# D2 Module Addition

University of Wisconsin – Design Review Board



### **Team Introduction**

D2 Project Team

#### **UW Health**



Mike McKay, Director of Planning Design and Construction



Mark Premo, Senior PM

### JP Cullen (CM)



Tom Pertzborn - Senior PM

#### **EUA (Architect of Record)**



Ed Anderson, Client Executive



Rob Beisenstein, PM



John Ford, Senior Design Architect

#### D'Onofrio Kottke (Civil/Landscape)



Dan Day, President



Matt Saltzberry, Landscape Architect



Dan Singer, Civil Engineer

#### **HKS (Design Architect)**



Rupert Brown, Design Director



Darin Couturiaux, Senior PM



Nick Savage, Designer

### **Design Review Board**

Meeting Agenda

- Project Description/Schedule
- Campus Masterplan
- Project Schedule
- Site Context
- Landscape Design
- Exterior Design
- Floor Plans
- QA/Next Steps



### **Project Overview**

Project Program, Vision and Schedule

- The proposed D2 Module Addition to University Hospital is a necessary expansion to accommodate the continued growth of UW Health and ongoing modernization of University Hospital / CSC.
- D2 Program: 101,500 Sq/ft Addition
  - L1 Facility Support Space (Below Grade)
  - L2 ED Expansion (Below Grade)
  - L3 Surgery & Diagnostic Imaging Pre-Post Expansion (Daylights)
  - L4-L6 48 Inpatient Beds (16 Beds Per Floor)
  - L7 Full Enclosed Penthouse
- LEED 4.0 Certification
- Parking demand served by existing parking facilities
- Internally connected to the existing hospital (no external/new entrances) and does not present a significant change or alteration of the existing site.
- Existing vehicular and pedestrian circulation patterns, major landscaping and streetscapes will all remain the same.
- During construction we will be coordinated with ongoing operations of the hospital, adjacent buildings and site, and campus operations. The mature landscape will be maintained and restored if affected during construction.

The D2 Addition will embody seamlessly coordinated, clinically integrated, market leading, patient-preference driven access for all patients and foster an environment of joy in clinical practice and staff wellbeing. The D2 Addition will continue to express UW Health's commitment to sustainability and to improving the health of the communities it serves.

- SD Package February 2, 2024
  DD Package April 26, 2024
  - CD Package August 16, 2024
  - K4 Dock Reconfiguration: April 8, 2024 July 1, 2024
  - Site Utility Installation/Reconfiguration: September 9, 2024 November 15, 2024
  - D2 Tower Sitework: May 6, 2024 January 13, 2025
  - D2 Tower Construction: September 26, 2024 April 29, 2026
  - Move In: April 16, 2026 June 11, 2026

### Project Background Adherence to UW Campus Masterplan

|  |       | Phase 3                                       |                 | 97. | 1124/0/0010 | 22.70 |           |
|--|-------|---|-----------------|-----|-------------|-------|-----------|
|  | W-02  | Parking Structure (Hospital Ramp<br>Addition) | Parking         | 3   | -           | 1,225 | 2017-2023 |
|  | W-04A | Health Sciences Expansion                     | Health/Hospital | 7   | 60,500      | ) -   | 2035+     |
|  | W-05  | McClimon Track/Soccer Grandstand              | Athletics       | 3   | 78,000      | -     | 2035+     |
|  |       | Social/Dining/Meeting Rooms/Health            | Union/Student   |     |             |       |           |

4. FACILITIES PLAN: PROPOSED CONDITIONS Total Building GSF: 871,064 Total District GSF: 17,639,456 Floor Area Ratio: 0.05 NEAR WEST CAMPUS Total Building GSF: 3,713,680 Total District GSF: 4,679,994 Floor Area Ratio: 0.79 CENTRAL CAMPUS Total Building GSF: 7,636,898 Total District GSF: 5,792,264 Floor Area Ratio: 1.32 WEST CAMPUS Total Building GSF: 5,881,018 Total District GSF: 6,073,475 Floor Area Ratio: 0.97 SOUTH CAMPUS --- Buildings shown for planning purpo Total Building GSF: 9,582,435 only. Not all lands owned by UW. Total District GSF: 6,687,740 Floor Area Ratio: 1.43 Figure 4-5 Capacity Density

