained displays, collections, model landscapes and natural areas.

The Arboretum features more than 1,100 acres of magnificent gardens, model landscapes, and natural areas—from woodlands and wetlands to prairie-with extensive collections of northern-hardy plants. Visitors enjoy 12.5 miles of garden paths and hiking trails, five miles of snowshoe and five miles of cross-country ski trails. Gardens, collections and visitor amenities are clustered around Three-Mile Drive, a shared road that serves as the primary means of circulation.

In the summer of 2010 the Arboretum Board of Trustees agreed on a mandate to increase Arboretum attendance and fund raising over a 5 year period. Dr. Edward Schneider, a former President and CEO of Santa Barbara Botanic Garden in California, was hired as Arboretum

Director and Professor of Horticultural Science to carry out the charge. The following fall, a meeting of Arboretum benefactors was convened to update the Landscape Arboretum Strategic Plan. The strategic planning team, consisting of Arboretum staff, benefactors and trustees, championed ideas to increase attendance by building an amphitheater and a Tree Canopy Walk and to accommodate larger audiences with improvements to roads, parking and internal circulation.

Minnesota Landscape Arboretum leadership and the strategic planning committee decided at this time to undertake a new study to provide a cohesive framework addressing circulation concerns and future opportunities for growth. Damon Farber and Associates was contracted to help development the framework and provide cost estimates to further guide the decision making process. Over the next year, Damon Farber developed concept plans that were reviewed by Arboretum administration and the Board of Trustees Officers. Plans were also presented to staff for comments.

Objectives of the Framework

The Minnesota Landscape Arboretum Master Plan, completed in 1998, continues

to provide overall guidance for the growth of the Arboretum today. The Master Plan addresses themes of programming, circulation, parking, preservation, visitor experience and land acquisition.

The Circulation and Development Framework will be used in conjunction with the 1998 Master Plan as a flexible guide for development according to the principles established and in accordance with the vision for the Arboretum.

The framework is intended to:

1. Enhance the relationship among services, visitor access & egress and new exhibits, gardens and research venues.
2. Update and expand parking to meet growing visitor needs and new circulation patterns associated with displays and facilities for an expanded Arboretum.
3. Develop a new eastern drive to access additions and to connect research areas, model landscapes, new developments and collections/exhibits.
4. Promote the pedestrian and bicycle experience by connecting to surrounding communities, regional trail and bikeway systems.

Strategic Plan

Vision

To be the world-class northern public arboretum.

Mission

To serve as a community resource for horticultural science, cold-hardy plant research and the environment

To inspire and delight visitors with public display gardens and plant collections, programs and experiences.

To actively engage in plant conservation and education.

Core Values

We must continue to support research to discover new knowledge about plants.

We will provide leadership in conserving our native flora

Plants are a necessary part of the emotional and spiritual well-being of all people.

Horticulture and Gardening is a nurturing and creative activity.

Dissemination of information is an essential activity of the Arboretum.

This dissemination includes landscape models, collections, and gardens, as well as written, visual, and verbal formats in order to reach an expanding community.

It is our commitment to create an atmosphere of excitement, enthusiasm, and interest about the living environment.

We will be accessible and welcoming to all people.

From *Arboretum Strategic Plan, FY 2012 - 2016*

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Guiding Principle One

Maintain the Arboretum's character and beauty while addressing future program needs and revenue generation.

- Preserve the native forest, diverse wetlands and natural ponds and streams on the site while increasing their visibility and accessibility.
- Continue the iconic Edwin Lundie design style using carved timbers, brick and stone throughout the Arboretum.
- Provide beautifully designed and maintained landscape plantings along with natural areas for quiet relaxation and enjoyment.
- Build new venues such as tree canopy walk and sculpture garden which will attract expanded audiences and create new opportunities for education and private rentals
- Increase parking to accommodate multiple events and seasonal attendance peaks.

Guiding Principle Two

Provide greater physical access to the Arboretum.

- Eliminate congestion and the gatehouse bottleneck by expanding the entry road and gatehouse lanes and parking.
- Create alternate west entrance and build connecting roads.
- Promote a decentralization of visitor activities.
- Build new Eastern Loop Road to open up new areas for tree collections and provide internal access to the Red Barn area and Spring Peeper Meadow.

Guiding Principle Three

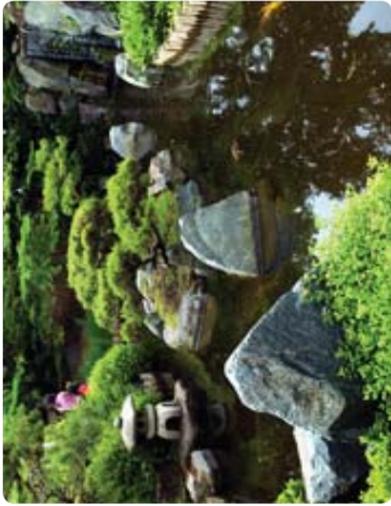
Ensure a safe and secure arboretum environment for guests, volunteers, staff, exhibits and collections.

- Provide roadway and parking lot lighting in high visitor use areas.
- Pursue opportunities for collaboration with the University of Minnesota Department of Emergency Management.
- Expand surveillance cameras to research areas and Sculpture Garden.
- Install fencing along Arboretum boundaries including West 82nd St, Bavaria Rd. and State Highway 5.

Guiding Principle Four

Create a clear pedestrian, bicycle and vehicular circulation system with a hierarchy of trails, roads and walks.

- Link new Arboretum Trails to the Regional Trail network at the new State Highway 5 Underpass at Minnewashta Pkwy. and a future Underpass under State Highway 41
- Continue to implement wayfinding plan including signage at intersections, you are here maps, and labeling for buildings, gardens and plant collections.
- Create dedicated walking and bicycle trails separated from vehicular roads by planted medians.
- New roads and trails should meet ADA standards including smooth paved surfaces and slopes under 5%



University of Minnesota Landscape Arboretum

Planning Challenges

As the Arboretum continues to develop, expanding the current research, outreach and educational opportunities to larger populations, the existing infrastructure will become a limitation.

Key challenges identified in this study by the planning team include:

- Heavy congestion at the main visitor entry and traffic conflict with Highway 5.
- Limited pedestrian and bicycle access.
- Insufficient event parking.
- Congestion along Three Mile Drive.
- Limited access to features and growth areas beyond Three Mile Drive.
- Inadequate maintenance facilities.

areas to growth. Each of the projects outlined within this report are anticipated to be complete within the next five years.

Circulation

East Gateway and Parking – An expanded main entrance to alleviate congestion on entry drive and highway 5, connecting visitors to an expanded parking area with an additional 300 parking spaces.

West Gateway and Linkage Roadway – A secondary entry, available to the public during peak visitor times and connecting to regional trail and new underpass at Minnewashta Parkway.

Eastern Drive – An extension of Three Mile Drive to the Spring Peeper Meadow will connect visitors and staff to research areas, model landscapes, new gardens and a number of possible development opportunities.

Development

Woodland Performance Center & Gardens - The venue is designed to attract new visitors and activities, providing space for events such as music, theater, education, and ceremonies.

Tree Top Canopy Walk - A non-intrusive walkway with rest areas for visitors to study the variety of plant life within the

canopy and to observe birds and other animals up close.

Chinese Garden - Guests to the Chinese Garden will encounter a cultural journey through five primary components of architecture, plants, stone, water and art and literature.

The Farm Garden - This development will update the Arboretum's iconic Red Barn and provide new space for teaching classrooms and conference facilities. It will demonstrate the latest in green building technology, sustainable landscaping and horticulture, modern farming techniques and interactive gardens showcasing residential and urban food production.

Bee Discovery Center - Will function like a bee hive, efficiently combining research and public educational space to showcase the importance of bees to agriculture and to human nutrition, health and food safety.

Sculpture Garden - Expected to open in the spring of 2013, this garden will showcase a collection of art, taking into account the environment in which the pieces are situated. The garden will support education, large audiences and private events.

Meyers - Deats Conservatory - A new

conservatory will revitalize use of the adjacent Snyder Building, engaging visitors with plans of desert, alpine and tropical rainforest climates.

Maintenance Facility - Core facilities are essential to the ongoing operations of the Arboretum. This development will provide office space, greenhouses and storage for staff, equipment and activities. The greenhouse will be a center for growing plants for new and expanding collections.

Additional development opportunities include updates to the Snyder Building, reconstruction of Garden Structures, landscaping at the Learning Center and along the Sorbus Trail, installation of rest stops along Three Mile Drive, enhance fencing in key areas and technology improvements to guide visitors through each exhibit.

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Overview

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About this Section

This section describes the various influences, past and present, on the context of the Minnesota Landscape Arboretum.

Topics in this section include the following:

- **Role of the Arboretum**
- **1998 Master Plan**
- **Trends and Assumptions**
- **Recent Improvements**
- **Site Analysis**

Role of the Arboretum

The mission of the Minnesota Landscape Arboretum, as part of the University of Minnesota, is to provide a community and a national resource for horticultural and environmental information, research and public education; to develop and evaluate plants and horticultural practices for cold climates; and to inspire and delight all visitors with quality plants in well designed and maintained displays, collections, model landscapes, and conservation areas.

Education

The Arboretum is a place for lifelong learning reaching a wide array of audiences. Educational specialties include:

Adult education and family programs such as guided adventures and summer day camps centering on plants and nature as its focus;

Public policy symposia on clean water and healthy foods in alliance with the Healthy Foods/Healthy Lives Institute at the University of Minnesota, local governments and educational partners

School programs for children beginning in kindergarten and up through middle school.

Therapeutic horticulture and animal-assisted therapy in alliance with the Center for Spirituality at the University of Minnesota

Inter-generational plant-based fun and activities every weekend for visitors

Urban children's gardens and mentoring initiatives with inner-city neighborhoods in Minneapolis (including the University of Minnesota UROC) and St. Paul; and other seasonal programming

Statistical Summary FY 2012

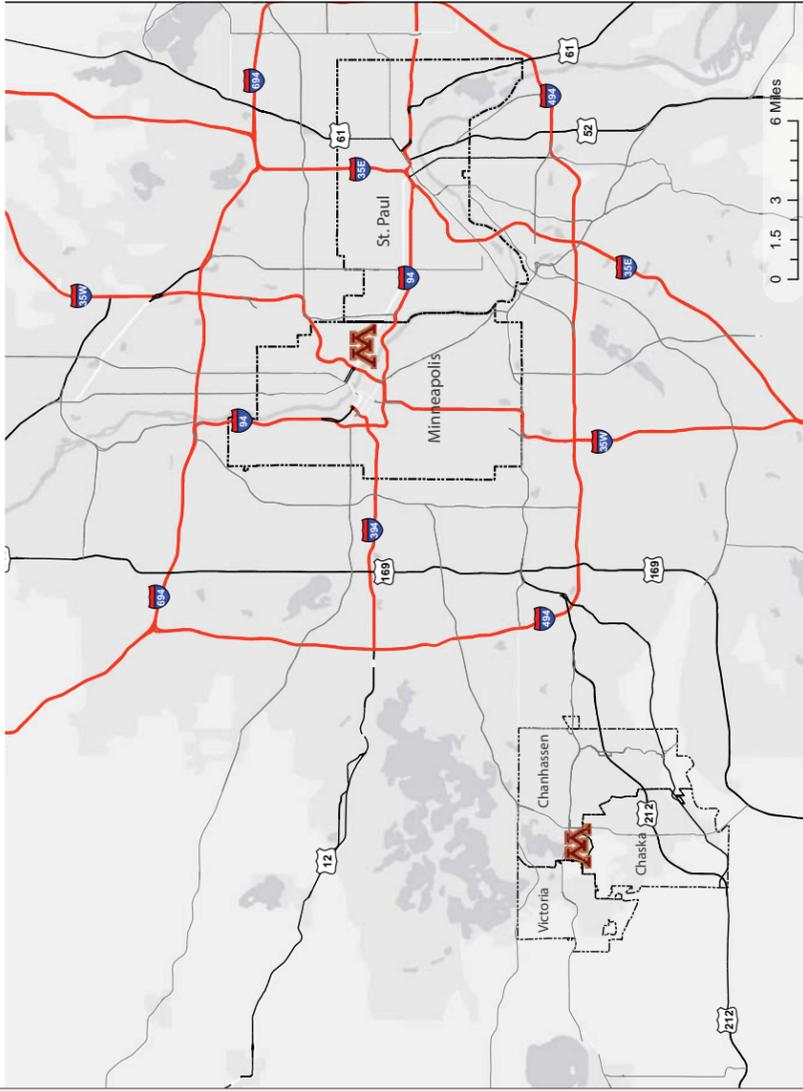
Geography:	1,137 acres 44o 51" 30' latitude 93o 35" 63' longitude Average elevation 950' above sea level with Range from 942' to 1062'
Average temperature:	Summer 26.6 o C (79.9 F) Winter -12 o C (10.4 F)
History:	Horticultural Research Center founded in 1908 Arboretum proper founded in 1958
Visitorship:	329,020
Membership:	22,622 member households 209 auxiliary members
Volunteers:	834 individuals 40, 141 documented hours \$867,848.42 total value
Staff (Arboretum, HRC & Library):	Winter – 126 (66 FTE) Summer – 234 (112 FTE)
Budget:	FY13 - \$10,419,133
Foundation:	31 elected members

Research

Internationally renowned for cold-hardy plant research, the University of Minnesota Horticultural Research Center (HRC) at the Arboretum is recognized for research in fruits such as apples, grapes, blueberries and even kiwi; garden and landscape ornamental plants such as azaleas, roses, shrubs, trees, grasses and turf. Plant introductions include apples such as Haralson, Honeycrisp and the new Sweetango; wine grapes such as Marquette, Frontenac, LaCrescent and Frontenac Gris; ornamental plants such as Azalea Light series, Blue Heaven Little Bluestem and new Arboretum rose "Summer Waltz" introduced in 2011; and trees such as Northwood and Autumn Spire red maples, Minnesota Strain Rosebud and Stately Manor Kentucky Coffeetree. Other research programs include low input turf grass evaluation, restoration ecology and rare native plant morphology and propagation.

The Spring Peeper Meadow wetland restoration is one of the Minnesota Landscape Arboretum's model landscapes. Ongoing research since its restoration in 1996-97 has provided insights into the restoration and establishment process to improve the practice of wetland restoration in the Midwest.

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Metropolitan Location

The Arboretum is located in the growing southwestern Twin Cities metropolitan area about 35 minutes from downtown Minneapolis. The grounds extend across several municipal boundaries and are shared by the communities of Victoria, Chanhassen and Chaska. Visitors to the arboretum commonly arrive from the East via Interstate 494 and Highway 5

Visitors

Open year-round, the Arboretum is a place for all seasons. In the last year, more than 338,000 visitors made the Arboretum their place to enjoy the gardens and outdoors, connect with nature and discover their particular interests, explore exhibits and displays indoors and out, and engage in activities at their own pace—sometimes solo or coming in pairs or inter-generational groups of four or more.

While many visitors plan their visits during the growing season—especially spring, the fall season and October, in particular, has been the busiest month for visitorship for the past three years. Visitors hail from throughout the Twin Cities metro area, Minnesota, nearly every state in the country and most every continent except Antarctica.

Completed in 2005, the Oswald Visitor Center is a 45,000-square-foot building that serves as a formal entry to the Arboretum and an information hub for the more than a quarter-million people who visit each year. The visitor reception desk, touch-screen kiosks and special exhibits are found within the building's McQuinn Great Hall.

Other highlights include the 375-seat

MacMillan Auditorium; the Wall Education Wing, with two high-tech classrooms and a teaching garden; a large gift store featuring a wide selection of books, toys, clothing, and other unique garden items and gifts; a cafeteria-style restaurant; and the Reedy Gallery, featuring ever-changing art exhibits.

Conservation

A certified member of the international Center for Plant Conservation network since 2011, the Arboretum anchors the upper Midwest in conserving and restoring America's most rare and threatened native plants. The Arboretum works closely with the MN Dept. of Natural Resources and MN Dept. of Transportation in rescuing and preserving increasingly endangered native species of the Upper Midwest such as the dwarf trout lily, ram's-head lady's slipper, showy trillium, cardinal flower and the Minnesota state flower: the showy lady slipper.

At the Arboretum, natural habitats such as the North American prairie, Spring Peeper Meadow wetlands, and the bog and wildflower gardens prove popular with visitors as well as research scientists and horticultural experts.

1998 Master Plan

The 1998 Master Plan provided a conceptual physical master plan incorporating key issues of land acquisition, programmatic needs, circulation and parking, preservation of natural areas and visitor experience. Architectural and planning firms Ellerbe Becket and Nelson Byrd were contracted to complete the study. The Master Plan document continues to guide the overall growth of the Arboretum today.

The following conclusions of the 1998 Master Plan continue to guide the opportunities contained in this Circulation and Development Framework.

1998 Goals and Objectives:

Visitor Services - Determine the best possible experience for visitors and develop programs and facilities to carry it out. Improve existing or develop new space for enhancement of all aspects of the visitor experience.

Land Acquisition - Identify land needed for short term and long term growth and for the preservation of land and water quality through management of the MLA perimeter, buffer zones and watersheds and the preservation of remnant natural areas.

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Circulation - Create and improved visitor access and orientation to the MLA and a workable traffic flow that serves all staff and visitors.

Research-Enhance the visitor's awareness of MLA/HRC research accomplishments and ensure availability of land committed for research.

Gardens and Collections - Provide the necessary space and organization to allow future growth and development of quality gardens and collections, enhancing both the visitor experience and reputation of the MLA as a leading arboretum.

1998 Key Findings:

Many collections are near or have met limits on available land area for further expansion.

Collections with available land area for growth typically lack access or sufficient signage and could benefit from better orientation.

Traffic lights proposed at Minnewashta Parkway and at Highway 41 to reduce vehicle speeds and provide safe crossings.

A new Visitor Center should become the hub of visitor activities.

A significant portion of the visitor

experience should be as a pedestrian. Interconnected, accessible walkways should link collections, exhibits and services.

Acquisition of all land within the boundaries of Highway 5, Highway 41, W. 82nd Street and Bavaria Road is critical to protect the watershed around the Arboretum, to maintain the continuity of the environment and to provide land for expansion.

Trends and Assumptions

Through the planning process, several trends were identified which impact growth and development the arboretum. The following are current trends and assumptions surrounding the projects identified in the Circulation and Development Framework.

Increasing Attendance

Named as one of the "Top 10 Places to Smell the Flowers" by USA Today, the Arboretum continues to build awareness as a destination. The Arboretum consistently ranks as one of the top 12 attractions in the metro area as determined by Explore Minnesota. The Arboretum is selected by the American Public Garden Association as one of the featured gardens for National Public

Garden Day in May, 2012 and again for 2013.

The Arboretum intends to capitalize on this awareness through investment in new exhibits, facilities and infrastructure to attract more visitors each year.

Although the Arboretum is open year round and visitors may experience beauty, programs and events for every season, visitor numbers continue to peak during the spring bloom and fall color weekends. This causes extreme congestion at the Arboretum entry road, the gatehouse and parking lots. Access to the site is becoming a limiting factor on growth of the Arboretum. Often events such as the Plant Sale and Fall Harvest Sale overlap with private events such as weddings or large conferences.

Evolving communications

Insights from visitor research over the past four years have indicated an interest or preference in exploring on their own but with "semi-guided" experiences.

