

Lakeshore Nature Preserve Outreach Center Advanced Plan

University of Wisconsin - Madison
Project ID: A-22-007 / 9950-2281
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In partnership with:



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1. Executive Summary



Executive Summary

Vision & Mission

The vision of the Lakeshore Nature Preserve is “to foster biodiversity on campus and cultivate lifelong environmental education.”

The mission of the Preserve is to shelter “natural environments and cultural resources through active learning, research, and outreach in a place of respite and well-being.”



Signpost at main entry to Lakeshore Nature Preserve

Project Need — History

The need for a new Outreach Center was first identified in the 2006 Lakeshore Nature Preserve Master Plan, which introduced the concept of a “Preserve Station” and a gathering place for students, faculty, staff, and visitors at the base of Picnic Point. It was again supported in the 2015 Campus Master Plan with an identified site outside the historic stone entry walls to Picnic Point and near the existing parking facilities. The site was identified as having ideal solar exposure and microclimatic conditions for a highly-sustainable building.

Project Scope

Phase I includes an advanced planning study for a new approximate 8,000 ASF / 9,000 GSF outreach & welcome center for the 300-acre Lakeshore Nature Preserve on the UW-Madison campus to “provide a space for experiential, hands-on learning and expand the research, teaching and outreach capacity of the Preserve on campus.” The project goals include being the first carbon-neutral university facility utilizing highly sustainable building practices that support the university’s commitment to resiliency and the student experience on campus.

Features & Program

The building is to be a highly sustainable facility and feature resilient green building design elements to provide 100% of electrical needs, stormwater reuse best management practices, green roofs to reduce runoff and the use of recycled/upcycled building materials, daylighting to reduce electrical needs, passive ventilation with operable windows throughout along with geothermal heating/cooling.

General Building Program

- Preserve staff work areas and land care management space
- Public facing facilities that support the research, teaching and outreach mission of the University including a 50-person multipurpose room and space for interpretive display
- Restrooms accessible from inside and outside the building
- Highly sustainable, carbon neutral building reflecting the values of the Lakeshore Nature Preserve and the University

The project will include relocation of a portion of University Bay Drive to place the road between the newly built parking lot to the southwest of the proposed project site, and the Class of 1918 Marsh. Mapped wetlands and floodplain will need to be taken into consideration as the roadway is relocated to the south. Site planning for the center’s relationship to the Preserve toward the entrance to Picnic Point, the Class of 1918 Marsh, the parking lot, and the Howard Temin Lakeshore Path all need to be included. Natural landscaping and treatment of stormwater runoff using green infrastructure measures to reduce stormwater impacts to the local Yahara Lakes system will be included.

Indigenous Significance

The project will also include consideration for the proposed Outreach Center being on the ancestral home of the Ho-Chunk Nation. The Center will communicate a deeper understanding of how these lands have been used for over 12,000 years by many various peoples.

Executive Summary

Respect History & Culture

Throughout the site and the building, respect for land and Indigenous culture have guided the choices of materials and forms. As the project continues into further phases, the team will continue to consult with Indigenous representatives to incorporate respect for the land and over 12,000 years of human habitation.

Stakeholder Engagement

Starting in Fall, 2022, the Design Team and Core Advisory Team engaged directly with stakeholder groups representing both the University campus and the larger community. This helped establish a consensus recommendation for the proposed site and building location as well as identify key issues critical to community acceptance. In particular, engagement with representatives of Indigenous groups and the Ho-Chunk Nation provided important direction for the project. As part of this engagement, the project began with a public ceremony at the Preserve where the Traditional Chief of the Ho-Chunk Nation, Clayton Winneshiek, gave an address and asked for blessings on the project.

Design Process

A key part of the design process is writing a collaborative narrative of issues and solutions called a Pattern Language. This narrative is composed of individual Patterns, each describing observed conditions and desired outcomes. This process resulted in eight initial patterns that helped inform and guide the recommended building and site design. The following patterns identify key underlying themes of the project:

1. Why Build Here?
2. A Kinship With the Land
3. Healing the Threshold
4. A Building for People Who Want to Be Outside
5. Positive Outdoor Space
6. Safeguard (and Rediscover) the Wall
7. A Simple, Stable Shell
8. Land Management Made Visible

For more information and detail about each Pattern, refer to the Patterns section.

Site Analysis & Key Principles

During the analysis of potential sites, the team identified five Key Principles that helped guide the ultimate site selection and decisions about building location and site features:

- Create a central corridor or spine that emphasizes safe, welcoming access to the Preserve
- Protect the marsh by locating development no closer than the existing southern edge of parking
- Clarify circulation and increase safety for pedestrians, and bikes
- Parking - support increased visitation without increasing parking counts.
- Maintain the health of the waters - preserve and enhance existing bioswale network

Recommendations

The Design Team's recommended approach is to site the new Outreach Center close to the primary Preserve entrance and historic stone gate, while staying outside the Preserve proper. We believe this strikes the best balance between convenience of access and limitation of disturbance. The proposed rerouting of University Bay Drive and the Howard Temin Lakeshore Path preserves a vital commuter route while increasing pedestrian safety by relocating primary parking to the north side of the Drive. The proposed building location and landscape design maximizes opportunities to restore native landscape and manage stormwater quality.

The team believes that pursuing Living Building Challenge Certification not only meets the University's goals for a highly-sustainable building, but provides an opportunity to be a national leader in regenerative placemaking. The Outreach Center can become the first Living Building certified in Wisconsin. The proposed Structural Insulated Rammed Earth wall system is hyper-local, sourced from surrounding soils. The building will be designed to be Net Positive Energy and Net Zero Carbon.

Estimated Project Cost

The anticipated Total Project Cost (including construction, soft costs, contingency, and escalation) is in the range of \$16 - \$19 million dollars. See the Cost Estimate section for detailed breakdown.

Next Steps

This project will be 100% gift-grant funded with funding secured currently through design & construction documents. Schedule of procurement, construction, and occupancy is dependent on donor funding and potential University-allocated funding support. Potential construction completion is projected for mid-2026.

2. Acknowledgments



Acknowledgments

PROJECT TEAM

UW-Madison Facilities Planning & Management

Rhonda James, Senior Landscape Architect and Project Manager
Laura Wyatt, Interim Director Lakeshore Nature Preserve
Bryn Sriver, Lakeshore Nature Preserve Volunteer and Outreach Coordinator
Adam Gundlach, Lakeshore Nature Preserve Field Projects Coordinator
Rex Loker, Architect, Office of Sustainability

Donor Representative

Gary Brown, Volunteer, former Director Lakeshore Nature Preserve
Kelly DeHaven, UW Foundation

UW System Administration

Peter Davis, P.E., Engineering
Pat Rebholz, Assistant Director - Project Delivery

Architecture / Engineering Design Team

The Kubala Washatko Architects (TKWA)
GRAEF Engineers
Design Engineers
Chloris Lowe Cultural Consulting

Stakeholders

Lakeshore Nature Preserve Committee
Friends of the Lakeshore Nature Preserve Board
Native Nations representatives
Educators
UW Police Department
FP&M Physical Plant
FP&M Transportation Services
Donors & Friends

3. Introduction



The Preserve is as essential to the University as its lecture halls, laboratories, and playing fields. It contributes to a powerful sense of place. It fosters an ethic of environmental and cultural stewardship.

A. About the Lakeshore Nature Preserve

Mission: The Lakeshore Nature Preserve shelters natural environments and cultural resources through active learning, research, and outreach in a place of respite and well-being

Vision: To foster bio-diversity on campus and cultivate lifelong environmental engagement.

The University of Wisconsin-Madison Lakeshore Nature Preserve is a 300-acre natural area situated along the south shore of Lake Mendota. The footprint of the Preserve represents approximately one-third of the total acreage of the main campus and includes roughly four miles of Lake Mendota shoreline.

The Preserve represents an essential opportunity to advance the University's historical commitment to conservation and stewardship. Currently volunteers, students, friends, and staff collaborate to steward the Preserve. Direct involvement in land management, honoring ancestors, listening to stories, strolling on the paths, conducting experiments, observing nature, and enjoying a campfire with friends are activities that connect people to this special place. The Preserve is integral to the individual's experience of the University of Wisconsin-Madison.

The Preserve shelters diverse and biologically significant plant and animal communities for teaching, research, and outreach. Over 80 University-affiliated research and teaching projects annually occur in the Preserve; students invest thousands of volunteer hours to help support and maintain the Preserve while gaining hands-on experiential learning. The knowledge and understanding gained by these activities helps ensure students are equipped to become environmentally conscious citizens upon graduation.

Significantly, the Preserve also safeguards historically important cultural landscapes. The Lakeshore Nature Preserve lies on the ancestral home of the Ho-Chunk Nation, a population which has been continually present on the land for over 12,000 years. A key mission of the Preserve is to maintain the integrity of these landscapes and in communicating their history and meaning.

The Preserve is as essential to the University as its lecture halls, laboratories, and playing fields. It contributes to a powerful sense of place. It fosters an ethic of environmental and cultural stewardship. Ultimately, the Preserve demonstrates how our modern society can become intentional in creating mutually beneficial relationships between humans and the natural world.

Land Acknowledgment

The University of Wisconsin-Madison occupies Ho-Chunk Land, a place their nation has called Teejop (Day-JOPE) since time immemorial. In an 1832 treaty, the Ho-Chunk were forced to cede this territory. Decades of ethnic cleansing followed when both the federal and state government repeatedly, but unsuccessfully, sought to forcibly remove the Ho-Chunk from Wisconsin.

This history of colonization informs our shared future of collaboration and innovation. Today, UW-Madison respects the inherent sovereignty of the Ho-Chunk Nation, along with the eleven other First Nations of Wisconsin.

**Lakeshore Nature Preserve:
Outdoor Learning is Our Point**

Introduction

The need for a structure at the entrance to the Preserve was first identified in the 2006 Lakeshore Nature Preserve Master Plan.



The Preserve's offices and equipment for managing the 300 acres is currently scattered across six locations on campus, creating significant operational challenges and inefficiencies for staff, researchers, and volunteers.

- A** Primary Preserve Entrance Point
- B** Charter Street Garage - 360sf of unheated storage
- C** Horse Barn - 354sf of heated storage
- D** Dairy Barn - 156sf of heated storage
- E** Tool Room - 150sf of heated storage
- F** Biocore Shed/Trailer - 150sf of unheated storage
- G** Preserve Offices

B. Prior Planning Efforts and Identification of Need

The 2006 Lakeshore Nature Preserve Master Plan was the first major effort by the University to develop a comprehensive plan for the future of the Preserve. This document provided direction for the ecological and cultural management of the Preserve and defined how the Preserve can support of the University's mission of teaching, research and outreach.

See page 51: <https://d138k1rt4vd1y.cloudfront.net/wp-content/uploads/sites/27/2017/01/LakeshoreNaturePreserveMasterPlan.pdf>

The need for a structure at the entrance to the Preserve was first identified in the 2006 Master Plan, which introduced the concept of a "Preserve Station". Initially, the proposed building was conceived as a modest gathering place for students, faculty, staff and visitors located at the base of Picnic Point that included restrooms and observation deck.

In the years following completion of the 2006 Master Plan the academic program and use of the Preserve has expanded exponentially. Further, the COVID-19 pandemic resulted in an increased awareness of the value of the Preserve in providing areas of respite and well-being for numerous audiences. Increasing environmental threats due to challenges of climate change have made the environmental services provided by the Preserve even more critical to the health of the entire UW-Madison campus.

Since 2006 the Preserve staff has grown to include three full time staff, four Student Natural Area Assistants, interns affiliated with the Prairie Partners Program, plus an additional approximately 500 campus and community volunteers. The Preserve's offices and equipment for managing the 300 acres is currently scattered across six locations on campus, creating significant operational challenges and inefficiencies for staff, researchers, and volunteers.

Other University planning efforts have reinforced the original conclusions of the 2006 Preserve Master Plan regarding the need for a Preserve facility:

- The 2015 Campus Master Plan indicated the need for a Preserve support and outreach building and recommended a site generally located outside the historic stone entry walls to Picnic Point and near the existing parking facilities.
- The 2020-2030 Lakeshore Nature Preserve Strategic Plan also identifies the need to "define and systematically communicate the Preserve's identity, mission/vision and purpose" in supporting and highlighting its value for teaching, research and public outreach to the University and greater Madison-area community. In providing a single location and visible main entry to the Preserve via an Outreach Center, the mission, vision and identity can continue to be advocated for and increase the presence of the Preserve at the University.

Introduction

The Outreach Center will enhance visibility, interpretation, and outreach of the Preserve; promote ecological stewardship; enhance pedestrian/bicycle safety and accessibility; and support essential land management, teaching, and field research activities.

B. Prior Planning Efforts and Identification of Need cont.

- As part of the 2020 Lakeshore Nature Preserve Strategic Plan the Preserve prepared a UW-Madison Visitor and Community Survey. The purpose of this survey was to gather feedback regarding visitor experience and community awareness of the Preserve's mission and work. The survey was also intended to document existing conditions and gather public input to inform the strategic planning process. When asked "Where should the Preserve focus its efforts in the next 5-10 years?" Under the topic of "Amenities/infrastructure/safety" survey respondents expressed a desire for the Preserve to establish a "Welcome/Visitor Center", provide improved bathroom facilities in high-use areas, maintain and enhance quality and safety of the trails, and increase accessibility.
- The 2022 Lakeshore Nature Preserve Master Plan Update reviewed the Preserve's infrastructure, land use, land management strategies, and efforts to protect and enhance its distinctive natural, cultural, and educational features. Taking an updated look at the needs and opportunities of the Preserve will lead to prioritized recommendations for the next ten years.

C. Public Use of the Preserve

Public use of the Preserve has always been high. To better document visitation a pedestrian counter was added inside the entrance to Picnic Point. In 2022 approximately 149,000 people were counted at this single entry point. This visitation count does not include the significant number of pedestrians entering at other locations such as through the historic stone entry portals. In 2020 the onset of the Covid-19 pandemic saw significant increase in visitor traffic as more people than ever rediscovering the outdoors.

D. Phase I Advance Plan Project Goals

The goal of the Phase I Advance Plan is to determine the scope, budget, & schedule for a new Outreach Center building to be located near the entrance to Lakeshore Nature Preserve. The Outreach Center will enhance visibility, interpretation, and outreach of the Preserve; promote ecological stewardship; enhance pedestrian/bicycle safety and accessibility; and support essential land management, teaching, and field research activities.

Outcomes of the Phase I Advance Plan process include the following:

- Review site options and recommend a preferred site
- Engage varied campus and community stakeholder groups
- Illustrate how the proposed building relates to adjacent natural areas
- Review potential for the building to be a highly sustainable, "Net Positive Energy" facility that is eligible for certification through the Living Building Challenge
- Propose appropriate architecture for this building



Introduction



The Outreach Center will incorporate highly sustainable site and building design strategies that reflect the University's commitment to climate resiliency.

E. General Building Program Requirements

- Identify critical needs for Preserve staff work areas and land management support
- Develop public facing facilities that enhance the research, teaching and outreach mission of the University, including multipurpose spaces, restrooms, and interpretive display areas
- Thoughtfully integrate the required program uses into the sensitive context of the site
- Identify ways to reduce pedestrian/bicycle/vehicle safety conflicts through careful site design
- Consider opportunities to incorporate highly sustainable site and building design strategies that reflect the University's commitment to climate resiliency
- Highlight the cultural and natural history of the Preserve via interpretive displays and signage

F. Major Site Design Considerations

- The project will include relocation of a portion of University Bay Drive to enable a pedestrian focused space adjacent to the Outreach Center.
- Site planning for the Center's relationship to the Preserve at the entrance to Picnic Point, the Class of 1918 Marsh, the existing parking lot, and the Howard Temin Lakeshore Path have all been considered.
- Mapped wetlands and floodplain restrictions were incorporated into the site design.
- Natural landscaping and treatment of stormwater runoff using green infrastructure measures to reduce stormwater impacts to the local Yahara Lakes system are included.

G. Archaeological & Cultural Considerations

Prior to European-American settlement, this land was the home of Native peoples living and thriving here for more than 12,000 years. This is the ancestral home of the Ho-Chunk Nation people who named this area around Madison "Dejope" or "Teejop" for its four lakes. Evidence of long human habitation can be found throughout today's Preserve landscape, in earthen burial mounds with effigy forms constructed over 1,000 years ago, along with evidence of a prehistoric settlement along the hillside shore of this glacial lake system.

There are at least 28 known archaeological sites on the campus shoreline of what is known today as Lake Mendota. Since the late 1800s land has been acquired for university teaching, research, and development by the State of Wisconsin. This document also provides a strategic opportunity to set a tone and intention to support use of the Preserve as a site for education and research with indigenous people and cultures in affirmation of "Our Shared Future"
<https://oursharedfuture.wisc.edu/>.

4. Existing Conditions/Site Analysis



Lakeshore Nature Preserve Location



Lakeshore Nature Preserve Location

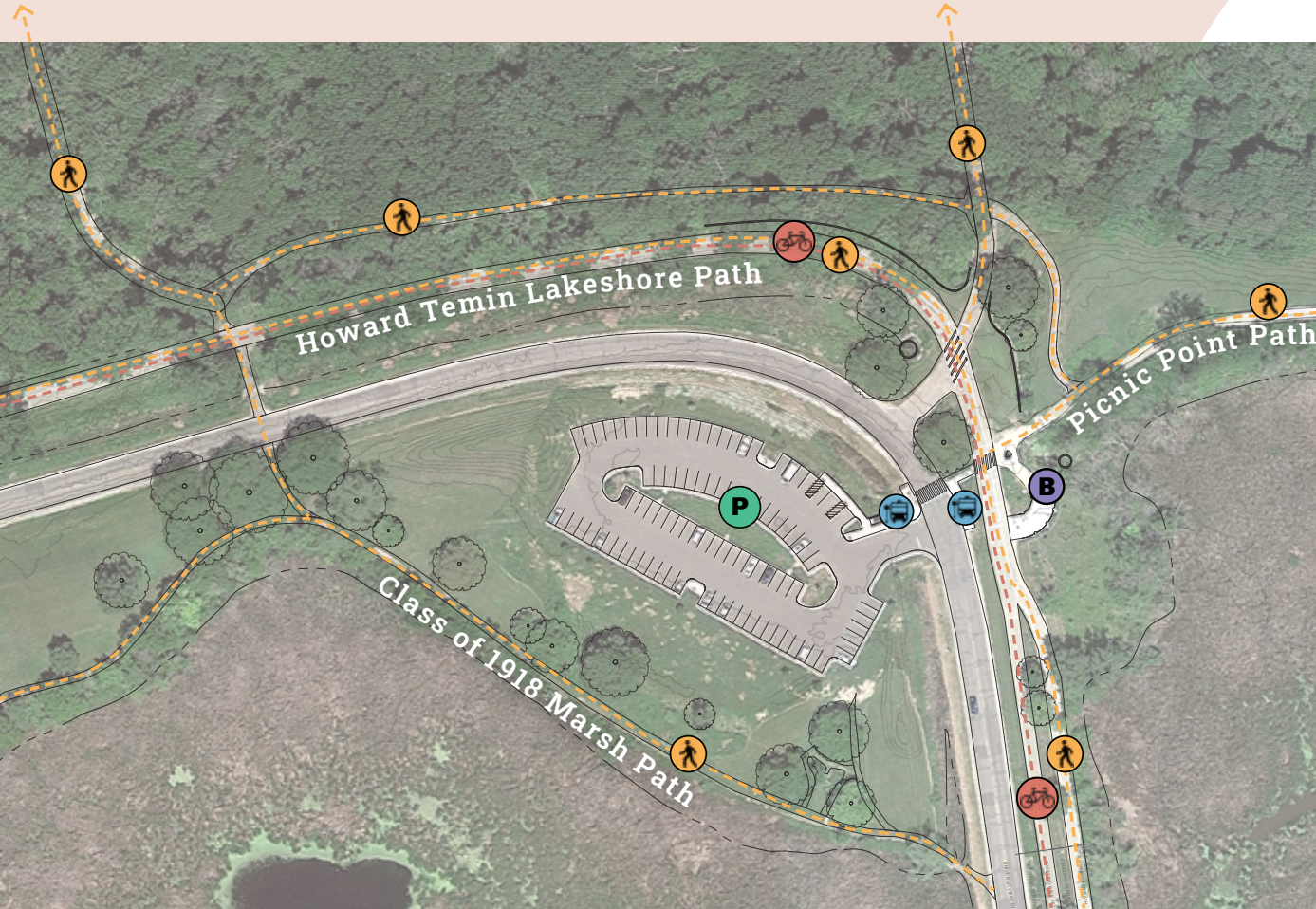
The University of Wisconsin-Madison Lakeshore Nature Preserve is a 300-acre natural area situated on the south shore of Lake Mendota on the UW-Madison campus. It represents about one-third of the total acreage of the main UW-Madison campus and includes 4.3 miles of Lake Mendota shoreline.

As noted in the Introduction, the general location for the Outreach Center was first identified in the 2006 Lakeshore Nature Preserve Master Plan. This location was prioritized for its ability to provide greater public awareness and visibility of the Preserve by creating a primary entry point.

Hydrology is an important consideration at the Lakeshore Nature Preserve and especially at the Outreach Center site:

- The site is bounded by the Class of 1918 Marsh to the south west and University Bay Marsh to the east.
- The majority of the site is within the 500 yr Floor Plain and some of the site is within the 100 year flood plain.
- A series of bioswales on the north side of University Bay Drive treat run-off water through a series of interventions that culminate within this site before its transferred to University Bay.

Site Circulation



Bus Stop

The site is served by bus Routes 80 and 84. There is a single, dedicated bus shelter on the west side of University Bay Dr within the existing parking lot.



Parking Lot

The existing Lot 130 has a capacity of 100 cars. A portion of the parking lot accommodates UW permit parking. Payment is required for parking Monday - Friday between 7 a.m. and 4:30 p.m. Parking is free after 4:30pm and on weekends. Visitor parking is managed by an onsite pay kiosk.



Bike & Pedestrian Paths

Bike and pedestrian paths connect to the west to the Shorewood Hills, Eagle Heights and University Heights neighborhoods. To the east, the Temin Lakeshore Path connects to the Lakeshore Residence Hall and the main campus, extending to the Memorial Union.

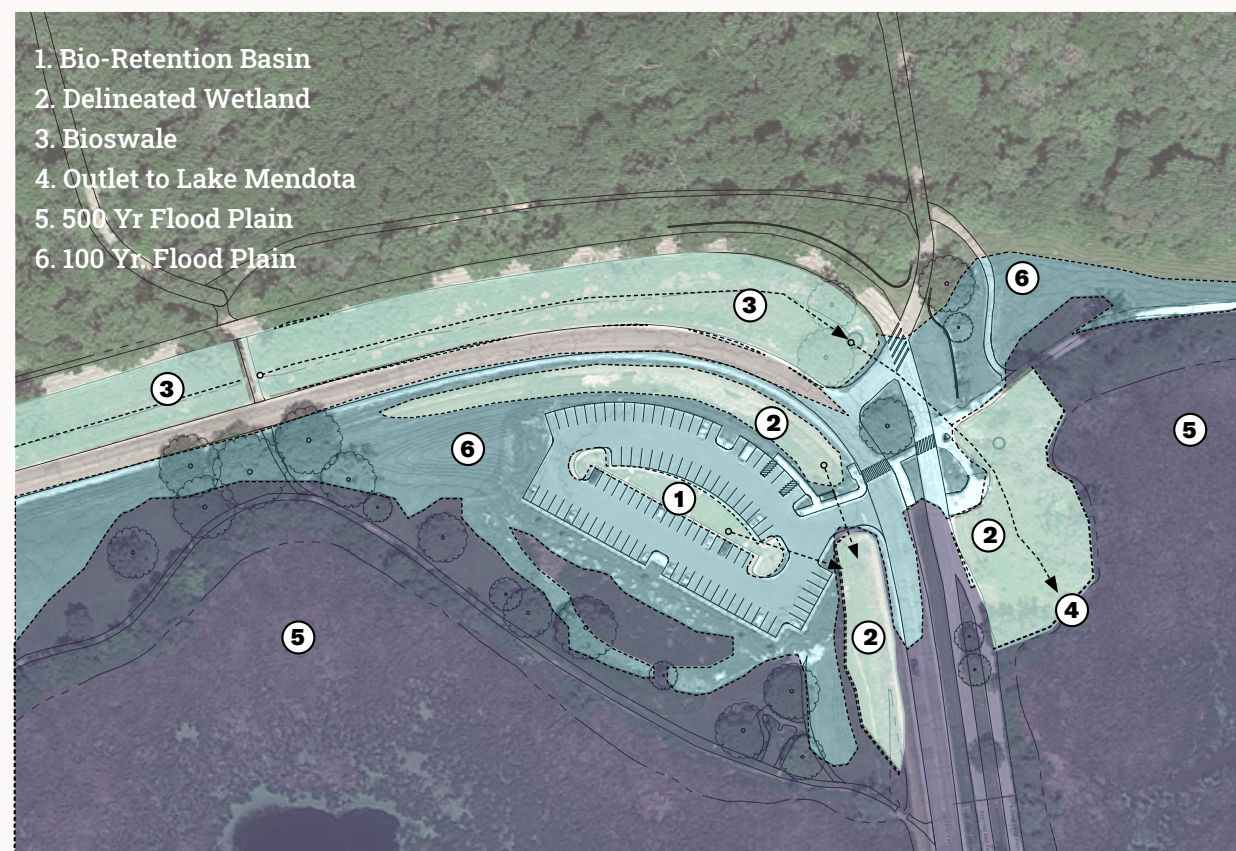


B-Cycle

A B-Cycle station is located on site near the main entrance to Picnic Point. Bicycle traffic is restricted to the Temin Lakeshore Path and other designated bicycle routes. Bicycle traffic is not allowed on Lakeshore Nature Preserve paths.