#### Proposed Project 101,500 GSF

Level 1 & 2 below grade: 27,250 GSF Level 3-6 Above grade: 59,650 GSF Level 7 Penthouse: 14,600 GSF

4. FACILITIES PLAN: PROPOSED CONDITIONS

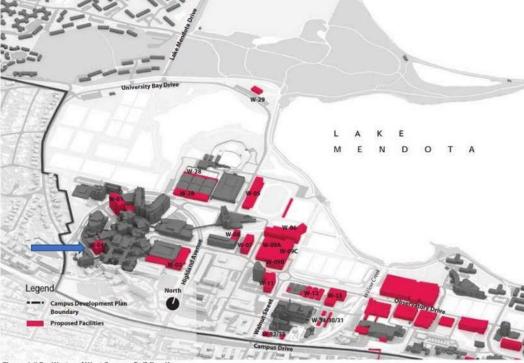
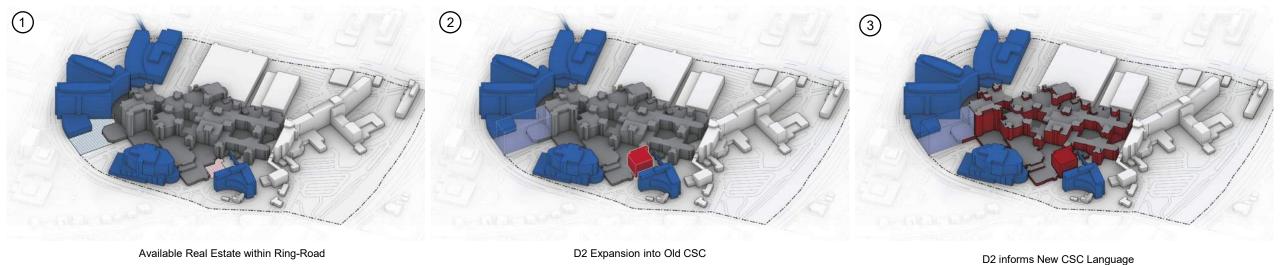