With the trend of mobile device applications and Quick-Read codes as options to connect with others in sharing their experience at the Arboretum, there is a demand for more visitor-friendly and mobile-accessible tour information. While the Arboretum offers one and two-

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hour tour brochures as well as guided walks and tram tours, there is increased demand by families or groups of friends, for more “experience itineraries” that are categorized by physical activity and in the form of particular trails or routes, specific gardens or places, and special interests. The role that way-finding and informational and interpretive signage is extremely important for these self-guided visits.

Metropolitan Growth

The west metro area continues to see population growth and increased development, even as other areas in the Twin Cities experience decline. A nearby community, Eden Prairie, was again cited by Money Magazine as the third most livable community in the United States, with the close proximity of the Arboretum as a competitive advantage. As formerly agricultural land is converted to housing, manufacturing or retail usage, the presence of the Arboretum and its natural woodlands and garden features serve as an in-town escape from stress and respite for renewal and re-energizing.

Development opportunities are planned to ensure future visitors and members have access to connect with nature and experience an active lifestyle. Projects encourage an interest in wellness and

support the fresh, locally grown foods movement.

Responsible use of financial resources

Donor support while strong continues to be increasingly challenging in an uncertain economy. As friends and benefactors experience economic pressures, giving is often reduced or prioritized to a few primary interests. Arboretum membership, while increasing in revenue for the last three years, fell short by 3% of double-digit financial targets established for FY 2011.

Continued on-site research

Horticultural research and plant introductions and discovery support the University of Minnesota initiatives of research. Ongoing research is expected to continue while new Arboretum research programs will focus on woody plant breeding and conservation of rare and threatened plants in the upper Midwest.

Current and future research sites will likely be at the HRC or within the Arboretum tree and shrub collections around the 3-Mile Drive. These areas have existing roads which could use improvement but are beyond the scope of this plan.

Conservation research could take place

in native forests and wetlands anywhere at the Arboretum. Most of these projects would not be accessible to the public but as we build up populations of rare, threatened and endangered plants we would introduce these plants into accessible areas such as the Woodland Wildflower Garden, Bennet-Johnson Prairie and Spring Peeper Meadow.

Events

Events, exhibits and related programming are designed to engage visitors in nature and the outdoors, typically paired with seasonal themes such as spring blooms, summer gardens, fall color, winter trails (hiking, snowshoe and cross-country skiing) and holiday celebration and memories. A variety of displays are featured in indoor art galleries, designated spaces and the Andersen Horticultural Library.

Recent Improvements

This section provides a summary of projects that have been completed since the 1998 Master Plan.

Learning Center Building Expansion

The Marion Andrus Learning Center provides space to fulfill the Arboretum’s ongoing mission to educate and entertain Minnesota’s families. Recent

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improvements to this facility include three new classrooms, a greenhouse expansion, a new teacher resource room, the harvest kitchen.

Ensuring activities directed toward children, the learning center also added model schoolyard gardens, a nature play area and a green play yard.

Oswald Visitor Center

Completed in 2005, the visitor center provides a new formal entry and first stop for guests of the Arboretum. The Great Hall includes a reception desk and information kiosks for orientation.

Additional features include an expanded gift store, a cafeteria-style restaurant, a 375 seat auditorium, an art gallery and two classrooms. The visitor center is connected by an enclosed skyway to the historic Snyder building.

Snyder Building

Named for the Arboretum's first director, Leon C. Snyder, the facility first opened in 1974.

Recent improvements have focused on protecting and restoring the exterior building envelope. Exterior doors and windows have been replaced with energy efficient solutions. The roof was replaced,

improving insulation and ventilation.

Inside the building, the elevator was modernized to meet state codes and a craft room was redesigned for additional office space.

Gardens and Collections

One of the Arboretum's newest gardens is the Maze Garden. This collection of over 1600 shrub specimens, contains 11 genera and 14 species and cultivars and is nestled into the pine collection across from the lindens.

The Johanna Frerichs Garden for Wildlife is a working laboratory designed to demonstrate the most effective ways to attract birds, insects, mammals to the backyard by providing food, shelter, and a reproductive habitat.

Model lakeshore restoration projects showcase efforts to protect water quality through the reintroduction of native plant species.

Land Acquisitions

Focusing on maintaining a quality environment and preserving critical bio-habitat while providing room for growth, the Arboretum has made substantial progress towards acquiring control of the lands within Highway 5, Highway 41, W.

82nd Street and Bavaria Road. At the time of the 1998 Master Plan, the Arboretum encompassed 920 acres. Today, the arboretum controls 1157 acres, an increase in land area of more than 25%.

Circulation and Parking

- Rain Garden Parking Lots
- Run-off Model Parking Lots
- New Bog Boardwalk and Wildlife Viewing Platform
- Completed Several Sections of Pedestrian Pathways
- Sorbus Hill Pathway and Steps
- New Roads and Sidewalks to Learning Center

Site Utility Improvements

- City Water Loop Installation
- Upgraded Utility Installations
- Geothermal Well Field Installation

Monument Signage and Landscaping

Located at the Highway 41 and Arboretum Boulevard (Hwy 5) intersection, a new grand entry sign now greets visitors and increases of the Arboretum to all passers by.

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Facilities					
Oswald Visitor Center	Horticultural Research Center	Bruinink Viewing Area	Hawthorn Collection	Photography	
Dahlberg Welcoming Terrace	Apple House / Summer House	Edible Pathway (Jaffray)	Larch Collection	Weddings and Receptions	
Keating Terrace	Greenhouse	Pine Walk	Linden Collection	Group Gatherings	
Newton Dining Terrace	Lath Structure	Brickson Walk	Locust Collection	Education for Adults	
Sweatt Entry Terrace	Display & Specialty Gardens	Native Areas	Maackia	Arts and Crafts	
Wall Teaching Garden and Classrooms	Annual Garden	The Prairie	Magnolia Collection	Cooking	
Wright Terrace Gardens	Dahlia Trial Garden	Spring Peeper Meadow	Maple Collection	Gardening	
Garden for Wildlife	Daylily and Chrysanthemum Walk	The Bog Area	Nut Collection	Horticulture	
Restaurant	Dwarf Conifer Collection and Waterfall Garden	Wildflower Garden	Oak Collection	Photography	
Gift Shop	Entrance Garden	Shrubs	Pine Collection	Public Policy Conferences	
Restrooms	Fern Walk	Azalea Collection	Poplar Collection	Walks and Fitness	
Reception Desk and Information Center	Green Roof	Shrub Walk	Prunus Collection	Horticultural Therapy	
Special Exhibits	Hedge Collection	Hydrangea Collection	Small Tree Collection	Children's Programs	
375 Seat MacMillan Auditorium	Home Demonstration Gardens	Lilac Collection	Serviceberry Collection	Summer Children's Garden	
Wall Education Wing	Hosta Glade	Miscellaneous Shrub Collection	Spruce Collection	Day Camp	
Reedy Gallery Art Exhibit	Iris Garden	Pea Shrub Collection	Weeping Tree Collection	School Field Trips	
Snyder Building	Japanese Garden	Potentilla Collection	Willow Collection	Plantmobile	
Meeting, Reception & Conference	Lilac Collection and Garden	Rhododendron Garden	Programs & Activities	Urban Children's Garden	
Anderson Horticultural Library	Lily and Dahlia Collection	Spiraea Collection	Bog Walk at Green Heron Trail	Research and Development	
Meyers –Deats Conservatory	Maze Garden	Viburnum Collection	Guided Walks and Tours	Fruit Breeding	
Office and Administration Building	Ornamental Grass Collection	Weigela Collection	Sculptural Exhibits	Woody Landscape Plant Breeding and Genetics	
Marion Andrus Learning Center	Peony Walk	Trees	Yoga in the Garden	Wetland Restoration	
Sally Pegues Oswald - A Growing Place For Kids	Perennial Garden	Arborvitae Collection	Bud Break 5K	Prairie Restoration	
Berens Cabin	Rain Gardens	Ash Collection	Gala Dinner	Bee and Native Pollinator Research	
Red Barn	Rose Gardens	Birch Collection	Toast and Taste	Native Plant Conservation	
Frog Hollow	Sensory Garden	Buckeye Collection	Orienteering	Cold Storage Seed Bank	
Syrup Evaporator House	Shade Tree Exhibit	Corktree Collection	School Programs		
Margot Picnic Shelters and Ordway Picnic Shelter	Terrace Garden	Crabapple Collection	Education Programs		
	Woodland-Azalea Garden	Elm Collection	Reading		

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Site Analysis

The following illustrations highlight the existing features of the Minnesota Landscape Arboretum related to vehicular circulation, parking, pedestrian and bicycle circulation and areas for growth.

The illustrations present information gathered through field observations, site surveys, review of current studies and previous site mapping. Both natural and built aspects were located and studied including roadways, parking areas, structures, exhibits and gardens, pathways and trails, topography, hydrology and storm water, view and vistas, micro climate, soils, sustainability and resource management practices.

Vehicular Circulation

Vehicular traffic provides the primary means of transportation for the majority of visits to the arboretum. While opportunities for pedestrian and bicycles are improving, these options are unlikely to have a substantial impact on the need for additional parking to accommodate growth. The nearest public transit stop, operated by Southwest Transit, is located at the intersection of Highway 41 and W 82nd Street.

Defining the Arboretum's Northern and Eastern edges, Highway 5 (Arboretum Boulevard) and Highway 41 provide primary circulation around the Arboretum property. Addressing capacity and safety concerns, Highway 5 was recently improved by MnDOT. A 4 mile stretch of road from Highway 41 to Victoria was resurfaced while new turn lanes were installed and a new underpass at Minnewashta Parkway, connecting to the Arboretum was completed.

W. 82nd Street, bordering much of the Southern edge of Arboretum, has been identified for a future extension of County Road 18. This project would build out the road infrastructure along full length of the Arboretum property. The approximate alignment of County Road 18 is identified on the following diagrams. Road improvements in this area are expected to facilitate access to the Red Barn / Farm Garden site.

Pedestrian and Bicycle Circulation

Pedestrian and bicycle access to the arboretum is improving, as demand for alternative means of transportation has increased among visitors and in the surrounding communities. The recent completion of a non-motorized transportation underpass at Minnewashta Parkway and Highway 5 is the first stage

in connecting proposed regional trails across the arboretum grounds. Future trails are planned to provide safe access west of Minnewashta Parkway to Vistoria and beyond while a nother link in the trail network is planned to connect to the arboretum at a Highway 41 underpass. An and travel east to Eden Prairie. An existing trail through Chaska meets the arboretum near Spring Peeper Meadow.

Key Constraints and Opportunities:

- Heavy congestion at the main visitor entry and traffic conflict with Highway 5.
- Limited pedestrian and bicycle access.
- Insufficient event parking.
- Congestion along Three Mile Drive.
- Limited access to features and growth areas beyond Three Mile Drive.
- Inadequate maintenance facilities.



Legend

-  Entry Drive & Gateway
-  Three Mile Drive
-  Service Drive & Gateway
-  Private Drive & Gateway
-  Arboretum Gateway
-  Conflict Zones

Gateway Intersection Lacks MLA Identity / Signage

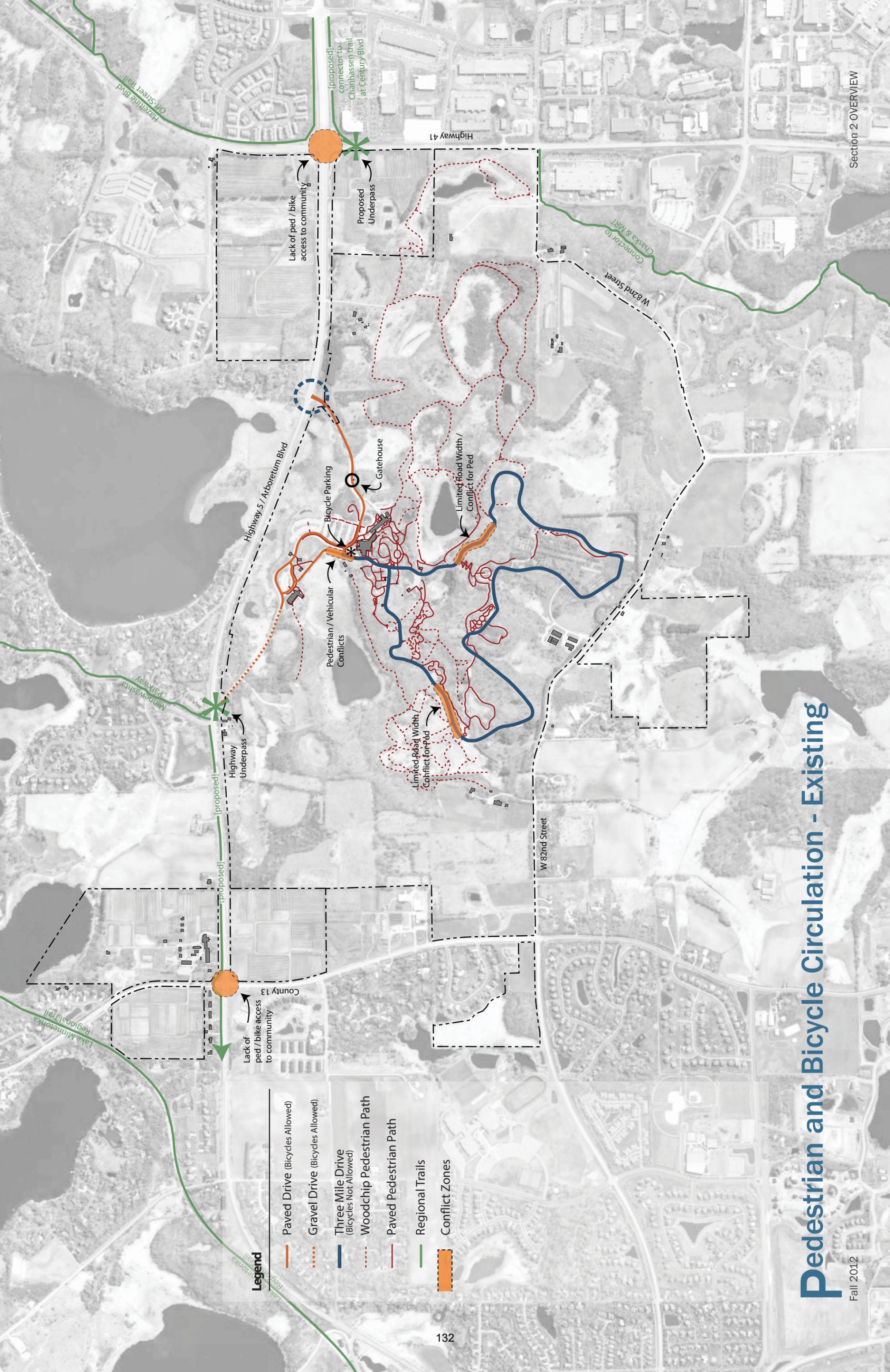
U of M HRC



Parking Inventory

	Existing
 main parking lot	195 (7 bus)
 rain garden lot	126
 learning center lot	33 (3 bus)
 staff lot	67
 maintenance facility	25
 red barn	10
 three mile drive	204
overflow parking	132
Total	792 (10 bus)

Vehicular Circulation and Parking - Existing

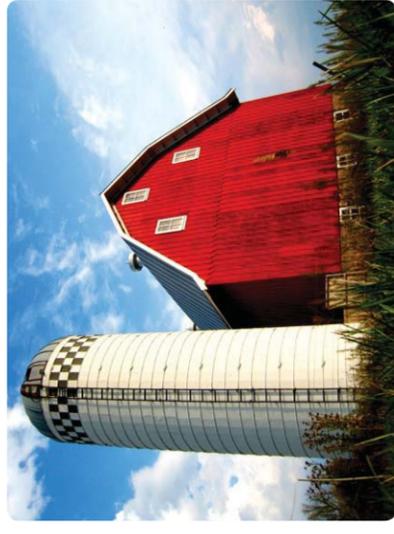


Legend

- Paved Drive (Bicycles Allowed)
- - - Gravel Drive (Bicycles Allowed)
- Three Mile Drive (Bicycles Not Allowed)
- - - Woodchip Pedestrian Path
- Paved Pedestrian Path
- Regional Trails
- Conflict Zones

Pedestrian and Bicycle Circulation - Existing

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Framework

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About this Section

This section describes the Circulation and Development Framework's overall organizational structure. Key infrastructure investments and development opportunities are identified to facilitate decision making and fund raising efforts. The Framework section is divided into themes of Circulation Improvements and Development Opportunities.

Topics in this section include the following:

- East Gateway and Parking
- West Gateway and Linkage Roadway
- Eastern Drive
- Woodland Performance Center and Gardens
- Tree Top Canopy Walk
- Chinese Garden
- The Farm Garden
- Bee Discovery Center
- Sculpture Garden
- Meyers-Deats Conservatory Expansion
- Maintenance Area

Summary

The public gardens and research facilities at the Landscape Arboretum are a statewide resource and national attraction designed to inspire ideas for visitors. With 32 display and specialty gardens, 48 plant collections and more than 5,000 plant species and varieties, the Arboretum has become one of the premier horticultural field laboratories and public display areas in the country. From its interactive display of Minnesota's natural environment to the scores of plant labels designed to allow visitors to replicate favorite gardens at home, the Arboretum is a kinetic wellspring of education, research and inspiration.

This study identifies a number of new experiential development opportunities within the Arboretum that have the potential to increase visitation and generate new revenue. They are intended to create new and exciting outdoor spaces that build upon the Arboretum's vision to decentralize its venues and to be a world class destination.

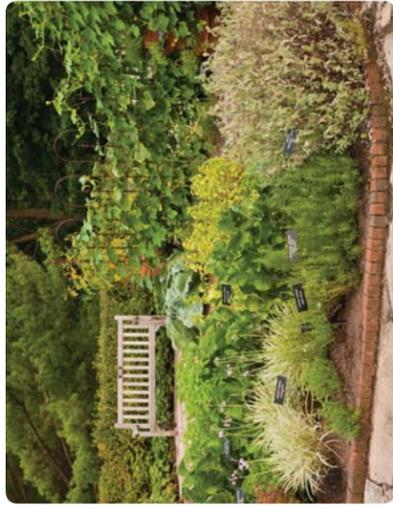
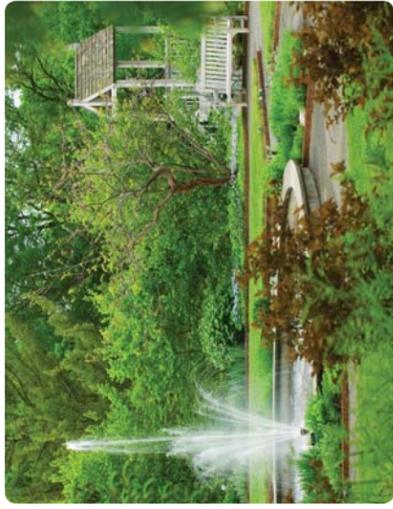
There are eight primary development opportunities identified as priorities for implementation and expansion which have the potential to be constructed within the relatively near future. These are illustrated through conceptual diagrams,

precedent imagery and preliminary programmatic lists.

Additional development opportunities identified for future consideration include the Snyder Building update, Garden Structures Rebuild, Learning Center Landscape, Sorbus Trail Steps and Landscaping, Circulation Rest Stops along Three Mile Drive, Safety and Security Fencing and Technology Improvements.