Stormwater Management

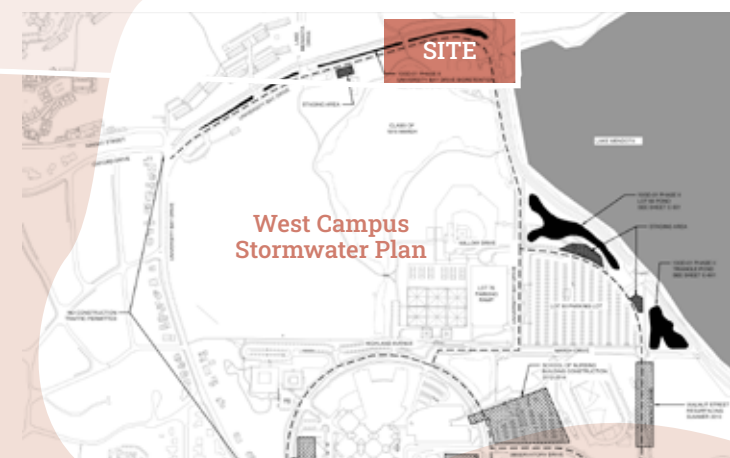


Selected areas of the proposed Outreach Center site are located within the DNR 100-yr or 500-yr flood plains (due to close proximity to the shoreline of Lake Mendota). Additional design team review with the WDNR will be conducted during Phase 2 to confirm appropriate strategies required to mitigate flood plain impacts.

West campus stormwater runoff is managed with an extensive bioswale system constructed as part of DFD project 10I3D-01 in 2013. This system directs stormwater to the east, eventually channeling it through an underground pipe within the project site

boundary. The bioswale system was originally installed to manage flooding in the west campus area and runoff from Shorewood Hills as well as the surrounding impervious areas. During this prior work, University Bay Drive was also raised to reduce/minimize flooding from Lake Mendota.

Both the reconfigured parking lot and Outreach Center are to be located within the footprint of the existing bioswale. **The proposed site plan modification will reroute the bioswale to maintain (or increase) its overall area to ensure continued integrity and**



Utilities

Sanitary sewer and water service connections will be made to existing public or campus infrastructure.

Due to the proximity to Lake Mendota and the 100-yr and 500-yr floodplains, off-grid sanitary sewerage treatment options were not investigated. Similarly, off-grid domestic water was not investigated for this site. City of Madison fire code requires two hydrants to serve the Outreach Center for fire protection. A connection to the Madison municipal water network ensures a more reliable and lower maintenance water source for the Outreach Center.



The nearest sanitary sewer pipes are just north of the proposed Outreach Center site. This sanitary sewer running just north of the site was designed as part of the 1967 Picnic Point Changing House. The sewer ranges from 10" to 15".

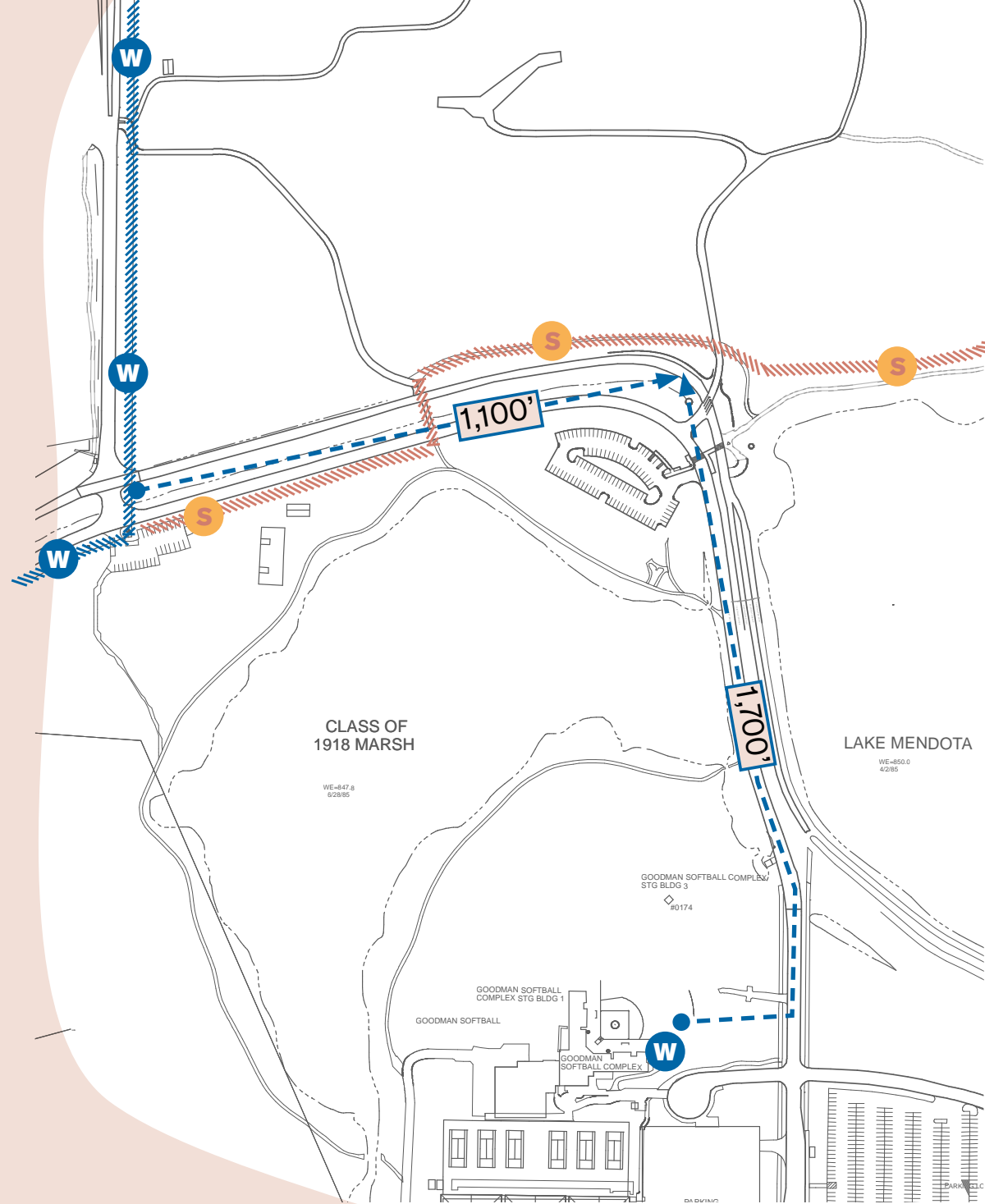
Additional sanitary sewer field investigation for the design phase is outlined in the Planning Considerations section of this report.

The existing sanitary sewer system functional capacity will be confirmed in the detailed Phase 2 design analysis.



There are two potential domestic water connections for the site. The first possible connection is from the water main in University Bay Drive. The water main runs in University Bay Drive east of the intersection with Mendota Drive. This water main connection would require an approximately 1,100 feet extension to serve the Outreach Center site.

The second potential water connection is the water main that serves the hydrants at the Goodman Softball Complex. Based on campus utility mapping, the nearest feasible connection to this water main is approximately 1,700 feet from the Outreach Center site. Additional water main field investigation for the design phase is outlined in the Planning Considerations section of this report.



Observations



The Multimodal “Hairball”

The experience of accessing the Preserve today can be stressful, while also creating safety concerns. As a pedestrian, one must first cross University Bay Drive, then the commuter bike path and walking trail, and finally navigate a tight Preserve entry maze designed to prevent bike access. As a biker, multiple interfaces with crossing pedestrian traffic create conflict zones. For drivers in vehicles, the tight curve of University Bay Drive creates a hazardous condition where pedestrians crossing the road cannot be easily seen, especially from east-bound traffic. The many different overlapping circulation paths at this curve create a multimodal “hairball effect” that must be unwound.

The design team agrees with the recommendations within the 2006 Preserve Master Plan and the 2015 Campus Master Plan for the general location of the Preserve Outreach Center and supports the relocation of University Bay Drive to allow this site to be fully utilized for the Center. To ensure the health of the Class of 1918 Marsh, the road should not be located any further south than the existing parking stalls within Lot 130.

A key design criteria for the Outreach Center building placement and site reconfiguration is to resolve the circulatory confusion and safety considerations that currently exist.

5. Stakeholder Engagement & Site Selection



Stakeholder / Community Outreach

A Tapestry of Community Stakeholders

The Lakeshore Nature Preserve is a beloved treasure of the University of Wisconsin-Madison and the community at large. The lands on which the University and Preserve are located are sacred to the native tribes of Wisconsin and the Ho-Chunk in particular. Called Dejope in the Ho-Chunk language, this land is home to evidence of at least 12,000 years of human habitation, including a number of extant effigy mound burial sites. Accordingly, any development which affects the Preserve generates interest from many groups in the community.

The design team helped facilitate numerous meetings during the fall of 2022 and spring of 2023 to identify and respond to the many concerns and hopes the community has for a new Outreach Center. During these meetings, several key themes emerged again and again: care for every aspect of the environment-protecting the soils, waters, plants, and animals of the Preserve; care for the people-enhancing the safety and enjoyment of access to this treasure; supporting the land stewardship mission of the Preserve staff; and, respect for the aboriginal cultural history of this sacred place.

These key themes were codified in a series of written Design Patterns that formed the fundamental DNA of the proposed Outreach Center design.

Universal Themes for the New Building:

Protecting the soils, waters, plants, and animals of the Preserve

Enhancing the safety and enjoyment of access to this treasure

Supporting the land stewardship mission of the Preserve staff

Respect for the aboriginal cultural history of this sacred place.



Cultural Design Response Summary

Author: Chloris A. Lowe Jr. – Cultural Consultant

“While there remains more to be done in the upcoming phases of this project much has been accomplished in Phase One.

This Cultural Design Response Summary includes two brief narratives: the first addresses and acknowledges the unique sacredness of the landscape adjacent to the site of the Lake-shore Nature Preserve Outreach Center, and acknowledges the respect for the beliefs of the aboriginal peoples and their ancestors who have inhabited these lands for thousands of years. The second part responds to the proposed facility concept design and its cultural relationship to the land.”

Sacredness of the Landscape

The Design Team has respected this sacred landscape in conducting Phase 1 planning for the Outreach Center. All of their thought, research and recognition of this sacred site and its aboriginal people on the shores of what is now called Lake Mendota is evidenced by the time spent in walking the landscape, and the many meetings discussing the importance and sacredness of the site along with the recognition of those who came before us.

These discussions led to the Traditional Chief of the Ho-Chunk Nation - Clayton Winneshiek - being invited to the site where he offered a prayer and blessings. He spoke of the relationships of the past, present and what his hopes for the future are of this land and all people associated with this project.

As important and successful as all of this is, it must be recognized that this is just the beginning. In future planning the Nation's aboriginal leaders will be invited to this site through the course of this process, culminating in a blessing ceremony for all who are present and for all who have made this project a reality.

Relationship of the Building with the Land

The Design Team has appropriately recognized and honored the most basic beliefs and understandings of our (aboriginal people's) relationship to the land.

The proposed building design thoughtfully incorporates access to the land, water and sky in ways which honor those who came before us, as well as the aboriginal peoples living today. This was accomplished by creatively addressing the important renewable energy component and the required day-to-day functional design working elements of the project that will serve and sustain it decades into the future.

“The Design Team has appropriately recognized and honored the most basic beliefs and understandings of our (aboriginal people's) relationship to the land.”

- Chloris Lowe, Jr.



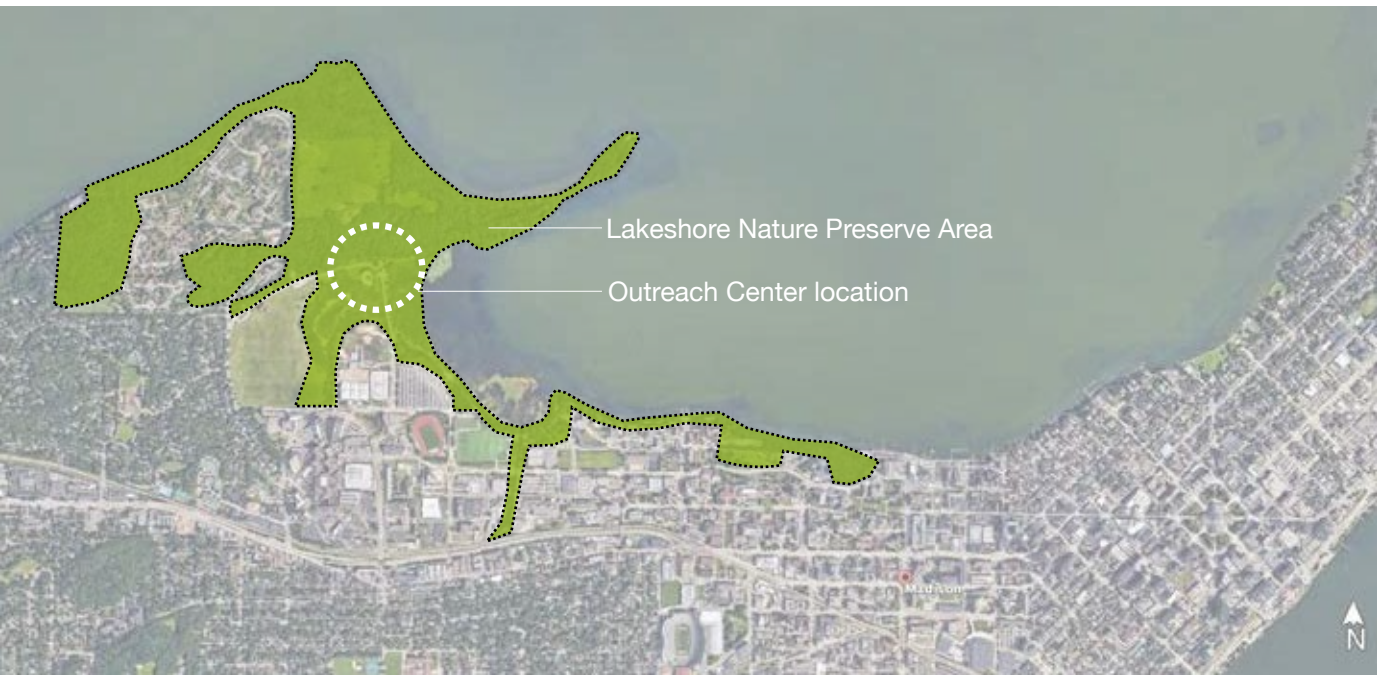
Future phases will incorporate not only native plants into the landscape planning but also native medicinal plantings to be utilized for educational purposes and medicinal gatherings.

Both the exterior and interior of the building design allow for incorporation of spaces for Native American-inspired educational components including designs, emblems and limited public art.

In summary, the Design Team has in all cultural elements of this 1st Phase of Design certainly met and exceeded in very visible, quantifiable and genuinely actionable ways the inclusion of all aboriginal cultural elements.

*Respectfully Submitted,
Chloris Lowe, Cultural Consultant*

Summary of Site Selection Process



Introduction

In Fall 2022, the design team worked with representatives of the University of Wisconsin-Madison and Lakeshore Nature Preserve staff to identify and evaluate potential sites for a new Outreach Center. Following the mandate set forth in the project's original Request for Proposals, the team sought consensus on a site best suited to create a Center that can become "a model of environmental responsibility, cultural sensitivity, and land stewardship".

The design team met with multiple stakeholder groups over the course of several days. After evaluating this input, the team developed foundational design patterns which described the key issues, strengths, and concerns to help guide the selection process. These design patterns were used during two Public Input Meetings to help illustrate the pros and cons for each potential site. The following pages detail this investigation and summarize the site investigation.

Site Evaluation Criteria

The following key criteria were used by the design team to evaluate potential site options, and in making the final site recommendation.

Alignment with ongoing LSP Master Plan	Environmental Constraints/ Opportunities	Archaeological Habitation Sites
Cultural Sensitivity	Pedestrian Safety	Parking Requirements
Public Transit Access	Sustainability Certifications	Land Management Access

Summary of Site Selection Process

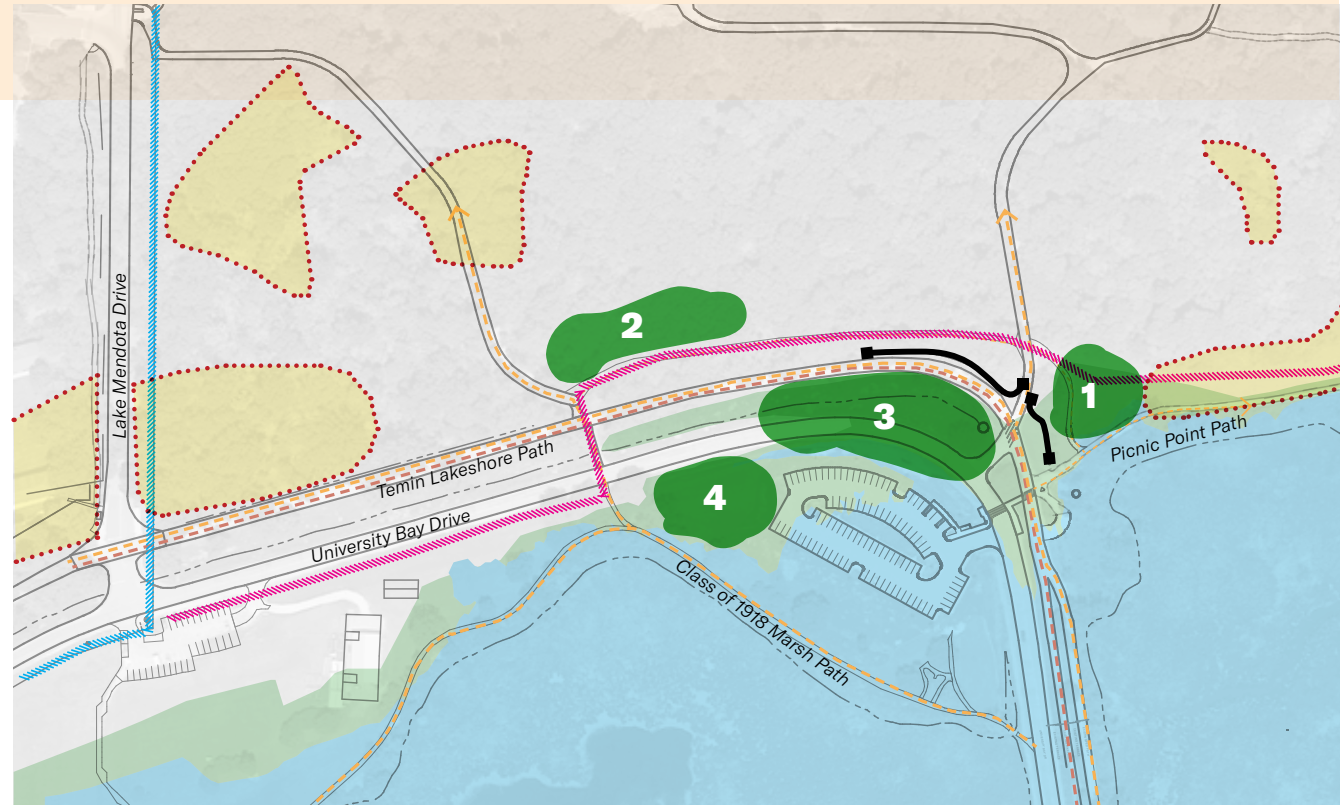
Identifying Potential Sites

The design team evaluated four primary sites for the building location.

Throughout engagement with both University and community stakeholders, the team addressed a variety of issues, with a focus on identifying the best long-term solution for the community and health of the land.

Evaluation criteria included:

- location of known or potential archaeological sites
- floodplain encroachment
- safe access for visitors
- existing utilities
- renewable energy opportunities
- land management access
- accommodating future increases in visitation
- creating a more welcoming entry experience
- limiting site disturbance
- opportunities to restore authentic native landscapes



LEGEND

- | | |
|----------------------|-----------------|
| 100-year flood plain | Pedestrian Path |
| 500-year flood plain | Bike Path |
| Archaeological Site | Water Line |
| Historic stone wall | Sewer Line |

Summary of Site Selection Process

Site Option #1 Inside the Wall

The first site option presented for public input was the open, grassy plain located just inside the east portion of the existing historic stone wall. Currently, pedestrians typically access the trail to Picnic Point at the controlled entry located at the south end of the stone wall. Site #1 is adjacent to a known archaeological site.

Selected Public Input Comments

“Popular pedestrian access to Picnic Point”

“Feels intrusive into the Preserve”

“Isolated from the Class of 1918 Marsh”

“Too close to mapped archeological sites”

“Space is tight - no room to expand”

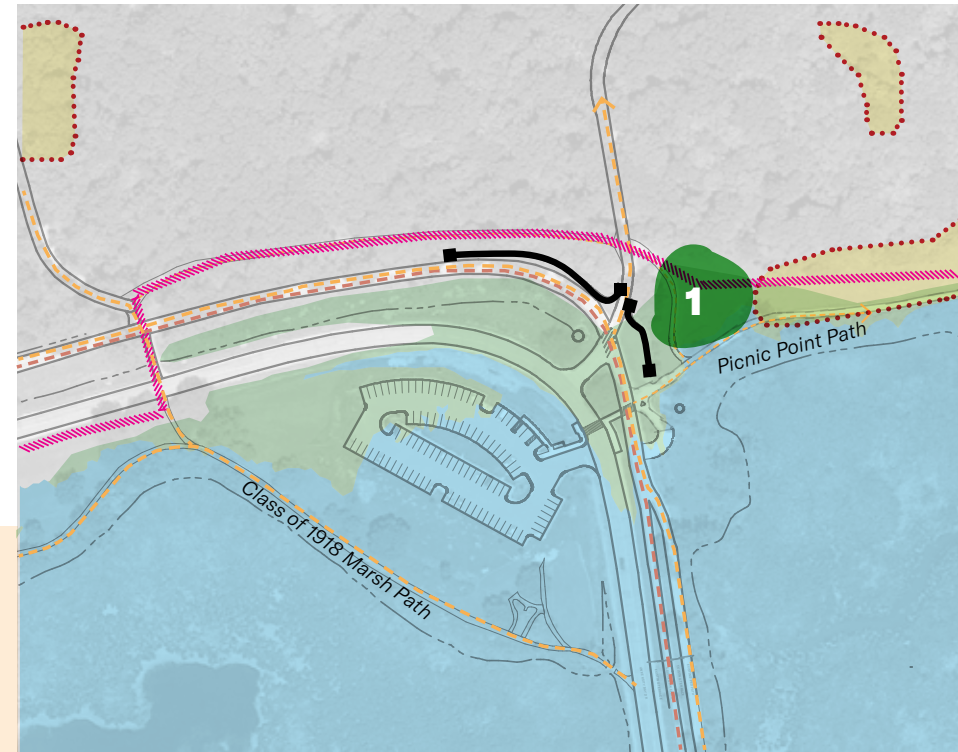
“This is a beautiful spot, but should we put a building here?”

PRO

- Proximity to current pedestrian entry
- Proximity to iconic gateway portals & stone wall
- Offers convenient land management access
- Minimal disruption of high quality tree canopy
- Reasonable access to water and sanitary lines
- Strong southern exposure
- Flat topography provides uncomplicated building site

CON

- Intrusion into the Preserve
- Potential impacts to a mapped archaeological site
- Potential limitations on building floor plate size
- Limited options for future expansion
- Location reduces outside visibility of the Center



Summary of Site Selection Process

Site Option #2 West Wall

Site Option #2 is located just inside the Preserve to the west of the existing stone wall. Site would require selective land management removal of non-native, low quality trees along the edge of the Preserve.