Figure 4-7 Far West and West Campus Building Key

## Project Background UW Health Masterplan Development



# Project Background Context Images











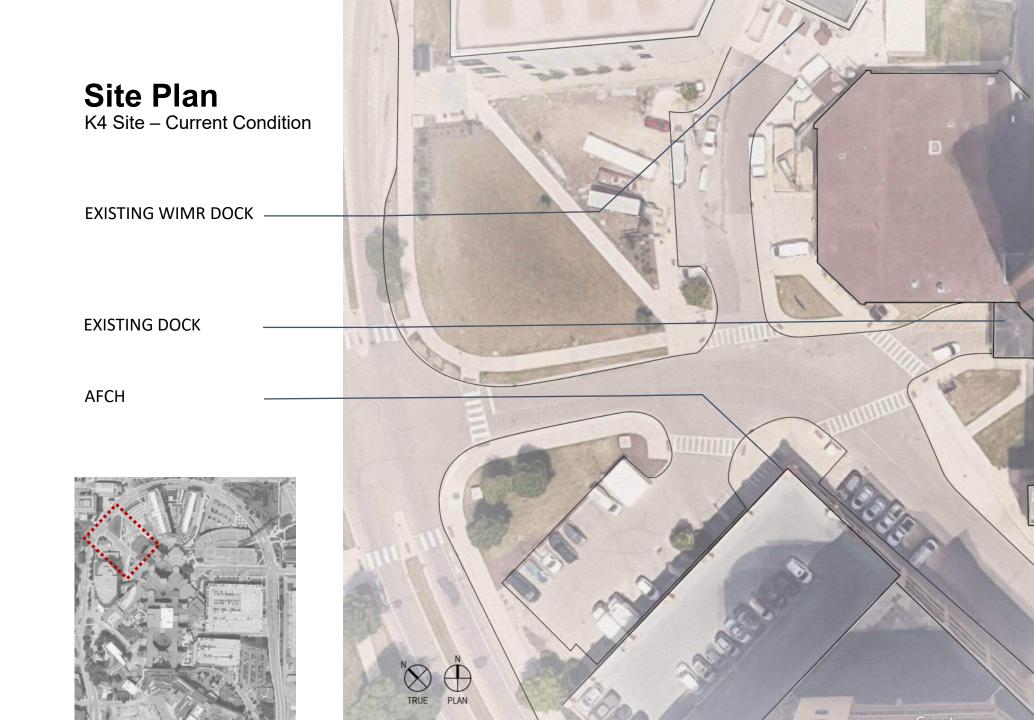


Campus Site Plan

Proposed **K4**Temporary Dock
Reconfiguration

Proposed **D2** module Expansion





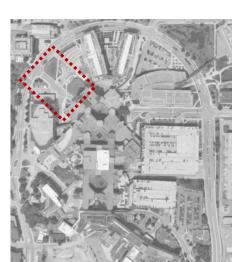
K4 Site – Temporary Dock

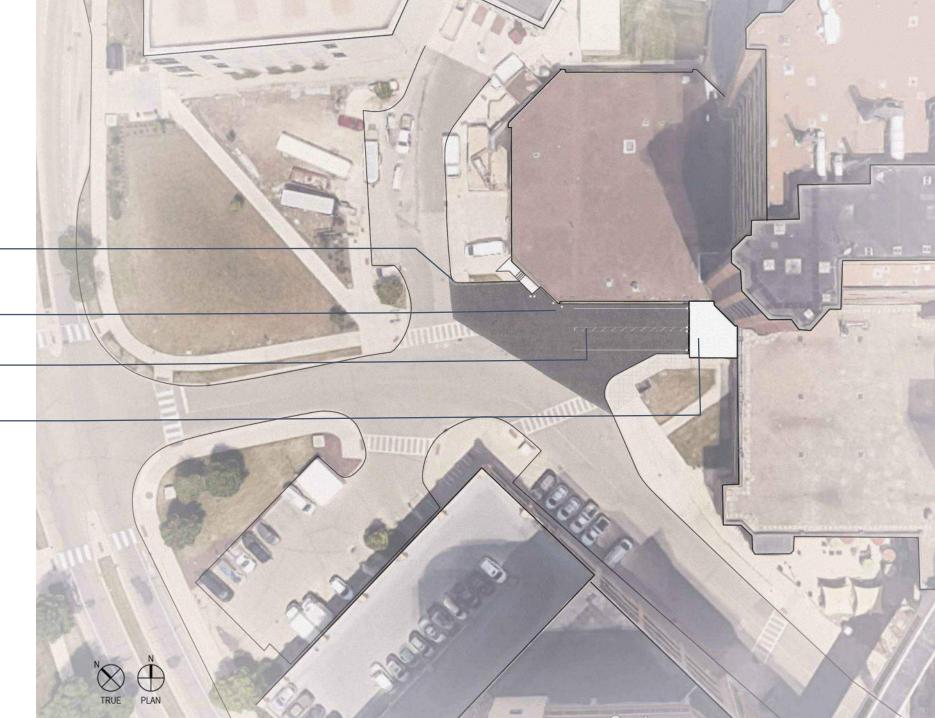
**Reconfigured Curbs** 

Bollards

Truck Parking Area

New Dock Enclosure/ Access Door





D2 Site – Current Condition

Existing Healing Garden (L4)

Existing Below-Grade open Dock (L1)