Circulation Improvements

University of Minnesota Landscape Arboretum

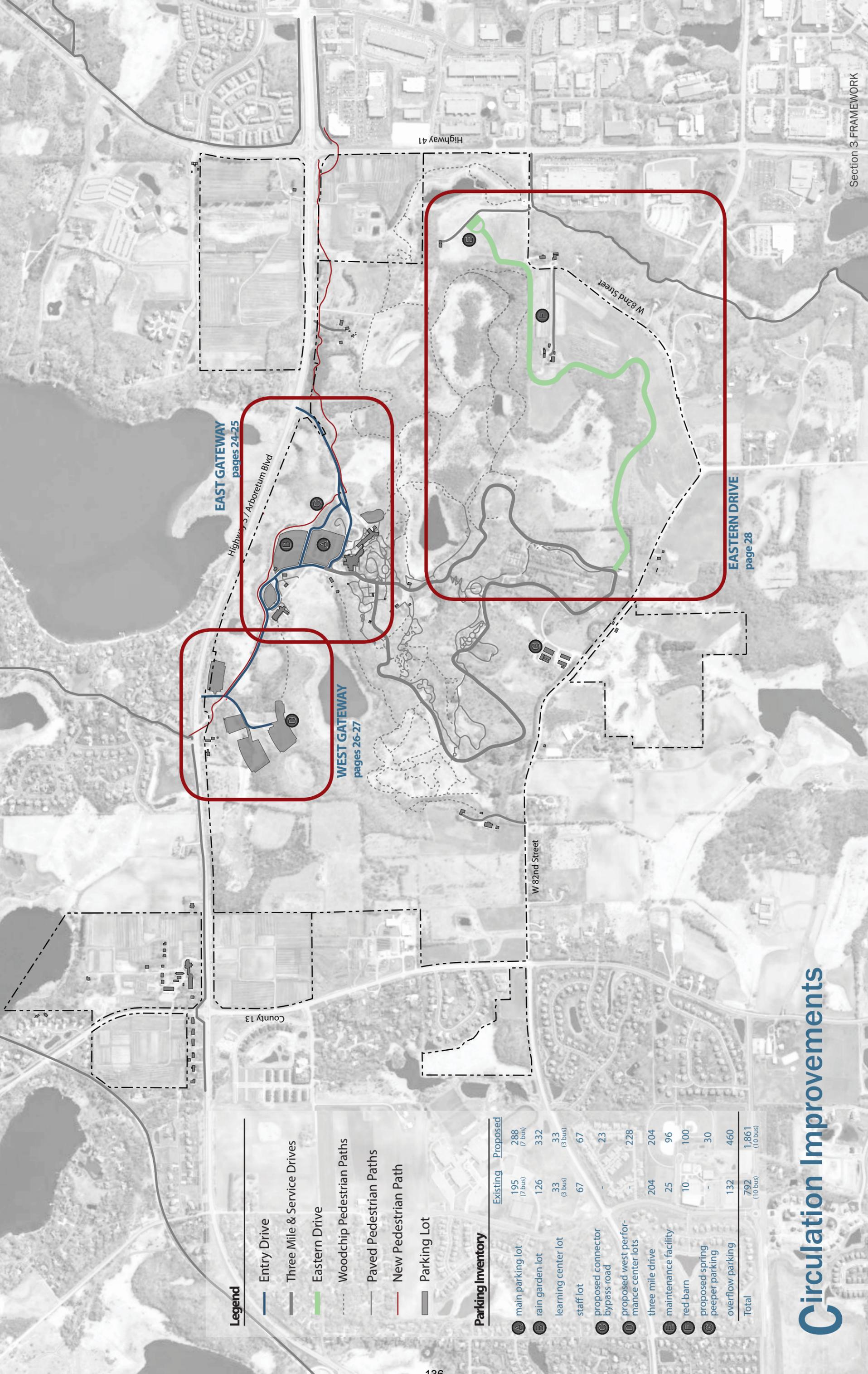


The Arboretum Foundation Board of Trustees voted in December of 2011 to establish Circulation and Parking improvements as a priority for implementation over the next five years. Improving the capacity to move visitors through the gate and providing sufficient parking during high turnout events are essential first steps to increasing attendance.

Most of the Arboretum's facilities, exhibits and activities are concentrated around the visitor center and along the three mile drive. The expansion of accessibility by auto, bicycle and pedestrians, in conjunction with the decentralization of venues, allows for flexibility of implementation as funds become available.

A new entrance drive with two points of entry / egress will move more people through the Arboretum in a safer and less confusing manner.

A new 1.9 mile Eastern drive will be added with an adjacent combined walk and bike path. The expanded road network will provide access to the Arboretum's Eastern property, the Red Barn and Spring Peeper Meadow.



Legend

- Entry Drive
- Three Mile & Service Drives
- Eastern Drive
- - - Woodchip Pedestrian Paths
- Paved Pedestrian Paths
- New Pedestrian Path
- Parking Lot

Parking Inventory

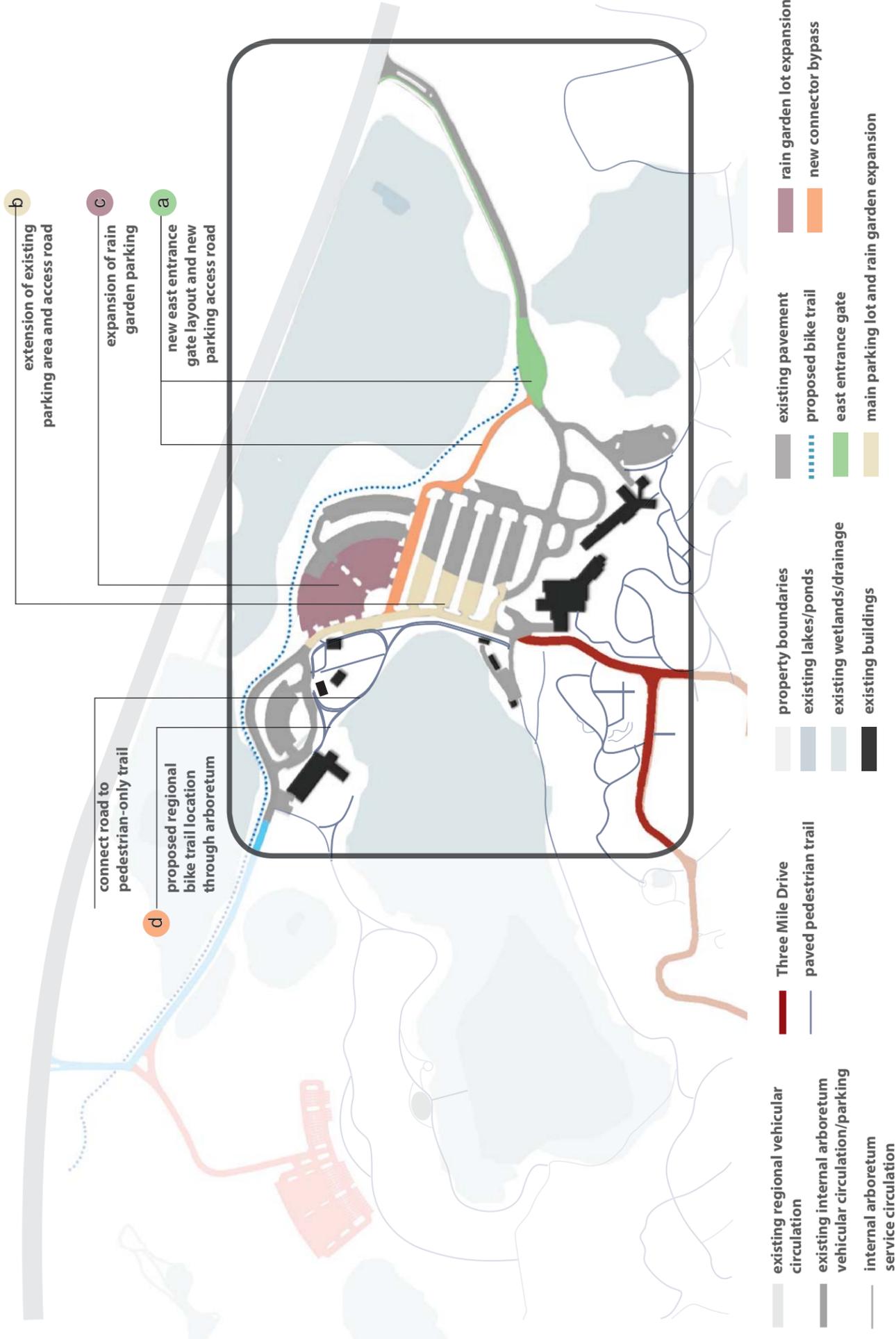
	Existing	Proposed
A main parking lot	195 (7 bus)	288 (7 bus)
B rain garden lot	126	332
learning center lot	33 (3 bus)	33 (3 bus)
staff lot	67	67
C proposed connector bypass road	-	23
D proposed west perfor- mance center lots	-	228
three mile drive	204	204
E maintenance facility	25	96
F red barn	10	100
G proposed spring peepee parking	-	30
overflow parking	132	460
Total	792 (10 bus)	1,861 (10 bus)

Circulation Improvements

East Gateway and Parking

University of Minnesota Landscape Arboretum

cost | \$1,600,000



The current east entry will be upgraded from Hwy 5 to the East Gate house. This will facilitate a safer vehicular access to the Arboretum with two entry lanes and one exit lane. There will be a designated members only lane with card reader and a new gate house located in the center landscaped island.

There will be a new access road to the parking lots located north of the existing Lilac collection which will remain as a point of focus for visitors. This new road will alleviate traffic congestion, connect visitors to the north side of the parking area and connect the east entry road to the Learning Center and new western entry. It will also allow direct access to the visitor parking lots while still maintaining the current entry drive to accommodate existing drop off at the Visitor Center and Snyder Building as it currently exists.

A new seasonal entry sign and display will be located just to the west of the new eastern entry gate at the intersection created by the new north parking access road and the existing entry drive.

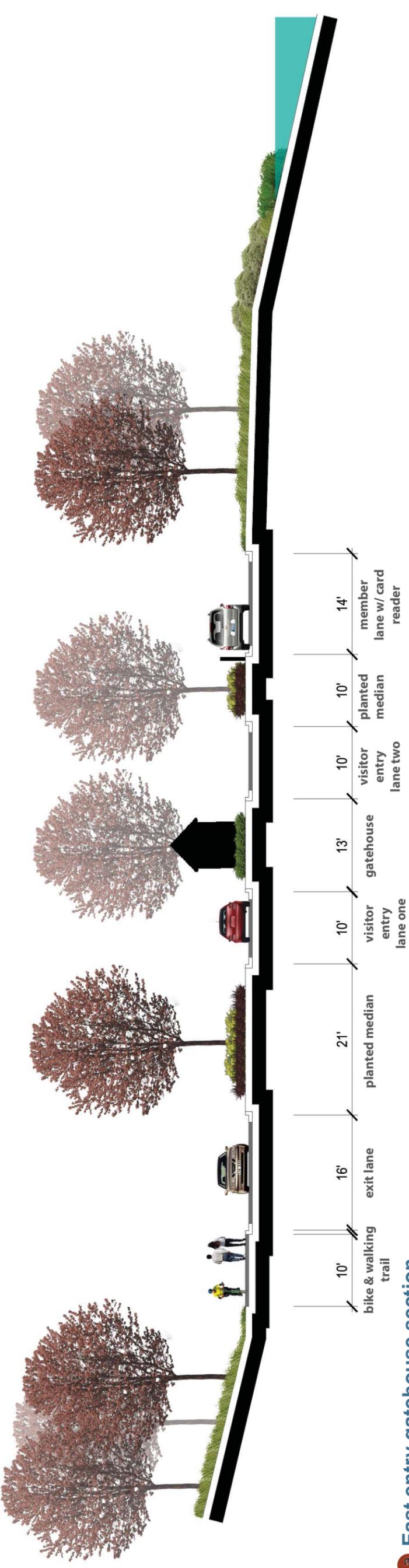
The main parking lot will be expanded to reflect the character of the existing lot. It will be reconfigured to allow guests to walk through the middle of it for easier pedestrian access to the Visitor Center and the exhibits.

Expansion of the rain garden parking will remove the knoll and provide additional parking that is environmentally sensitive. The parking will connect directly with the north parking entry road and the main entry circulation drive.

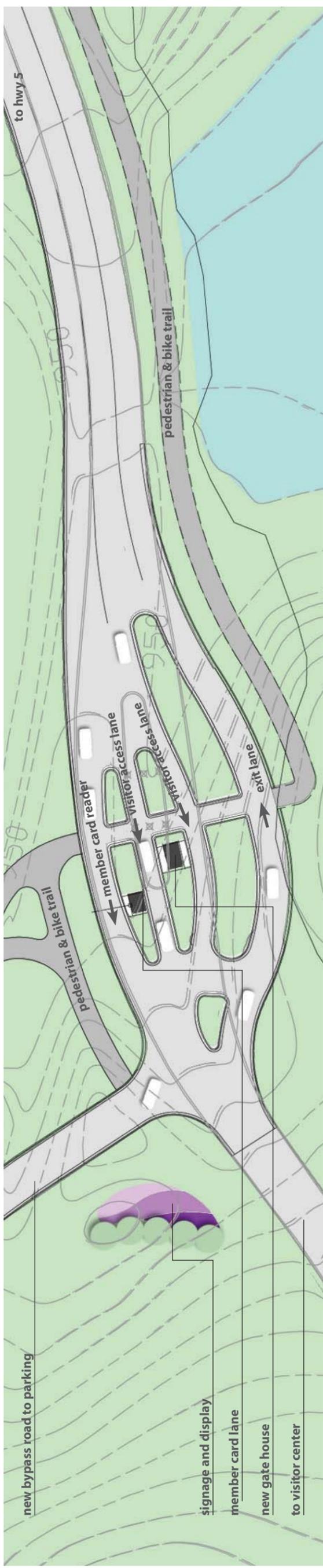
- a** 375,000
- b** 450,000
- c** 525,000
- d** 250,000

Construction Cost \$1,600,000

University of Minnesota Landscape Arboretum



1a East entry gatehouse section

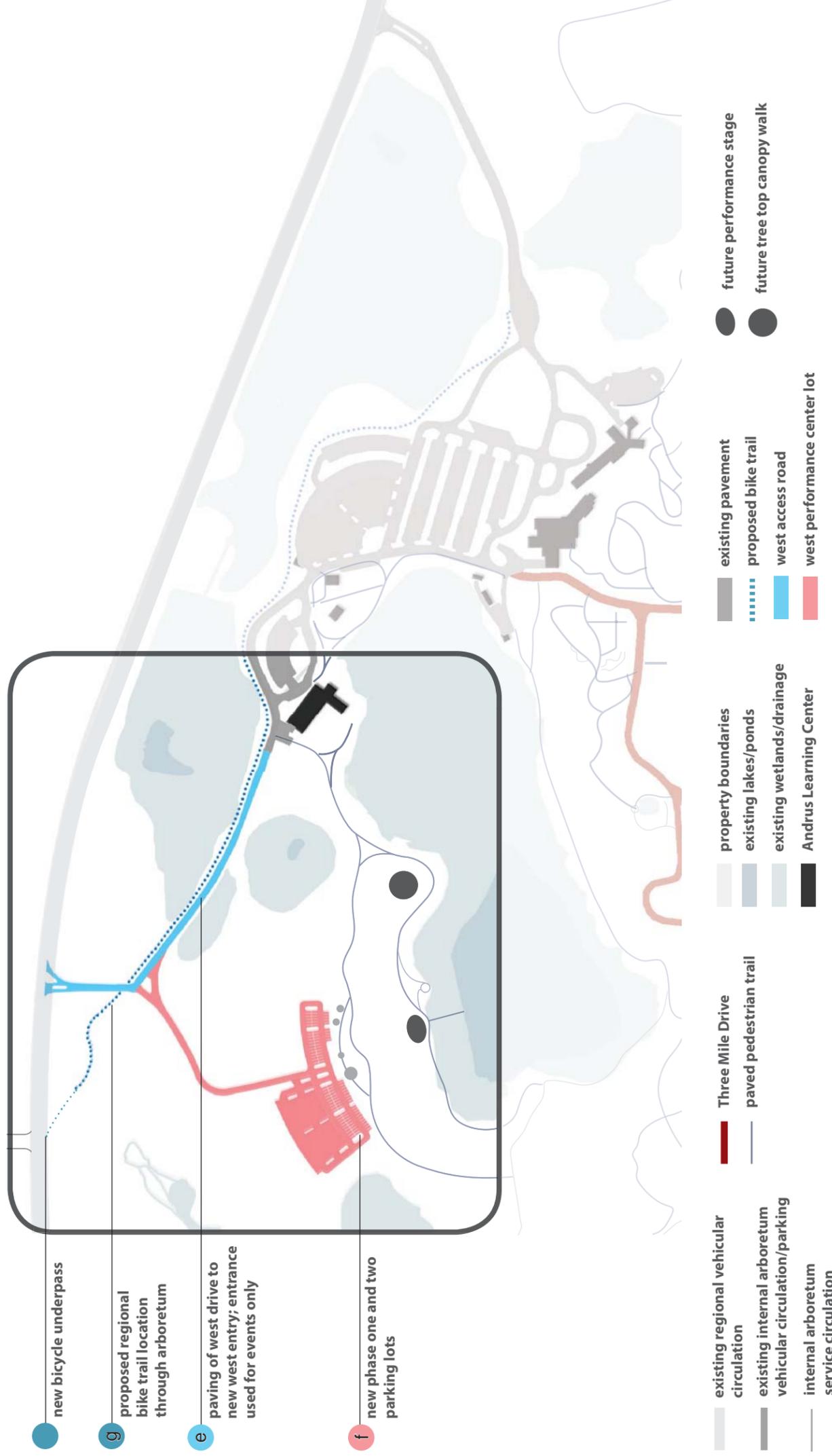


1b East entry gatehouse plan

West Gateway and Linkage Roadway

University of Minnesota Landscape Arboretum

cost | \$1,375,000



The new regional bike trail which enters the Arboretum at the corner of Hwy 5 and Hwy 41 will meander through the property to the east entry gate. From there, the trail will continue west along the new access road and rain garden parking area following the east-west connector road to the west entry, Hwy 5 and the proposed MnDOT bike trail underpass.

Entry will be controlled for events with a gate house and gate structure. The West gate is intended primarily as an exit unless there are major events such as an outdoor performance or wedding or fair at the proposed Woodlands Performance Center.