Selected Public Input Comments

“Project could help remove non-native plantings”

“Feels intrusive into the Preserve”

“Too remote - not a good place for a welcome center”

“Tramples on habitats”

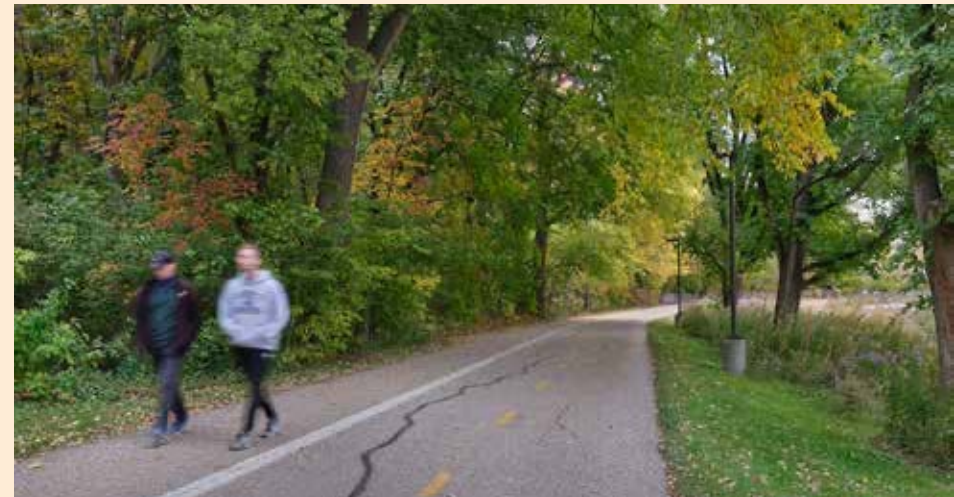
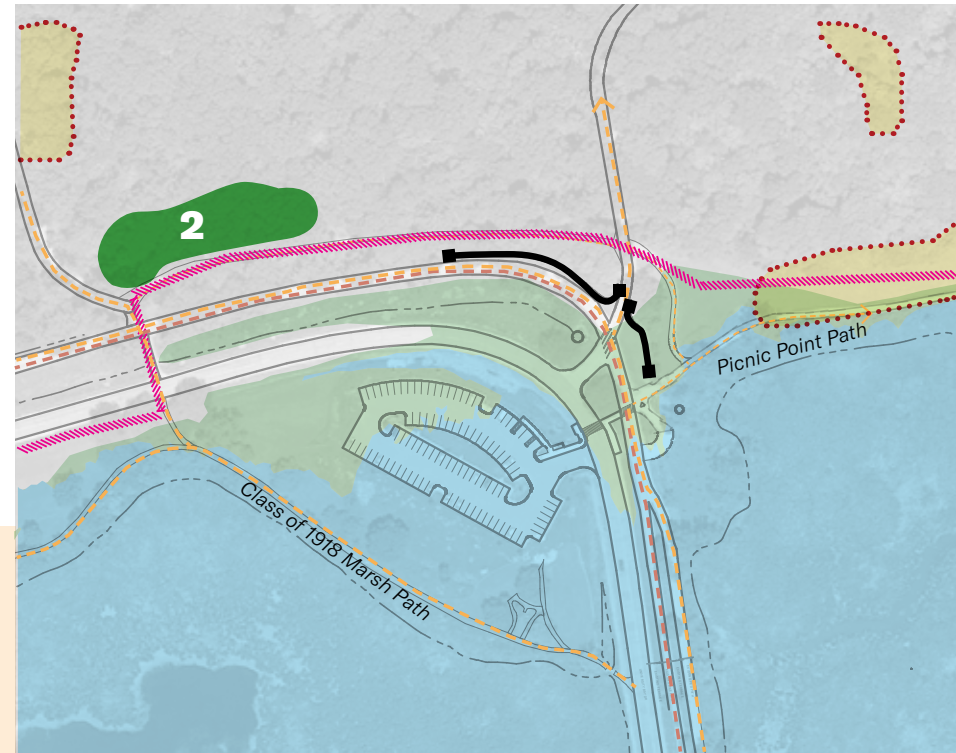
“Too much vegetation would be removed”

PRO

- Offers convenient land management access
- Limited infringement on known habitation sites
- Location responds to selective removal of low quality trees
- Relationship to iconic gateway portals & stonewall
- Strong relationship to pedestrian trails
- Good visibility along University Bay Drive
- Elevation change in topography may create unique building design opportunities
- Reasonable access to water and sanitary lines

CON

- Potential impact to unmapped archaeological sites
- Construction cost impact of topography
- Solar access more challenging
- Reduced public visibility
- Intrusion into Preserve
- Greater walking distance to entry
- Could create new bike/ped/vehicle conflicts if road relocated



Summary of Site Selection Process

Site Option #3 Reinforcing the Threshold

Site Option #3 is located directly south of the historic stone wall and within the roadway of University Bay Drive and partially within the existing bioswale. This site would require relocating both the drive and the bioswale.

Selected Public Input Comments

“Locating on a previously disturbed site is positive”

“Requires the team to resolve problematic traffic conflicts”

“Good site access - close to parking and bus stops”

“Already a high use area, put building here instead of creating new high use area elsewhere”

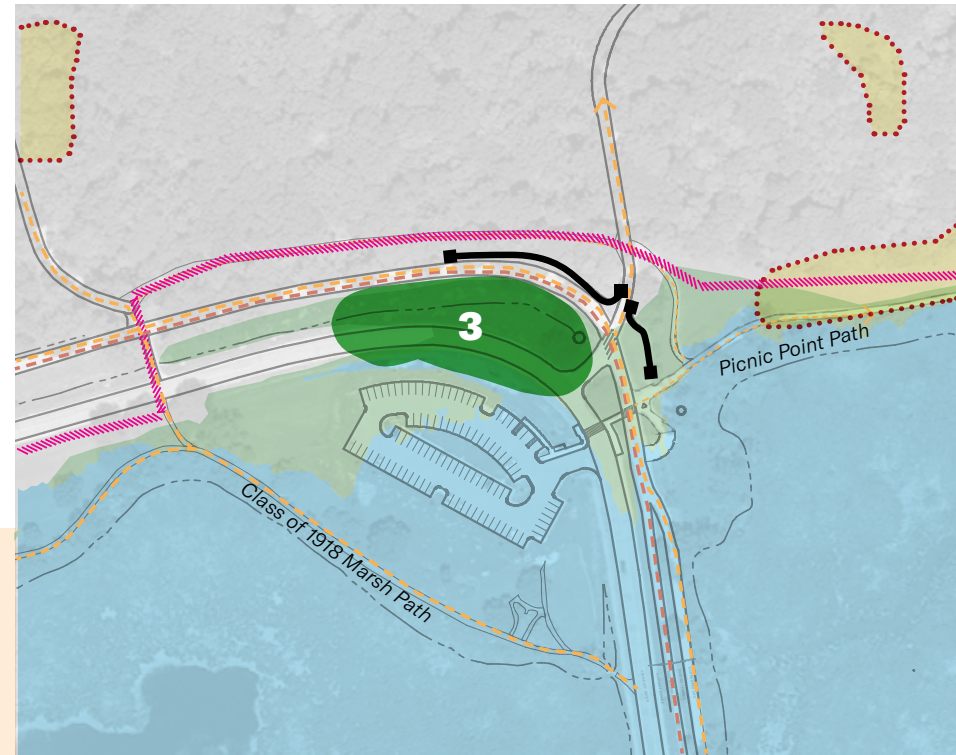
“The parking lot should be studied - do we need that parking?”

PRO

- High public visibility
- Proximity to iconic gateway portals & stone wall
- Creates pedestrian zone that reduce vehicle/ bike conflict
- Offers convenient land management access
- Building on previously disturbed site reduces potential archaeological impacts
- Reasonable access to water and sanitary lines
- Strong southern exposure

CON

- Constrained space for building and required parking
- Potential flood plain encroachment
- Additional cost to reposition University Bay Drive
- Requires changes to existing bioswales



Summary of Site Selection Process

Site Option #4 The West End

Site Option #4 is located to the west of the existing Lot 130 parking lot. This site compromises a number of program goals, however it also occupies one of the most disturbed areas.

Selected Public Input Comments

“Good relationship with the marsh”

“Feels too far from main entrance”

“Would require crossing the road to get to the Preserve”

“Too much traffic noise”

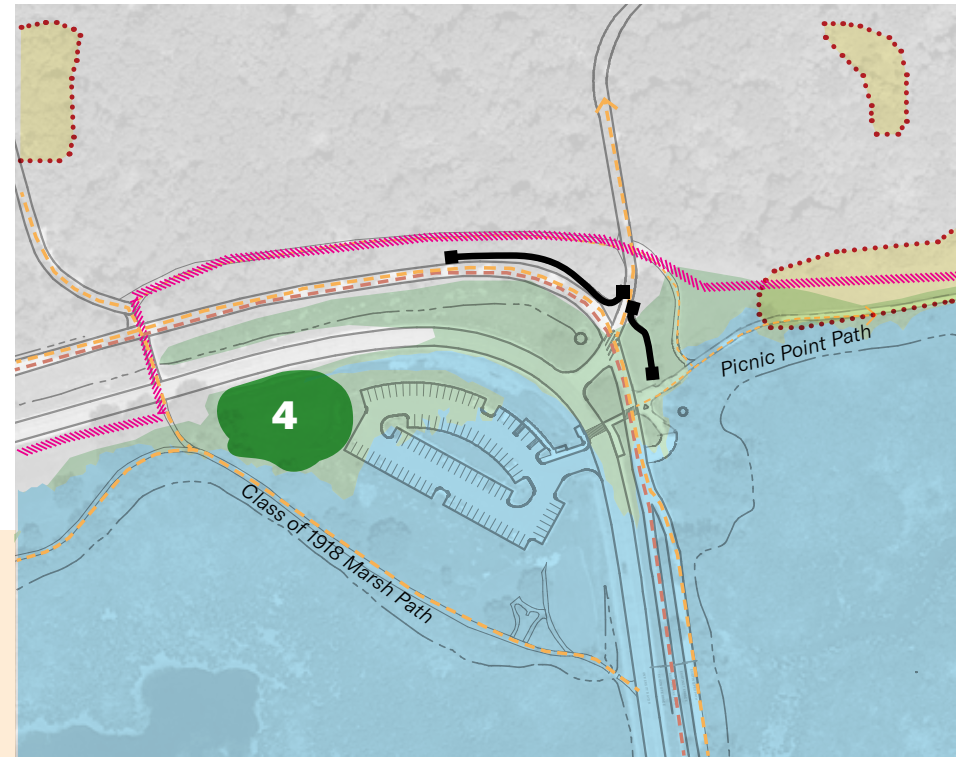
“Building may block views of wall”

PRO

- Building on previously disturbed site
- Sufficient space for future expansion
- No infringement on known habitation sites
- Reasonable access to water and sanitary lines
- Strong southern exposure
- High public visibility

CON

- Requires crossing University Bay Drive
- Furthest pedestrian travel from Preserve entry
- Lacks strong relationship to iconic entry portals & stone wall
- Lacks integration into the Preserve
- Less convenient land management access to the Preserve
- Poor acoustics due to vehicle traffic noise



Benchmarking

Benchmarking Site Visit to Leopold Legacy Center

In December, 2022 the UW-Madison Lakeshore Outreach Center Core Team took a benchmarking site tour to the Leopold Legacy Center in Baraboo, Wisconsin. Designed by TKWA, the Leopold Legacy Center is a “Net Zero Energy” facility that was the first building recognized by the US Green Building Council as carbon neutral in operation. Leopold Foundation Executive Director, Buddy Huffaker, provided an in-depth look at how the building functions, as well as a discussion of “lessons learned”. Many aspects of the Leopold Center’s activities, especially land management and staff support, directly relate to the needs of the Lakeshore Nature Preserve Outreach Center.

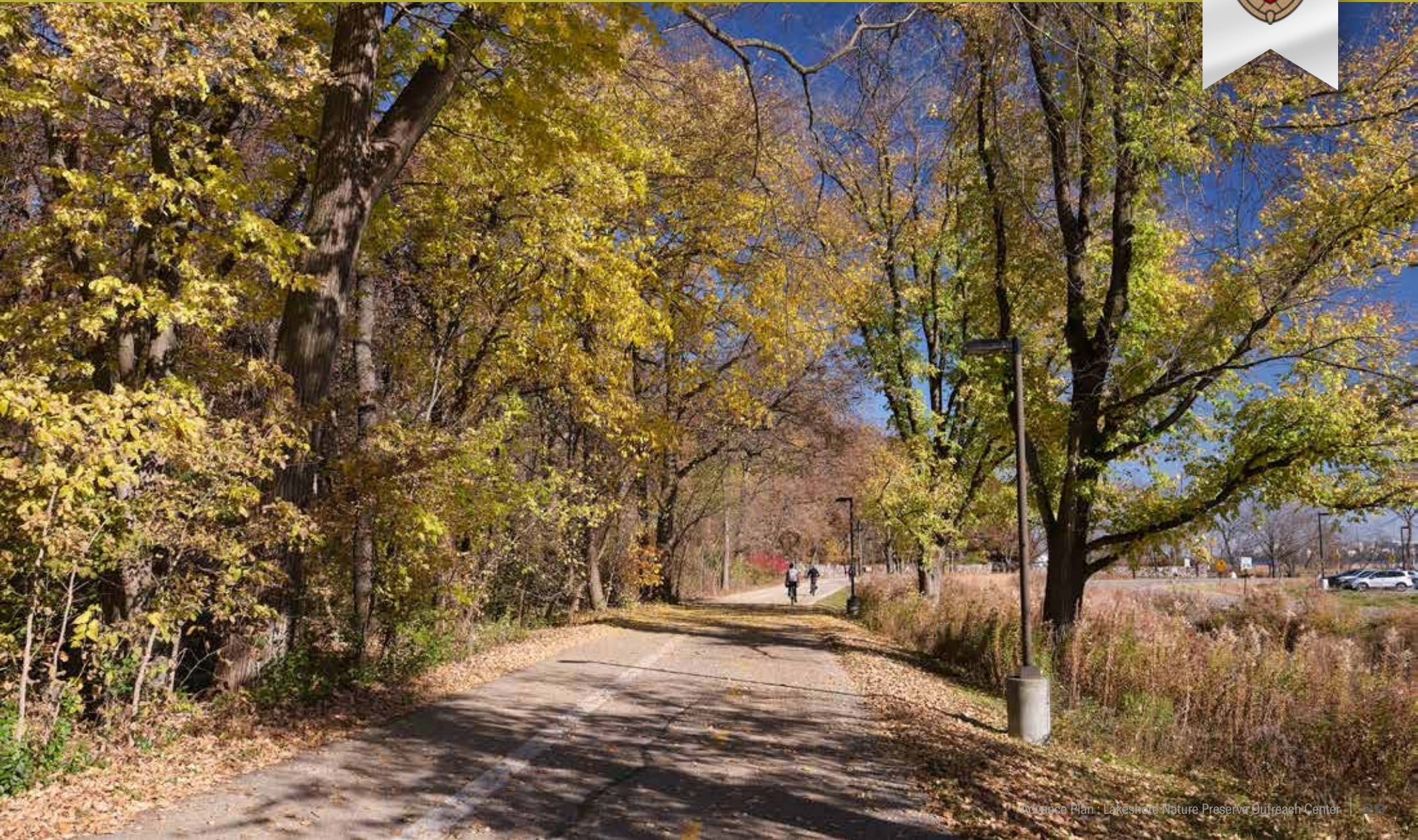


Benchmarking Site Visit to UW Arboretum

In September, 2022 the UW-Madison Lakeshore Outreach Center Core Team conducted a site visit to the University Arboretum. Located in Madison and encompassing approximately 1,200 acres, the Arboretum mission is focused on conservation and restoration of native landscapes through “collaborative approaches in science, stewardship, education, and public engagement.” Specifically, the Core Team sought to evaluate how existing Arboretum facilities support ongoing programming, visitor services, and staff land management efforts.



6. Initial Patterns

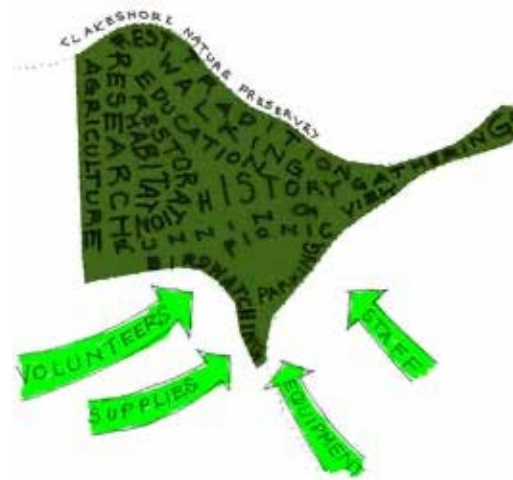


Initial Patterns

A Brief Introduction to Pattern Writing

The goal of writing Patterns is to gain a deeper understanding of how buildings and site can be configured to support both human activity and natural processes in a harmonious way.

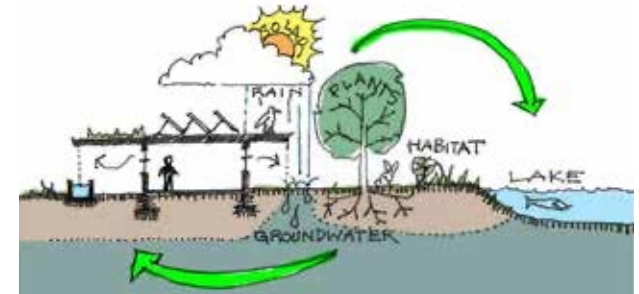
Writing Patterns helps identify the deeper social, spiritual, and emotional values inherent in a place. This process offers solutions for making a place more alive, more functional, and more inviting for staff and visitors.



1. Why Build Here?

ISSUE: For the casual visitor it can be easy to take for granted the effort required to maintain the Preserve. The work being done behind the scenes is not always obvious. Thus, the intrusion of a building may at first seem counterintuitive. However, the resources to properly manage the Preserve are scattered throughout campus, creating challenges and inefficiencies for both staff and volunteers. The current way of operating is not sustainable.

SOLUTION: A new Outreach Center will give staff and volunteers a place to gather, train, store materials and equipment, and administer the many ongoing projects taking place here. A new building here will also raise awareness of the work required to protect and restore this important ecosystem. Finally, the Center will educate students and the community about the sacred cultural history of this place to the Tribes of Wisconsin.



2. A Kinship With the Land

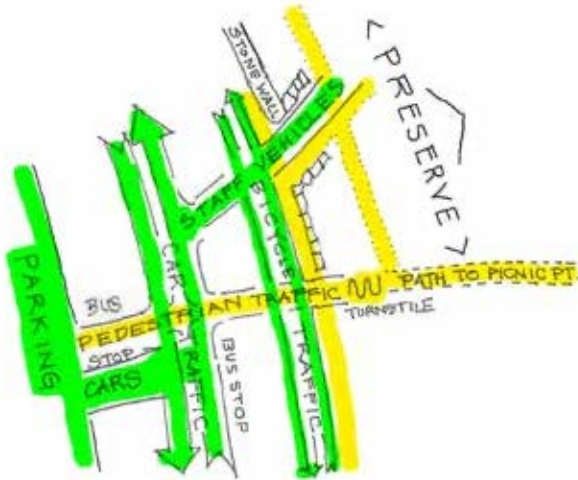
ISSUE: Indigenous peoples have lived in kinship with this land for thousands of years, taking only what they needed and improving the health of ecosystems along the way. How can we enlarge our notions of sustainability to include kinship with all living beings, human and otherwise?

SOLUTION: Be certain that the 'health of the land' becomes the measure by which all building decisions are made. Examine each question in terms of what is ethically and aesthetically right, as well as what is economically expedient.

"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

—Aldo Leopold, *A Sand County Almanac*

Initial Patterns



3. Healing the Threshold

ISSUE: The Preserve entrance along University Bay Drive is key. Everything happens here. It is the boundary between the urban realm and a place in nature. It is the intersection of all activity - vehicle traffic, fast moving bicycles, pedestrians crossing from parking. Yet this essential space is a tangle of overlapping paths and barriers. Despite the legacy of the historic gate and wall there is no real core, no meaningful threshold into the Preserve.

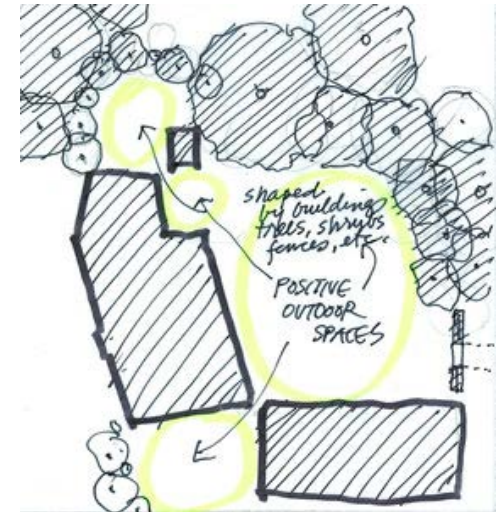
SOLUTION: No matter where the new building is sited this condition must be healed. Design efforts must create a new 'front door' to the Preserve.



4. A Building for People Who Want to be Outside

ISSUE: For visitors to the Preserve a building should not be the main event.

SOLUTION: Think of the new Outreach Center as a pathway first, and an invitation, into the landscape. Configure the Center to not only enhance and strengthen the Preserve entrance, but to celebrate the pedestrian experience. Create a place for gathering or lingering, for embarking and for returning.



5. Positive Outdoor Space

ISSUE: "Outdoor spaces which are merely left over between buildings will, in general, not be used." - Christopher Alexander

A building designed as an object in space lacks potential to create and capture positively shaped outdoor space that can contribute to the life of the Preserve and the Campus.

SOLUTION: Always consider the placement and general shaping of the building and adjacent outdoor spaces simultaneously. Provide outdoor spaces with edges that give them a room-like character.

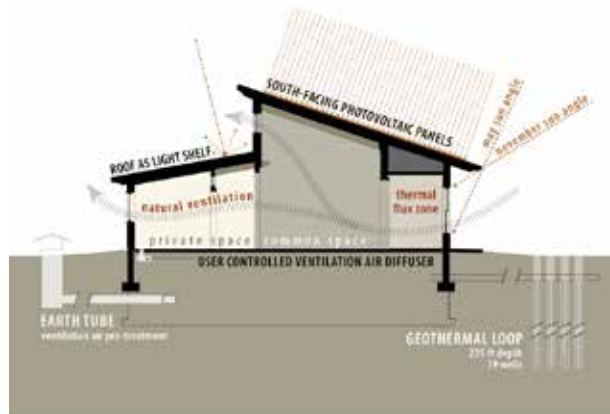
Initial Patterns



6. Safeguard (and Rediscover) the Wall

ISSUE: The iconic stone wall and entry portals are an important part of the Preserve's history and identity. Any changes to the site must respect the wall's contribution to a sense of place.

SOLUTION: Locate the building so that it may safeguard the visibility of the wall and entry portals. Consider new ways to highlight the distinct character of the wall - its assemblage of uniquely interwoven stones, its roughness of texture, and its subtle multi-hued colors. Create views to the wall from inside the building and from gathering spaces outside, offering focal points for new discovery of an old familiar friend.



7. A Simple Stable Shell

ISSUE: Many of today's buildings are designed to be well-insulated, lightweight, thin-skinned shells augmented with the latest technology in heating, cooling, and air control. Buildings of this type tend to be high users of energy, technology dependent, and because their shells are lightweight, their life expectancies are relatively short.

SOLUTION: Design a stable, well-insulated, massive, and self-shading shell. These low-tech, high-yield design strategies will decrease the building's reliance on both energy and technology, allowing the structure to serve its purpose over a longer than typical span of time.