**Existing Hospital** 

Centennial Building

Existing Rain Garden





D2 Site – Proposed

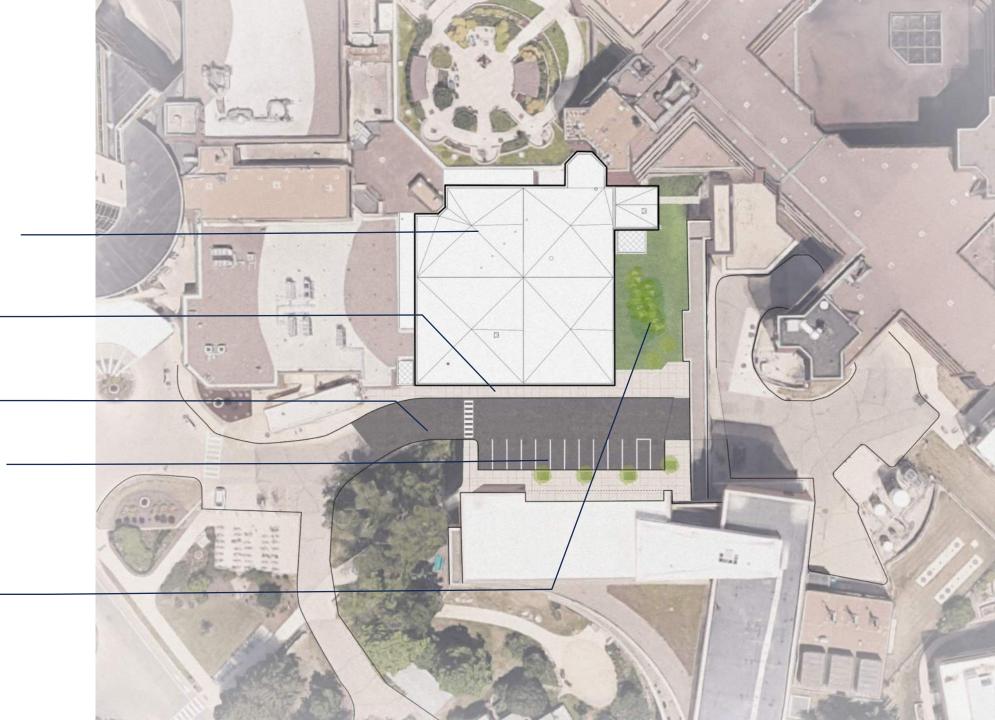
D2 Module Addition

**New Sidewalk** 

Reconfigured 24' drive lane

Reconfigured
Parking Spots (12)
& Relocated Trees

Bio-Retention + Staff Respite