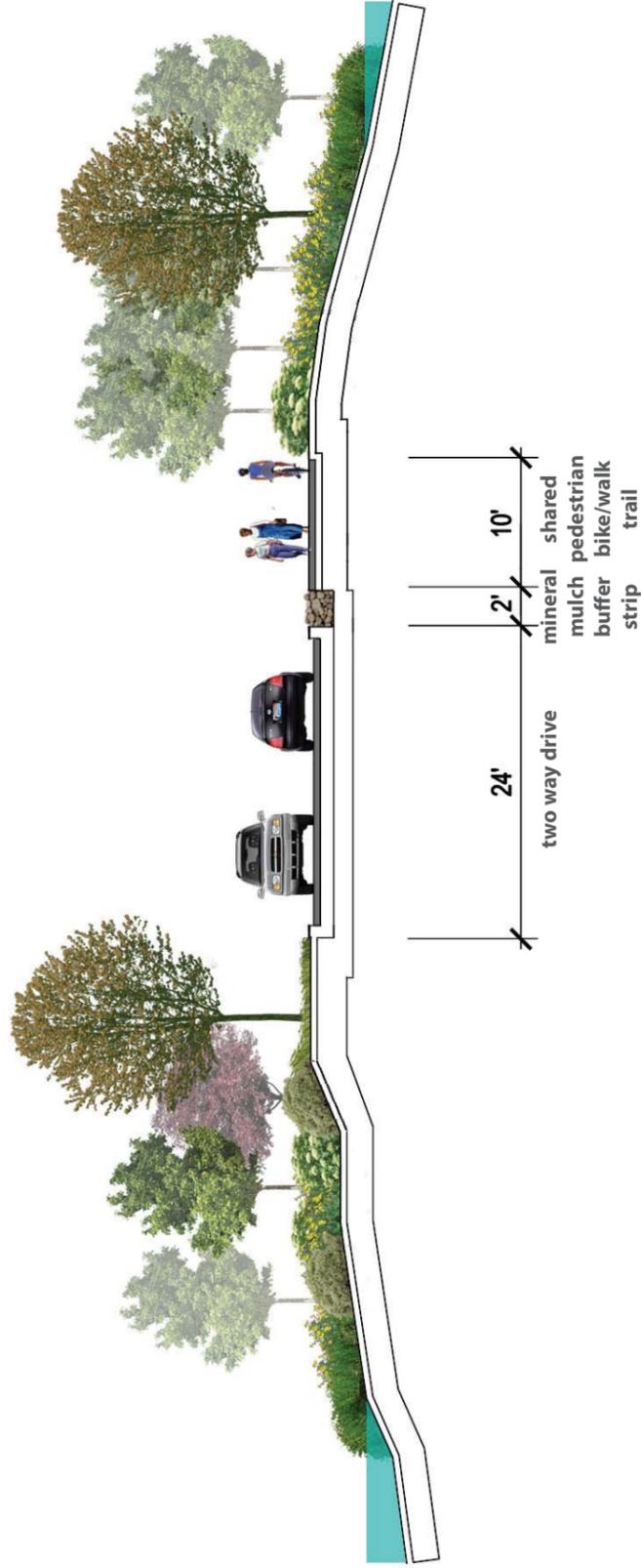
Resurfacing of the currently deteriorating west connector road to a new west entry gate will provide a means of access / egress from either the east or west, depending upon what activities are programmed by the Arboretum. A raised curb will separate vehicular traffic on the roadway from bike/pedestrian traffic on the bike path.

Overflow parking can be provided in the new west parking areas as well as in unpaved overflow lots when the primary lots are filled and for special program events.

e 500,000
f 875,000

Construction Cost \$1,375,000

University of Minnesota Landscape Arboretum



2a Typical drive/bike/pedestrian trail section



2b East-west linkage road plan

Development Opportunities

University of Minnesota Landscape Arboretum

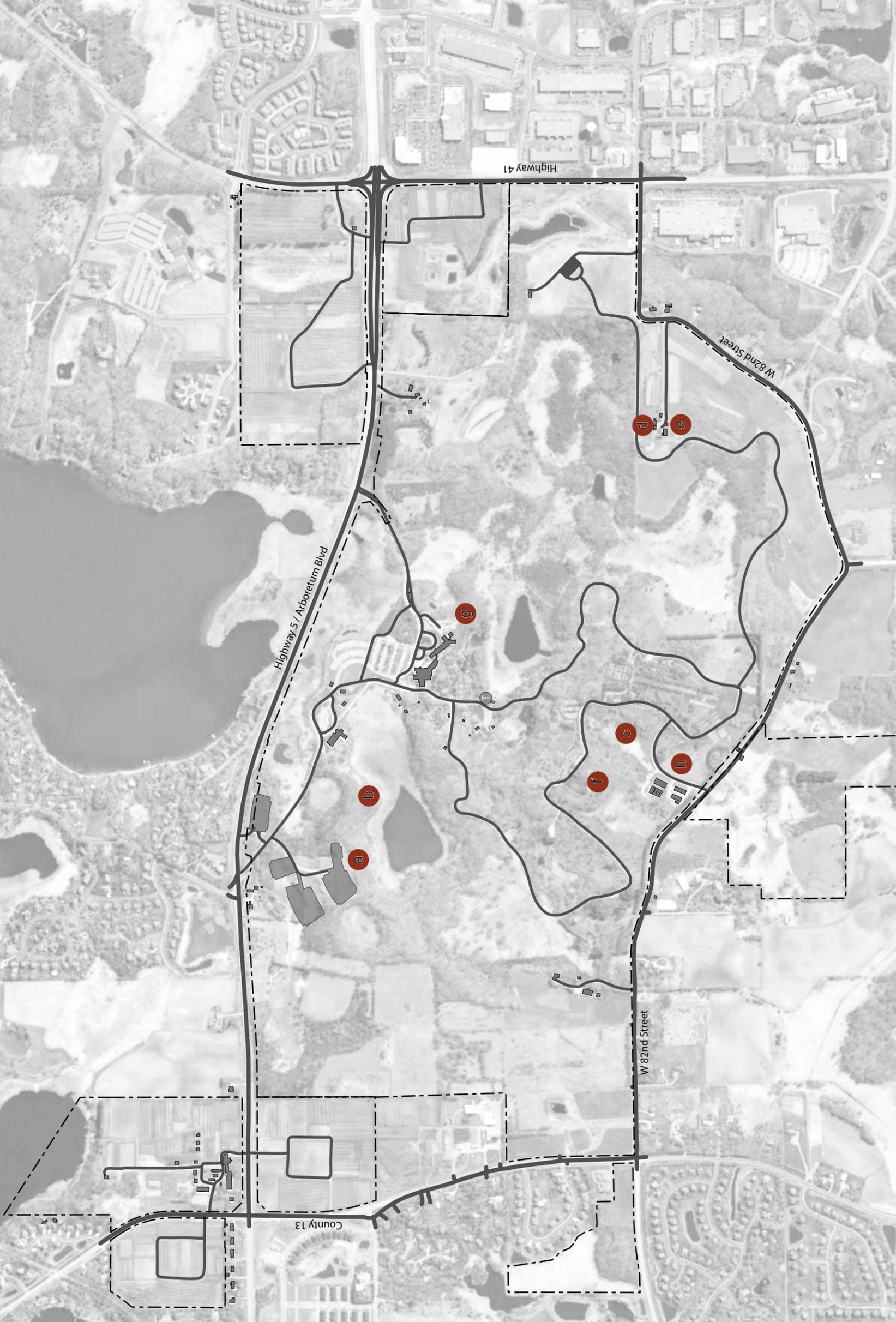


This plan illustrates possible locations within the Arboretum for the development opportunities that are listed below. A number of these opportunities have multiple locations identified. Since a master plan, by definition, is a flexible and evolving document, the final locations will be decided as part of on-going discussions with staff, sponsors and volunteers.

The pages that follow provide narrative descriptions and graphic representations of development opportunities that have been identified by the Minnesota Landscape Arboretum.

Legend

- a** Woodland Performance Center and Gardens, p. 33
- b** Tree Top Canopy Walk, p.37
- c** Chinese Garden, p.41
- d** The Farm Garden, p.45
- e** Bee Discovery Center, p.59
- f** Sculpture Garden, p.63
- g** Meyers-Deats Conservatory Expansion, p.67
- h** Maintenance Area, p.71



Development Opportunities



Woodland Performance Center & Gardens | development opportunity

Woodland Performance Center & Gardens

University of Minnesota Landscape Arboretum

construction and endowment cost | \$3 million



The Woodland Performance Center and Gardens is a flexible outdoor venue within the Arboretum on the edge of Wood Duck Pond. It is designed to host events such as music, theater, education, and ceremonies. The facility would also contain gardens and planted terraces. The Center is slated to accommodate seating for 500 people with approximately 270 parking spaces. Future improvements may include a band shell, additional seating, parking, concessions and rest rooms. The performance center will be ADA accessible.

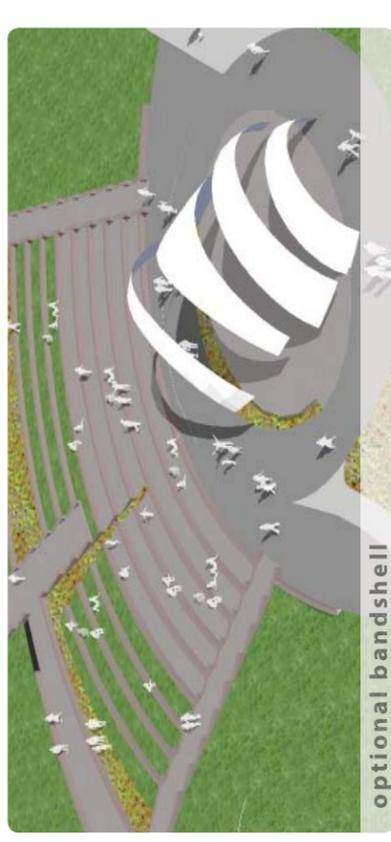
The intent is that the gardens and seating bowl will be nestled into the landscape such that significant, existing trees are saved and storm water management techniques are employed to incorporate sustainable design tenets.

Primary access to the performance center will be from the proposed West Entry. The term entry is used in conjunction with the venue, but access at this controlled intersection is intended to occur only when performance events are planned. Otherwise, it acts primarily as an exit from the east district parking. This new exit for the Arboretum will reduce congestion at the core of the campus.

Site lines, noise reduction, acoustical priorities and sun orientation have been considered in the siting of both public and internal aspects the facility. Pedestrian connections and service to existing roads, walkways and support buildings have been identified that will link the stage area with facilities to the east.



- entry plaza and parking
- overlook wall
- central steps
- terrace gardens
- vehicle access/accessible trail
- pond overflow
- performance stage
- terrace hillside



optional bandshell

Key Features

- Outdoor Amphitheater with seating for 500+
- Stage for nature-based programming, story telling, presentation and demonstrations, picnics, graduation ceremonies, field trip orientations
- Interpretive signage for visiting public

Performance Area

- Terraced seating for 500+

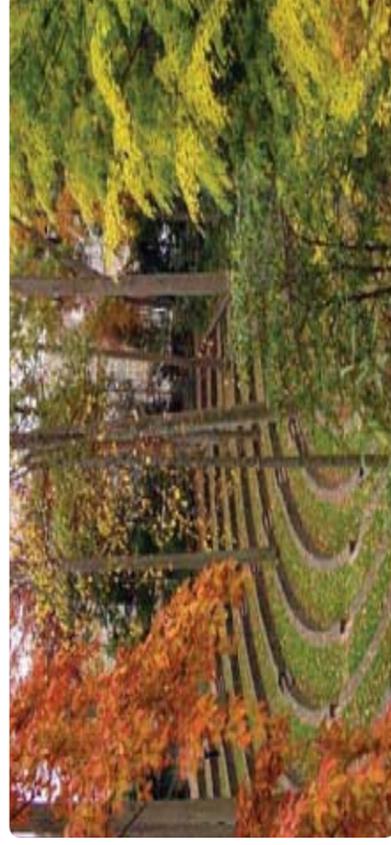
- Stage
- Steps
- Gardens
 - Terraced gardens
 - Entry plaza gardens
- Stage gardens

Education Audiences

- Adult class participants, especially plein-air programming (e.g. painting, photography)
- Orientation for visiting groups
- Summer day camps
- School field trips

Facilities

- Restrooms and pavilion
- Concession & maintenance
- Building, pavilion
- Entry kiosk





Tree Top Canopy Walk | development opportunity

Tree Top Canopy Walk

University of Minnesota Landscape Arboretum

construction and endowment cost | \$8 million



A number of very different sites were considered before the Wood Duck Pond location was selected as the most appropriate site at which the Tree Top Canopy Walk might be located. Factors included views, topography, vegetative cover, vehicular and services access, parking, pedestrian accessibility, utilities and proximity to ancillary structures.

There are layers of animal life in the forest, and they differ from one layer to another. Tree varieties, too, differ from each other and can be identified via their bark, buds, flowers, leaves and shapes. From the ground into the canopy, a walkway will feature non-intrusive spaces for visitors to study these differences and to observe birds and other animals up close. The pathway will be heated, preventing snow and ice build-up, for year-round visiting. Above the treetops, visitors will have a broad overview of the Arboretum's ecosystems: woodlands, marshes, ponds, prairie, collections and gardens. Visitors will learn concepts like seasonal bird migration, study the evolving forest, and learn to identify trees and other woodland plants. Viewing the forest from ground to treetop will give visitors a unique perspective on the Arboretum, its changes throughout the year, and the varied, fascinating ways plants and animals have adapted to living at different elevations.



Key Features

- Habitat-sensitive, non-intrusive bird blinds, listening devices, feeder stations, binocular stations
- Space for camera tripods and easels
- Heated pathway
- Side platforms for groups
- Interpretive signage on history, biomes, plants, animals for all visitors

Education Audiences

- Adult education classes
- Children's camps and field trips
- Birders
- Painters
- Photographers

Facilities

- Canopy walkways
- Elevated steel platforms
- Rope netting play area suspended 50' above ground between trees and platforms
- Birds nest interpretive area
- Interpretive panels
- Story of tree and wildlife in the canopy
- Arboretum overlook projecting out from the canopy with views of the arboretum and regional lake
- Gateway/entry pavilion

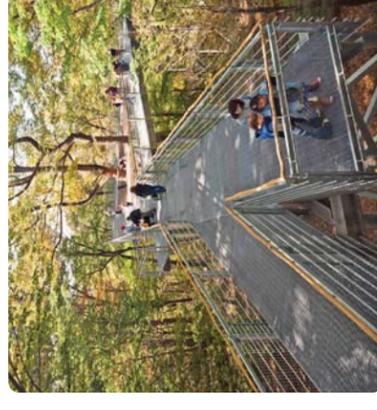
- Pathways and trails linking the arboretum trail network
- Restrooms
- Concessions
- Interpretive opportunities

Sustainable Design

- Sustainable/recycled materials
- Tree protection/engineering
- Lightweight structure
- Prefabricated and moveable structure

Events/Activities

- Education
- Formal and informal learning
- Field trips
- Guided tours
- Recreational opportunities (play areas)
- Photography
- Resting place
- Rental Venue





Chinese Garden | development opportunity

Chinese Garden

University of Minnesota Landscape Arboretum

construction and endowment cost | \$3 million



key plan

The Chinese Garden will be a respite, a refuge, respectful of the balance between man and nature and responsive to the landscape, view, and vistas that will define it. In a Chinese Garden there are many subtleties, but the five primary representative components include architecture, plants, stone, water, and art and literature. A truly successful garden will never give the appearance of having been structured.

The Chinese Garden will attempt to imitate nature in a manner that avoids all strict geometrical layouts that would remind us of man's ordering hand. Rather, characteristics of freedom and irregularity will take precedence.

As one passes through the traditional Chinese entry pavilion, into the courtyard, through a moon gate and into a gallery visitors will experience landscape through twisting pathways leading to a Reception Pavilion. Guests to the Chinese Garden will encounter a journey into a culture most non-Asians can only imagine.

The Chinese Garden interprets the transition from the outside world to a tranquil and harmonious environment. The garden becomes a sequence of sensory qualities as we move from veranda to walking gallery to pavilion to courtyards. The aspect of space based upon solidity and voidness or Yin/ Yang.

There is an elegance and simplicity, a subtlety as we celebrate our four seasons, experience the integration of site and structure, appreciate intimate views and long borrowed vistas, contemplate art and enjoy the serenity of the central lake with its sacred rocks.



Educational Programming

- Opportunities to learn about Chinese approaches to art, gardening, medicine (with many healing plants), cooking, literature, and other nature-inspired cultural issues
- Interpretive signage for visiting public
- Opportunities for children to learn about the elements of a traditional Chinese garden and what they signify: architecture, plants, stone, water, and the arts and literature
- Opportunities for art-education programming in collaboration with the Minneapolis Institute of Arts and its Chinese collections curator

Education Audiences

- Adult/youth art education class participants
- Art practitioners, students and patrons
- Children's field trips

Structures

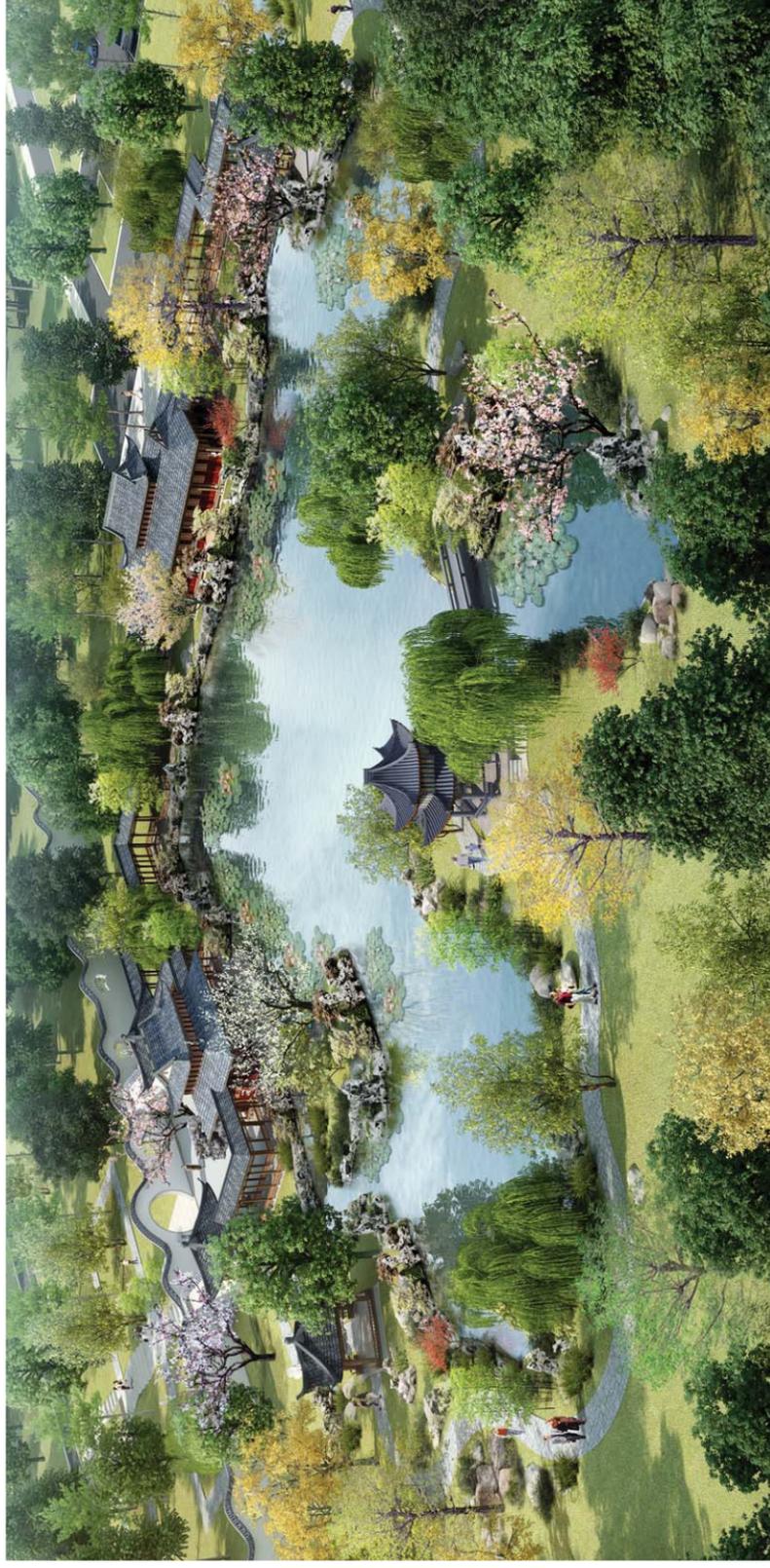
- Reception pavilion
- Gateways structure
- Covered walkways
- Pavilions
- Teahouse
- Food service
- Scholars house
- Garden wall
- Bridges