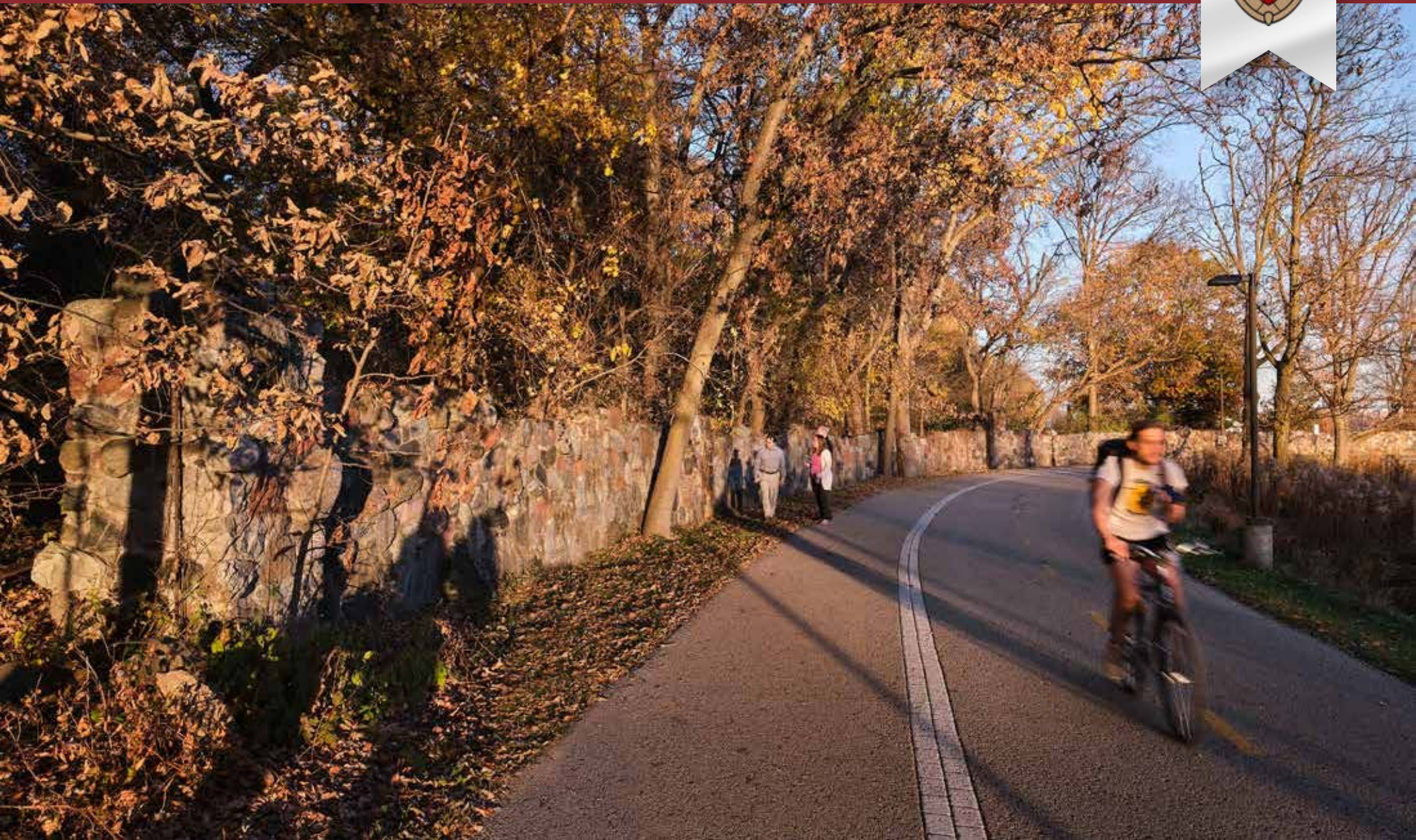


8. Natural Area Management Made Visible

ISSUE: It takes work to manage a 'natural' landscape and to support the ecological health of the Preserve. Many of these necessary activities, both by staff and volunteers, are often little understood by those who visit the Preserve or the larger community.

SOLUTION: Locate maintenance support areas, such as garages or work yard, so they are evident to visitors (yet secured when not in use). Organize the building and site to provide convenient access to the Preserve for staff while maintaining clear separation between public and private zones of activity.

5. Design Response



Introduction

The design goal for the Outreach Center is to create a gathering place that brings together all who enjoy, support, and maintain the Preserve.

An Expansive Vision

The University described an expansive vision in its call for proposals to create a new Outreach Center for the Lakeshore Nature Preserve. Key goals included:

- create the first carbon-neutral campus facility utilizing highly-sustainable building practices
- support the University's commitment to climate resiliency
- introduce visitors to the cultural and natural history of the Preserve
- consider the history of the land as the ancestral home of the Ho-Chunk and other indigenous peoples for over 12,000 years
- support the University's educational mission
- support essential staff and volunteer land stewardship activities
- create safe and effective pathways for movement of people, bicycles, vehicles, public transport, and animals.

In short, the stated design goal for the Outreach Center is to create a gathering place that brings together all who enjoy, support, and maintain the Preserve. The goal is to create a building that sits lightly on the land and exemplifies the highest values of the University.

Beyond Sustainability

This vision calls for a model of environmental responsibility that goes beyond traditional definitions of "sustainability" - the idea of simply doing no harm is not good enough. For this reason, the design team recommends pursuing the **Living Building Challenge**—the most rigorous third-party building certification program in the world.

The Living Building Challenge is modeled on the idea of regenerative placemaking; creating buildings that make measurable improvements to air, water, and soil quality; that generate more renewable energy than required for operation, that clean more water than they consume; and remove more carbon than they produce.

Celebrating Earth, Water, and Sky

The design team considered the words of Aaron Bird Bear, expressed during our first day of stakeholder meetings. **What does it mean to share a "kinship with the land"?** With every decision, we asked: "what is best for the long-term health of the whole community—including people, animals, and plants?"

It is our hope that the designs depicted on the following pages describe a place that celebrates the earth, waters, and sky of the Lakeshore Nature Preserve—a building and site that literally grows from the earth and pays homage to the people who know this land as Dejope.

Early Site Plan Studies

Several important “fixed” features within the site are:

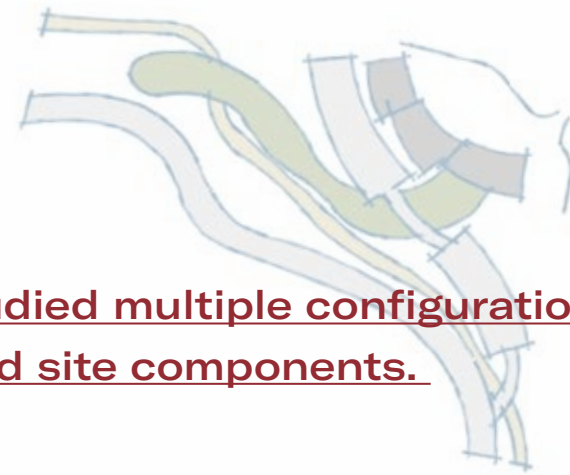
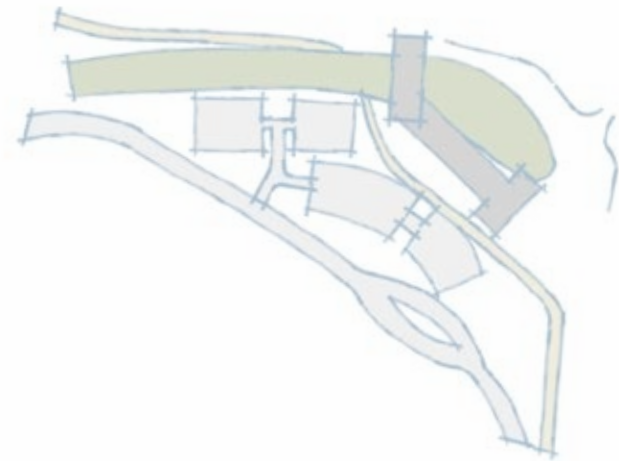
- The stone walls at the entry to the Preserve
- Where University Bay Drive and the Temin Lakeshore Path enter and leave the site
- Wetland areas around the Class of 1918 Marsh and Mendota Lake Marsh
- Where water from the western bioswales enters the site and where it is discharged into Lake Mendota
- The quantity of parking spaces

The design team explored different arrangements of the site features that had flexibility to move:

- How University Bay Drive and Temin Lakeshore Path connect through the site
- The path the bioswale takes through the site
- The configuration of the parking spaces
- The building location

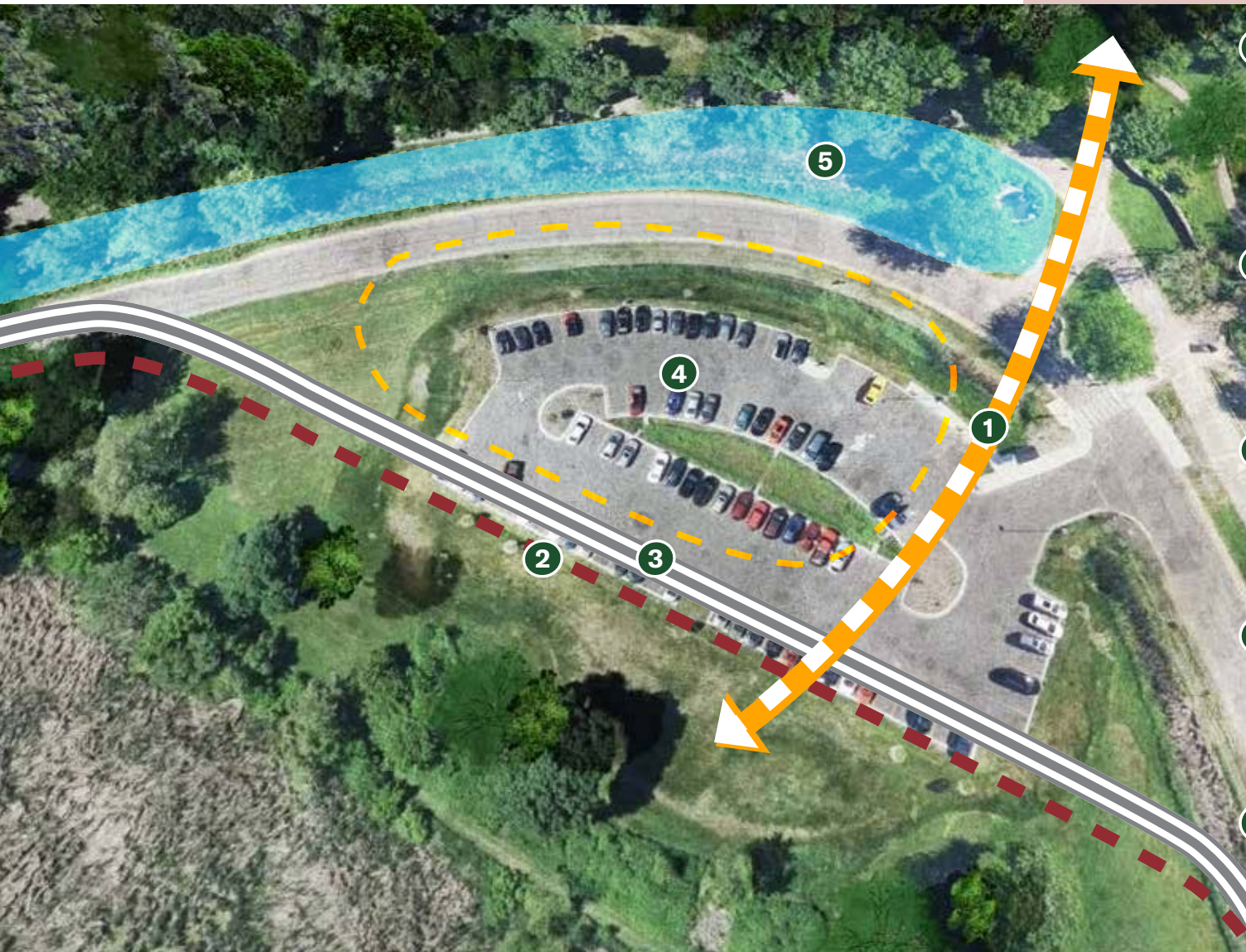
The early studies that were the most successful prioritized opportunities for gathering around the Outreach Center, created a strong path toward the entry of the Preserve, and reduced the footprint consumed by the parking lot.

The design team studied multiple configurations to organize the required site components.



Five Key Principles

The design team identified (5) key principles to guide design of the overall site. These key principles were informed by feedback from campus and community stakeholders, UW System representatives, and Lakeshore Preserve staff.



1 A Central Spine

- Emphasize pedestrian access to Preserve
- Focus attention on main gate and wall
- Create strong center near Preserve entrance
- Unify marsh with Preserve
- Create safe pedestrian passage

2 Protect the Marsh

- Locate road no further south than existing parking
- Maintain or reduce impervious area
- No additional stormwater to marsh

3 Clarify Circulation

- Define ped/bike/vehicle pathways
- Introduce traffic calming
- Increase pedestrian safety
- Maintain overall traffic volume

4 A Parking Solution

- Support increased visitation
- Create new amenities to attract other modes of transportation
- No increase beyond existing 100 parking stalls

5 Maintain Bioswale Integrity

- Maintain inlet from western bioswales
- Maintain outlet to lake
- Maintain capacity

Conceptual Site Plan

Key

- | | |
|-----------------------------------|--|
| ① Entry to Site/Building | ⑮ Boardwalk* |
| ② Lakeshore Path | ⑯ Table Top Crossing |
| ③ Preserve Portal | ⑰ Bus Stop |
| ④ Public Space | ⑱ Bio Swale |
| ⑤ Outreach Center Building | ⑲ Water Collection Feature |
| ⑥ Service Yard/Garages | ⑳ Ho-Chunk Medicine Plant Garden |
| ⑦ Ramp to Building | ㉑ Outdoor Terraces |
| ⑧ Existing Stone Wall | ㉒ To Picnic Point |
| ⑨ Parking Lot | ㉓ Screen Wall and Gates |
| ⑩ Temin Lakeshore Path, relocated | ㉔ Service Enclosure |
| ⑪ B-Cycle Parking | ㉕ Turtle Tunnels |
| ⑫ Stone Seat Walls* | ㉖ Covered Bike Parking* |
| ⑬ Existing Trail | ㉗ Class of 1918 Marsh Dedication Boulder |
| ⑭ Proposed Canopy Walk | |

*Donor Gift Opportunity (not in project scope)



Unfolding the Building Design



- ① New road location creates unified space for building and parking
- ② Vehicle/bike/pedestrian circulation improved for safety and sense of place
- ③ New pedestrian path highlights main entry to Preserve
- ④ Solar photovoltaic panels above accessible pathway leading to rooftop overlook
- ⑤ New gathering area and pavilion at Class of 1918 Marsh (Future phase)
- ⑥ Restored native prairie/wetland areas
- ⑦ Outreach Center Building

Site Amenities

The following site amenities can be designed to incorporate storytelling of the natural and cultural history of the site:

- Stone seat walls
- Educational displays
- Pervious walking paths
- Incorporation of art
- Bird watching opportunities
- Marsh overlook
- Interpretative signage
- Drinking fountains/Water Bottle Fillers
- Hands on demonstration areas

Comfort, safety, education and inclusion are primary considerations when designing site amenities for the Outreach Center.

Note: Selected site amenities are optional and can be added based on donor support

Signage

Artful Interpretive and wayfinding signage will be important for visitors to both navigate the site and learn about the historical and cultural significance of the site.

Interpretive signage will also inform visitors of the many sustainable design elements of both the building and the site.

Site Plan Materials

In support of the project's sustainable mission, we propose the use of native stone, wood harvested from the Preserve, and other locally sourced or certified sustainable materials.



Naturalized bioswales will be repositioned and expanded

Gathering/Programmed Use

The development of both large and small gathering spaces for both celebration and intimacy will be defined by the detailing of the amenities and the materiality used throughout the site.

Formal spaces on the site include:

- The entry portal to the Preserve
- Destination public gathering space next to the Outreach Center
- Outdoor gathering space at Outreach Center

Informal spaces on the site include:

- Places for volunteer orientation
- Small group gathering spaces
- Places to rest



Native landscape elements will be identified through interpretive signage

Cultural Interpretive Opportunity

The Preserve plans to engage with Tribal Historic Preservation Officer Bill Quackenbush to explore opportunities to make visible the important cultural history of the Ho-Chunk people on this site. Listening to Bill Quackenbush and representatives of the Ho-Chunk Tribe will be the first step in developing the telling of those stories.

The site amenities at the Outreach Center will support wayfinding, support volunteer activities, and offer interpretive and educational opportunities.

Vehicle/Multimodal Access

Site Parking & Circulation Key Features

- Re-routed University Bay Drive provides safer pedestrian crossings and entry to parking located on the Preserve side of road.
- Reconfigured University Bay Drive will not encroach closer to Class of 1918 Marsh than southern edge of existing parking lot.
- Emergency vehicle access is preserved through main entry gate.
- New service yard can be accessed through widened pathway north of existing stone wall.
- The proposed new parking lot will be located immediately north of the realigned University Bay Dr.
- The lot will maintain the number of stalls and have a combination of paid parking and permit parking. The final number of each type of parking space will be refined in the future design phases of this project.
- The reconfigured parking lot will provide fire access for the Madison Fire Department to serve the Center. The pavements and turning radii will be designed to accommodate fire truck access.
- Waste and recycling pickup will be collected from the Outreach Center through the parking lot

Note: The existing Lot 130 was constructed by DFD project 17H2H in 2019. The lot has 100 stalls including 4 ADA stalls. The lot contains a combination of paid parking for visitors and permit parking issued by UW Transportation Services.



Pedestrian & Bicycle Circulation Key Features

- New routing of bicycle and pedestrian paths maintain continuity of important routes through the Preserve while increasing safety.
- A new B-Cycle station is located where a new pedestrian path into the Preserve diverges from the main bike/ped route.
- Buses will stop in-road as they do today, however, more generous covered waiting areas are provided in the new design.



Stormwater Management

The proposed stormwater management for the Preserve Outreach Center is a combination of new development for the facility and redevelopment for the parking lot and roadway relocations. Past projects have studied the stormwater management in the areas surrounding the site.

The following stormwater codes and standards apply to projects on the UW Madison Campus:

- Green Infrastructure & Stormwater Management Master Plan, 2015 Campus Master Plan
- State of Wisconsin and Wisconsin DNR Chapter NR 216

The following stormwater codes and standards will be followed as a best practice on the UW Madison Campus:

- Dane County Chapter 14
- City of Madison MGO 37

Past studies and applicable stormwater design:

- West Campus Stormwater Management Plan (2004)
- DFD 10I3D West Campus Storm Basins Plan Set (2013)

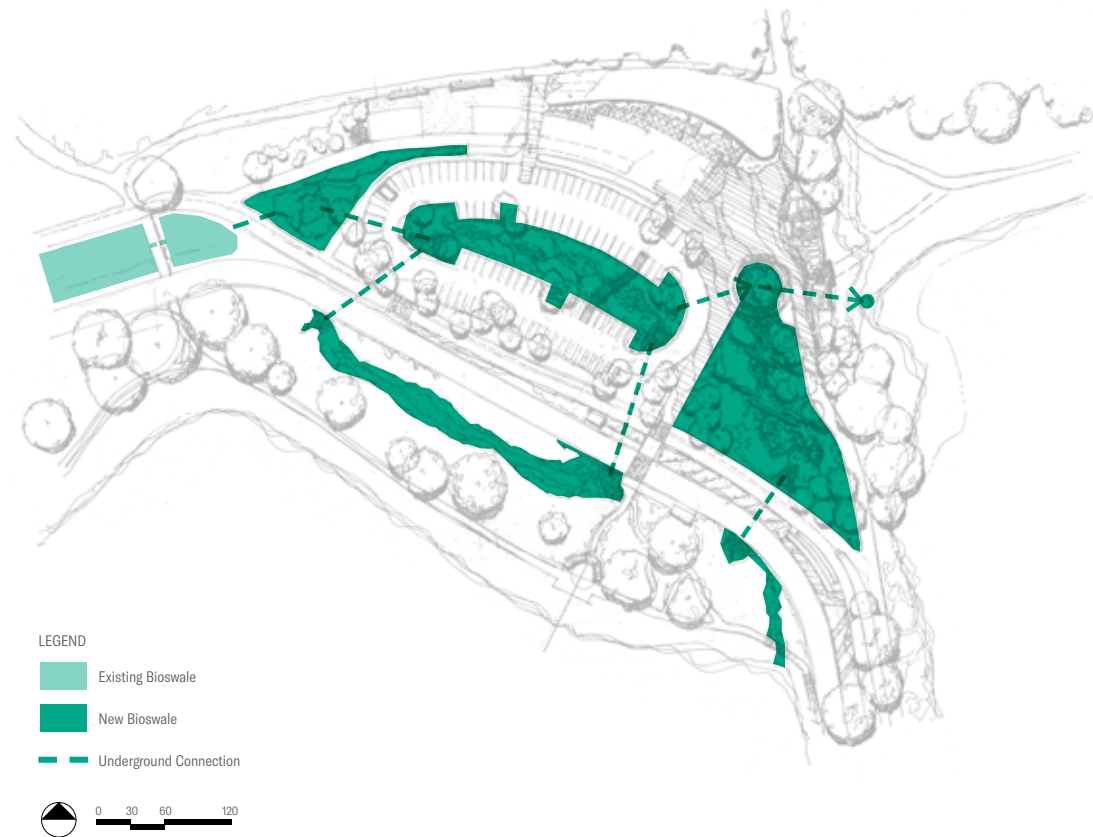
Since 2013 new rainfall modeling standards have been developed to more accurately model rainfall in the Midwest. In 2018 the Lake Mendota watershed experienced a rainfall equivalent a 500+ year storm event that lead to additional attention to stormwater management in City of Madison. In 2020 the City of Madison adopted a more restrictive stormwater ordinance. While not required, this standard is followed on the UW Madison campus as a best practice. The City of Madison MGO 37 standard is the most restrictive of the listed standards.

MGO 37 Stormwater Standards

Sediment control:

New Development: Reduce total suspended solids by 80% based on average annual rainfall.

Redevelopment: This site is in the Rock River TMDL. The site will be designed to reduce the TSS leaving the site by 80% or 60% for new parking as compared to no controls.



New parking area and Preserve entry creates opportunities for improved water quality and land restoration while managing stormwater from existing bioswales to the west.

Stormwater Management (cont'd)

Oil & Grease

The existing site has 100+ parking stalls in the lot. Parking lots with over 40 stalls that are resurfaced are required to have oil and grease controls. The first one-half inch of runoff from the parking lot needs to pass through an oil and grease control device.

Runoff Rate Control

New development: Control the peak runoff rate for the 1, 2, 5, 10, 100, and 200-yr 24-hour storm event and safely pass the 500-yr 24-hour storm event.

Redevelopment: Reduce the runoff rate from the site by 15% compared to existing conditions during a 10-year design storm.

Infiltration or Volume Reduction

All developments: Post development site shall infiltrate 90% of the predevelopment infiltration volume unless the site qualifies for an exemption. High groundwater on the site may limit the feasibility of achieving the recommended infiltration volume.

Redevelopment: Reduce the runoff volume from the site by 5% compared to existing conditions during a 10-year design storm. Due to the mixture of redevelopment and new development, this will be applied to the parking lot and University Bay Drive rerouting.

Green Infrastructure

The first half inch of runoff shall be routed to bioretention or other green infrastructure BMPs. All the stormwater management practices proposed on this site classify as green infrastructure.

The first objective of the stormwater management design required by the Preserve Outreach Center is to maintain the capacity of the existing bioswale that runs through the proposed site. This bioswale, along with the raising of University Bay Drive, have helped to reduce flooding in this area. It is important to maintain this improvement.

The bioswale will be rerouted south of the Outreach Center through the parking lot. Additional bioswale and stormwater management area are proposed east of the parking lot. The discharge for the bioswale in University Bay will be maintained to reduce disturbance to the shoreline of the Bay and Lake Mendota. The bioswale will provide TSS reduction, oil and grease removal, runoff rate reduction, and infiltration.

A new bioswale is proposed south of the new section of University Bay Drive. This swale is intended to collect and treat the runoff from the road prior to entering the Class of 1918 Marsh.

Pervious pavement is proposed for the parking lot replacement. The geotechnical investigation from DFD 10I3D indicated that the water table around the location of this site was roughly 3ft below the ground surface. The feasibility of the pervious pavement for the new parking lot will be evaluated further following a future geotechnical investigation. Pervious pavement can provide TSS reduction, runoff rate reduction, and infiltration.

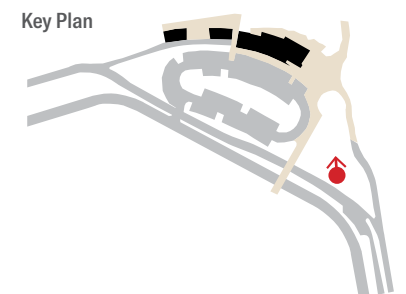
Green roof is proposed for much of the LNP Outreach Center. The proposed green roof reduces the rate and quantity of stormwater leaving the roof top via evapotranspiration, cools the runoff, and filters the water through the soil medium. It also reduces HVAC needs and extends the life of the roof membrane reducing overall maintenance costs.