## Site Plan Character Studies









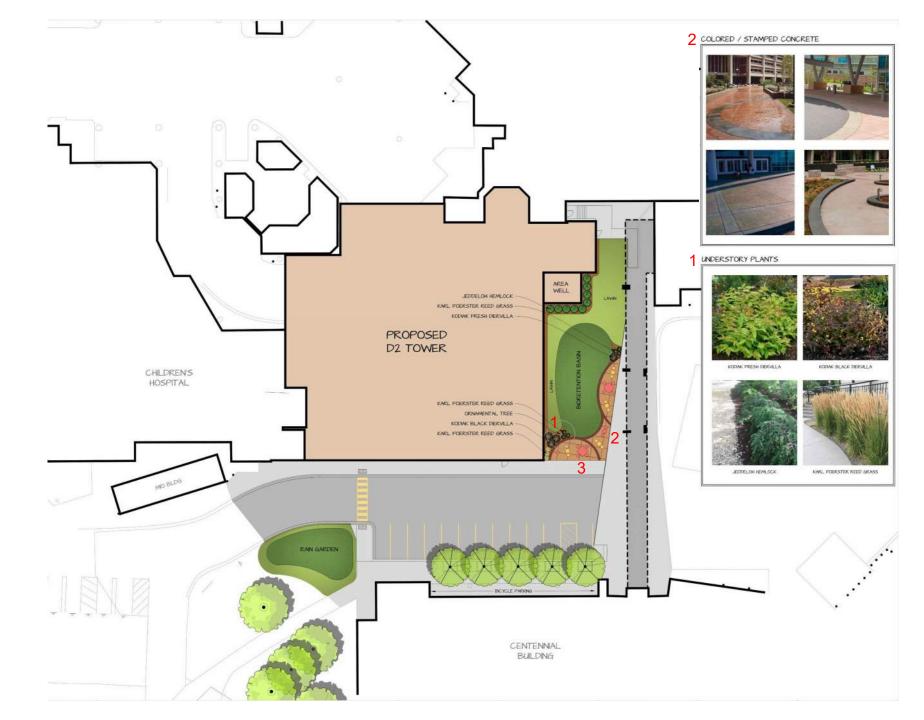
### Site Plan Landscape Plan





### Site Plan Landscape Options

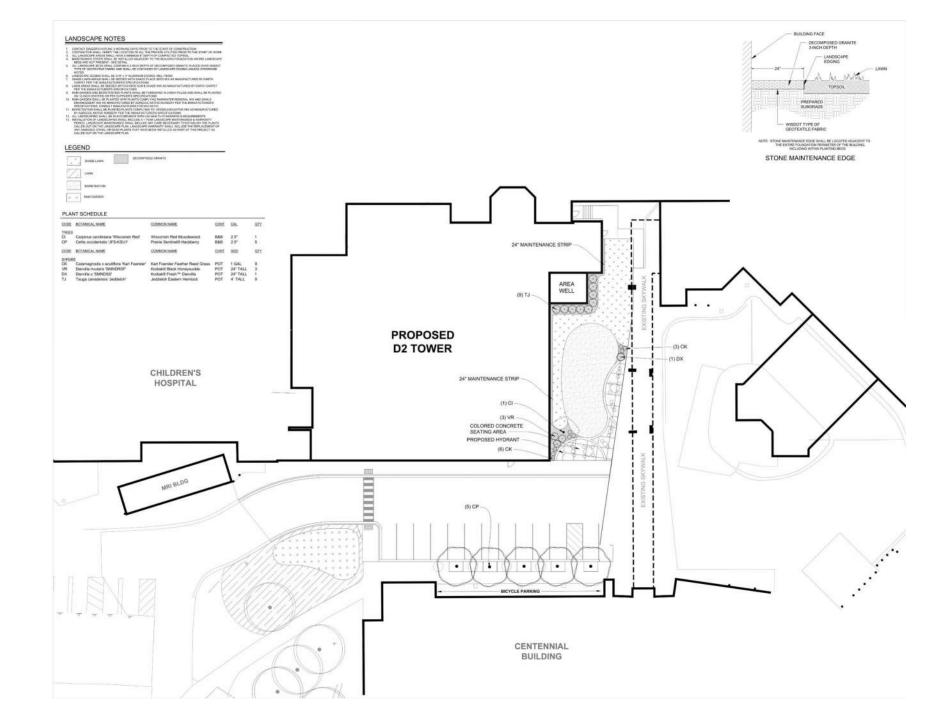




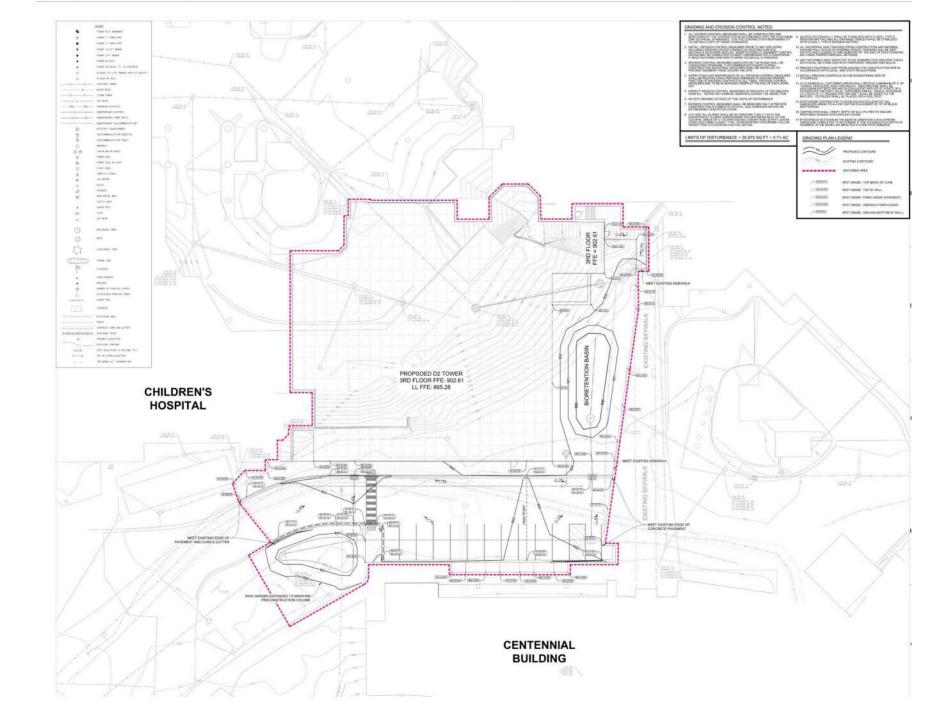
### Site Plan Utility



### Site Plan Planting Schedule



### Site Plan Grading



Campus Connectivity