Landscape

- Trees, shrubs, and perennials
- Sculptural Rock
- Art/Sculpture
- Stream
- Waterfall
- Decorative paving
- Courtyards
- Fish pond
- Lake
- Stone paths
- Gravel paths
- Parking, concessions and restroom facilities

Events

- Traditional ceremonies
- Meetings
- Lectures, seminars & educational sessions
- Guided walks/tours
- Chinese gardening classes
- Weddings/receptions
- School trips
- Cooking and writing classes
- Fund raising events
- Seasonal celebrations



The Farm Garden | development opportunity

The Farm Garden

University of Minnesota Landscape Arboretum

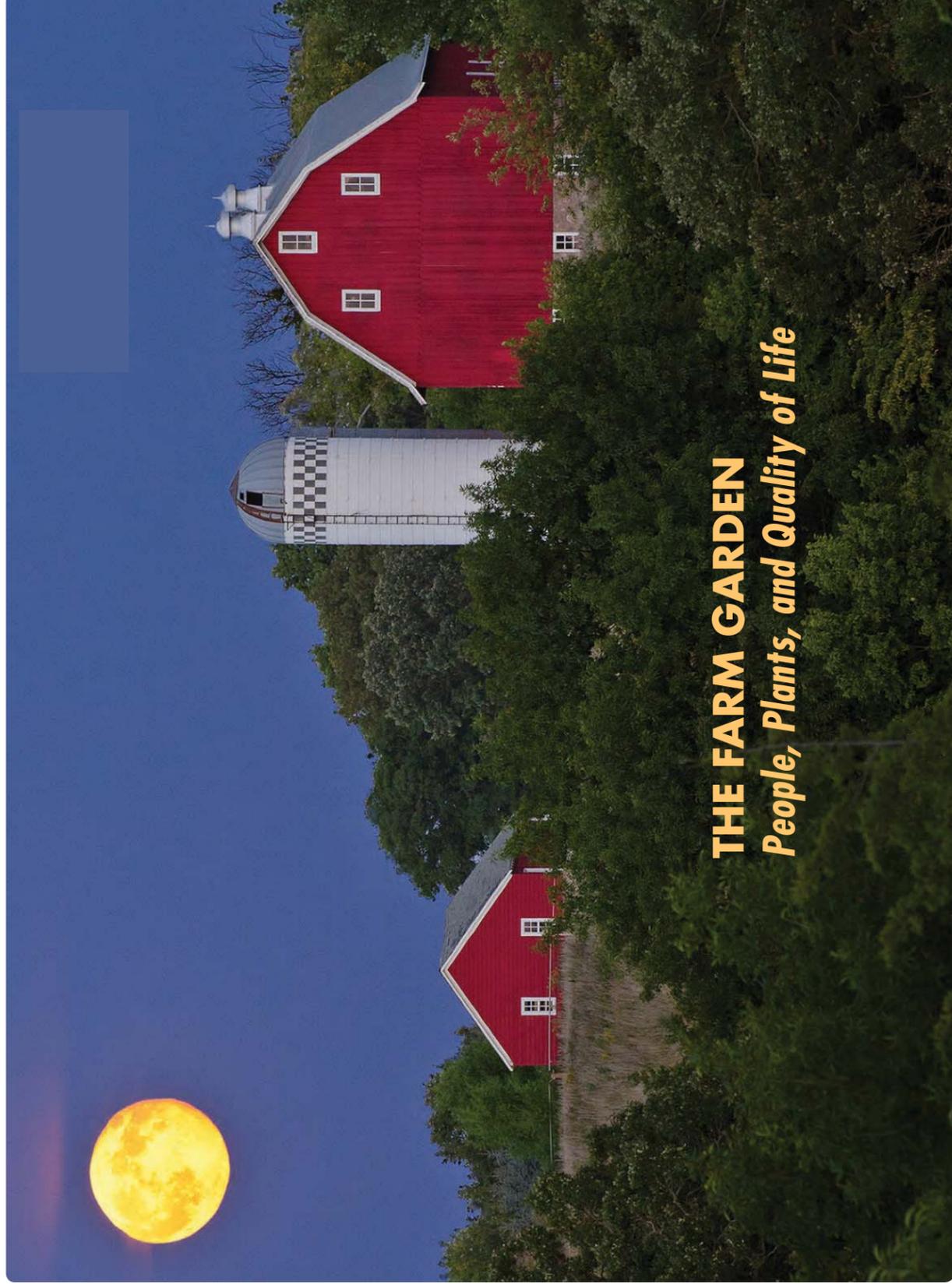
construction and endowment cost | \$8 million



The Red Barn represents an important component of the rural Minnesota homestead and is an iconic structure on the University of Minnesota Arboretum's property. It can become a 21st century hub around which future interactive exhibits and experiential opportunities occur.

It is imagined that this updated existing facility and new eco-friendly facilities will demonstrate the latest in green building technology, sustainable landscaping and horticulture, modern farming techniques and interactive gardens showcasing residential and urban food production. As a venue, the traditional farmstead can become a Suburban Ecology Center with displays and exhibits for the 21st century.

Teaching classrooms, inside and out, conference facilities, rest rooms and concessions can make this a vibrant and freestanding facility able to be used year round as a jumping off point for visitors, school groups and tours. An interpretive kiosk at the top of the hill near the parking area and entrance will provide an overview of the mission of The Red Barn as well as showcase current events.



THE FARM GARDEN
People, Plants, and Quality of Life

Facilities

- A living farm, a sustainable agricultural center, a retail nursery, and a multi-functional/rental facility. Parking, concessions, and restrooms will be needed at this site
- Barn Store
 - Fresh produce
 - Honey and wax products
 - Flowers and flower arrangements
 - Gifts, books and souvenirs
 - Gardening equipment and tools
 - Sandwiches, salads, snacks and beverages
 - Restrooms
- Meeting space, event space, outdoor classroom, adventure playground
- Farm house
 - Ecological principles of sustainable living
 - Alternative power sources, solar, wind, geothermal
 - Green building materials
 - Residential composting
 - Water conservation
 - Recycling
 - Water treatment
 - Free range chickens
 - Honey production

Bee Discovery Center

Nature based therapy

Parking/Access and Infrastructure

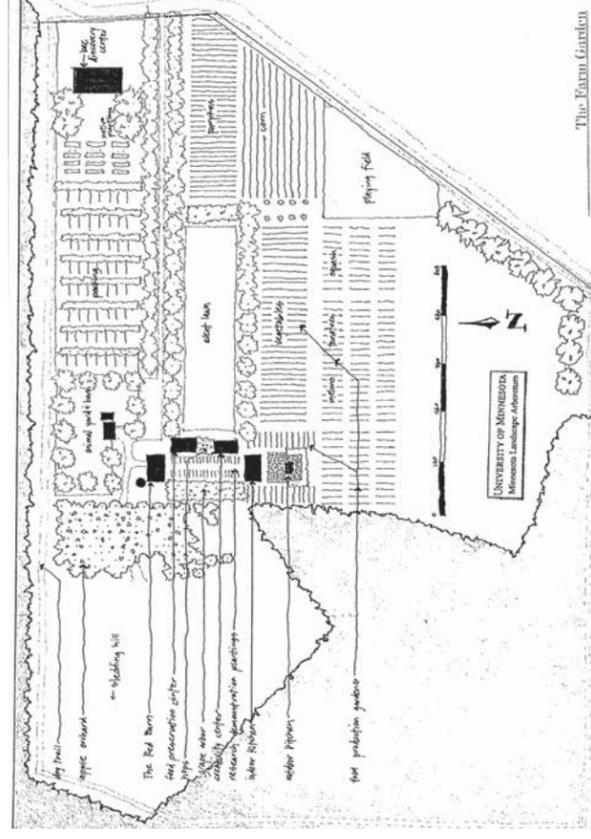
- 100 space minimum capacity

Demonstration Gardens

- Vegetables and fruit crops suitable for residential and urban gardening
- Perennials and annuals for cutting and display

Events

- Planting and harvesting crops
- Seasonal holidays and celebrations
- Educational sessions
- School field trips
- Corporate events, team building
- Cooking demonstrations and classes
- Weddings and receptions
- Gardens and facility tours
- Educational sessions on gardening



The Farm Garden

University of Minnesota Landscape Arboretum

The Arboretum's Farm Garden project will realize a vision, long dreamed of, to put all the Arboretum elements together into a unique facility: research station, education programs, seasonal beauty, horticultural training, foods for good health, animal husbandry, creative opportunities, and a wide variety of nature-based therapies. In addition to programming components for specific audiences, all features will include interpretive signage for the visiting public.

Key Features

- Research demonstration plantings
- Annual and perennial food production gardens & demonstration areas, with emerging plant production techniques
- Indoor-outdoor kitchen teaching facility
- Food preservation center
- Animal barn for urban/suburban animal husbandry and nature-based therapy
- Creativity space for art and interpretation
- Bee center – apiary with pollinator gardens
- Dog trail
- Staff space for maintenance and research

THE FARM GARDEN | people, plants and quality of life



RESEARCH DEMONSTRATION PLANTINGS | apples, grapes, prunes and small fruits

THE UNIVERSITY OF MINNESOTA Horticultural Research Station at the Arboretum has introduced many well-known fruit-bearing plants for Minnesota. The farm garden will showcase a living exhibit – a “Hall of Fame” for these plants. From doctoral students and elementary students to casual visitors, everyone will have the chance to watch food growing through all seasons of the life cycle, gain new skills in food production techniques, enjoy samplings of fruit as each cultivar ripens, and understand more deeply the connection between plants, place, and ourselves.

Each grouping of fruit-bearing plant will have interpretive signage that includes yield per tree, diseases and insects, spacing, hardiness, and vigor. The site will be easy to access on foot from a classroom and include space to gather around the plants for hands-on instruction.

Key Features

A four-seasons, living laboratory of fruit producing plants, to see in one visit, at one place. Plant collections and interpretive signage demonstrate locally grown-and-harvested concept.

Education Audiences

- Adult students, all visitors



FOOD PRODUCTION GARDEN | best growing practices and demonstration area

THIS STATE-OF-THE ART GARDEN will integrate educational and horticultural programming into a public demonstration site, giving Arboretum gardening staff the opportunity to demonstrate their considerable skills and the most up-to-date practices for growing food in a small, local setting.

Participants in gardener-apprentice programs will have the chance to work side by side with staff and learn to mix soil, water, wash pots, harvest, process, care for plants, fix lunch from the garden, take produce home. This garden will also enable nature based therapeutics staff to offer similar hands-on programs to various client groups seeking therapeutic and vocational rehabilitation.

This garden will be large enough to plant and harvest significant quantities of produce, teach a wide range of planting methods, and cater to specific interests like growing hops and brewing beer. Numerous social service agencies have expressed interest in partnering with the Arboretum on this garden.

Key Features

- Demonstrates best practices to grow food plants at home/community/school/business; seed-saving as history
- Best plants to grow in Minnesota

Education Audiences

- Nature-based therapy programs
- Work-rehab participants
- Gardener apprentices
- All visitors



ONE DOESN'T NEED a large yard to grow food. Many new state-of-the-art devices exist to help people grow food plants in all manner of small spaces. Vegetables and fruits alike can be grown in urban settings so that neighbors and passers-by don't even notice the utilitarian nature of the plantings. Small plots, pots, walls and balconies can be beautiful and well designed as well as functional.

This section of the food production garden will feature the latest in vertical walls, moveable planters, pop-up gardens, edible fencing, grow-bags and the like and demonstration best place and practices for using them at home or in a community setting. Small-space, season-extending, high-tunnel models will also be used and displayed.

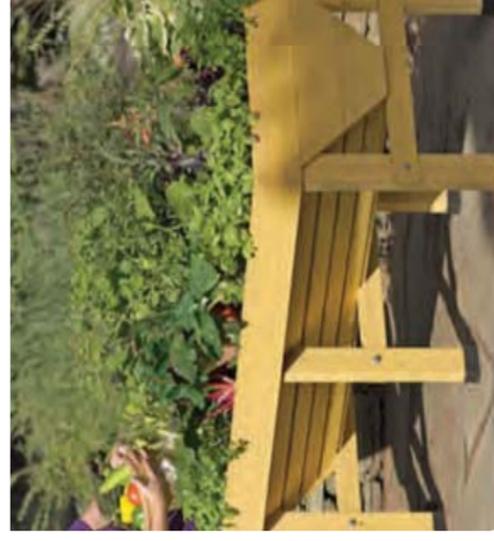
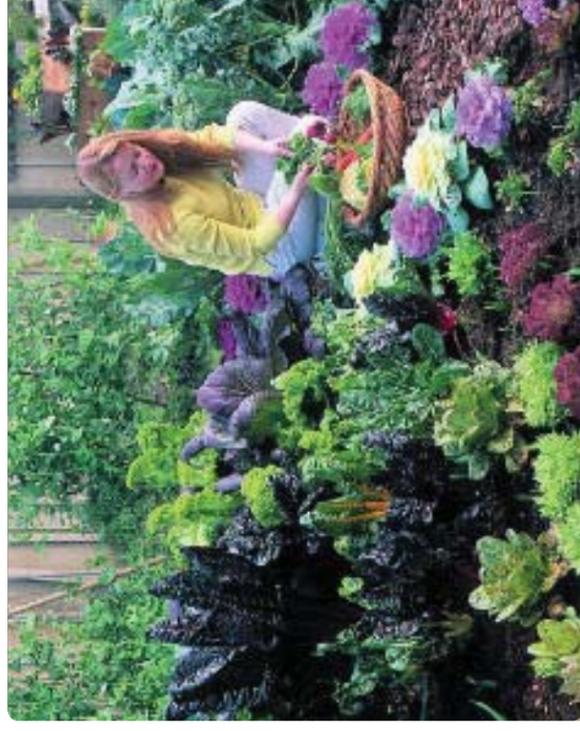
Key Features

- Vertical walls
- Moveable planters
- Pop-up gardens
- Edible fences
- Gro-bags and the like
- Interpretive signage

Education Audiences

- Horticulture and custom classes
- All visitors

FOOD PRODUCTION AREAS | state of the art planting techniques



THE NEW INDOOR-OUTDOOR teaching kitchen will give Arboretum staff the ability to grow, prepare, serve and preserve food in the same location on Arboretum grounds. Targeted for a site near the beloved old Red Barn, staff will be able to harvest food and prepare it for visitors the same day. You just can't get it fresher than that!

From cooking classes to corporate team-building events, guests will have the opportunity to make wine, prepare a harvest meal and learn the science behind the healthful benefits of plants. Arboretum staff can offer samples of fresh, locally grown food at a tomato festival, corn feed, grape stomp or fall beer fest.

The kitchen will be accessible to cars, wheelchairs, pedestrians and schoolbuses. It will operate year round, seat 50 adults easily, and offer clear views of the demonstration gardens. The indoor and outdoor facilities will make it possible to bake, braise or barbecue the freshest produce according to the season.

Key Features

- Commercial-grade stoves and dishwashers
- Canning equipment
- Composting system
- Dining/demonstration/teaching/outdoor areas cooking

Education Audiences

- Adult class participants
- Corporate groups
- Visitors to events
- Beekeepers

INDOOR | OUTDOOR TEACHING KITCHEN FACILITY



AN INCUBATOR KITCHEN is a licensed, commercial grade facility that individuals and groups can rent to develop a food product that will meet official food safety standards. Small-scale entrepreneurs can gain access to spaces and equipment not otherwise available; local bee keepers in particular will benefit from the honey extractor. Families will be able to celebrate a commemorative event by preserving generous quantities of fresh fruits or vegetables, facilitated by an expert.

In addition, the Arboretum will use this facility to develop its own honey retail sales operation, similar to the existing maple syrup and fruit preserves production facility. This operation offers educational programs in addition to sales of Arboretum-grown and -produced food products. Further, participants in the Urban Garden Youth Employment program can develop new food product ideas in a dedicated facility that is connected to gardens and classrooms.

Key Features

- Access to the commercial kitchen
- Food preservation area with honey extractor
- Conveyor belt for food production

Education Audiences

- Small-scale and start-up food producers: caterers, growers, manufacturers
- CityFresh program participants
- Honeybee keepers
- Adult class participants

INCUBATOR KITCHEN | serving our community



THERAPISTS AROUND THE WORLD are observing profound benefits for patients who interact with animals in a guided setting – including the Arboretum’s Nature-Based Therapeutics (NBT) staff. Taking advantage of our expansive acreage, our NBT staff plan to incorporate animals as “co-therapists” into therapeutic programming at the proposed farm garden at the Arboretum. The animal barn will be in close proximity to the gardens and kitchen, where it makes sense to include it – horses, chickens, dogs and cats belong on a farm! These animals will, of course, be highly trained to interact with people, especially with the sensitive individuals and groups who are clients of the Arboretum’s NBT programs.

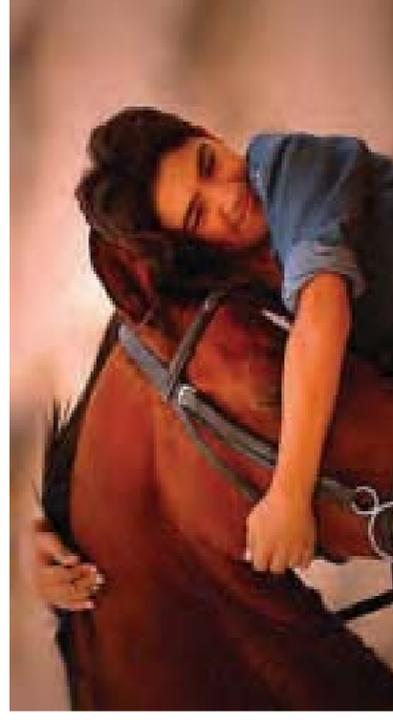
Key Features

Animal barn to house an assortment of horses, chickens, rabbits, dogs and cats

Education Audiences

- 1) Nature-Based Therapeutics for patient groups with a wide range of issues, including:
 - Veterans and others with PTSD
 - Parkinson’s and other disabilities
 - Mental health issues
 - Occupational and vocational rehabilitation
- 2) Professionals seeking training in NBT

THE ANIMAL BARN | nature-based therapeutics (NBT)



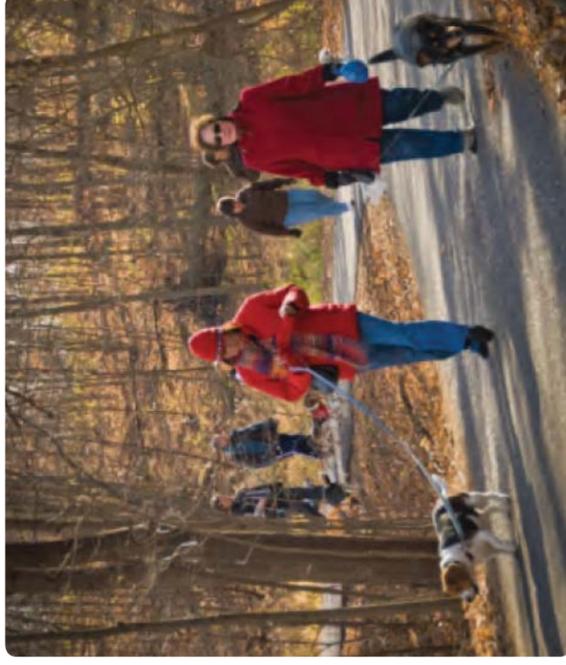
DOG OWNERS REPORT that concern for their animal's health gets them out for at least one vigorous walk a day – in other words, the human-animal bond promotes healthful exercise for all concerned! This designated trail addresses a long hoped-for desire on the part of members who are dog owners.