Bioswale Aerial



- ① New native plant bioswale
- ② New Preserve access pedestrian path
- ③ Covered bike shelter*

**Donor Gift Opportunity (not in project scope)*

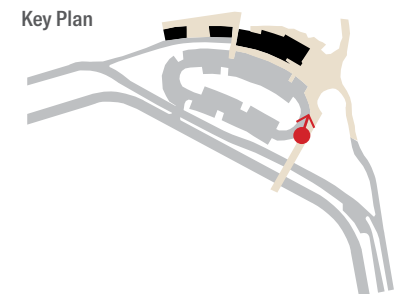


Entry Pathway



- ① Fully-accessible overlook offers views 20 feet above Preserve, Marsh, Lake Mendota, and Madison skyline
- ② Bike shelter provides storage and gives visitors a protected area to leave bikes before entering the Preserve*
- ③ Permeable pavers and native vegetation help protect water quality and enhance the entry experience

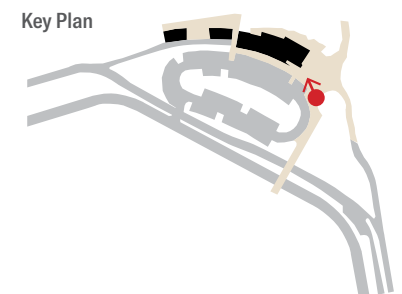
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Entry Plaza & Monument Sign



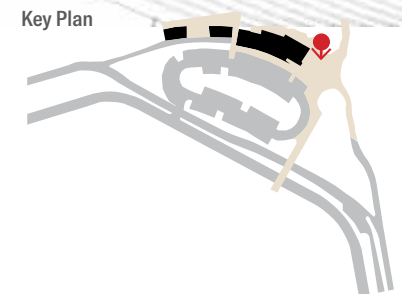
- ① Pathway and plaza with permeable paving
- ② Monument sign and seat wall defines outdoor gathering area and provides interpretive opportunities
- ③ Limestone wall surface provides space for major donor recognition



Unfolding the Building Design — Overlook



- ① Fully-accessible overlook offers views 20 feet above Preserve, Marsh, Lake Mendota, and Madison skyline
- ② Plaza provides welcome to the Preserve main entry and maintains emergency vehicle access
- ③ Path through eastern bioswale
- ④ Seat wall helps shape outdoor gathering area and provides interpretive opportunities



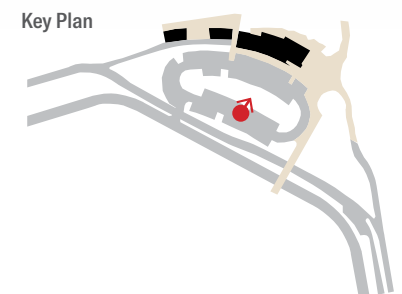
Path Through Parking Lot Bioswale



① Boardwalk path through bioswale makes safe pedestrian connection*

② Bioswale plantings help reduce visual impact of parking lot

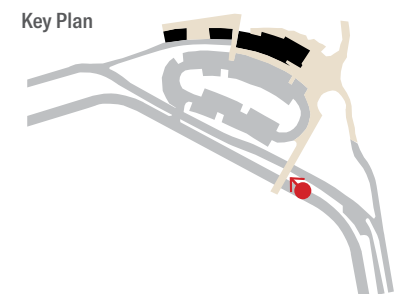
**Donor Gift Opportunity (not in project scope)*



Site Entry Zone



- ① Raised table crosswalk helps create safer pedestrian crossing across University Bay Drive
- ② Separate bikeway and pedestrian path continuity is maintained through the new Preserve entry

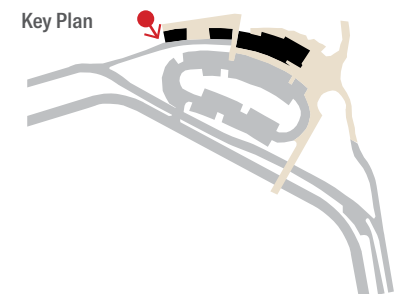


Work Yard Aerial



- ① Work yard provides convenient staff access to Preserve
- ② Green roof helps manage and filter site stormwater
- ③ Photovoltaic canopy covered pedestrian walkway gives views into work yard and across bioswale

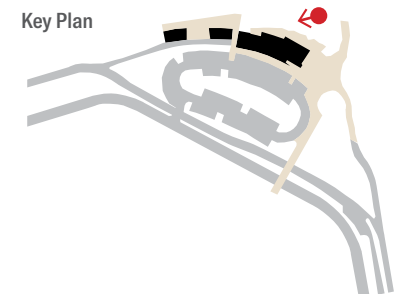
- ④ Canopy Walk
- ⑤ Bioswale



Canopy Walk Entry



- ① Canopy walkway provides direct access into Preserve and views of iconic stone wall
- ② Shaded north elevation of building has generous windows with views into the woods
- ③ Bird Safe Glass (prevents bird strikes) allows light into the facility

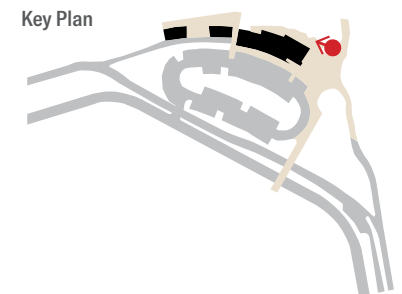


North Terrace

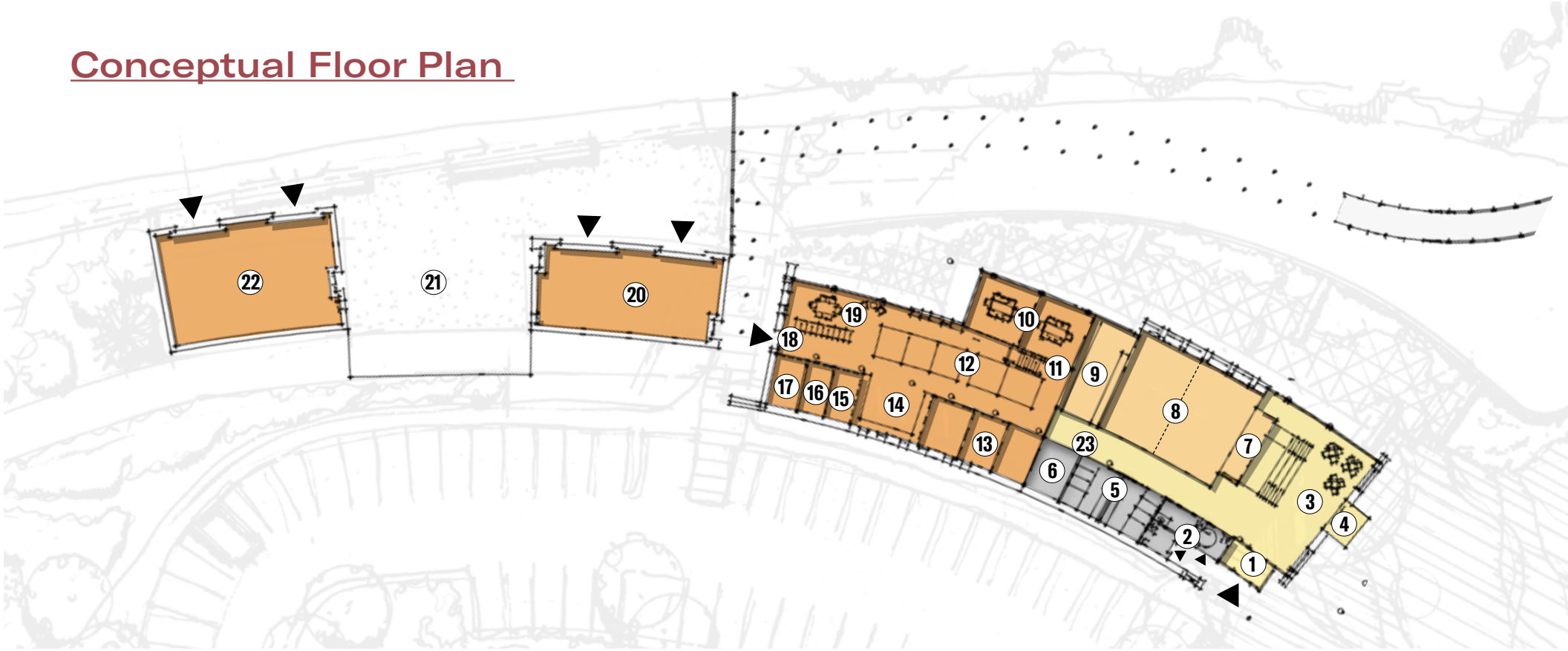


- ① Main gathering spaces offer strong indoor-outdoor connections with doors and/or operable walls
- ② Back terrace provides informal, small-scale gathering spaces
- ③ Pathway follows stone wall with interpretive signage
- ④ Stone seat walls*

**Donor Gift Opportunity (not in project scope)*



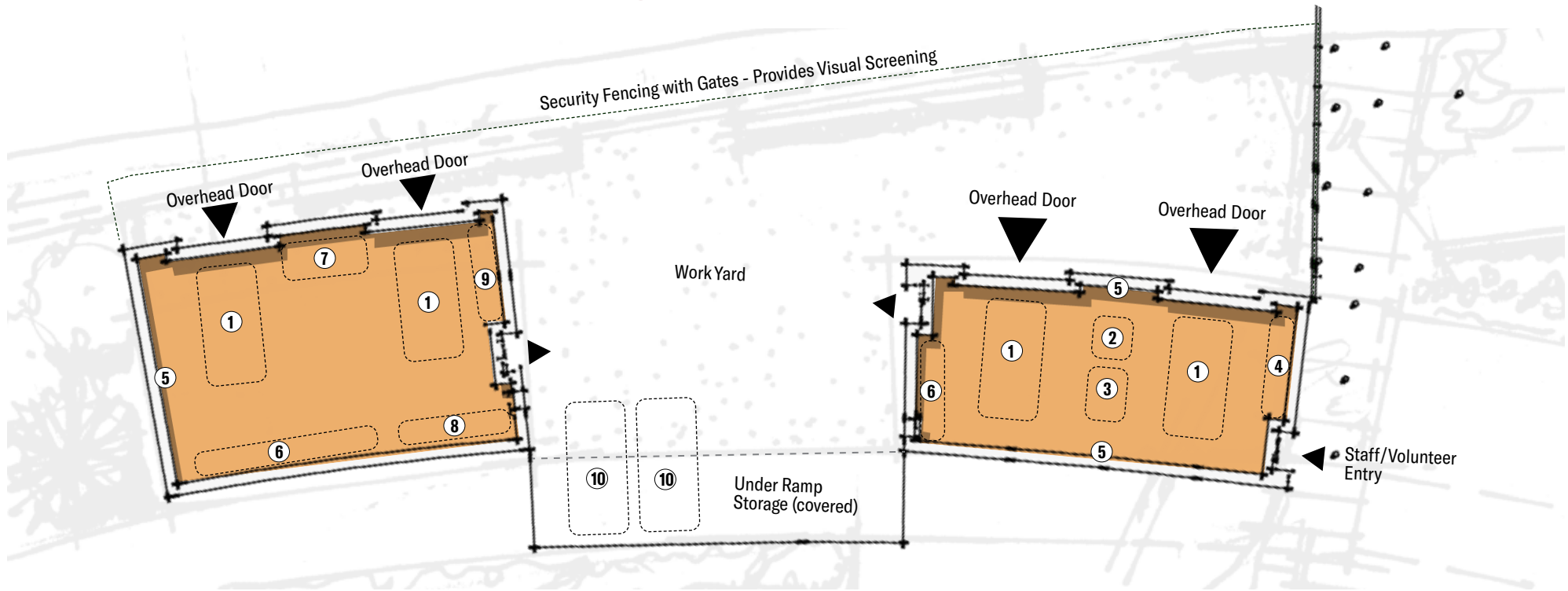
Conceptual Floor Plan



Key

- | | |
|---------------------------------------|--|
| ① Main Entrance | ⑬ Enclosed Offices (qty: 3) |
| ② Toilets (accessed outdoors) | ⑭ Work Room (printer, office supplies) |
| ③ Interpretive Area | ⑮ Storage |
| ④ Elevator to rooftop overlook | ⑯ Personal/Private Room |
| ⑤ Toilets (accessed indoors) | ⑰ Staff Shower/Toilet |
| ⑥ Mechanical Room | ⑱ Staff Entry / Lockers |
| ⑦ Table/Chair Storage | ⑲ Staff Break Room |
| ⑧ Multi Purpose Room (can be divided) | ⑳ Garage - Cold Bay |
| ⑨ Warming Kitchen | ㉑ Work Yard |
| ⑩ Conference Rooms | ㉒ Garage - Warm Bay |
| ⑪ Stair to Mezzanine (open offices) | ㉓ Public Vending Machine |
| ⑫ Open Offices (qty: 5) | |

Conceptual Floor Plan - Enlarged Workshop Plans



Key

- ① Vehicle Storage
- ② Brush Cat Mowing Deck
- ③ DR Mower
- ④ Volunteer and Intern Storage
- ⑤ Wall Mounted Storage
- ⑥ Storage
- ⑦ Herbicide Work Area/Storage with exhaust hood
- ⑧ Seed Cleaning/Work Area
- ⑨ Work Bench
- ⑩ Trailer Storage



Garage/Workshop Spaces

The preliminary space program was developed by Lakeshore Nature Preserve staff and provided to the design team. Through conversations with staff and stakeholders, the space program was organized within a privacy gradient - from most public to most private spaces. This informed the layout of the spaces within the floorplan (previous page). In the next phase, the design team will put greater focus into the functionality and storage needs of the garage and workshop spaces. Intuitive and high quality tool/equipment storage will encourage an organized and safe work area.

Preliminary Space Program

The preliminary space program was developed by Lakeshore Nature Preserve staff and provided to the design team. Through conversations with staff and stakeholders, the space program was organized within a privacy gradient - from most public to most private spaces. This informed the layout of the spaces within the floorplan (previous page). In the next phase, the design team will put greater focus into the functionality and storage needs of the garage and workshop spaces. Intuitive and high quality tool/equipment storage will encourage an organized and safe work area.

Building - Interior

Room Name	Net Square Feet Assigned	Net Square Feet as designed	Notes
Building Interior Public Access			
Restrooms	800	500	Gender inclusive, access from inside and outside
Donor Recognition	0		wall space
Interpretive/Reception Space	800	1500	Include reception desk for volunteer greeter in future phase and storage for (2) wheelchairs
Building Interior Semi Public Access			
Warming Kitchen	500	350	Refrigerator, microwave, tables
Large Multipurpose Room	1000	1000	Can be divided in half. Include AV projection, sound system, sink and water source. Consider lighting and wall material that support hanging of artwork
Building Interior Limited Access			
Staff Workstations	800	780	4 FTE and 4 TE Workstations - 100sf per person
Staff Break Room	100		
Staff Conference Room	200	250	Could be converted to director office
Staff Conference room	250	250	4 FTE and 4 TE Workstations - 100sf per person
Privacy Room	100	100	Private phone calls, mothers room, mental health room
Program Storage	100	100	
Work Room	200	250	Printer, office supplies
Staff Shower	150	110	Herbicide Safety
Lockers	100	100	For Staff and Volunteers
Total Net Square Feet	5100	5290	
Gross Square Feet	7140	7400	

Building - Garage and Workshop

Room Name	Net Square Feet Assigned	Net Square Feet as designed	Notes
Garage / Workshop Spaces Limited Access			
WARM BAY			
Space for 2 Vehicles	700		Provide opportunity for electric vehicle charging
Herbicide Work Area	100		Racks/Cabinets for Sprayer equipment , sink and exhaust hood
Herbicide Storage	25		
Flammables Storage	50		Drip torches, gasoline, etc - fireproof storage
Hose Storage	75		
Water Tank Storage	50		Pump skid
Seed Cleaning Work Area	200		Tables, screens, drying racks
Equipment Storage	75		Brush saw, chainsaw
Work Bench	50		Tool repair
Total Net Square Feet	1325	1350	
Gross Square Feet	1855	1600	
COLD BAY			
Space for 2 Vehicles	700		Provide opportunity for electric vehicle charging
Brush Cat Mowing Deck	50		
DR Mower	75		Parking for 2 mowers
Fuel can storage	25		
Volunteer Equipment Storage	50		
Cold Seed Storage	25		
Equipment Storage	150		Wheelbarrow storage, safety cones, signs
Total Net Square Feet	1075	1020	
Gross Square Feet	1505	1300	
Total Net Square Feet	2400	2370	
Gross Square Feet	3360	2900	

Exterior Requirements / Options

Room Name	Net Square Feet Assigned	Net Square Feet as designed	Notes
Outside Items/Spaces			
Gathering Places for classes			Protection from sun
Water Spigot and hose bibs			Watering Plants and filling water tanks
Native Planting			
Drinking Fountain			Bottle filler and dog water dish filler
Benches/Picnic Tables			
Trash/Recycling Cans			Service enclosure in parking lot
Display/Interpretive Space			
Storage of wood			
Marsh Overlook			
Bike and B-Cycle Parking			
Bird Watching Stations			
Seat Walls			
Parking lot lighting			
Outdoor electric outlets			
Turtle/Frog Crossings			
Parking for Open Trailer		125	In work yard
Parking for Closed Trailer		125	In work yard
Short term live plant storage		100	In work yard

Sustainability Vision



A key strategy of sustainable building design is to minimize, and ideally eliminate, greenhouse gas (GHG) emissions associated with building operations.

The largest source of GHG emissions associated with building operations comes from the energy used to operate the building. Typically, sustainable design strategies focused only on maximizing energy efficiency. To reach zero GHG emissions, buildings must go beyond energy efficiency and transition to using only energy that is produced without creating emissions.

Building Energy System Options

During the Phase I Study the design team considered two primary approaches to energy production for the Outreach Center. The original UW System Request for Proposals identified an Off-Grid building as a potential design goal.

After careful evaluation the design team concluded the optimal solution - balancing economics, sustainability, and site conditions - is a Grid-Tied Net Positive Energy System.

Option 1: Fully Off-Grid Energy Production

- To achieve fully off-grid status for the Outreach Center, the photovoltaic (PV) array must be sized to produce enough electricity to heat and power the building even on the most extreme winter day.
- An off-grid solution also requires the ability to store electricity for times when the sun is not shining.
- This approach requires a significant investment in both PV array and battery backup systems.
- Given proximity to existing campus utilities an Off-Grid approach is not essential.

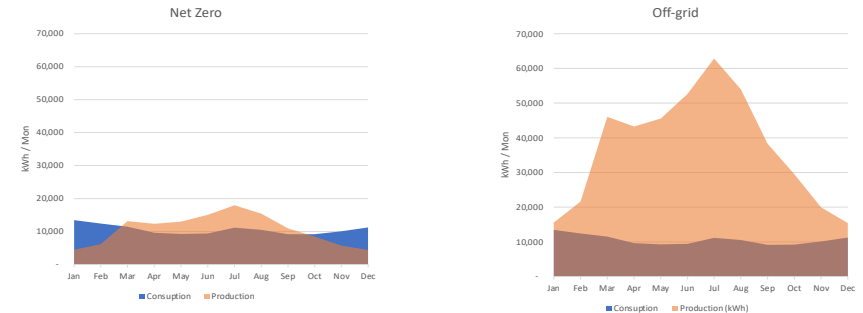
Option 2: Grid-Tied Net Zero or Net-Positive Energy Approach

- A Net-Zero or Net-Positive energy building produces as much energy as it uses over the course of a year.
- The building is connected to the larger electrical grid. When the PV system produces more energy than the building uses (typically summer days), electricity is transferred to the grid. When the building requires more energy than it produces (nights and winter), the building draws power from the grid.
- The grid acts as a battery and over the course of a year, the amount of power supplied to the grid equals the amount of power taken from the grid.
- A Net-Positive Energy system also includes a smaller battery system to provide building occupants and potentially community members with a “resiliency hub” during times of a grid outage.

A Net Positive with Resiliency approach is recommended for the Preserve Outreach Center. Phase I construction budget estimates include preliminary allocations for the required PV array and battery backup system.

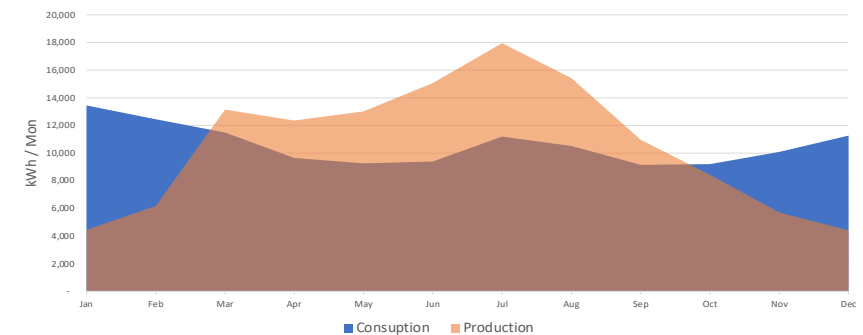
Annual Energy Production Comparison: Off-Grid vs Net-Zero

Typical variance in annual energy production of Off-Grid vs Net-Zero PV arrays



Seasonal Variation in Demand vs PV Energy Production

Typical seasonal variation in building energy consumption vs production with Net-Zero PV array



Photovoltaic Array Size Comparison: Off-Grid vs Net-Zero

Illustration showing relative area of required PV arrays for off-grid vs Net-Zero grid-tied scenarios at the Lakeshore Nature Preserve Outreach Center.



Potential Sustainability Certifications

UW–Madison is a signatory of the Second Nature Resilience Commitment. Resilience refers to the ability of institutions and communities to prepare for, mitigate, and adapt to the impacts of climate change. During the signing ceremony, Chancellor Blank emphasized that the Resilience Commitment reflects a holistic approach and timely need: “We are facing a global crisis, and we recognize that higher education has a role to play in addressing it.”



**LIVING
BUILDING
CHALLENGE**

Living Building Challenge

The most rigorous and advanced third-party sustainability certification in the world.

There are currently no Petal-Certified or Full Living Buildings in the state of Wisconsin.

The Living Building Challenge consists of twenty Core Imperatives categorized into seven Petals: Place, Water, Energy, Health and Happiness, Materials, Equity, and Beauty.

The design team attended an initial consult with the Living Buildings Certification Manager. After reviewing our introductory materials, LBC has indicated that this project has a potential pathway to full Living Building Certification.



LEED

UW–Madison pursues a minimum of LEED Silver certification on most of its new and renovated facilities and currently has 11 LEED-certified buildings.

In the next phase of work, the compatibility and eligibility of these certification opportunities should be evaluated to determine if one or both should be pursued.

Mechanical/Electrical/Plumbing/Fire Protection (MEP/FP)

Systems Detail

HVAC Systems

- A closed loop, vertical ground heat exchanger will provide geothermal water to a series of heat pumps in the building. The ground loop will be provided with redundant circulation pumps and will circulate 25% propylene glycol solution rated for geothermal usage.
- Exact well field siting will be determined as the design is further developed. Drilling safeguards will be discussed and developed with local drillers based on their past experience.
- Redundancy is built into the system to avoid unintentional downtime. Redundant geothermal supply pumps keep the system circulating. Each zone has a terminal heat pump and radiant floors supplement all zones. If one heat pump goes down, the others all remain functional including the radiant floors. Electric fin tube could be added as a failsafe backup in all spaces if further redundancy is desired, but this is typically not included in distributed geothermal heat pump systems.
- Primary space conditioning will be provided by terminal water-to-air heat pumps. A zoned radiant floor system will provide supplemental heating and cooling.
- The radiant floor system will be supplied with hot and chilled water by water-to-water heat pumps connected to the main geothermal water loop.
- A dedicated outdoor air system will provide ventilation to and exhaust air from the building. The unit will include a total energy recovery core. An on-board heat pump will dehumidify and temper ventilation air to space neutral conditions. The on-board heat pump will be connected to the geothermal loop.
- The entire system shall be controlled by a DDC building automation system. The BAS will also serve as a central trending and data logging location for energy and water sub metering.

Plumbing Systems

- A new domestic water service is to be provided to serve the building. A new RPZ and dichlorination filter will be provided at the main service.
- The existing sanitary line that runs through the site will be evaluated to determine if it can be reused for this building. In the event that the sanitary line is in poor condition, an allowance will be provided in the cost estimate to run a new sanitary line.
- If the invert of the existing sanitary sewer is not low enough to support the building piping, a duplex sewage ejector would be provided within the building. This will be further explored as design progresses and is not included in the current cost estimate.
- A new electric domestic water heater with recirculation will be located in the main mechanical room, serving all hot water fixtures.
- Water closet fixtures will be dual flush manual fixtures. Lavatories will be low flow, sensor activated. Showers will have low flow heads. No PVC or CPVC will be allowed for the supply or waste piping and basis of design will be copper supply and cast iron waste lines.
- Trench drains and floor drains in the service garage shall be routed to a sand/oil separator

before connecting to the main sanitary drain. The interceptor shall be located outside of the building to maintain service access.

- Stormwater falling on the building will be managed and removed by a sloping green roof and an exterior gutter system.
- Emergency fixtures will have independent mixing valves to ensure water is delivered at temperatures in accordance with ANSI standards. Valves shall be located at the fixtures.

Fire Sprinkler Systems

Due to the square footage and construction classification of the building, no fire suppression system will be required or provided. Due to hazardous material storage within the garages (herbicides and fuel tanks), quantities will need to be further explored in the next phase to determine if localized sprinkling will be required. Given the separation distances between the garages and the main building, full sprinkling is unlikely.

Power Distribution Systems

The new facility will require a 400 Amp, 120/208 Volt, 3 Phase, 4 Wire incoming service. There are two options for the new service; 1) extend a ductbank from the UW medium voltage (MV) network to the site or 2) extend MG&E service to the site. The UW network would be extended from the south while an MG&E service would come from the west. The location of the resulting electrical room would be based on the selected option.

Service Provider	Transformer (Internal vs External)	Location Relative to Building
UW Medium Voltage Network	Internal With MV Switch	South Side
MG&E Service	External Pad Mount	West Side

New entrance conduits will be installed underground to the new Electrical Service Room with final location TBD. Due to the marsh land topography between the proposed site and nearest point of connection to the medium voltage distribution system on the campus, it is anticipated that a ductbank from the UW medium voltage network to this area may not be feasible making a connection to MG&E a more likely option.

An independent surge protective device (SPD) for the main service will be provided. An arc flash study will be performed to label each piece of equipment with the appropriate energy levels for maintenance.