University Hospital Level 02 Floor Plan

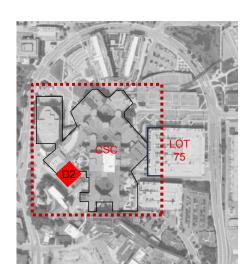


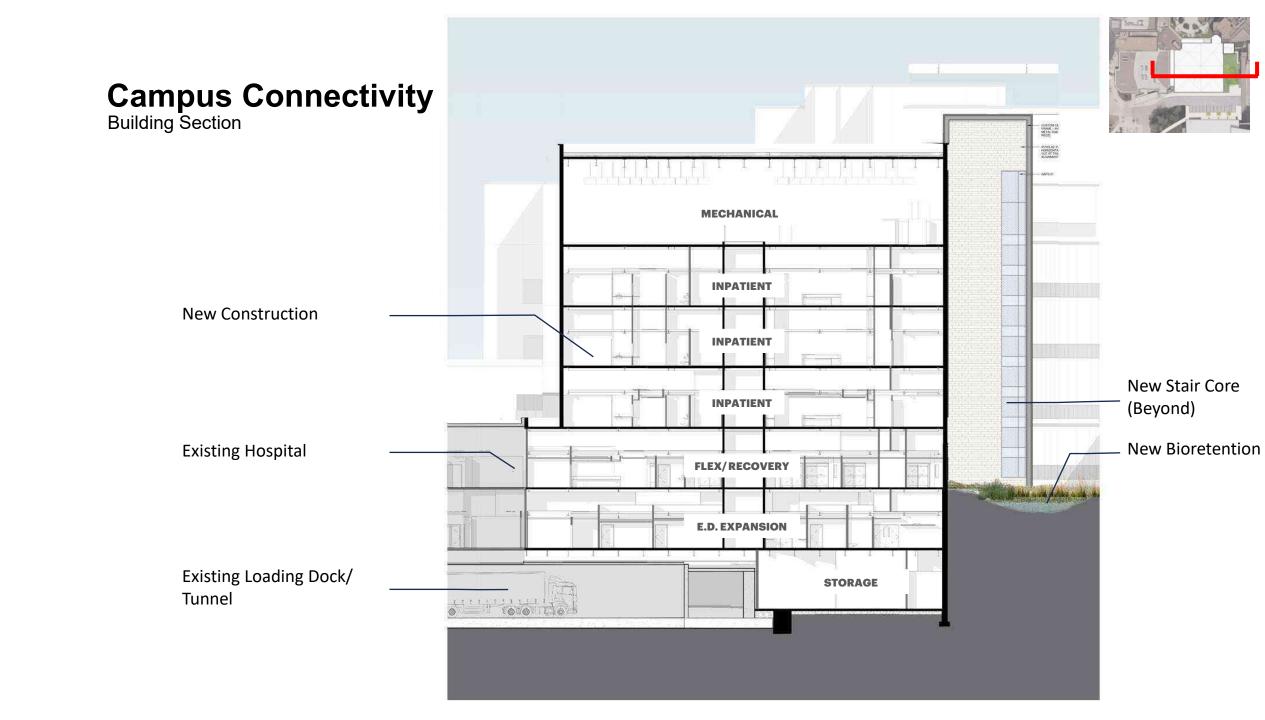
I more to the trans

Main Drop-

ED Walk-In

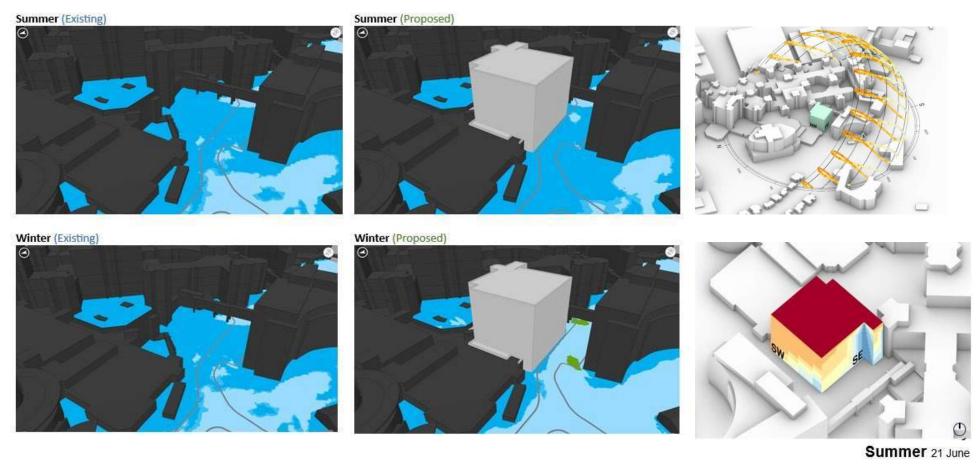
Ambulance Drop-Off Outpatient Drop-Off Hospital Drop-Off Inpatient Flow (L3+)