Key Features

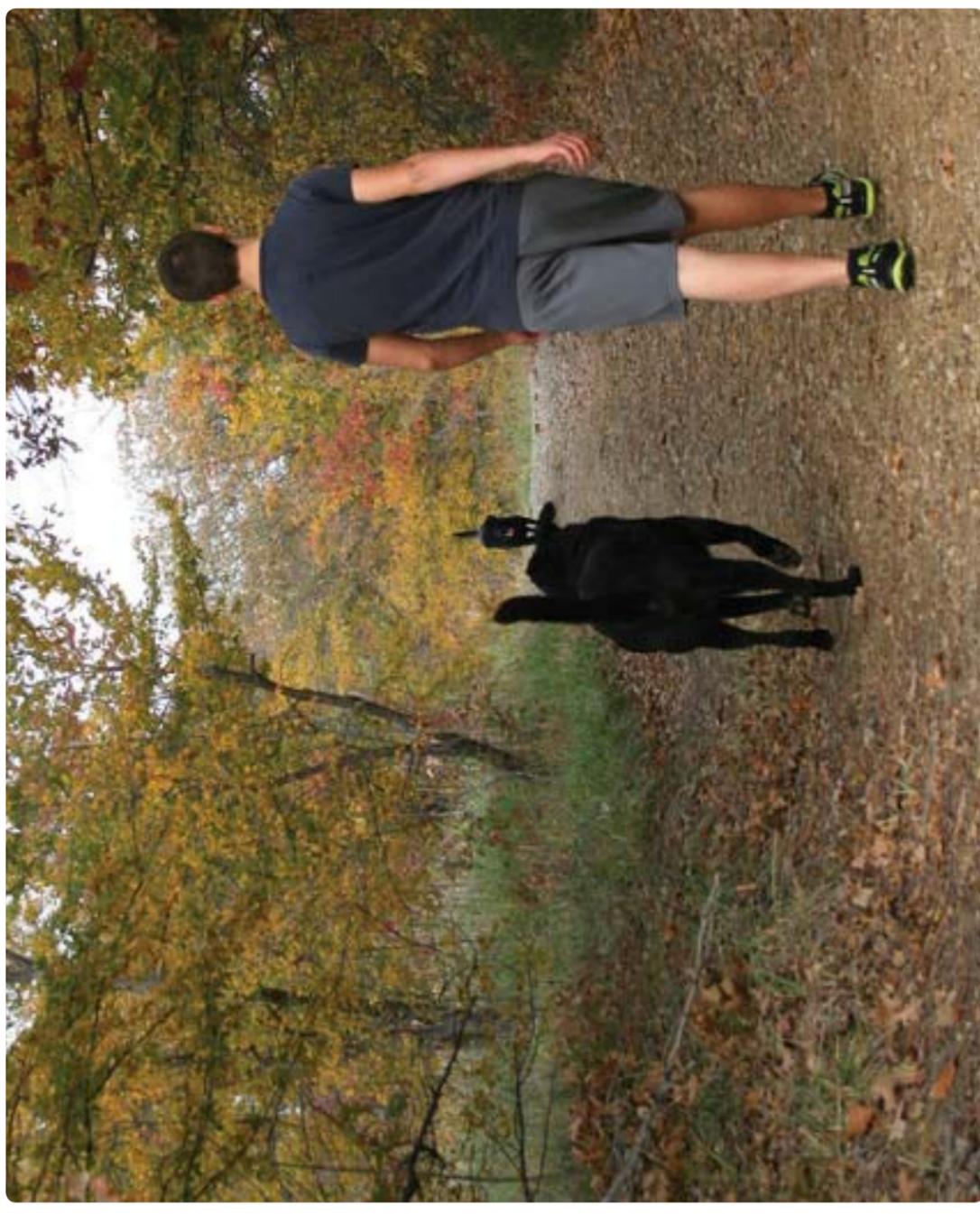
- For-members-only trail will require a canine membership in the Arboretum

Audience

- Member visitors with a member dog



DOG TRAIL | canine partners in nature-based therapeutics



The Farm Garden

University of Minnesota Landscape Arboretum

THE ARBORETUM OFFERS a near-perfect setting for anyone interested in creative activity inspired by nature. The Arboretum is not an art center, but it offers a natural attraction to anyone who seeks inspiration and instruction. Further, creative inspiration is often a pathway to advocacy and conservation. The Arboretum has excellent exhibit spaces, but lacks dedicated creative space for adults. In the new facility, photographers, painters, potters, papermakers, writers, and anyone engaged in occupational or vocational therapy will have a dedicated working space for learning and creating, with a water source for a range of media, and ready in-and-out access to gardens and trails through the grounds. The creativity space will connect to the kitchen-demonstration area and make it easier for Nature Based Therapeutics clients and adult education participants – including a large group of amateur photographers – to take classes and easily complete their creative projects.

Key Features

- Studio space to accommodate 30 adults at once
- Expansive, durable work surfaces
- Easy access to a water source and to gardens and grounds

Education Audiences

- Nature-Based Therapeutics clients and contract groups
- Participants in adult education programs

THE CREATIVITY AREA | nature-based inspiration and expression



THE FARM GARDEN will not only offer a new site for horticultural research and educational opportunities, but it will also be a state-of-the-art green building that will incorporate the latest energy-conservation, environmentally friendly technology. To develop this building, we will look to the Phipps Conservatory Center for Sustainable Landscapes as a model. In addition to its programming components, our new green building will include:

- Reception area
- Offices for NBT, Adult Ed, beekeepers, head gardener
- Communal work space for up to 6 staff
- Conference room for 10 people
- First aid-respite-adult-care room
- A desk and room for cleaning supplies and storage
- 200 sq.-ft. apartment for overnight animal care,

- instructor-in-residence, security for special vents
- Work stations for researchers
- Dedicated maintenance building for larger storage and maintenance needs.

Key Features

- Indoor-outdoor kitchen
- Incubator kitchen
- Bee center
- Classrooms
- Creativity space
- Interpretive center
- Research area
- Maintenance facilities

Essential Components of the New Green Farm Garden Project Building

- *Natural day lighting*
- *Natural ventilation*
- *Passive solar energy*
- *Geothermal heating and cooling*
- *Green roof*
- *Sustainable building materials*
- *Building management system*
- *Permeable paving*
- *Sustainable landscaping*
- *Rain gardens and bioswales*
- *Rainwater harvesting*
- *Integrative design process*

GREEN BUILDING FOR THE FARM GARDEN PROJECT maintenance, staff, research and learning spaces



The background of the page is a grayscale photograph of a honeycomb. The hexagonal cells are filled with a light-colored substance, likely honey or wax, and are arranged in a regular, repeating pattern. Several bees are visible, some on the surface of the honeycomb and others partially obscured by the cells. The overall tone is muted and naturalistic.

Bee Discovery Center | development opportunity

Bee Discovery Center

University of Minnesota Landscape Arboretum

construction and endowment cost | \$2 million



The Bee Discovery Center at the Minnesota Landscape Arboretum will be a unique bee exploration experience. It will function like a bee hive, efficiently combining research and public educational space to showcase the importance of bees to agriculture and to human nutrition, health and food safety.

Visitors will be invited into a unique destination, the Discovery Center, which will have great potential for capacity building, increasing the university's reputation as a leader in environmental and agricultural research and education. This will be an exciting new public attraction, providing a portal to explore the tangible benefits of university research.

The Discovery area will include informative exhibits on current research projects. The range of exhibit topics will include:

- Human health benefits derived from bees and bee products (honey, propolis, venom)
- Biology of the fascinating social behaviors of bees
- Ecosystem services provided by bees as key pollinators of our fruits, vegetables and flowers
- Cultural importance of bees throughout the world and history
- Bees as a portal to sustainable stewardship of our environment

In addition, the Discovery area will be a place for the public to safely experience bees and beekeeping and to appreciate the importance of bee welfare. The center will contain a large viewing window where school and public tours can view a beekeeper handling colonies in a garden setting. Visitors will view live, seasonal demonstrations of how honey is harvested and extracted in a food grade facility.

The Center surroundings will be artfully landscaped with bee-pollinated trees, shrubs and gardens. Here the public can experience floral landscapes from the perspective of a pollinator and appreciate how pollinators, in turn, shape our environment. Landscape designs will teach how everyone can help to improve habitat and promote bee health and diversity.

The new Bee Discovery Center will be a unique bee centered experience, connecting research with a public educational space.



Key Features

- Apiary
- Pollinator gardens
- Interpretive center
- Classroom for 40
- Research area

Education Audiences

- Bee keepers
- Honey-making entrepreneurs
- Food producers
- Horticulture class participants
- Visitors interested in the role of bees in horticulture and gardening

Facilities

- Plant breeding exhibits/research plots
- Bee/honey research and display
- Shelters/teaching pavilions
- Trails and circulation system
- Interpretive opportunities
- Study stations
- Fruit trees
- Butterflies
- Birds

Flowers

- Rest rooms
- Parking and service
- Hummingbirds

Events

- University Classes
- School Field Trips
- Education Seminars
- Guided Tours
- Photography
- Nature Watching
- Research
- Classes and Seminars
- Harvesting





Sculpture Garden | development opportunity

Sculpture Garden

University of Minnesota Landscape Arboretum

construction and endowment cost | \$4 million (fully funded)



Too often art is imagined as a piece unto itself, when the reality is that the environment in which it is situated often plays a significant role in how a particular piece is perceived. It is not enough to simply place a piece of sculpture into the landscape, but rather one must take into account the artist's thought process in its creation as well as how it was imagined to be displayed.

Does it require a contained space? Should there be vistas beyond it? Does it want to have solid backdrop? Does it want to be viewed through a thicket of woods or be the focal point within a grove of trees? Does it want to sit in a meadow or woodland? Does it deserve to become a point of focus or does it want to be part of a grouping?

A garden designed specifically to house and showcase a collection of art deserves special care and attention from the manner in which it is sited and exhibited to the ongoing need to maintain a piece properly.

The design of a sculpture garden in itself, deserves to be thought of as a work of art, which requires sensitivity to landscape, engineering, orientation, views, lighting, spatial organization and attention to detail.

Open Spring 2013



Educational Programming

- Media and performance programs highlighting relationship of nature and art
- Sculpture "crawl"
- Plein-air painting and drawing classes
- Photography classes
- Curator- and/or docent-led tours of
- Artist visit lectures/presentations on the art and their relationship to nature
- Demonstrations of sculpture technique
- Sculpture-inspired classes in creative and meditative movement and yoga
- Interpretive signage for visiting public

Education Audiences

- Adult and Youth art education program participants
- Corporate and family custom groups
- University of Minnesota community (students, faculty, staff)

Facilities

- Permanent art collections
- Open lawns
- Flower gardens
- Pathway for circulation and viewing
- Seating

Parking/Access (vehicular, service, emergency) and Infrastructure.

Events

- Tours, guided and virtual
- Corporate and private rentals
- Weddings/receptions
- Artist in residence
- Lectures & classes
- Parties/cocktail hours/wine tasting
- Photography
- Fund raising events
- Workshops
- Music





Meyers - Deats Conservatory | development opportunity

Meyers-Deats Conservatory Expansion

University of Minnesota Landscape Arboretum

construction and endowment cost | \$5 million



The Meyers-Deats Conservatory inspires, facilitates, promotes and engages visitors with an understanding and appreciation of plants, their diversity and the pivotal role they serve in the environments where they are found. The expansion of the Meyers-Deats Conservatory will revitalize the use of the adjacent Snyder Building.

A new Conservatory would be built and would offer a desert climate, alpine climate and tropical rainforest climate. The expanded conservatory would offer year-round attractions and would be used for education programs, weddings and private rentals.

The Conservatory and its collections within would serve as an interactive and multi-sensory museum containing a large diversity of live specimens. The plants in the Conservatory would be displayed in a well designed, visually pleasing manner to promote learning, interest in plants, and awareness of the need for conservation of the world's rare and endangered plant species. Living plant collections provide opportunities for plant biology teaching and research.







Maintenance Facility | development opportunity

Maintenance Facility

University of Minnesota Landscape Arboretum

construction and endowment cost | \$4 million



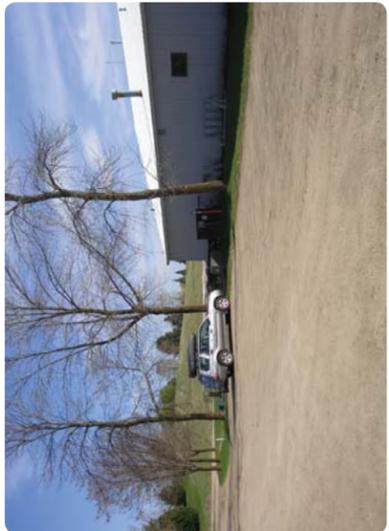
The Landscape Arboretum maintenance and plant growth facilities have not expanded to match the growth in areas maintained, number of staff and expanded programs. Much valuable equipment is stored outside and staff offices, lunchroom and meeting space are sub-standard, crowded and deficient in almost every respect.

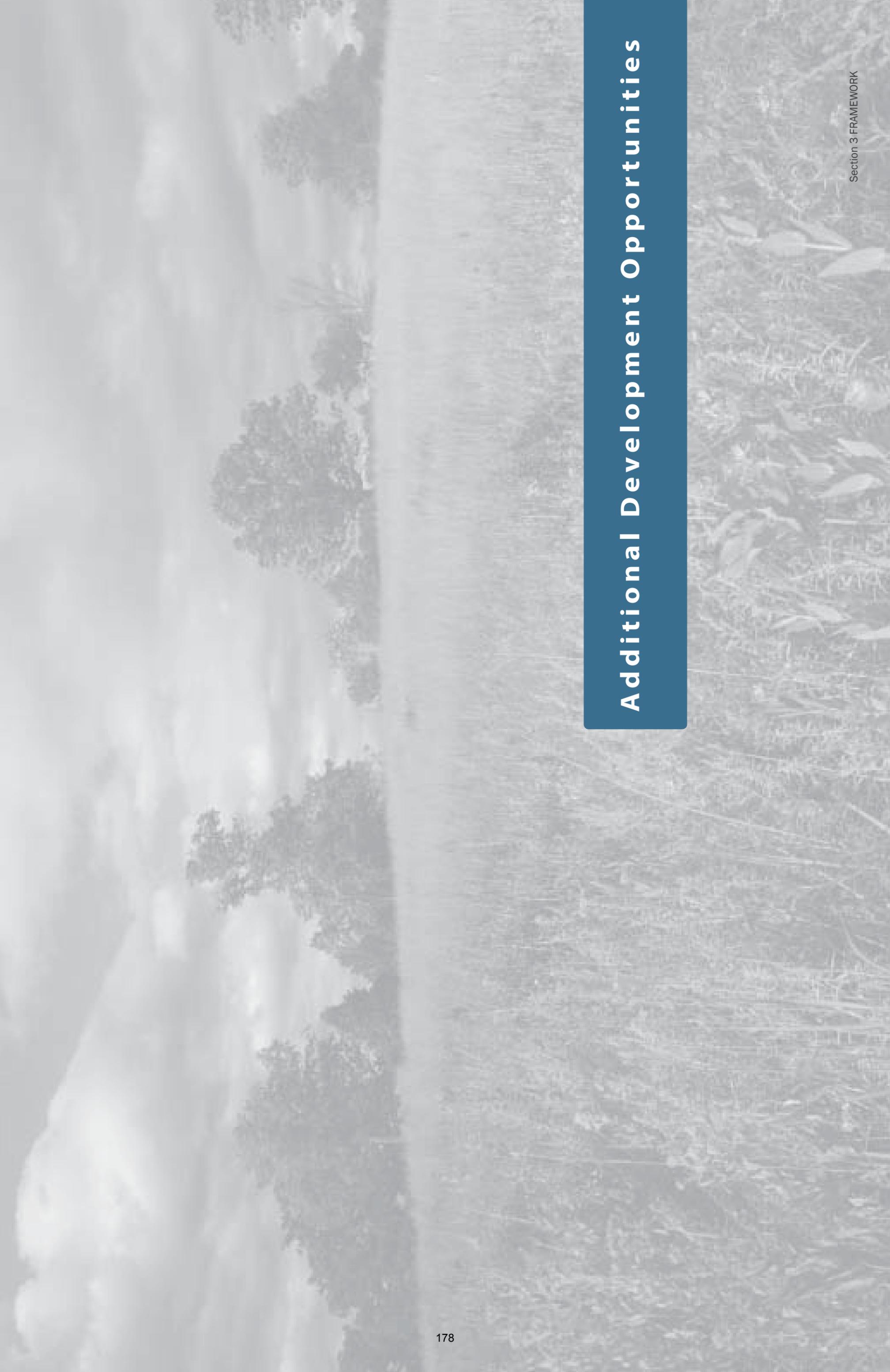
Infrastructure upgrades are necessary to support staff, equipment and activities, including office space, greenhouses, storage and parking.

A new greenhouse is needed to grow plants that are part of the Center for Plant Conservation, new Arboretum woody plant breeding program, and plants for the newly designated National Pine and Ornamental Grass Collections.

Two unheated metal farm buildings are needed to store equipment and a modern office/lunchroom building is needed to house garden and plant collection staff.







Additional Development Opportunities

Snyder Building Update

University of Minnesota Landscape Arboretum

construction and endowment cost | \$4 million

The iconic Snyder Building is a valuable and visible building at the Landscape Arboretum. With Arboretum annual attendance of over 340,000 architectural, mechanical and life safety improvements are essential. The Snyder Building houses the U of M Andersen Horticultural Library Special Collection and additional security and environmental temperature and humidity controls are essential. This project will complete accessibility improvements by remodeling restrooms and adding an elevator in library; improve security and energy efficiency by replacing windows, upgrading heating and cooling equipment and replacing incandescent lighting; improve safety by connecting to city water and installing fire sprinklers and provide needed office space by renovating the Craft Room. Critical priorities include restrooms, pavers, furniture and office space within the craft room.

Snyder Building Renovation Costs

Restroom remodel for ADA	
Office Space in Craft Room	
Furniture	
IT upgrades in Fireplace Room, Tearoom and Auditorium	
Replace floor coverings and window shades	
Replace Windows	
City Water and Fire Sprinklers	
Lighting and HVAC Upgrades	
Total	\$4,000,000



Garden Structures Rebuild

University of Minnesota Landscape Arboretum

cost | \$1 million

Some of the Arboretum's timber frame buildings and garden structures were designed by famed architect Edwin Lundie and were built in the 1960's. Many other trellises, arbors, fences, decks and water features are over 25 years old. Repairs and renovations will include replacing rotted wood, setting posts above the ground on steel and concrete footings and waterproofing waterfalls and ponds. This is an on-going project that will require regular inspections, scheduled repairs and rebuilding of all types of garden structures.



Garden Structure Renovation Costs

Replace rotted timbers in Wilson Rose Garden trellis	150,000
Replace wood steps and pavement in Home Demonstration Garden	75,000
Repair and replace garden edging	30,000
Rebuild wood deck in Pillsbury Shade Tree Exhibit	50,000
Replace pavement and brick edging in display gardens	245,000
Complete historic reconstruction of Ordway Shelter	25,000
Re-set and repair bluestone terraces	125,000
Waterproof and upgrade water features	200,000
Replace low voltage lighting in gardens and walkways	100,000

Total \$1,000,000



Learning Center Landscape

University of Minnesota Landscape Arboretum

cost | \$500,000

The Learning Center Landscape is a place for visitors to learn about gardening and plant science with hands-on workshops. It also a place where visitors can stroll the learning grounds and enjoy the gardens. The landscape surrounding the Learning Center expands the education workspace of the building, allowing educational and social activities to flow from the indoors to the outdoors, as well as providing a scenic overlook for all types of events. The Arboretum's Learning Center features a "please-touch" greenhouse, weekend family fun programs, children's day camps and adventures, adult gardening school, cooking classes, botanical arts retreats and more.