An emergency generator is not planned for this facility. Emergency power for life safety egress will be provided by battery ballasts or a central inverter.

Equipment connections and disconnects will be required for all mechanical equipment. Selected mechanical pumps and fans will have VFD controls. It is anticipated that all loads for the facility will originate in this new electrical room from panelboards of appropriate size.

Mechanical/Electrical/Plumbing/Fire Protection (MEP/FP)

Systems Detail

Power Distribution Systems (Cont)

A photovoltaic array will be provided to showcase sustainable practices and offset some or all of the building's electricity usage. The placement of the array includes building roof mounted and sidewalk cover mounted arrays. These panels are intended to be a prominent feature for the facility. The capacity of the system has yet to be determined but is anticipated to include approximately 9,000 square feet of panels.

A complete grounding electrode system which includes all available electrodes shall be tied together and connected per NEC 250 at the main switchboard and intersystem grounding bus. Equipment grounding conductors will be required throughout the electrical distribution system including branch circuiting. A lightning protection system is not included in this project.

Energy efficient light emitting diode technology (LED) fixtures will be installed throughout the entire facility to provide illumination. Exhibit and other showcase areas will have architectural type lighting. Offices and other common use areas will have standard LED troffer style fixtures with acrylic lenses. In utilitarian spaces such as custodial rooms, mechanical and electrical rooms, strip-light style fixtures will be provided.

Energy efficient LED exit signs and emergency egress lighting will be provided by selected light fixtures serving the space/area as required to allow for proper egress upon normal power failure. These fixtures will have internal batteries for emergency power. Lighting levels (in footcandles) and associated watts per square foot of energy consumption will be based on Illuminating Engineering Society (IES) Handbook, ASHRAE 90.1 -2010 and the University of Wisconsin Design Standards and Procedures.

Automatic lighting control will be provided throughout the entire facility as required per ASHRAE 90.1 as appropriate for each use. Daylighting control will be provided for spaces with windows. In general, all spaces except transient spaces will include dimming controls. For spaces where automatic lighting control will not be provided, such as mechanical and electrical rooms, standard light switches will be provided for safety concerns.

Fire Alarm Systems

A fire alarm system will be provided. Initiation and annunciation devices will be extended from the fire alarm system to serve the facility. Initiation devices will be located in all corridors, mechanical/electrical spaces and storage type spaces. Smoke detection will be included in air handling systems larger than 2000 cfm. Notification devices will be both visual and audible and located in all common spaces throughout the building. Audible and visual devices will be installed in all general public areas and assembly areas.

Telecommunications Systems

Connectivity for the facility will be established from the existing campus fiber network via duct-bank. The fiber connection will terminate within a dedicated telecom room. The telecom room will have a floor standing rack for switches, patch panels, etc. and a dedicated panelboard. This panel will have an integral SPD. Multiple receptacles will be provided for each data rack in this room.

Two 4" conduits will be installed from the existing campus distribution network to the main distribution telecommunications room. Fiber will be extended from the nearest super-node, which is anticipated to be 1675 Observatory Drive, utilizing new and existing ductbank pathways. The walls of the telecommunication rooms will be fully lined with 0.75" AC, fire rated plywood, A side visible, painted in two coats of bright white fire-retardant paint. The upper area of the room will be open to structure. New underground entrance conduits will be installed for campus fiber and campus copper cables. The main telecom room will include two post data racks, vertical cable management, rack mounted plugmold power strips, overhead ladder racking, and wall mounted Cat6 termination hardware while the secondary room will include one two post rack. Each room will also include a 120/208V, 3Ph, 4W, 100A panelboard, proper IT Room illumination levels, and dedicated HVAC for climate control.

Access Control and Video Surveillance

The Access Control System will be UW standard including all perimeter doors, Telecom room doors, and select interior doors per user request. Monitoring of overhead doors will also be included. Video surveillance will be included based on user selected areas to be observed. Video components shall be selected from current UW standards which include IP cameras on the data network

Data Switches and Wireless Access Points (WAP)

Data Switches and wireless data access points are furnished and installed by DoIT. Structured cabling to support the access points will be installed by the Contractor at DoIT selected locations.

Audio Visual Systems

Audio Visual systems will be provided to support the mission of the facility and be tailored to the presentation space(s) as needed.

8. Construction & Planning Considerations



Construction Considerations

Phasing

This project is anticipated to be constructed in a single phase, however if fundraising efforts result in less than the anticipated project cost, certain elements could be delayed for completion at a later date, specifically:

- Solar array: The project should plan for “renewable ready” and could expand the solar array over time as the budget allows.
- Canopy Walk: The ramp down the north side of the wall is an important connection to the Preserve experience, however it could be completed at a later time without compromising the ability for visitors to access the look out point.

There are programmatic considerations that may be phased:

- Future welcome desk in interpretive area for a volunteer to staff
- Future expansion area for additional desk space within the office area
- Additional space within the work yard for additional enclosed storage space if needed in the future

All improvements south of University Bay Drive, including the Class of 1918 Marsh path and overlooks are all considered future phase improvements and are not included in the cost estimate.

Scheduling Considerations

In general, the academic calendar at UW-Madison runs from mid-August to mid-May, with select summer sessions running from May to August. Construction sequencing should be considered such that construction activities having the largest impact on traffic, bike, and pedestrian flows are scheduled during the summer months when campus is least occupied and classes are not occurring in the Preserve.

Continuation of Traffic Flows & Detours

This project involves the relocation of University Bay Drive. Impact to traffic and bus routes must be impacted as little as possible during the course of construction. Consider an option to construct the new portion of University Bay Drive while the existing road is still in use.

Emergency vehicles must have unobstructed access to the Preserve from University Bay Drive through the Entrance Gates during construction.

The Preserve will remain open throughout Construction. The site will need to be fenced with a chain link fence on feet rather than in the ground. The UW Technical Guidelines include additional detail on campus standards (<http://cpd.fpm.wisc.edu/technical-guidelines/>)

Planning Considerations – Zoning

This area of the Lakeshore Nature Preserve is currently zoned “Conservancy” (CN) in the city of Madison and an Outreach Center/Nature Center will require a partial rezoning of the project site to Campus Institutional (CI). The adjacent Eagle Heights neighborhood is currently zoned (CI) per the zoning map (see inset).

A Conditional Use review through the Madison Plan Commission will be required due to this being a Lakefront Development. The UW-Madison Design Review Board and Joint Campus Area Committee will review the project and recommend an action to the Plan Commission. The following tasks will be completed by the AE Team:

1. Conditional Use Application

28.138(2) Applicability.

(a) With the exception of (b) below, all new principal buildings, additions to principal building totaling in excess of five hundred (500) square feet during any ten (10) year period, or any accessory building on zoning lots abutting Lake Mendota, Lake Monona, Lake Wingra, Monona Bay, and associated bays, shall require conditional use approval and shall meet the requirements of this subsection.

(b) Conditional use approval and the requirements of this subsection shall not apply to any part of a zoning lot abutting Lake Mendota, Lake Monona, Lake Wingra, Monona Bay, and associated bays that is more than three hundred (300) feet from the Ordinary High Water Mark (OHWM) or is separated from the OHWM by a street or public right of way.

2. Zoning Map Amendment

This will require a legal description and a metes and bounds description. A formal schedule of appearance will be determined in tandem with the larger project schedule in Phase II, but we anticipate the following sequence of events relative to the zoning scope:

1. Pre-application meeting
2. Pre application notification
3. Submit Land Use Application
4. Planning Commission Appearance
5. Common Council Appearance



Planning Considerations – Permitting & Utilities

Environmental Permitting

It will be important to meet with the various state agencies, including the DNR, early in the process, in order to determine which environmental permits will be required. The state may require an endangered resources review, a wetland delineation or others.

Environmental Impact Statement

Early involvement with the state will be beneficial to completing an Environmental Impact Statement (EIS), as they can take 6-12 months to fully prepare. A pre-mitigation meeting will help determine state requirements, as well as the level of detail and information they will want to see. An open conversation may also reveal any leeway for certain project types or agencies.

Archaeological Phase 1 Study

In 2005, an archaeological shovel test was performed in areas of the preserve adjacent to the project site, including Bills Woods. Additional Phase 1 exploration will be required within the bounds of the project site.

Utility Investigation

In the next phase of design, the following utility investigation are recommended:

- Sanitary Sewer televising of existing 1967 pipes & structures
- Water main pressure testing for two potential locations

UW Grounds Storage

Currently, UW Grounds stores materials within the Preserve and uses small trucks to take materials in and out of the Preserve through the main Preserve gates multiple times per day. These vehicles create conflicts with pedestrians on the trails and create a significant visitor safety issue for visitors and staff.

In the future, a relocation of Grounds Storage should be considered to enhance visitor experiences and provide less conflicts for UW Grounds to access their materials. This relocation should be completed as soon as feasible prior to the construction of the Preserve Outreach Center

9. Construction Cost Estimate



Construction Cost Estimate & Project Costs

The Construction Cost Detail

The construction cost detail (included in subsequent pages) was prepared by Middleton Consulting and Contracting and is totaled in today's dollars (2023). The UW-Madison System Project Budget Worksheet (included) includes an escalation factor of 1.18% which is accounted for in the Total Project Cost Estimate.

A 10% design contingency and a 15% project contingency is included within the Total Project Cost Estimate to account for unforeseen items that may arise through the course of the project.

Long Term Maintenance Endowment

Given the high performance nature of the energy systems in the building, a long term maintenance endowment is suggested to ensure the viability of these systems. The suggested endowment is \$2 million and is not included in the Total Project Cost Estimate.

Estimated TOTAL PROJECT COST* for the Lakeshore Nature Preserve Outreach Center is approximately \$16-17 million dollars.

*Total Project Cost includes building construction, site work, design and construction contingencies, FF&E, an escalation percentage, and related soft costs such as design fees, anticipated permitting and fees, and other related project management costs.

* Total Project Cost (above) includes costs to:

- Relocate University Bay Drive
- Construct new parking lot and bioswale
- Reroute the Howard Temin Lakeshore Path
- Extend needed utilities to the site

These site costs total approximately \$4 million dollars

Optional Gift Opportunities

The Total Project Cost noted above does not include selected optional program elements and amenities. These items represent outstanding opportunities for named donor gift collaborations. Additional named gift opportunities may also be identified as the project evolves.

- Entry pavilion for covered bike parking
- 12' wide boardwalk path through bioswale
- New electric vehicle charging stations
- New stone seat walls along new paths
- Site amenities not included in base project cost (tables, chairs, artwork, birding stations)



Entry pavilion for covered bike parking



Boardwalk path through bioswale

Construction Cost Estimate & Project Costs

THE UNIVERSITY OF WISCONSIN SYSTEM

PROJECT BUDGET WORKSHEET SUMMARY Rev. 2023-05

PROJECT TITLE:
LOCATION:
PROJECT TYPE:
OPTION NO.:

LAKESHORE NATURE PRESERVE OUTREACH CENTER
UNIVERSITY OF WISCONSIN - MADISON
UNSPECIFIED
X

Date Prepared:
Prepared By:
Revised By:
TOT PROJ COST EST:

06/13/23
RHJ

\$ 16,392,000

NEW BUILDING AREA

ASF New Const
GSF New Const

9,500
10,500

90.48% Efficiency

Base Date:
Base Date Index:
Escalation Date:
Escalation Date Index:
Escalation Factor:

05/2023
8054.43
11/2024
9507
1.1803

REMODELING AREA

GSF Remodeling
GSF Total Bldg

0
10,500

0.00% Remodeling

Occupancy Date:

11/2027

\$ 985 /ASF: Construction Cost (building & site)
\$ 891 /GSF: Construction Cost (building & site)

\$ 1,725 /ASF: Total Project Cost
\$ 1,561 /GSF: Total Project Cost

TOTAL CONSTRUCTION

CONSTRUCTION
HAZARDOUS MATERIALS ABATEMENT

12,144,000
12,144,000
0

TOTAL DESIGN FEES

DESIGN FEES (BASIC)
DESIGN FEES (OTHER)

14.2210%
10.4002%
3.8208%

1,727,000
1,263,000
464,000

CONTINGENCY

15.0033%

1,822,000

MANAGEMENT FEES

3.5014%

489,000

FURNISHINGS, FIXTURES, & EQUIPMENT (FF&E)

OWNER FURNISHED, CONTRACTOR INSTALLED (OFCI)
OWNER FURNISHED, OWNER INSTALLED (OFOI)

1.7292%
1.7292%
0.0000%

210,000
210,000
0

TOTAL BUDGET ESTIMATE

16,392,000

6/13/23

PBW Summary

page 1 of 1

THE UNIVERSITY OF WISCONSIN SYSTEM

PROJECT BUDGET WORKSHEET SUMMARY Rev. 2023-05

PROJECT TITLE:
LOCATION:
PROJECT TYPE:
OPTION NO.:

Lakeshore Nature Preserve Outreach Center
University of Wisconsin - Madison
X
X

Date Prepared:
Prepared By:
Revised By:
TOTAL PROJECT COST ESTIMATE:

06/13/23
RHJ

\$ 16,392,000

NEW BUILDING AREA

ASF New Const
GSF New Const

9,500
10,500

90.4762% Efficiency

Base Date:
Bid Date:
Escalation Factor (Calculated):
Escalation Factor (Manual Override):
Escalation Delta (Manual - Calculated):
Occupancy Date

8054
9507
1.1803
1.1803
0.0000
36 months

REMODELING AREA

GSF Remodeling
GSF Total Bldg

0
10,500

0.0000% Remodeling

NEW CONSTRUCTION BY SPACE TYPE

Space Category

ASF

Eff

GSF

\$/GSF

Category Cost

Function
Function
Function
Function
Function
Function
Function

9,500
0
0
0
0
0
0

0.9000
0.0000
0.0000
0.0000
0.0000
0.0000
0.0000

10,600
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\$ 516.00
-\$
-\$
-\$
-\$
-\$
-\$

\$ 5,469,600
-\$
-\$
-\$
-\$
-\$
-\$

NEW CONSTRUCTION COST SUBTOTAL

9,500

10,600

Subtotal: \$

\$ 5,470,000

REMODELING BY SPACE TYPE

Space Category

ASF

Eff

GSF

\$/GSF

Category Cost

Function
Function
Function
Function
Function
Function
Function
Function
Function
Function

0
0
0
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REMODELING BY TRADE

Trade Category

General

Notes

Surface Treatment
Minor
Partial
Complete

X
X
X
X

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\$ 16.00
\$ 56.00
\$ 93.00
\$ 112.00

\$ 16.00
\$ 56.00
\$ 93.00
\$ 112.00

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Plumbing

Minor
Partial
Complete
Special Laboratory Needs

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\$ 18.00
\$ 31.00
\$ 35.00
\$ 66.00

\$ 18.00
\$ 31.00
\$ 35.00
\$ 66.00

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Heating, Ventilating, & Air Conditioning

Minor
Partial
Complete

X
X
X

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\$ 24.00
\$ 51.00
\$ 77.00

\$ 24.00
\$ 51.00
\$ 77.00

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Electrical

Minor
Partial
Complete

X
X
X

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\$ 20.00
\$ 34.00
\$ 43.00

\$ 20.00
\$ 34.00
\$ 43.00

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REMODELING COST SUBTOTAL (cell H63 will highlight red if Remodeling by Space Type and Remodeling by Trade sections are both used)

0

\$

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NEW CONSTRUCTION & REMODELING COST SUBTOTAL

\$ 5,470,000

Construction Cost Estimate & Project Costs

PROJECT TITLE: Lakeshore Nature Preserve Outreach Center
 NEW CONSTRUCTION & REMODELING COST SUBTOTAL (from page 1) \$ 5,470,000
 ADDITIONAL CONSTRUCTION & REMODELING COSTS:

HEADING NAME OR ITEM CODE	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	SUBTOTAL
DEMO	DEMOLITION (RAZING GROSS SQUARE FOOTAGE)	0.00	GSF	\$ 19.99	\$ -
ADDITIONAL CONSTRUCTION & REMODELING COSTS					
Relocate Road					\$ -
	Demolition	1.00	LS	\$ 40,000.00	\$ 40,000
	New Asphalt Road, bus stops, and bus shelters	1.00	LS	\$ 201,000.00	\$ 201,000
Relocate Parking Lot 130					\$ -
	Demolition	1.00	LS	\$ 30,000.00	\$ 30,000
	Drive lane asphalt and porous paver parking spaces	1.00	LS	\$ 334,500.00	\$ 334,500
Relocate Bioswale					\$ -
	Demolition	1.00	LS	\$ 15,000.00	\$ 15,000
	Soil and Planting	1.00	LS	\$ 752,000.00	\$ 752,000
Site Work					\$ -
	Demolition	1.00	LS	\$ 189,000.00	\$ 189,000
	Hardscape	1.00	LS	\$ 461,736.00	\$ 461,700
	Landscape	1.00	LS	\$ 258,300.00	\$ 258,300
Utilities					\$ -
	Utility Connections (water, sanitary, electric, fire hydrant, telecom)	1.00	LS	\$ 416,570.00	\$ 416,600
	Site Lighting Allowance	1.00	LS	\$ 50,000.00	\$ 50,000
Special					\$ -
	Relocate Temin Lakeshore Path (bike/ped shared use)	1.00	LS	\$ 178,820.00	\$ 178,800
	Solar Pergola at ramp to overloop	1.00	LS	\$ 695,660.00	\$ 695,700
	Canopy Walk North of Wall	1.00	LS	\$ 218,880.00	\$ 218,900
	Monument Sign	1.00	LS	\$ 28,650.00	\$ 28,700
Special					\$ -
	Site Amenity Allowance	1.00	LS	\$ 12,500.00	\$ 12,500
ADDITIONAL CONSTRUCTION & REMODELING COSTS:					\$ 3,883,000
FURNISHINGS, FIXTURES, & EQUIPMENT (FF&E): CONTRACTOR FURNISHED, CONTRACTOR INSTALLED (CFCI)					
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
FF&E: CFCI					\$ -
ADDITIONAL CONSTRUCTION & REMODELING COST SUBTOTAL					\$ 3,883,000
CONSTRUCTION & REMODELING COST SUBTOTAL					\$ 9,353,000
HAZ MATS	HAZARDOUS MATERIALS ABATEMENT	0.00	SF	\$ -	\$ -

PROJECT TITLE: Lakeshore Nature Preserve Outreach Center
 CONSTRUCTION & REMODELING COST SUBTOTAL (from page 2) \$ 9,353,000

1. Total Construction Cost				\$ 12,144,000
NEW CONSTRUCTION & REMODELING COST (from Page 1)		\$ 5,470,000		
DEMOLITION (from Page 2)		\$ -		
ADDITIONAL CONSTRUCTION & REMODELING COST (from Page 2)		\$ 3,883,000		
FF&E: CFCI (from Page 2)		\$ -		
CONSTRUCTION & REMODELING COST SUBTOTAL (from Page 2)		\$ 9,353,000		
Design Contingency	10.0000%	\$ 9,353,000	\$ 935,300	
General Conditions	0.0000%	\$ 9,353,000	\$ -	
Overhead & Profit (OH&P)	0.0000%	\$ 9,353,000	\$ -	
HAZARDOUS MATERIALS ABATEMENT (from Page 2)		\$ -		
Unescalated Construction Cost Subtotal		\$ 10,288,300		
Escalation Factor (from Page 1)	1.1803	\$ 10,288,300	\$ 12,143,700	
2. Architect/Engineer Basic Services				10.4002% \$ 1,263,000
Basic Services (Calculated % of Construction \$)		10.0000%	\$ 12,144,000	\$ 1,214,400
Basic Services (Enter Direct \$ for Basic A/E Fees)				\$ -
Reimbursable costs		4.0000%	\$ 1,214,400	\$ 48,600
3. Additional Design Services				3.8208% \$ 464,000
Pre-design		1.9000%	\$ 12,144,000	\$ 230,700
Sustainable/Resilient Design				\$ -
Commissioning (Level 1 or 2)		1.0000%	\$ 12,144,000	\$ 121,400
EIS/EIA consultant				\$ 60,000
Construction Testing				\$ -
Testing & Balancing				\$ -
Phase 1 Archeology & Wetland Delineation				\$ 18,000
Survey				\$ 16,000
Geotechnical				\$ 10,000
Tree Use Investigation				\$ 8,000
Furnishings, Fixtures, & Equipment (FF&E) Design Fee		0.0000%	\$ 210,000	\$ -
Furnishings, Fixtures, & Equipment (FF&E): Owner Furnished, Contractor Installed (OFCI)				\$ 200,000
Audio-Visual and Computer Equipment				\$ 10,000
Systems Furniture				\$ -
Specify FF&E Title(s), Type(s), and Budget Estimate Lump Sum				\$ -
Specify FF&E Title(s), Type(s), and Budget Estimate Lump Sum				\$ -
Specify FF&E Title(s), Type(s), and Budget Estimate Lump Sum				\$ -
4. Project Contingency				15.0000% \$ 1,821,600 \$ 1,822,000
5. Project Management				3.5000% \$ 488,800 \$ 489,000
6. Furnishings, Fixtures, & Equipment (FF&E)				1.7292% \$ 210,000
FF&E: OFCI (from #3 above)			\$ 210,000	
Furnishings, Fixtures, & Equipment (FF&E): Owner Furnished, Owner Installed (OFOI)				\$ -
Movable & Special Equipment (% of Construction \$)		0.0000%	\$ 12,144,000	\$ -
Audio-Visual and Computer Equipment				\$ -
Systems Furniture				\$ -
Specify Equipment Title(s), Type(s), and Budget Estimate Lump Sum				\$ -
Specify Equipment Title(s), Type(s), and Budget Estimate Lump Sum				\$ -
Specify Equipment Title(s), Type(s), and Budget Estimate Lump Sum				\$ -
TOTAL PROJECT BUDGET ESTIMATE				\$ 16,392,000
		\$ 985	/ASF: Construction Cost (building & site)	
		\$ 891	/GSF: Construction Cost (building & site)	
		\$ 1,725	/ASF: Total Project Cost	
		\$ 1,561	/GSF: Total Project Cost	

Detailed Construction Cost Estimate

Assembly	Qty	Unit	Cost	Total Cost	Notes
RELOCATE ROAD					
Demo Existing Roadway	1	LS	40000	\$40,000	approx. 34,500 SF surface area
New Road Cost				\$201,000	Sum of below numbers
New Road	25,000	SF	6.8	\$170,000	5 1/4" asphalt and 8" base course. 24'w x 765', 60' long raised table at crosswalk.
Bus Stops	2	Ct	8000	\$16,000	12' wide x 50' long concrete pad (within road)
Bus Shelter	1	Ct	15000	\$15,000	(include paving under shelter)
TOTAL				\$241,000	
RELOCATE PARKING LOT					
Demo Existing Parking Lot	1	LS	30000	\$30,000	approx. 34300 SF surface area
New Parking Lot Cost				\$334,500	Sum of below numbers
New Parking - Drive	17,000	SF	10	\$170,000	Assume 8" concrete for fire trucks
New Parking - Parking Spaces	16,200	SF	10	\$162,000	Concrete
Parking Ticket Pay Station	1	ct	2500	\$2,500	Re-Use Existing
TOTAL				\$364,500	
RELOCATE BIOSWALE					
Demo Existing Bioswales	1	LS	15000	\$15,000	approx. 45,000 SF surface area
New Bioswale Cost				\$752,000	Sum of below numbers
Parking Lot Bioswale	28000	SF	20	\$560,000	Planted with native perennials, ornamental grasses, trees and shrubs. Connect to existing outfall,
Eastern Bioswale	12,000	SF	16	\$192,000	native seeding
TOTAL				\$767,000	
SITE WORK					
Excavation	10500	SQFT	18	\$189,000	
Hardscape				\$461,736	Sum of below numbers
Pedestrian Only Path	3,239	SF	9	\$29,151	Pervious Asphalt
Site Circulation	13,830	SF	24	\$331,920	Permeable Pavers
Site Circulation	4,470	SF	4.5	\$20,115	Gravel Pave Path
Stone Steps through Bioswale	1	Allow	1000	\$1,000	
Replacement of existing path north of wall	7,000	SF	6.8	\$47,600	
New Work Yard-Pervious	7,100	SF	4.5	\$31,950	Pervious Gravel Surface
Landscape				\$258,300	Sum of below numbers
Earthen Berm Ramp	185	LF	60	\$11,100	From ped path to start of building
Misc Planting Areas	46,000	SF	3	\$138,000	Perennials and ornamental grasses, including road terrace and buffer between bike lane and parking lot, restoration of south side of relocated University Bay Dr
Native Plantings	10,500	SF	10.4	\$109,200	
TOTAL				\$909,036	