Expansion plans include the planting of shade trees and a shade shelter on the south side of the building for children to gather out of the hot sun to receive gardening instructions, take a break from the sun and perhaps to cook on a grill.



Sorbus Trail Landscaping

University of Minnesota Landscape Arboretum

cost | \$300,000

The granite steps and accessible paved walk on the Sorbus Hill were installed in 2008 to provide a pleasant walk from the Visitor Center and central display gardens to the Shrub Rose Garden, Maze Garden and other gardens and plant collections along the southern part of the Three Mile Drive. The complete vision for this area includes planting additional mountain ash trees, hundreds of Northern Lights Azaleas and large drifts of spring bulbs. The bulbs and azaleas will provide a spectacular display in spring and the colored fruit on the Mountain Ash will be beautifully displayed against the yellow and orange leaves of the native sugar maples surrounding the hillside.



Circulation Rest Stops Along Three Mile Drive

University of Minnesota Landscape Arboretum

cost | \$300,000

An increasing number of visitors are regular walkers on the Arboretum's pedestrian pathways and the Three Mile Drive. Drinking fountains, benches and sheltered structures are needed at several locations along the furthest reaches of the pathway and road so that water is available on warm days and visitors may extend their explorations of the Arboretum gardens, plant collections and restored native plant communities.

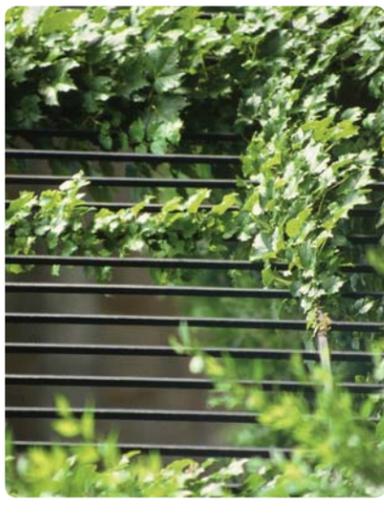


Safety and Security Fencing

University of Minnesota Landscape Arboretum

cost | \$1 million

By 2013 the Arboretum Sculpture Collection will have grown to over 40 works of art with a value of several million dollars. The Arboretum is also seeking sponsors for visiting artistic exhibitions that could include works by Chihuly, Henry Moore or other prominent artists. The population in the surrounding communities is rapidly growing and there are likely to be more unauthorized people entering the Arboretum through parts of the outer perimeter. Valuable research plant material and tools have been stolen and thefts from vehicles have increased over the past several years. A fence is required to improve security and control access to the Arboretum grounds and research areas.



Technology Improvements

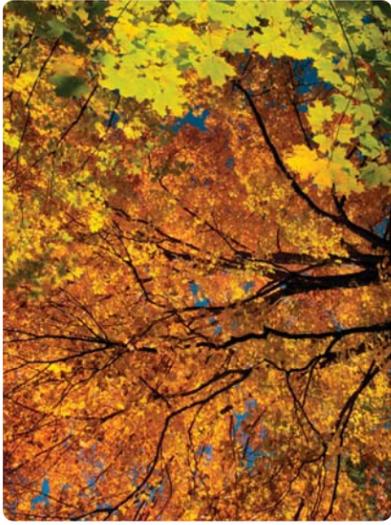
University of Minnesota Landscape Arboretum

cost | \$500,000

Smartphones and tablets are commonly used by many Arboretum visitors and interpretation and wayfinding throughout the Arboretum could be greatly improved by extending the wireless network onto the grounds and providing WiFi access to visitors. Webcams could be installed in areas of high seasonal interest including the Flowering Crabapple, Azalea and Tulip collections and apps are available to provide information on plants and programs throughout the Arboretum. New apps can identify plants from a cell phone photo or link to the University of Minnesota Plants Online website.



University of Minnesota Landscape Arboretum



Implementation

University of Minnesota Landscape Arboretum

About this Section

This section describes the process for achieving the recommendations and opportunities identified in the Circulation and Development Framework.

Topics in this section include the following:

- Administering the Plan
- Phasing
- Cost Summary

Administering the Plan

Project Development and Approvals

The University maintains a disciplined program for making capital investments and managing its capital resources. Capital Planning and Project Management (CPM) manages all capital projects, systemwide and regardless of funding source, to ensure compliance with local, state and federal laws, guidelines and regulations.

Capital projects including roads, parking, facilities, trails, exhibits and gardens will be reviewed in consultation with this Framework as well as the 1998 Master Plan.

Project Funding

Projects and contracts with a value of \$500,000 or greater must have 100 percent of the funds required to complete the project in the appropriate plant fund; or a signed finance agreement with University Budget and Finance.

Funding for projects will be pursued through a forthcoming Minnesota Landscape Arboretum capital campaign. A task force, organized by the Arboretum in late 2012, will perform an initial review of project proposals to be included in the campaign.

The capital campaign Task Force will apply the following criteria in assessing each proposal:

- Advancement of the Landscape Arboretum Mission
- Capacity of the project to increase attendance and revenue
- Project feasibility
- Fit with the existing Arboretum site, facilities and natural areas
- Creation of new opportunities for expanded education and research

Board of Regents

Campus Master Planning Principles

In 1993, the Board of Regents determined that all campuses of the University of Minnesota should have master plans, and adopted four principles to guide the preparation and implementation of those plans. These principles provide further guidance to master planning initiatives at university field stations, research and outreach centers and all other non-campus sites including the Arboretum.

The regents planning principles are as follows:

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

Phasing

The development opportunities and circulation improvements described in this framework are assumed to be near-term activities, projected to be completed within the next five years. Certain key projects are identified as priorities to address the most pressing issues today. These improvements, related to parking and circulation, will allow other development opportunities to proceed by increasing the capacity of the arboretum to manage guests and visitors. The remaining development opportunities are intentionally flexible in order and will be pursued individually as capital funding is made available.

The Arboretum Foundation Board of Trustees voted in December 2011 to make Circulation and Parking Improvements the top priority for a future capital campaign. Visitors need to be able to enter the Arboretum safely and efficiently and find a place to park before they can experience the Arboretum's gardens, grounds, facilities and programs. In addition, proposed new venues including the Woodland Performance Stage and Garden, the Farm Garden and Bee Discovery Center all require access roads, parking and utility infrastructure before they can be developed.

Circulation improvements and projects underway include:

1. East Gateway, Entry Road and Gatehouse
2. Three Mile Drive Rest Stops
3. Bee Discovery Center
4. Maintenance Facilities
5. Snyder Hall Plumbing and Restroom Upgrades.

University of Minnesota Landscape Arboretum

Cost Summary

The following tables identify the costs associated with the development opportunities identified and the costs associated with the development of the circulation master plan. The costs are based on conceptual design and reflect an estimated budget for construction.

The estimates are based on precedent projects of similar scale and programming.

Circulation and Parking	
East Gateway	TOTAL
	\$375,000
Main Parking Lot Expansion	TOTAL
	\$450,000
Rain Garden Parking Lot Expansion	TOTAL
	\$525,000
East West Linkage Road	TOTAL
	\$500,000
West Gate Parking	TOTAL
	\$875,000
Pedestrian / Bike Trail	TOTAL
	\$250,000
Eastern Drive	TOTAL
	\$850,000
Circulation and Parking Total	
\$3,825,000	

Development Opportunities	
Woodland Performance Center and Gardens	TOTAL
	\$3,000,000
Tree Top Canopy Walk	TOTAL
	\$8,000,000
Chinese Garden	TOTAL
	\$3,000,000
Red Barn and Gardens	TOTAL
	\$8,000,000
Sculpture Garden	TOTAL
	\$4,000,000
Meyers-Deats Conservatory Expansion	TOTAL
	\$5,000,000
Bee Discovery and Pollinator Center	TOTAL
	\$2,000,000
Maintenance Facility	TOTAL
	\$4,000,000
Snyder Building Update	TOTAL
	\$4,000,000
Garden Structures Rebuild	TOTAL
	\$1,000,000
Learning Center Landscaping	TOTAL
	\$500,000
Sorbus Trail Landscaping	TOTAL
	\$300,000
Circulation Rest Stops Along 3 Mile Drive	TOTAL
	\$300,000
Safety and Security Fencing	TOTAL
	\$1,000,000
Technology Improvements	TOTAL
	\$500,000
Romeo and Juliet Sculpture	TOTAL
	\$250,000
Development Opportunities Total	
\$44,850,000	

Costs include construction and endowment

Total Estimated Costs: \$48,675,000

Acknowledgements

University of Minnesota Landscape Arboretum

We would like to gratefully acknowledge the assistance of the following people in the preparation of this document, prepared for the University of Minnesota Landscape Arboretum.

Master Plan Steering Committee

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**UNIVERSITY OF MINNESOTA
BOARD OF REGENTS**

Facilities and Operations Committee

June 13, 2013

Agenda Item: Information Items

review review/action action discussion

Presenters: Vice President Pamela Wheelock

Purpose:

policy background/context oversight strategic positioning

To provide the Board of Regents information regarding the following items:

- Landcare Salt and Sand Storage Building, Twin Cities Campus
- Kolthoff Hall Pedestrian Deck Removal, Twin Cities Campus
- Capital Planning and Project Management Semi-Annual Project Report

Outline of Key Points/Policy Issues:

***Landcare Sand and Salt Storage Building, Twin Cities Campus
Kolthoff Pedestrian Deck Removal, Twin Cities Campus***

In accordance with Board of Regents Policy: Reservation and Delegation of Authority, Article 1, Section VIII, Subdivision 9, "The Board reserves to itself authority to approve project schematic plans for (a) interior renovations with a value greater than \$5,000,000; (b) projects with a value greater than \$2,000,000 that have an exterior visual impact; (c) projects that vary from adopted campus master plans or that have a significant visual impact; and (d) projects noted during the annual review of the capital budget." Neither of these projects rises to the standard of this policy. However, because of their locations, they are presented to the Committee as information items.

Capital Planning and Project Management Semi-Annual Project Report

In accordance with the Board of Regents calendar, the Capital Planning and Project Management Semi-Annual Project Report is presented in the summer and in the winter to provide performance information prior to the consideration of the Annual Capital Improvement Budget and the Six-Year Capital Plan. This report includes projects in process that have been approved in the Capital Improvement Budget and for which the Regents are required to approve the Schematic Plans. The report highlights progress toward and challenges encountered in delivering the project scope of work within the approved budget and schedule.

Background Information:

Information items are intended to provide the Board of Regents with information needed for them to provide their oversight responsibilities.

Salt and Sand Storage Facility

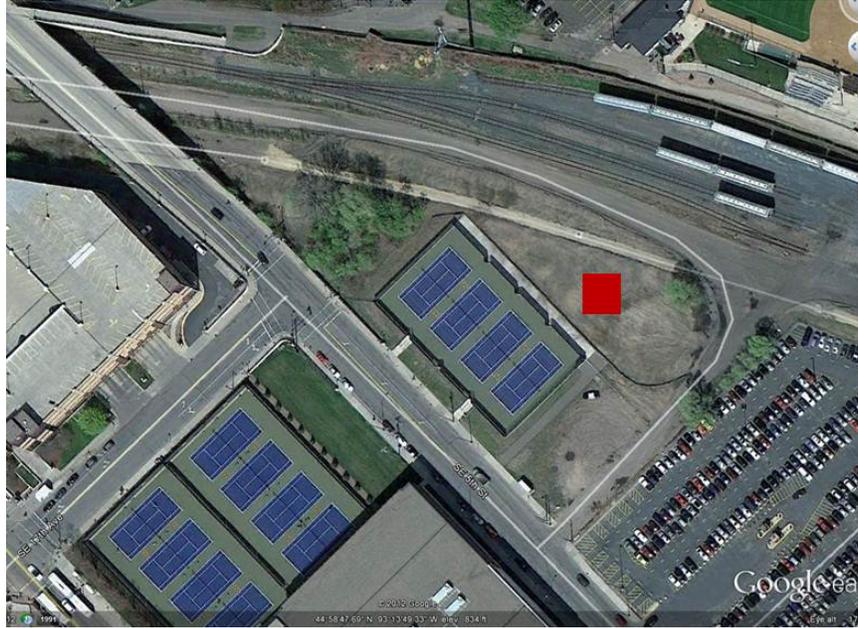
PROJECT INFORMATION

The proposed structure will accommodate salt and sand storage on the Minneapolis campus. This structure is needed because the current location for salt and sand storage is being displaced as the Combined Heat and Power plant remediation gets underway in summer 2013. The chosen location is at the edge of the Athletics District, adjacent to outdoor tennis courts and the currently under construction Minneapolis U of M Bike trail (see graphic next page).

The facility is proposed to be constructed of precast concrete panels, a sloped 'shed' roof, and access doors for vehicles to load and unload material. The structure is not insulated or heated, but security and building/site lighting is planned. The project budget is estimated at \$1 million. Financial resources are dedicated from Facilities Management Landcare.

The height of the roof at its pinnacle is approximately 28' tall. Most of the building height is approximately 18' tall. The variation of texture and color (range of tan and gray) provides some visual interest. The location of access doors on the east and south side of the facility provides additional interest on the two faces of the building most visible from the campus (5th Street edge.)





Site for new building is behind fenced tennis courts. Bike path under construction to the north. Shown below as viewed from 5th Street.



Present day view of site from 5th Street. Facility would be located behind tennis courts (location of parked excavator.)



Facility site, view on north side of tennis courts looking east.



Context for building architecture and materials: view of Ridder Arena from facility site

Kolthoff Hall Pedestrian Deck Removal

PROJECT INFORMATION

The project involves removal of the existing elevated walkway on the south side of Kolthoff Hall. A 2003 forensic assessment indicated that the bridge structure, built of concrete and reinforced steel, has deteriorated to the point that it needed either a near-total reconstruction estimated at \$940,000 (all project costs in 2012 dollars) or a demolition. Deterioration was ascribed to normal wear and tear from weather exposure, trapping of moisture, and use of salt/sand chemicals for de-icing purposes. The cost of demolition of the southern deck and repair of the walkway along the western edge of the building has been estimated at \$500,000.

The bridge deck was originally built to convey pedestrian and bike movement along the south face of Kolthoff Hall at the same level of the Washington Avenue bridgehead and the Northrop Mall. Since that time many other changes to Northrop Mall and Washington Avenue have occurred including the opening of the STSS building in 2009. Another critical unresolved access problem between the transit stop on Washington Avenue and Northrop Mall on the north side of Washington was the absence of ADA accessible paths in the immediate vicinity. Getting to the elevated deck through an ADA accessible route from the bus stop required a long circuitous path that stretched back to Church Street or all the way west to Pleasant Street before gaining the elevation to reach the pedestrian level of the bridge.

After careful consideration it was determined that the most advantageous and cost effective design solution was to create a more compact, tiered stair access from Washington Avenue up to the pedestrian level of the Washington Avenue bridge.

- There is limited disruption to current pedestrian traffic using this path to move east-west from Northrop Mall to the bridgehead. Those traveling across campus have the option of using the northern passage between Kolthoff and Smith Hall without creating a time or inconvenience penalty for east-west movement on the north side of Washington. Feasibility studies in 2012 showed adequate space for redirection of current pedestrian traffic (these are the highest users of the deck) along the north and west side of the building.
- Removing the deck allows light to penetrate and supports the vision of Washington Avenue as a pedestrian/transit amenity by opening up space at the ground and overhead for a planted landscape to thrive where there is asphalt and hardscape today.
- Removing the deck restores architectural integrity to Kolthoff Hall's exterior appearance on Washington Avenue.

Demolition of the structure avoids continued repair and maintenance concerns. It also removes the high concentration of bird roosting that is currently occurring in the space.



View of deck from south side of Washington Avenue, STSS building in background. Trees planted on south side of Washington suggest a similar treatment for the north side of Washington when deck is removed.



Deck creates perception of lurking space and unpleasant walk environment for pedestrian traffic moving along sidewalk between Coffman Union/ Northrop Mall transit stop and STSS building at Washington Avenue bridgehead.



Stairwell at transition between street level and approach up stairs to Washington Ave pedestrian crossing. Undesirable walking environment with concentrated bird roosting overhead. Difficult conditions to create ADA compliant access.



Steel and concrete construction of bridge deck is past its useful life. Spauling and delaminating from trapped moisture is pronounced in some locations.

Capital Planning & Project Management (CPPM)

Semi-Annual Project Report
June 2013

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EXECUTIVE SUMMARY

This semi-annual project report submitted by Capital Planning & Project Management includes projects in process that have been approved in the Capital Budget and for which the Regents are required to approve the Schematic Plans. Once a project is reported as complete it is removed from subsequent reports.

The projects in this report are organized by phase: Projects in Design, Projects in Construction, and Completed Projects. A total of 20 projects are listed: 6 in design, 10 in construction, and 4 have completed.

The full scope of work within Capital Planning & Project Management includes the following project activity:

<u>Project Phase</u>	<u>Quantity</u>
Project Initiation	54
Pre-Design	18
Design	74
Construction	67
Substantial Completion	28
Project Closeout	45
Closed since last report	<u>88</u>
Total Projects	374

CPPM MEASURES & STRUCTURE

CPPM uses the following performance measures and accepts full accountability for the following:

- Meeting project scope expectations
- Delivering expected quality
- Delivering projects on schedule
- Delivering projects on budget
- Improving process productivity
- Limiting / eliminating legal liabilities
- Promoting targeted business participation
- Support University of Minnesota sustainability initiatives

CPPM Organization:

- CPPM is organized as follows:
 - Planning, Space, & Architecture
 - Project Delivery
 - Business Services

Projects in Design

Ambulatory Care Center, UMTC



Description: The Ambulatory Care Center Project is located at approximately 910 Essex Street Southeast, on the Twin Cities Minneapolis Campus; four blocks east of the University of Minnesota Medical Center - Fairview Hospital.

The program for the Ambulatory Care Center (ACC) was completed at the end of May 2013. The ACC will be a facility of 330,000.

The program elements include:

- Ambulatory Surgery Center
- Ambulatory Surgery Center
- Comprehensive Cancer Center
- Clinics such as Transplant, Cardiovascular, Medical Specialties, Surgical, Specialties, Orthopedics, Neurosurgery, Neurology, PM&R, Dermatology/Dermatology Surgery, ENT, Ophthalmology
- Ancillary and diagnostic service to support the integration of the care experience and convenience for patients

Clinical spaces will actively support the incorporation of educational and research for transformative team based care, which will enhance the patient experience and the training experience. The program will also include flexible education/conference spaces to train healthcare professionals of tomorrow including medical residents and fellows, pharmacy students, nursing students, and other disciplines.

Project Executive:	AVP Suzanne Smith	Project Director:	Richard Johnson
		Project Manager:	Dennis Sachs
A & E Firm:	Cannon Design with Studio 5 Architects	Contractor:	McGough Construction
Budget:	\$164,911,000		
Schedule:	January 1, 2016		

- Schematic Design estimated start June 2013
- Construction Start estimated December 31, 2013
- Occupancy estimated January 1, 2016
- Project is on schedule and within budget

Projects in Design

Biomedical Facilities - Microbiology Research Facility, UMTC



Description: This project will construct the 4th and final building in the Biomedical Facilities Program which is funded 75% by the Minnesota Legislature and 25% the University of Minnesota. The four-story, 74,000 square foot Microbiology facility will be located to the north and connected to the Cancer and Cardiovascular Research Building on ground and first floors. Funding reflects the amount remaining in the original \$292 million program.

Project Executives: Sr VP Aaron Friedman,
VP Pamela Wheelock,
and
AVP Suzanne Smith

Project Director: Richard Johnson

Project Manager: Pete Nickel

A & E Firm: BWBR Architects

Contractor: M. A. Mortenson

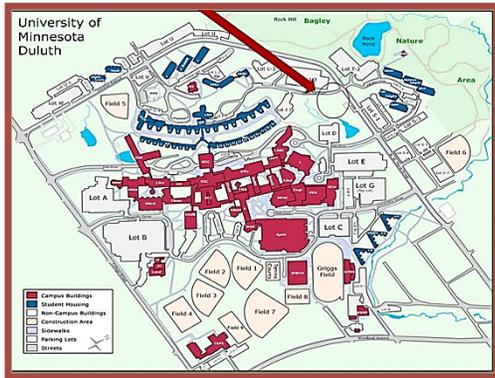
Budget: \$63,600,000

Schedule: Estimated construction start November 2013

- Schematic Design complete
- Construction anticipated to start October, 2013
- Estimated completion date December, 2014
- Project is on schedule and within budget

Projects in Design

Campus Utility Building, UMD



Description: The scope of the project includes a new 5,000 gross square foot facility, located on the northwest side of the Duluth Campus off of St. Marie Street. The facility will house an additional 2,000 tons of cooling capacity and enclose an existing pad mounted electrical substation located on site. This first phase of the project will include one new 1,000 ton chiller to meet the campus cooling needs.

Project Executive: AVP Suzanne Smith

Project Manager: John Rashid

A & E Firms: Perkins+Will (A) /
Dunham Associates (E)

Contractor: Kraus Anderson

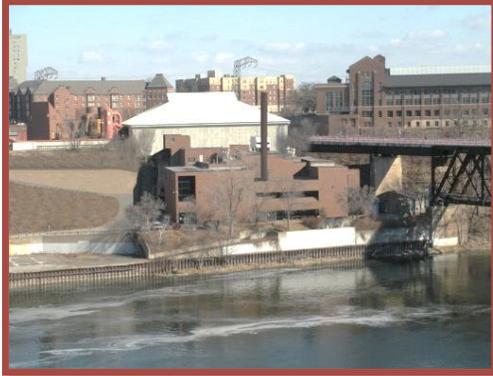
Budget: \$4,500,000

Schedule: Construction complete in January 2014

- Design in process.
- Construction Manager at Risk selected
- Project is on schedule and within budget

Projects in Design

Combined Heat and Power, UMTC



Description: This project installs new combined heat and power equipment (CHP) in the existing Old Main Utility Building located adjacent to the Mississippi river in the Knoll area. Due to the growth of new University buildings requiring steam service and aging boiler equipment on the Minneapolis campus, the University is at risk for a shortage in firm boiler capacity relative to winter-time peak steam demand beginning in 2014. The CHP equipment represents a two stage configuration; a new natural gas fired turbine will generate electricity for use on the Minneapolis campus and a new heat recovery steam boiler will recover heat from the combustion gases that are

discharged from the turbine to generate the required steam capacity. The CHP equipment solution reduces the carbon footprint for the University and represents the best long term sustainable solution from an energy use standpoint. The plant will be designed with space allocation for future installation of a packaged boiler as well as two future steam turbine-driven chillers

Project Executive: AVP Suzanne Smith
A & E Firm: Jacobs Engineering
Budget: \$95,881,000
Schedule: February 2016

Project Director: Richard Johnson
Project Manager: Matt Stringfellow
Contractor: Adolfsen & Peterson

- Currently in design
- \$18M project funding was approved in the FY13 Capital Budget
- Project approved in February, 2013 with a total project funding of \$95 Million by FY13 Capital Budget Amendment
- Schematic Plan approved: February, 2013
- Major Equipment Procurement: February, 2013
- Tentative Hazardous Materials Abatement: June, 2013
- Tentative Construction start: Fall 2014 (pending air emissions permit approval).
- Project is on schedule and within budget

Projects in Design

Glensheen Water Damage and Cleanup, UMD



Description: The Glensheen Historic Estate experienced extensive damage due to severe four-county wide storms on June 19-20, 2012. This project will restore the landscape and built site features to their pre-storm condition. The project is funded with FEMA Public Assistance and insurance reimbursement. Repairs will maximize salvaged material to comply with State Historic Preservation Office requirements.

Project Executive: AVP Suzanne Smith

A & E Firm: Miller-Dunwiddie

Budget: \$3,412,557

Schedule: Estimated construction start July 2013

Project Managers: Kevin Ross & Jim Litsheim

Contractor: To Be Determined

- Schematic Design approved June 2013
- Project is on schedule and within budget

Projects in Design

Mechanical Engineering Building Infrastructure Remodel, UMTC



Description: The existing Mechanical Engineering building with 144,733 square feet of area provides office, research, and classroom space for the Department of Mechanical Engineering. Originally constructed in 1948, the building has served the needs of the University without any major infrastructure changes since that time. In order to position itself for the next 50 years, the building needs to be modernized with a comprehensive replacement and upgrade to its central infrastructure systems. The objective of the infrastructure project is to provide these comprehensive system upgrades for the west and

north wings of the "Old Mechanical Engineering" building. This project will be funded with HEAPR dollars and constructed in phases based on available funds.

Project Executive: AVP Suzanne Smith **Project Manager:** Matt Stringfellow
A & E Firm: Architectural Alliance **Contractor:** M. A. Mortenson
Budget: Phase I: \$12,757,609
Anticipated Future Total: \$47,869,561
Schedule: Phase I: September 2014

- \$12,700,000 funded in FY13 (Phase 1)
- Schematic Plan approved May, 2013
- Tentative Phase I Construction Start: September, 2013
- Project is on schedule and within budget

Projects in Construction

17th Avenue Residence Hall, UMTC



Description: This project constructs a 227,000 gross square foot building. The building includes a 600 bed residence hall, 350 seat dining facility, 3 Greek Chapter Houses designed to support and enhance the sorority and fraternity experience, and an extension of high pressure steam, electric, and chilled water utility infrastructure.

Project Executive: AVP Suzanne Smith
A & E Firm: TKDA Architects
Budget: \$62,500,000
Schedule: August 2013 (Occupancy)

Project Manager: Kevin Ross
Contractor: M. A. Mortenson

- Interior finish work including carpet, ceramic tile, paint, ceilings, and food service equipment is underway
- Final site work and landscaping is underway
- Furniture and equipment installation is scheduled for July-August 2013
- Project is on schedule and within budget

Projects in Construction

Amundson Hall Gore Annex, UMTC



Description: This project will renovate a portion of the existing structure and construct an addition to Amundson Hall. The additional laboratory and office space will allow the Department of Chemical Engineering and Materials Science to add faculty, grow undergraduate enrollment, and increase the number of doctoral students. The infrastructure upgrades include replacing the original exterior curtain wall and all windows; rebuilding the electrical vault; replacing the emergency generator; life-safety improvements; replace exterior lighting; connecting the entire building to the District chilled water system; and providing a second domestic water service.

Project Executive: AVP Suzanne Smith
A & E Firm: Perkins+Will
Budget: \$27,600,000
Schedule: Summer 2014

Project Manager: Paul Oelze
Contractor: Kraus Anderson

- Currently in Construction
- Excavation for basement, structural footings and foundations, and south curtain wall replacement are in progress
- Utility installation
- Project is on schedule and within budget

Projects in Construction

Engine Research Lab Remodeling, UMTC



Description: This project relocates the Engine Testing Laboratory to the south end of the Reuse Center which is currently open warehouse shell space. The new location will provide two engine test cells, control room, engine build room, flow bench room, private office, four workstations, break room, and a unisex toilet room. The south exterior of Reuse Center will be further improved to include fuel storage tanks, cooling tower, electrical transformer, exterior vehicle test cell, and minimal parking.

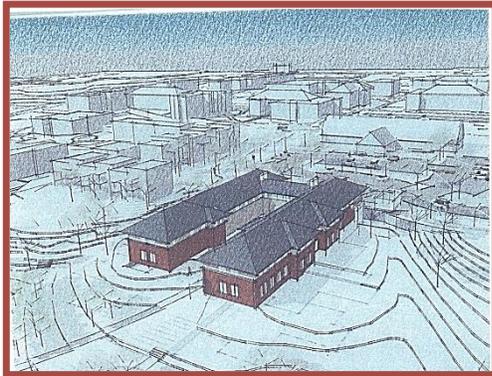
Project Executive: AVP Suzanne Smith
A & E Firm: Architectural Alliance
Budget: \$5,000,000
Schedule: Fall 2013

Project Manager: Paul Oelze
Contractor: McGough Construction

- Currently in Construction, with interior demolition underway
- Project is on schedule and within budget

Projects in Construction

Green Prairie Living and Learning Community, UMM



Description: The project is a new two-story residence hall and contains 72 beds in 16 quad suites with 4 beds per suite (8 with single bedrooms, 8 with double bedrooms), 4 single bed/private bath units, and 4 single bedrooms, Community Advisor units, as well as 1 area coordinator apartment and a community kitchen. A common lounge will connect the two wings. The residence hall will also contain a study room, student lounges on each floor, laundry room, and two staff offices.

Project Executive: AVP Suzanne Smith
A & E Firm: LHB, Inc.
Budget: \$6,900,000
Schedule: August 2013

Project Managers: Paul Oelze & Kevin Ross
Contractor: McGough Construction

- Currently in construction
- Building envelope (windows/roof) and interior wall installation are complete
- Exterior brick and stucco, painting, flooring, ceiling tile, lighting, casework and electrical/mechanical systems construction are in progress
- Project is on schedule and within budget

Projects in Construction

Heritage Hall & Academic Classroom, UMC



Description: The project is a 43,000 gross square foot 141 bed residence hall for freshman and sophomore students and an adjoining academic classroom addition. Each building wing includes a common area kitchenette, study, exercise, and laundry room. The project also includes a commons area, study room, vending, and activity room.

Project Executive:	AVP Suzanne Smith	Project Managers:	George Mahowald & Kevin Ross
A & E Firm:	Michael J Burns	Contractor:	Community Contractors
Budget:	\$9,800,000		
Schedule:	July 2013		

- Phase 1 – Residence Hall construction was completed December 2012. Students moved in January 11, 2013
- Phase 2 – Academic classroom under construction to be substantially completed June 2013
- Phase 3 – Classroom technology package and classroom seating installed under separate contract to be completed June 2013
- Phase 4 – Final grading and landscape installed to be complete July 2013
- Project is on schedule and within budget

Projects in Construction

Laboratory/Classroom Facility, Itasca Biological Station & Laboratories



Description: This project constructs an 11,800 square foot laboratory/classroom and demolishes 3 obsolete, energy inefficient buildings. The new building is designed to meet Minnesota B3 requirements and anticipates achieving LEED Gold status through a substantial reduction in energy use.

Project Executive: AVP Suzanne Smith
A & E Firm: Meyer Scherer & Rockcastle
Budget: \$6,090,000
Schedule: Winter 2014

Project Managers: George Mahowald & Kevin Ross
Contractor: Kraus Anderson

- Design documents complete
- Construction start has been delayed due to extreme winter weather conditions, anticipated start in late June, 2013
- Project is on schedule and within budget

Projects in Construction

Northrop Phase II Interior Renovation, UMTC



Description: Northrop will become a pre-eminent Cultural Center that inspires and nourishes the human spirit by creating a +/-2,750-seat hall with excellent acoustics and sightlines, and state-of-the-art technologies to provide the highest quality experience attainable. Northrop will house the University Honors Program, the Institute for Advanced Study, and the Innovation Laboratory.

Project Executives:	Vice Provost Robert McMaster and VP Pamela Wheelock	Project Director:	Michael Denny
A & E Firm:	HGA Architects	Project Manager:	Roger Wegner
Budget:	\$88,198,000	Contractor:	JE Dunn
Schedule:	Fall 2013 / Winter 2014		

- Major interior work is underway including drywall and plaster walls, terrazzo flooring and mechanical and electrical systems
- 1st, 2nd, and 3rd floor balconies are in place
- North Addition structure is complete, brick installation to start in June 2013
- Budget amendment for \$2,373,000 is requested as part of the FY14 Capital Budget in June, 2013, and will increase the project budget to \$88,198,000
- Project is on schedule and within requested amended budget

Projects in Construction

Physics & Nanotechnology Building, UMTC



Description: The project is approximately 144,000 square feet and houses offices and research laboratories for the School of Physics & Astronomy and the Center for Nanostructure Applications. The site is bounded by Civil Engineering to the north, Akerman Hall to the west, Scholars Walk to the south, and Recreation Center to the east. The building will house approximately 200 faculty, post-doctorate, graduate-level, and visiting researchers. The facility includes forty flexible-use research laboratories and a 5,000 net square foot cleanroom laboratory for Nano research designed for Class 100 chip fabrication and Class 1000 bio-

Nano work. There is also a 2-story tall high-bay laboratory with overhead rail crane for use in assembling large installations such as satellite payloads.

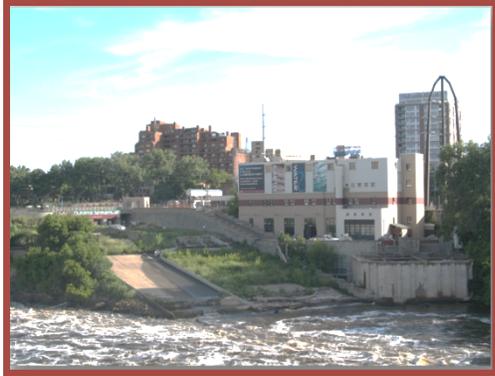
Project Executive: AVP Suzanne Smith
A & E Firm: Architectural Alliance with
Zimmer Gunsul Frasca
Budget: \$84,100,000
Schedule: November 2013

Project Manager: Matt Stringfellow
Contractor: M. A. Mortenson

- Project is currently in Construction
- Mechanical and electrical, exterior building envelope, and interior finish construction are in progress
- Project is on schedule and within budget

Projects in Construction

St. Anthony Falls Lab Infrastructure, UMTC



Description: The project will help transform the laboratory into a national shared research facility conducting cutting edge research in the energy/environment nexus, expand its role as major hub for industry/academia collaborations, and strengthen and broaden its educational and outreach missions. Infrastructure renovations will include fire/life safety, ADA upgrades, building structural systems, collaborative meeting space, and updated research and laboratory space to meet current and future science needs.

Project Executive: AVP Suzanne Smith

A & E Firm: Perkins+Will

Budget: \$15,800,000

Schedule: September 2013

Project Manager: Scott Everson

Contractor: McGough

- Currently in construction
- Construction of the exterior elevator shaft, interior fit-out in progress
- Installation of major Mechanical, Electrical, Plumbing systems in progress
- The project start was delayed and spring flooding slowed work for a period of time. These delays, together with unexpected site cleanup costs, may require modifications to both schedule and budget.
- National Science Foundation is requesting additional project information to align current scope with the original grant request and will be visiting the site in June 2013

Projects in Construction

University Recreation Center Expansion, UMTC



Description: The expansion includes a 148,000 square foot, four-level addition to the existing south side of the University Recreation Center. The program for the expansion consists of the following components: a two-court gymnasium, fitness and weights area, seven multi-purpose rooms, outdoor recreation center with a climbing wall, locker rooms, jogging track, offices, and miscellaneous spaces. The entry of the building also has a café with an associated serve-and-prepare area, public toilets, and a social lounge.

Project Executive: AVP Suzanne Smith
A & E Firm: Studio Five Architects
Budget: \$59,600,000
Schedule: Summer 2013

Project Manager: Roger Wegner
Contractor: JE Dunn

- Interior construction is 99% complete
- Final exterior work has started – Landscaping/Scholars Walk restoration
- Furnishings and fitness equipment procurement process is underway
- Occupant move-in will begin July 8, 2013
- Project is on schedule and under budget

Completed Projects

Center for Magnetic Resonance Research New 3T MRI Magnet, UMTC



Description: This project will renovate the existing 1,200 square feet MRPET MRI suite to accommodate the purchase of a new 3.0T MRI.

Project Executive: AVP Suzanne Smith
A & E Firm: RSP Architects
Budget: \$2,700,000
Schedule: December 2012

Project Director: Richard Johnson
Project Manager: Kevin Ross
Contractor: M. A. Mortenson

- Project is complete
- Construction was completed on schedule and under budget

Completed Projects

Biomedical Facilities – Cancer/Cardiology Research Center, UMMC



Description: This project will provide approximately 280,000 square feet of space for chemistry and biology labs, lab support, and office space to support Cancer and Cardiovascular research. It also includes shared research and public commons on the first level that will house a large vivarium, shared instrumentation spaces, meeting space, and a small food service venue. The project will be connected to the Medical Biosciences Building and the future Microbiology Research Facility

Project Executives: VP Aaron Friedman, **Project Director:** Richard Johnson
VP Pamela Wheelock,
and **Project Manager:** Pete Nickel
AVP Suzanne Smith
A & E Firm: Architectural Alliance **Contractor:** M. A. Mortenson
Budget: \$182,614,000
Schedule: Occupancy July 2013

- Project substantially complete March 2013, commissioning of mechanical systems in progress, estimated completed June 2013
- Researchers scheduled to move July/August 2013
- Project completed on schedule and under budget

Completed Projects

Siebert Field Ballpark Replacement, UMTC



Description: This project replaces Siebert Field with a new ballpark on the existing site. Included is: a seating bowl to accommodate 1,400 spectators on slab-on-grade concrete risers, two entry plazas, seasonal press/concessions and restroom buildings, sunken artificial turf playing surface with adjacent home and visitor bullpens, new home and visitor sunken dugouts, revamped field lightings, and new scoreboard.

Project Executive: AVP Suzanne Smith
A & E Firm: DLR Group
Budget: \$7,310,883
Schedule: Winter 2012

Project Manager: Roger Wegner
Contractor: PCL Construction

- Construction completed December 2012
- Certificate of Occupancy issued April 1, 2013
- Project completed on schedule and under budget

Completed Projects

Wind to Hydrogen to Ammonia, West Central Research & Outreach Center, Morris



Description: This project constructs a globally unique research and demonstration facility to foster the development of wind, hydrogen, and other renewable energy sources. To store wind energy, electricity is converted to hydrogen by electrolysis of water and stored in compressed gas cylinders. When demand calls, the hydrogen is burned in an internal combustion engine to run a generator. In addition, the hydrogen will be converted into anhydrous ammonia for use as a fertilizer within the local community. The facility will provide researchers opportunities to measure efficiencies and optimized production of anhydrous ammonia.

Project Executive: AVP Suzanne Smith

A & E Firm: Sebesta Blomberg

Budget: \$3,782,000

Schedule: Winter 2011 – Anhydrous Project

Project Manager: Oliver Real Estate

Contractor: Knutson

- Hydrogen component of the project operational and complete in 2010
- The research nature of the project caused delays. The anhydrous ammonia custom design-build, research equipment skid was delivered to the site in August, 2012. Pre-startup testing and equipment modifications were completed late fall 2012, and startup/commissioning commenced in late November, 2012. Substantial completion was achieved in April, 2013.
- Construction was completed on schedule and on budget