Detailed Construction Cost Estimate

UTILITY CONNECTIONS					
Connection to Water Utility	1100 LF			\$69,300	New Service from MG&E
Connection to Electric Utility	1100 LF			\$80,000	Distance measured to nearest road
Sanitary Connection	1100 LF			\$59,400	Note: this distance is measured to nearest existing known sanitary line assuming adjacent line is unusable
Fire Hydrants/Water Line	1100 LF			\$57,870	Distance measured to nearest road
Telecom				\$150,000	This may be covered by the cable company
TOTAL				\$416,570	
SITE UTILITIES					
Site Lighting				\$50,000	Bollards, pedestrian path lighting, parking lot lighting, Dark-sky, 180-deg cut off exterior lighting
TOTAL				\$50,000	
SPECIAL					
Relocate Temin Lakeshore Path				\$178,820	
Demo Existing Bike Path	1	LS	25000	\$25,000	approx. 10,500 SF surface area
Demo Existing Ped Path	1	LS	10000	\$10,000	approx. 10,500 SF surface area
New Ped/Bike Combined Path	16,531	SF	8.7	\$143,820	Pervious Asphalt
Solar Pergola Walkway				\$695,660	
Solar Pergola Walkway	4969	SQFT	140	\$695,660	12'W x 9'H - timber framing for PV panels
Canopy Walk				\$218,880	
Guardrail	456	LF	300	\$136,800	42"H guard rail with wood top and bottom rail, painted steel posts@5' o.c. typ, steel wire mesh infill panels.
Elevated wood walkway	1824	SQFT	45	\$82,080	8' wide sloping wood deck over wood framing (see Wlckcraft or similar). Assume posts @8-10 ft o.c. both
Monument Sign				\$28,650	
Monument Sign - Limestone Feature Wall	250	SF	60	\$15,000	Limestone Feature Wall
Monument Sign - Wood Slat Wall	42	LF	325	\$13,650	Wood slat wall - 3'H w/ square steel tube post support @ 42" OC, 2x6 horizontal wood slats @ 4" OC (similar
Site Amenity Allowance				\$12,500	
Site Amenity Allowance				\$12,500	Signage (interpretive and way finding), bike racks (50 bikes), Relocation of B-cycles, trash cans,
TOTAL				\$1,134,510	

Detailed Construction Cost Estimate

ARCHITECTURAL					
Insulated Concrete Slab-On-Grade	10500	SF	8	\$84,000	Stained finish - assume Living Building Challenge compliant finish products. (over 4" rigid insulation)
Concrete footings and foundations	775	LF	250	\$193,750	Insulated shallow foundation: concrete footing 5' W x 12" T with 4" x 4' horizontal XPS rigid insulation
Rammed Aggregate Piers	9832	SF	9	\$88,488	
Limestone Feature Wall	9800	SF	61	\$597,800	Limestone wall over CMU or Metal Studs (no poured concrete) assume high end limestone
Standing Seam Metal Roof	9183	SF	36	\$330,588	Assume custom color, snow guards, rock wool rigid insulation (R50)
Metal Gutter	336	LF	15	\$5,040	"B" profile, match roof color
Extensive Green Roof	5985	SF	45	\$269,325	Sedum plants in tray system with lightweight growth medium, rubber roof membrane, rock wool rigid insulation (R50)
Wood Siding Wall	1822	SF	36	\$65,592	Thermal-treated wood siding over smart rainscreen membrane over 2" rigid mineral wood board insulation over ZIP sheathing over 6" wood stud with mineral wool batt insulation and 5/8" gyp board.
Occupiable Wood Roof Deck System	1880	SF	70	\$131,600	Wood deck (assume decay-resistant, locally-sourced material such as black locust) over rock wool R50 rigid insulation
Cross-laminated Timber Roof Structure	12138	SF	32	\$388,416	CLT panels over Glu-laminated Timber Beams
Timber Posts	600	LF	60	\$36,000	~25 columns @16" dia round solid timbers
Clerestory Windows	1532	SF	106	\$162,392	Assume high-performance storefront system (thermally-broken frames, triple-glazing or similar). Ceramic frit (20% dots) on #1 surface.
Vision windows @Lobby/Interpretive Gallery	540	SF	106	\$57,240	Assume high-performance storefront system (thermally-broken frames, triple-glazing or similar). Ornilux or similar bird-friendly UV glazing film
Vision windows @Office area	1528	SF	106	\$161,968	Assume high-performance storefront system (thermally-broken frames, triple-glazing or similar). Ceramic frit (1/8" horizontal lines @2") on #1 surface.
Unit Windows	98	SF	130	\$12,740	Assume high-performance window system (thermally-broken frames, triple-glazing or similar). Ceramic frit on #1 surface.
Exterior Sunshade	496	SF	75	\$37,200	2x wood slats over steel brackets with steel tension rod
Overhead Insulated Doors	4	CT	16500	\$66,000	12'W x 10'H with vision glazing panel-Electric
Guardrail at Occupiable Building Roof	504	LF	300	\$151,200	42"H guard rail with wood top and bottom rail, painted steel posts@5' o.c. typ, steel wire mesh infill panels.
Interior Partition Walls	6400	SF	12.8	\$81,920	5/8" gypsum board over wood stud
Mezzanine above Conference Rooms	500	SF	18	\$9,000	3/4" T&G wood flooring over wood joists
Guardrail at interior mezzanine	25	LF	300	\$7,500	42"H guard rail with wood top and bottom rail, painted steel posts@5' o.c. typ, steel wire mesh infill panels.
Stair at interior mezzanine	1	EA	14000	\$14,000	Steel-framed stair with wood treads, railing sim to guard rail. Rise = 11'-8", assume 7-11 rise-run
Wood fence at work yard	184	LF	32	\$5,888	Treated wood fence 6'H
Sliding Gate	2	EA	5500	\$11,000	Motorized sliding fence gate 12'W x 6'H
TOTAL				\$2,968,647	

Detailed Construction Cost Estimate

CONVEYING SYSTEMS					
Elevator System	1	CT	90000	\$90,000	2-stop, 2-sided, Limited Use-Limited Access elevator. 22' 2nd floor landing elevation.
TOTAL				\$90,000	
MECHANICAL SYSTEMS					
Geothermal Heat Pump System	10500	SQFT	75	\$787,500	Assume closed loop heat exchanger located below parking - 10 boreholes 500ft deep with redundant circulating pumps located in mechanical room
					Water-to-air heat pumps for each zone in main building (8,300 sf) - total of 8 zones
					Energy recovery unit for main building with integral heat pump
					Radiant floor for Warm Bay garage/workshop (2,000sf)
					Water-to-water heat pump for radiant floor system with circulating pump
TOTAL				\$787,500	
ELECTRICAL SYSTEMS					
Single Phase, Three-Wire Electrical Service	10500	SQFT	14	\$350,000	total of 12,000sf of building area serviced including warm and cold bay workshops (main panels and distribution)
					Assume non-PVC sheathing for all wiring to comply with Living Building Challenge Materials Red List.
					Submetering and trending system for monitoring of all circuits
Photovoltaic System	9000	SF		\$350,000	Assume net-positive array per Living Building Challenge
					100kW PV system with panels mounted on walkway canopies
					40 kWh battery system for operation when grid is out of service
Lighting System	10500	SF	18	\$189,000	All LED, mercury-free lighting with architectural fixtures at main entrance lobby and interpretive space
					Dimming and daylighting controls
					Dark-sky, 180-deg cut off exterior lighting
					Lighting for 2,000sf covered work yard
Fire Alarm System	10500	SQFT	5	\$52,500	Fire alarm system throughout building
IT/Data/Network	10500	SQFT	8	\$84,000	Fiber voice/data service to building with structured cabling distribution to outlets in building
Audiovisual	10500	SQFT	30	\$315,000	Audio Visual system for 2 multi purpose rooms with room combining functionality, and interpretive hall
Security Cameras	10500	SQFT	3	\$31,500	\$/SF based on other UW project
TOTAL				\$1,372,000	

Detailed Construction Cost Estimate

PLUMBING SYSTEMS					
Water-Supply					Assume copper or non-PVC for all piping per LBC. Provide de- chlorination filter at utility connection.
Fixtures - WC	13	CT	3600	\$46,800	Assume low-flow, dual flush
Fixtures - Sink/Faucet	15	CT	1800	\$27,000	Assume low-flow, sensor activated
Fixtures - Shower	2	CT	4500	\$9,000	Assume low-flow
Fixtures - Exterior	1	CT	800	\$800	Hosebib for watering plants
Piping	10500	SQFT	12	\$126,000	Drinking fountain/bottle filler
Water-Waste					Assume cast-iron or non-PVC for all waste piping
Rainwater Capture System	10500	SQFT	4.5	\$47,250	Provide rainwater capture system for greywater reuse for non- potable uses.
TOTAL				\$256,850	

CONSTRUCTION COST TOTALS					
Site Costs				\$3,416,046	
Utility Costs				\$466,570	
Architectural Costs	10500			\$3,058,647	\$418/SF Architectural Costs Only
Mechanical, Electrical, Plumbing Costs	10500			\$2,416,350	\$647/SF Architectural & MEP Costs
Total Construction Cost				\$9,357,613	

GIFT OPPORTUNITIES/FUTURE ITEMS					
EV Charging Stations	4	ct	3000	\$12,000	Assume level 2 chargers
Site Walls	375	LF		\$50,000	Seat walls, Retaining Walls, Length and height TBD
Bike Parking Shelter	1	Ct	140	\$35,000	Timber canopy structure w/standing seam metal roof - approx. 12' W x 30' L x 12' H - racks for 24 bikes
Site Amenities	1	Allow		\$12,500	Site furniture (tables and chairs), art installations, birding stations
New Boardwalk	1,142	SF	45	\$51,390	Assume 12' wide across bioswale

10. Schedule



Schedule

Phase I - Advanced Plan

AE Kick Off Meeting	August 2022
Site Visit & Stakeholder Meetings	September 2022
Public Information Meeting #1	October 2022
Site, Pattern, Sustainability Review	November 2022
Public Information Meeting #2	January 2023
Draft Design Report	May 1, 2023
Final Design Report	May 18, 2023

Phase II - Basic Services

Kick Off	Summer 2023
Schematic Design Completion	December 2023
BOR Approval**	February 2024
Design Development Completion	May 2024
Project Bidding	November 2024
Start Construction	February 2025
Complete Construction	June 2026

**Additional Approvals Anticipated (DRB, JCAC, UDC, City PC). Specific appearances will need to be coordinated for each approval body with the overall schedule.

11. Appendix



Request for Qualifications

UW System Administration
Lakeshore Nature Preserve Outreach Center

Architect / Engineer Services - Request for Qualifications
Project No. A-22-007_9950-2218

On behalf of the University of Wisconsin-Madison (UW-Madison), firms who are qualified in providing Architecture, Engineering, and Construction Administration Services are invited to submit a Statement of Qualifications (SOQ) to the University of Wisconsin System Administration (UWSA) for the following project.

A. Project Description

Phase I includes an advanced planning study for a new approximate 8,000 ASF / 9,000 GSF outreach & welcome center for the 300-acre Lakeshore Nature Preserve on the UW-Madison campus to provide a space for experiential, hands-on learning and expand the research, teaching and outreach capacity of the Preserve on campus. The project goals include being the first carbon-neutral and off-the-grid university facility utilizing highly sustainable building practices and support the university's commitment to resiliency and the student experience on campus. UW is seeking to hire a prime consultant for all the architectural and engineering design services (AE Services) of this building, starting with architectural and engineering services for Phase I (Advanced Planning), with the intent of doing Phase II (Design, Bidding and Construction) at the discretion of UW.

This new outreach facility will showcase interactive exhibits providing visitors with an introduction to the Preserve and support many on-going and new teaching and field research activities. The building will include a 50-person classroom that can also be used for campus community meetings and outreach activities, public restrooms (with potentially composting toilets and low/no flow urinals), on-site offices for Preserve staff and field management tools/equipment storage and repair. The facility will also include a volunteer space and locker facilities for their belongings while in the field. The building is to be a highly sustainable facility and feature resilient green building design elements such as solar photovoltaics and/or wind power to provide 100% of electrical needs, stormwater reuse best management practices, green roofs to reduce runoff and the use of recycled/upcycled building materials, daylighting to reduce electrical needs, passive ventilation with operable windows throughout along with geothermal heating/cooling. A goal of the project is to have a LEED platinum+ certified level project. Locally sourced building materials are to be considered to reduce the overall impact of the construction and delivery process.

The project will include relocation of a portion of University Bay Drive to place the road between the newly built parking lot to the southwest of the proposed project site, and the Class of 1918 Marsh. Mapped wetlands and floodplain will need to be taken into consideration as the roadway is relocated to the south and mitigation of such may be necessary. Site planning for the center's relationship to the Preserve toward the entrance to Picnic Point, the Class of 1918 Marsh, the parking lot, and the Howard Temin Lakeshore Path all need to be included. Full cut off site lighting for dark sky compliance, natural landscaping and treatment of stormwater runoff using green infrastructure measures to reduce stormwater impacts to the local Yahara Lakes system will be included.

The project will also include consideration for the proposed outreach center being on the ancestral home of the Ho-Chunk Nation and continue to support how these lands have been used for over 12,000 years by many various peoples.

Per the 2020 Lakeshore Nature Preserve Strategic Plan, facilities and infrastructure in the Preserve should:

- a. Be designed to protect the natural and cultural resources of the Preserve
- b. Be designed to protect the safety of users
- c. Minimize adverse physical, biological, and aesthetic impacts
- d. Serve multiple uses whenever possible
- e. Support the biological diversity that is fundamental to the educational value of the Preserve
- f. Be sustainable, resilient and environmentally friendly.

Following the conclusion of this Advanced Plan and the findings, at the sole discretion of UW, the project may proceed to a second Phase which will deliver full AE Services to complete the design through Construction Administration and project close-out. The project processes will follow all state of Wisconsin statutes, for example the Single Prime Bidding process.

5/4/2022

Page 1

UW System Administration
Lakeshore Nature Preserve Outreach Center

Architect / Engineer Services - Request for Qualifications
Project No. A-22-007_9950-2218

B. Background & Purpose

The University of Wisconsin-Madison Lakeshore Nature Preserve is a 300-acre natural area situated on the south shore of Lake Mendota. It currently represents approximately one-third of the total acreage of the main campus and includes roughly 4 miles of Lake Mendota shoreline. The famed Lakeshore Path extends along the shoreline from the Limnology Lab on the east, near the Memorial Union, to Wally Bauman Woods near the Village of Shorewood Hills, via Picnic Point, a peninsula that juts nearly a mile into the lake.

The beauty of the UW-Madison campus is renowned world-wide. Much of what makes the university so distinctive is its relationship to Lake Mendota, which means that the Lakeshore Nature Preserve is responsible for preserving some of the most celebrated features of the campus. It is the physical connecting link from the campus to the lake. A major part of the mission of the Preserve is to serve as a living classroom laboratory for the teaching and research needs of the UW-Madison as well as a place for campus and community members alike to explore nature outside on the UW-Madison campus.

Only Muir Woods at the eastern end of the Preserve was originally part of the university campus. Lands farther to the west were acquired over many decades, sometimes on purpose, sometimes by generous gifts of university alumni and other benefactors. Until the early 1940s, even Picnic Point was private property, and only in the 1990s (with an extraordinarily far-sighted and generous gift of the last remaining parcel of non-UW shoreline property by the Frautschi family) did the university come to own the continuous 4.3-mile corridor of green. In 2004, these separate parcels were renamed the Lakeshore Nature Preserve, and the university is now committed to their permanent protection.

The Lakeshore Nature Preserve's first master plan was completed in 2006 that provided direction for the management of these lands and defined the long-term future of the Preserve in full support of the university's mission of teaching, research and outreach. Over 75 research and teaching projects occur in the Preserve annually and thousands of student volunteer hours help support and maintain the Preserve while they gain hands-on experiential learning that they carry with them as they graduate and become environmentally conscious citizens.

Official university efforts to protect and set policy for the lands that are now within the boundaries of the Lakeshore Nature Preserve date back to the early 1960s, in response to public controversy over the decision to construct the Sewell Social Science Building in Muir Woods. UW-Madison oversight of these lands has evolved through several different governance committee structures: first the Wooded Areas Committee, then the UW Arboretum, the Campus Natural Areas Committee, and finally the current Lakeshore Nature Preserve Committee that advises UW-Madison's division of Facilities Planning & Management leadership on overall policy, land use and management of the Preserve.

This area of the Lakeshore Nature Preserve is currently zoned "Conservancy" in the city of Madison and an Outreach Center/Nature Center will require a conditional use review through the Madison Plan Commission. The UW-Madison Design Review Board and Joint Campus Area Committee will review the project and recommend an action to the Plan Commission.

The vision of the Lakeshore Nature Preserve is "to foster biodiversity on campus and cultivate lifelong environmental education." The mission of the Preserve is that it "shelters natural environments and cultural resources through active learning, research and outreach in a place of respite and well-being." The Lakeshore Nature Preserve is a showcase for rethinking a city's relationship to the natural systems in which it is embedded to make human and non-human communities more mutually supportive, sustainable and resilient. It provides access to a natural setting where humans are not the main species for the campus community.

The need for a Preserve Outreach Center was first identified in the 2006 Lakeshore Nature Preserve Master Plan (a gift funded project in 2005) which introduced the concept of a "Preserve Station" and gathering place for students, faculty, staff and visitors at the base of Picnic Point. It was again supported in the 2015 Campus

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Master Plan with an identified site outside the historic stone entry walls to Picnic Point and near the existing parking facilities. The site has a southern exposure making it an ideal candidate for rooftop solar photovoltaics, daylighting and passive ventilation building design.

The 2020 Lakeshore Nature Preserve Strategic Plan also identifies the need to “define and systematically communicate the Preserve’s identity, mission/vision and purpose” in supporting and highlighting its value for teaching, research and public outreach to the university and Madison community. In providing a single location and visible main entry to the Preserve, the mission, vision and identity can continue to be advocated for and increase the presence of the Preserve at the university. The Strategic Plan also notes that Preserve staff need to be responsive to teaching faculty, researchers, permit holders and passionate volunteers who all uphold and carry out the Preserve’s mission through regular and consistent use for teaching and research, with regular communication and outreach to the university community. The new Outreach Center helps fully support these goals.

Project Location:



Building/Site Data	
Building Size	new approximate 8,000 ASF / 9,000 GSF
Name	Lakeshore Nature Preserve Outreach Center
Land Address	2000 University Bay Drive, Madison, WI 53715

Project Budget	
Phase I, Advanced Planning Project Cost	\$120,000

Funding Source
This is a 100% gift & grant funded project and will be delivered with contracts held by the Board of Regents of

the University of Wisconsin.

Project Schedule Advanced Planning (Pre-Design – Phase I)

A/E Selection	7/2022
Draft Design Report	2/2023
Final Design Report	8/2023

Project Schedule (Basic Services – Phase II)

Schematic Design	12/2023
Design Development	5/2024
BOR Approval	2/2024
Project Bidding	11/2024
Start Construction	2/2025
Complete Construction	6/2026

C. Scope of Services

The consultant team should be prepared to provide the following services:

Pre-Design Services - Advanced Plan (Phase I)

- ☒ Facility/Department program.
- ☒ Project definition.
- ☒ Goals and visioning sessions.
- ☒ Scenario planning.
- ☒ Blocking and stacking diagrams.
- ☒ Space tabulation.
- ☒ Site Survey (Easements, Zoning Approval, Floodplain Restrictions, Environmental Restrictions, etc).
- ☒ Geotechnical.
- ☒ Feasibility study.
- ☒ Cost estimating.
- ☒ Renderings.
- ☒ Donor package.
- ☒ Site Utility Investigation

All final documentation must be provided electronically, in a means approved by UW in Adobe Acrobat PDF format and appropriate original format. All narrative text and cost estimate documentation shall also be provided in an unlocked, editable file format for future use and presentation outside of the final document. Text shall be provided in rich text format (*.RTF) or Microsoft Word XML document format (*.DOCX) and cost estimates provided in Microsoft Excel XML workbook format (*.XLSX). The content of the editable file formats must match the content of the final document, but the organization, layout, and formatting needs only to be representative of the final content. All graphics, images, maps, plans, and renderings must be provided in electronic format separate from the master plan document in high-resolution 300 pixels per inch (ppi) raster format (*.PNG), suitable for poster size (minimum 24-inches by 36-inches) publication.

Phase II Basic Service (Design and Construction):

1. Schematic Design
 - a. Review and evaluate Owner’s program, schedule, budget (Cost of the Work), Project site, and Initial Information.
 - b. Preliminary design options illustrating scale and relationship of Project components.
 - c. Schematic Design Documents (site plan, building plans, sections and elevations. May include study model, perspective sketches, and/or digital representations. Including preliminary major building systems and construction materials).

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- d. Publish 25% design materials (description of project, drawings, estimate of Cost of the Work and Project Budget, and schedule).
2. Design Development
 - a. Design Development Documents (e.g. plans, sections, elevations, typical construction details, and diagrammatic layouts of building systems to fix and describe the size and character of the Project as to architectural, structural, mechanical and electrical systems, and other appropriate elements and systems).
 - b. Assist with internal UW reviews (Shop reviews, user group reviews, etc.), as appropriate.
 - c. Update estimate of Cost of the Work, Project Budget, and schedule.
3. Construction Documents
 - a. Development of Construction Documents (which include Drawings and Specifications) for the construction of the Work, incorporating requirements from governmental authorities, for use in approved state of Wisconsin bidding processes.
 - b. 90% progress set to Owner.
 - c. Update estimate of Cost of the Work, Project Budget, and schedule.
 - d. 100% set for bidding.
4. Procurement
 - a. Support Owner's Single Prime bidding process; including, but not limited to preparing the posting documents, preparing and issuing addendum, and attending all walk-thru's.
5. Construction Administration
 - a. Perform Construction Administrative services as described in the contract (Certificate for Payments, Submittals, shop drawing reviews, RFI's, CBs, CCDs, COs, etc.).
 - b. Visit the site and determine if Work observed conforms to Contract Documents.
 - c. Standard AIA defined work, but potentially different than other state work:
 - i. Participate and lead Construction progress meetings
 - ii. Construction meeting minute documenter
 - d. Publish AIA contract documents (e.g., Change Orders with AIA's G701 and Construction Change Directives with AIA's G714)
 - e. Issue Certificate of Substantial Completion
 - f. Deliver design documents utilizing Building Information Modeling.

Delivery Guidelines, Technical Guidelines and Specifications

The project will need to conform to the UW-Madison Technical Guidelines and Campus Design Guidelines. The project will need to conform to the State of Wisconsin single prime bidding requirements and use General Conditions developed by UWSA. Project specifications shall be modeled off the State of Wisconsin's Department of Administration's Division of Facilities Development & Management (DFDM) master specifications where applicable. Deliverables and depth of service from the A/E at each phase of the project shall be modeled off the precedents previously set by DFD as amended by the UWSA's contract.

- UW-Madison Technical Guidelines: <https://cpd.fpm.wisc.edu/technical-guidelines/>
- UW-Madison Campus Design Guidelines: <https://cpd.fpm.wisc.edu/resources/campus-design-guide/>
- UW 2015 Campus Master Plan: <https://cpd.fpm.wisc.edu/resources/campus-master-plan/>
- DFDM Single Prime Bidding and Contracting: <https://doa.wi.gov/Pages/DoingBusiness/SinglePrime.aspx>
- DFDM Master Specifications and Guidelines: <https://doa.wi.gov/Pages/DoingBusiness/MasterSpecsDesignGuide.aspx>

D. Qualification Requirements

Interested consultants should have, or assemble a team of consultants who have, experience in the execution of similar projects at higher education facilities to the one under consideration and have acted as the responsible, prime A/E from design through substantial completion of at least \$4,000,000 of construction value. Interested firms must hold respective architectural, engineering, and landscape architectural licenses in Wisconsin.

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Consultants should have specific expertise and experience in new nature center building projects in an institutional setting as part of a design team. Work includes site surveys, acquiring field data, wetland delineation, and verifying existing conditions to assure accurate assessment of design and bidding documents, and production of necessary design and bidding documents should a second phase be pursued. In addition, preference will be given to teams that have either the prime A/E or sub-A/E with specific design experience within the last 5 years that includes the following:

- Design and requirements for a carbon neutral and on-site renewable energy development for a highly sustainable off-the-grid facility that may be LEED platinum.
- Successfully obtaining WDNR and other regulatory agency approvals for construction near a wetland and in a floodplain.
- Site design processes that require working in a collaborative, transparent process, managing the needs of multiple stakeholders while still providing a high-quality design solution.

Consultants should indicate specific projects from past experience (including size, cost, and completion date) in their Statement of Qualifications (SOQ) and when known, include proposed consulting partners and specialty consultants. The consulting team should be prepared to provide design and construction services along with construction document development, construction administration, and project closeout.

The consultant team should strive to include at least 5% participation by minority-owned, women-owned, and/or disabled veteran-owned businesses (MBE, WBE, and DVB) as defined by Wisconsin Statute 16.18, and identified on the Wisconsin Supplier Diversity website: <http://www.doa.state.wi.us/Divisions/Enterprise-Operations/Supplier-Diversity-Program> or use the State of Wisconsin Department of Transportation list of DBE certified firms. <https://wisconsin.gov/Pages/doing-bus/civil-rights/dbe/certified-firms.aspx>

E. Selection Process

Using the criteria listed below the firm will be evaluated by a selection committee. The selection committee expects to make an award selection from the SOQ evaluation. A shortlisted group of A/E teams to interview on-line would be created only if necessary, at the sole discretion of the selection committee. The selection committee will be made up of three (3) professional staff: two (2) from UW-Madison and one (1) from UWSA.

All teams will be notified within one week of the committee's selection meeting, which is expected to occur the week of June 13, 2022.

If applicable, shortlisted teams will be invited for a short video conference to discuss the project, during the week of June 27, 2022. Shortlisted teams will be given a 1.5-hour time slot for the interview day, randomly selected.

The selected team should be prepared for a project kick-off meeting to be tentatively held during the week of July 18, 2022.

The contract for professional services will use a modified AIA Contract B101, which can be found on our website [here](#) under Contracts & Documents (bottom left-hand side of page). Requested exceptions to contract must be submitted with Submittal of Qualifications.

F. Submitting Qualifications

The firm is to submit a Statement of Qualifications (SOQ) using the Federal SF330 form Part I and Part II, to the below Procurement Contact. An electronic copy must be received by email no later than the deadline of 2:00 PM Wednesday, June 1, 2022.

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Submittals are to be combined into one PDF file named with the UWSA project number listed at the top of this RFQ and include your firm's name. Limit the total number of pages submitted to 25, using a font size no smaller than 10-point. Use the "print" feature of Adobe Acrobat or similar software for creating a PDF, rather than using a scanner. If possible, please reduce/optimize the file size of the PDF, and in no case are submittals to exceed UW-System's incoming email attachment limit of 20MB.

Within the Federal SF330, Part I, section E, please provide relevant projects within the last 8 years. Please provide resumes for at least the following key personnel:

1. Principal architect
2. Project point-of-contact
3. Lead engineers (MEP)
4. Lead landscape architect

Within the Federal SF330, Part I, section F, please list nature center buildings that strive to be carbon neutral and provide onsite renewable energy that your firm has designed within the past 8 years.

Within the Federal SF330, Part I, section H, please answer the following questions for your SOQ to be fully considered.

1. Please describe the firm's design approach and specifically the approach for programming.
2. What do you see as opportunities and challenges for this project at UW-Madison?
3. Please describe the organization and partnering organization level, and on an individual employee level, how your firm will address inclusion by under-represented people?
4. How will you serve the Madison campus from your firm's location?
5. If partnering with a local firm, please describe the roles and responsibilities each firm will be responsible for.
6. For each project listed in Section F of Form 330, provide the Change Order rate as a percent of construction.
7. Experience of firm and its proposed consultants to provide successful services in settings similar to those in the university's Campus Master Plan and Design Guidelines

Include in Section H a description of the team's delivery philosophy. Items might include the following:

- structure of project planning meetings
- budget control
- schedule control
- communication and decision making
- document and design quality controls

Do not submit consultants for Wisconsin Environmental Protection Act (WEPA) or hazardous materials as they will be contracted separately. That said, the selected firm will support those other Owner consultants with drawings, materials, and public meeting attendance as needed.

If the university requests any clarifications to the SOQ, it expects a prompt response from the firm for the firm's continued consideration. The university reserves the right to reject a SOQ or proposal that is incomplete or late, and to cancel the project selection for any reason.

Submit all questions regarding this RFQ in writing to the Procurement Contact with the project name and number included in the subject line (no phone calls please). Questions will be posted and answered on the UWSA Procurement web page (<https://www.wisconsin.edu/procurement/construction/>) on a regular basis until one week before the RFQ deadline. The name of the firm submitting a question will not be posted.

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Procurement Contact:
Jacob Dwyer
Purchasing Manager
UWSA--Office of Procurement
660 W. Washington Ave., Suite 201
Madison, WI 53715
(608) 263-4584
jdwyer@uwsa.edu

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Overview & Location

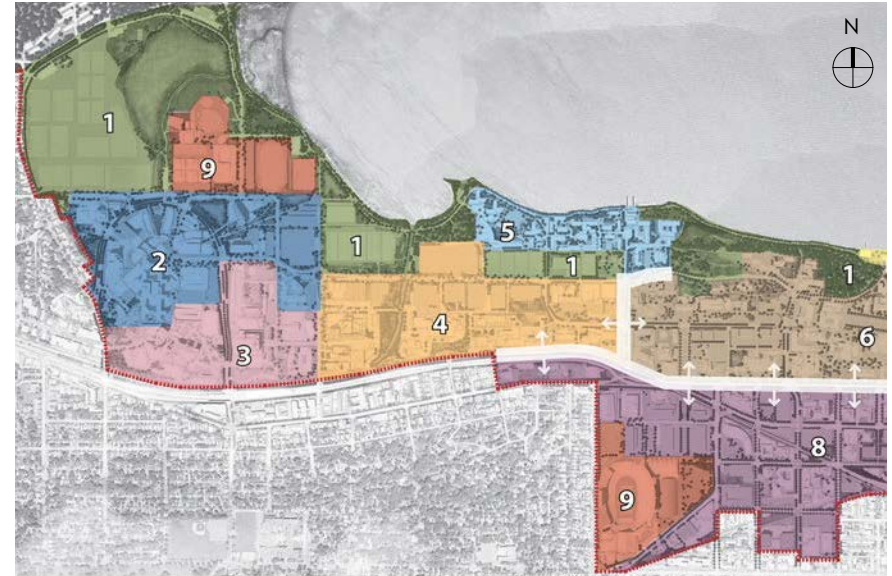
Defined by large contiguous open spaces that provide research, recreation, relaxation, stormwater management, habitat, and restorative functions. These areas are considered significant scenic resources and are located primarily along the lake. Architectural development within this area is atypical. When proposed, development should be heavily influenced by the surrounding natural context and place an emphasis on sustainability. Buildings should be lower in scale and mass to preserve lake viewsheds and reduced densities.

While significantly contributing to UW-Madison sense of place, this neighborhood spans the edge of Lake Mendota and transitions into the 300-acre Lakeshore Nature Preserve. The Recreation Neighborhood's location and character afford the best opportunities for the campus to engage the lake front and promote education and interpretation to a wide audience. The area consists of a wide spectrum of functions, from untouched and naturalized landscapes, to horticultural gardens and active recreation.

The southern boundary of the neighborhood is generally defined by Marsh Drive (extended) on the west and Observatory Drive throughout the remainder of the campus. While the Lakeshore Neighborhood graphically divides this area, buildings here should have the sense of being in nature and situated to preserve views and quality naturalized vegetation. The Recreation Neighborhood areas of Observatory Hill, and Muir Woods to the north of the Historic Campus Neighborhood are considered passive and natural areas and help to define what people consider the traditional collegiate campus, especially along the iconic lake front.

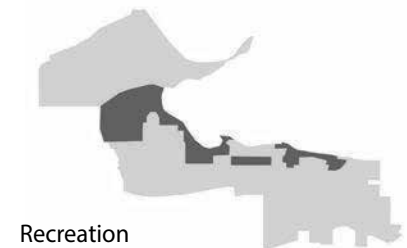
Note: The Lakeshore Nature Preserve that lies approximately north and east of University Bay Drive is not included in this design neighborhood. Reference the Lake Shore Nature Preserve master plan for information specific to this area.

Area: 130 acres (20 percent of 636-acre planning area)



Recreation = Active & Passive

The refreshment of mind, body, or spirit through play and/or relaxation



Recreation
Neighborhood Key Plan

RECREATION NEIGHBORHOOD

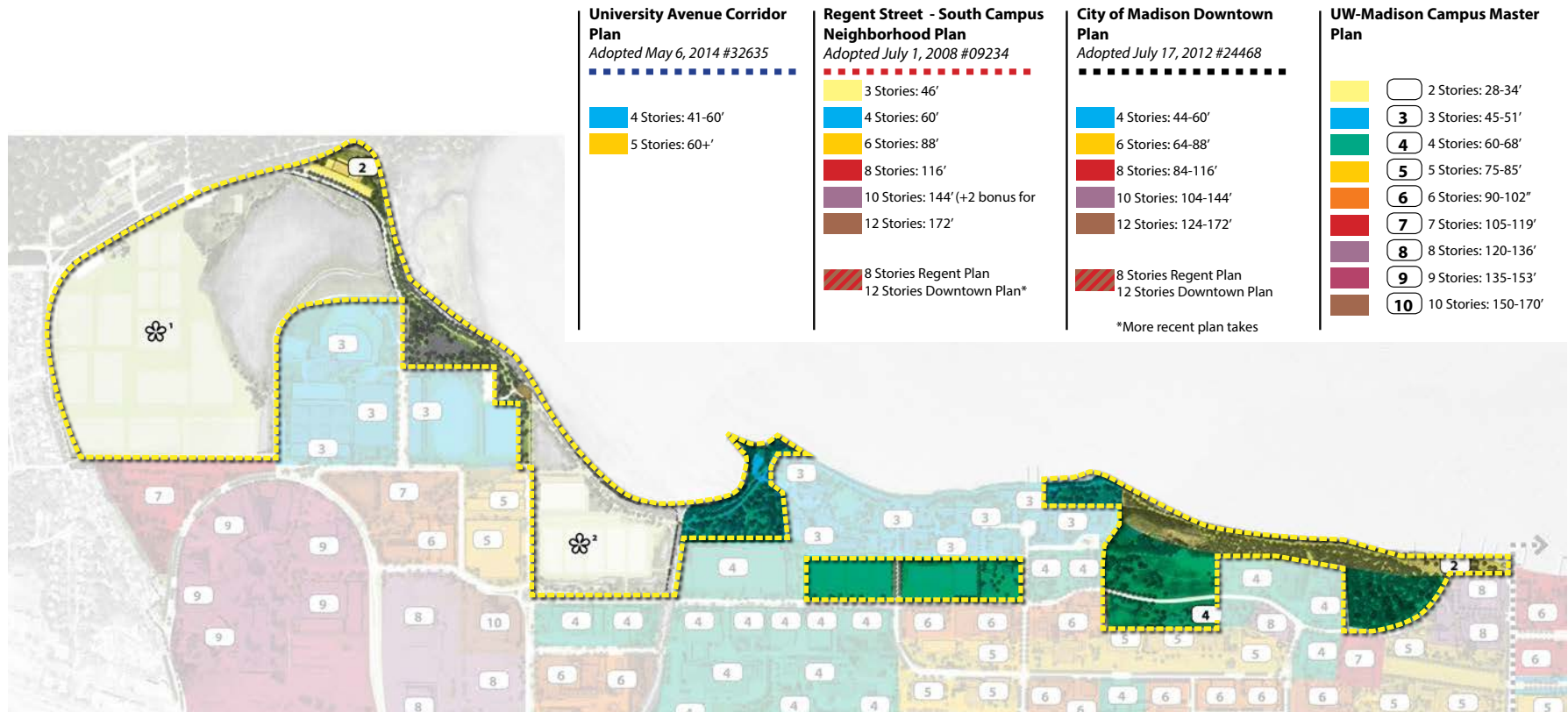


Key Plan

Massing & Scale

- Building edges facing important pedestrian corridors, gathering spaces, or exceptional natural resources shall have transparent treatments to enhance visual access between inside and outside, as well as enliven outdoor spaces to promote activity. Transparency shall occur where building activity is highest to balance energy efficiency needs.
- Proposed building massing shall consider daylight penetration into all spaces of the building.
- Limit buildings and structures within this neighborhood to preserve existing natural amenities and characteristics.
- Proposed buildings shall be smaller in size with maximum footprints of 40,000 GSF within a maximum 4-story structure.
- Building massing shall be of a human scale that is highly articulated to provide visual interest and blend with the natural context.





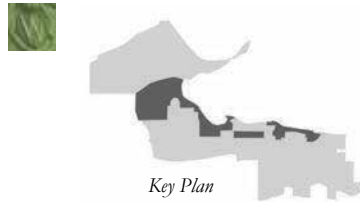
Building Heights

- Building heights are to generally match the urban context to the south and east, crescendo in height along the campus arterials of University Avenue and Johnson Street and become lower as the lakeshore is approached.
- Consider existing topography and the natural campus setting when determining building heights.
- Building heights are recommended to be set below the adjacent tree canopy and have limited visibility when viewed from Lake Mendota.
- Buildings are recommended to be a maximum of 4 floors to promote interaction with the natural environment and respond to the adjacent context.
- Buildings should generally have pitched or butterfly type roofs.
- Consideration of accessible and/or highly visible green roofs shall be considered.

NOTES:

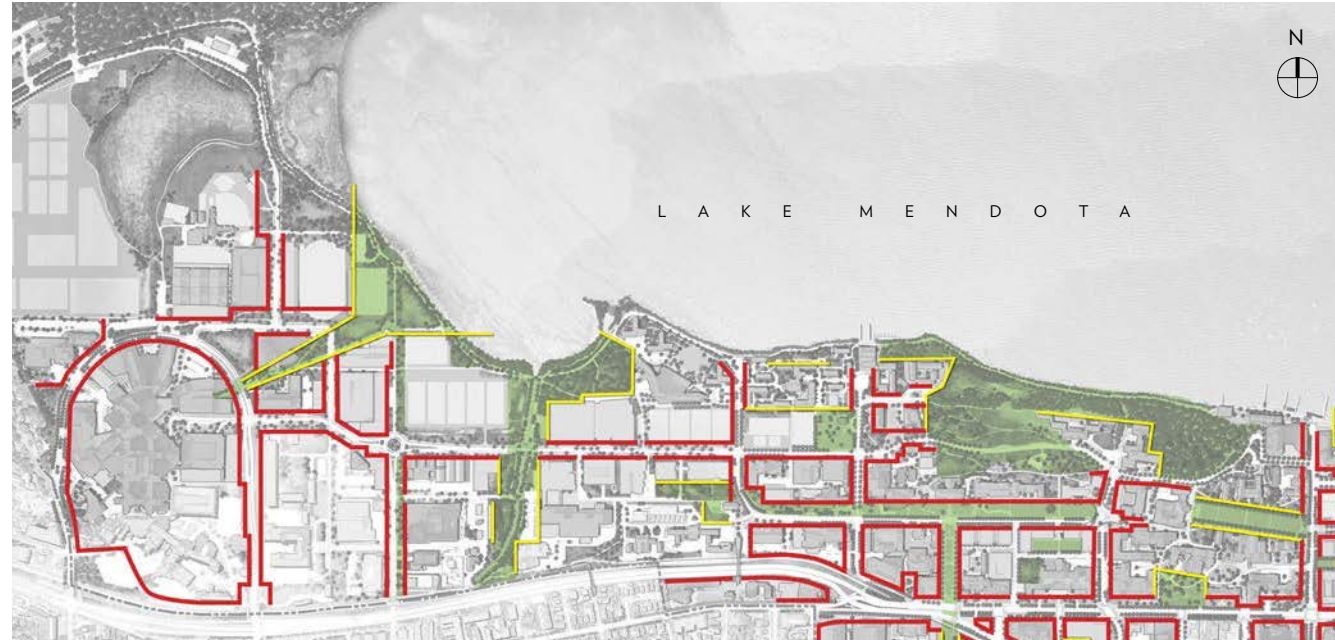
1. Colors relate to building heights.
2. Where discrepancies arise between adopted plans, most current plan takes precedent.
3. (X) Numbers indicate UW-Madison 2015 Campus Master Plan proposed maximum building heights. Floor quantities indicated equate to 15-17' floor to floor heights.
4. (X) Indicate proposed HIGHER maximum heights than approved plans.
5. (X) Indicate proposed LOWER maximum heights than approved plans.
6. "+2" Additional floors approved for exceptional design/LEED.
7. ☼¹ Zoned Conservancy District, buildings not anticipated
8. ☼² Viewshed agreement, any proposed buildings require additional approval.

RECREATION NEIGHBORHOOD



Build-To Lines

- Refer to the Build-To Dimensions matrix for specific distances related to street frontages and major open space corridors.
- The primary build-to lines in the recreation neighborhood involve interaction with the Lakeshore Nature Preserve and open space frontages. As such, planning and design associated with tree preservation, construction staging, and erosion control will be of primary interest.
- Where buildings are proposed adjacent to the Recreation Neighborhood and no build-to line is indicated, it is recommended that planning and design be considered on an individual basis to balance program and open space.
- Build-to lines are given to prevent flat, expansive, lifeless street or open space facades. The majority of the building facade should be brought to the suggested build-to line while still achieving facade articulation and interest that is compatible within the neighborhood.



Note: The placement of new buildings should respond to the alignment of adjacent buildings and adhere to the landscape framework plan which defines signature open space corridors. New buildings should be placed to engage and improve the quality of the campus landscape. While proposed buildings should be placed to maximize efficiency and use of the site, they should not block major pedestrian, habitat, stormwater, or visual corridors. Placement is ultimately dictated on a site by site basis to respond to the immediate context and ensure the building positively contributes to the whole of the campus.



Build-To Dimensions

The neighborhood matrix references each of the streets within the Campus Design Neighborhood and further identifies the nuances along that street frontage to provide guidance when determining architectural build-to limits. These limits ensure architectural framing of the street is occurring where appropriate, green space is preserved, and that a pleasing human-scaled pedestrian space is created that allows for street activation and socialization.

- *Street Name:* Name of street located within the neighborhood.
- *Description:* Segment of street in neighborhood, as widths and character may vary.
- *Existing Corridor Width*:* Identified existing width per Dane County mapping data.
- *Orientation:* What side of street segment guidelines are being applied.
- *Build-To Line¹:* Distance from back of the sidewalk where majority of the building should interface.
- *Building Ht. Max:* As identified by neighborhood/city plans and per anticipated UW program need.
- *Step Back Req'ts:* Recommended story height at Build-To line/distance (feet) of step back.
- *Stormwater²:* Is the area between the sidewalk/path and street appropriate for green infrastructure.

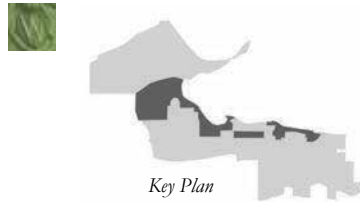
1. RECREATION NEIGHBORHOOD							
Street Name	Description	Corridor Width*	Orientation	Build-to Line ¹	Building Ht. Max.	Step Back Req'ts	Stormwater ²
University Bay Drive	Oxford Rd. to Colgate Rd.	72-86'					
			E	-	2	-	NO
	Oxford Rd. to Marsh Dr.	66'	N (W/E)	-	2	-	YES
			S (W/E)	-	2	-	YES
Walnut Street (Pedestrian)	Marsh Dr. to Observatory Dr.	80'					
			E	-	-	-	NO
Observatory Drive	Walnut St. to Willow Creek	70'	N	-	-	-	YES
	Willow Creek to Babcock Dr.	64'	N	25'	4	None	YES
	Babcock Dr. to Park St.	60-64'	N	-	4	None	NO
			S	25'	4	3rd & Above - 15' Min.	NO
Willow Drive	Lot 58 to Observatory Dr.	68'	W	The Preserve	-	-	YES
			E	-	4	None	YES
Elm Drive	Lot 37 to Observatory Dr.	62'	W	20'	4	3rd & Above - 15' Min.	YES
			E	20'	4	3rd & Above - 15' Min.	YES
Babcock Drive	Tripp Circle to Observatory Dr.	60'	W	30'	4	3rd & Above - 15' Min.	NO

* Corridor Width = Right-of-way width or if no right-of-way, back of sidewalk to back of sidewalk where right-of-way would typically be located.

¹ Right-of-way line or in the case of no right-of-way, the distance from back of sidewalk.

² Does the terrace condition support green infrastructure as part of the development of this area of street?

RECREATION NEIGHBORHOOD



Landscape Principles

This area contributes to the primary physical identity of campus through its relationship to the lake front, the Lakeshore Nature Preserve, and the naturalized landscape character of rolling topography, woods, riparian corridors, and wetlands. Future development should ensure these resources are preserved and enhanced.

- Vegetation shall be managed to promote engagement with the lakeshore and support native habitat for a diverse mix of flora and fauna.
- Foster naturalized landscapes to reduce maintenance needs and promote ecosystem services. These under used landscapes contribute in functional ways to stormwater management and habitat creation.
- Many of our campus cultural resources, Allen Centennial Gardens, Muir Woods, and Native American burial mounds, reside in this area. Ensure proper management and development respect.
- The Howard Temin Lakeshore Path is a heavily used recreational and transportation corridor along the lakeshore linking the Recreation Neighborhood together. Balance human uses and natural habitat.
- As the physical and psychological lungs of the campus, preserve and restore these areas for health and wellness of campus, as well as the community and the region at large.



Note: The list of statements characterize the neighborhood in regard to the Landscape Master Plan Guiding Principles. These principles were established to assist landscape recommendations in reaching the goals of the Campus Master Plan. Refer to the Landscape Master Plan and Landscape Development Standards for further information.



Landscape Guidelines

The Recreation Neighborhood contains two primary recreation typologies: playing fields and naturalized environments. These scenic areas reveal the natural history of campus and contribute significantly to UW-Madison.

- **Naturalized landscapes:** Maintain and restore woodland areas such as Muir Woods as natural areas that provide ecosystem services and human enjoyment. New stormwater features should be naturalistic in form and use native plants along the lakeshore and west near the Lakeshore Nature Preserve. Avoid hard edges and provide opportunities for people to interact without dividing contiguous natural areas.
- **Athletics and recreation:** Maintain contiguous open spaces with minimal plant palette. Maintain views to the lake. Locate playing fields with north-south orientation for optimal playing conditions.
- **Parking and service:** Consider stabilized aggregate or pervious pavers as low impact development alternatives adjacent to the lakeshore. Integrate parking areas into the landscape and provide vegetative screening to buffer views of cars. Consider the view from Lake Mendota and avoid runoff to the lake or natural areas.



Note: The list of statements characterize the nature of the identified typologies as defined by the Landscape Master Plan. Refer to the Landscape Master Plan and Landscape Development Standards for further information.



Materials & Styles: Existing Conditions

Reference the opposite page for material (Mx) and architectural feature (Ax) references.





Materials & Styles

The Recreation Neighborhood has very few buildings set within the defined boundaries of the neighborhood. New construction within these areas shall be informed by the context integrating both the natural environment and sustainability features. Aspects related to green building, renewable resources, restorative environments, and low impact development shall be common characteristics of buildings within this neighborhood. This neighborhood shall also have a contextual impact on its adjacencies, informing a relationship between the interior and exterior environment.

Materials

- M1. Wisconsin Limestone Screenings
- M2. Nature
- M3. Limestone Veneer (Ashlar Pattern)
- M4. Recreational Fields
- M5. Wetland/Marsh
- M6. Glacial Erratic Stone (Color Mix)
- M7. Tan Brick
- M8. Lake



Architectural Styles

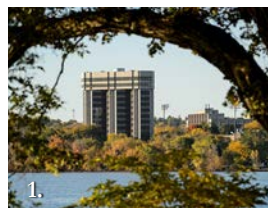
- Environmental Modernism



Schlitz Audubon Nature Center

Architectural Features

- A1. Framed Views/Long Views
- A2. Large Open Spaces
- A3. Ornamental Detailing
- A4. Integration with Nature





Building Inventory

The building inventory lists all of the buildings within the defined campus neighborhood. Buildings are listed alphabetically by the official campus building name (per the Campus Map). Additional inventory information includes:

- *Year building construction was completed.*
- *Year(s) major renovation projects were completed.*
- *Defining architectural style.*
- *Primary exterior material use.*

Building	Built	Renovated	Style	Materials
Agricultural Dean's Residence	1897			Brick
Hasler Laboratory for Limnology	1963	--	Post World War II	Steel, Reinforced Concrete
Water Science & Engineering Lab	1905	1928 add., 1970-1980's remodel	Georgian Revival	Brick, Concrete



Considerations

Considerations include information related to the planning, design, and approval of a typical building and/or landscape architecture campus project. It is to be reviewed as a resource identifying locations of materials that UW project teams reference most often. Not all projects will require each identified item. All projects should review the reference list and determine with the UW project manager applicability to the project.

Site Amenities & Vegetation

- 2015 Landscape Development Standards
- Division of Facilities Development Master Specifications–Division 32
- UW-Madison Technical Guidelines–Division 32

Past Plans

- 2006 Lakeshore Nature Preserve Master Plan Cultural Landscape Report
- 2016 Allen Centennial Garden Master Plan

Restoration/Preservation Efforts

- Class of 1918 Marsh Restoration
- University Bay Restoration
- Willow Creek Restoration Project
- Observatory Hill
- John Muir Woods

Neighborhood Specific Conditions

- Viewshed Protection Agreement–WARF
- Friends of Lakeshore Nature Preserve

Historical and Cultural Resources

- Cultural Landscape Report
- Historic Property Review Requirements
- Archaeological Site Review Requirements
- Archaeological Management Guidelines
- Indian Burial Mound Management Policy

Well Head District/Locations

- City of Madison Unit Well 6 (University Bay Drive & University Ave.)
- City of Madison Unit Well 19 (Lake Mendota Drive)
- City of Madison Unit Well 27 (N. Randall Ave. & Bike Path)

City of Madison Zoning (Chapter 28)

- Campus Institutional District (C-I)
- Conservancy District (CN)