### **Environmental Factors**

Wind & Solar Analysis



### Campus Continuity Design Guidelines and Palette

#### Materials

M1. Brick, Glass, Metal

M2. Precast Concrete

M3. Kasota Limestone

M4. Light Colored Metal

M5. Dark Colored Brick

M6. Glazing Bands













Centennial Building



#### Architectural Styles

- Modern
- Post World War II
- Environmental Modernism









AFCH





- A1. Large building scales and massings
- A2. Lake views (from & toward)
- A3. Horizontal banding, facade arcs







Campus Design Guidelines -2017\*

Campus Tonal Range

HSLC

## Campus Continuity Vernacular Progression







**Institute for Discovery** 



**Hamel Music Center** 



**Veterinary Medicine Expansion** 

# Exterior Design Contextual Scale





# Exterior Design Spandrel vs Vision Glazing



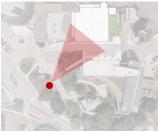


# Exterior Design Pedestrian View



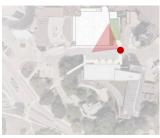


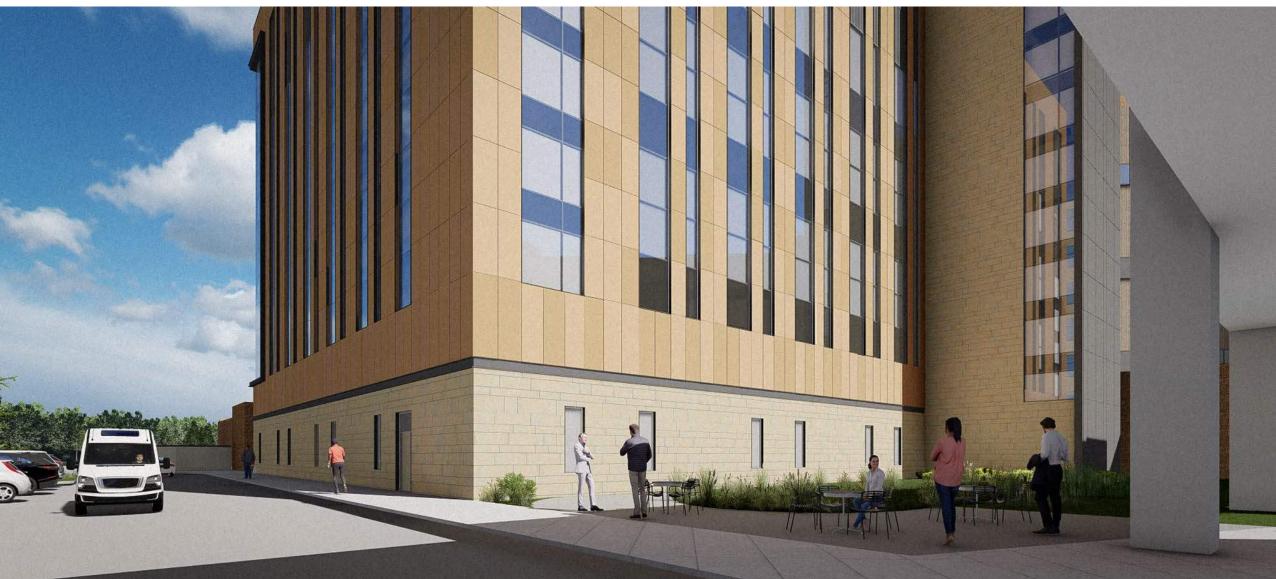
## Exterior Design Pedestrian View





# Exterior Design Outdoor space





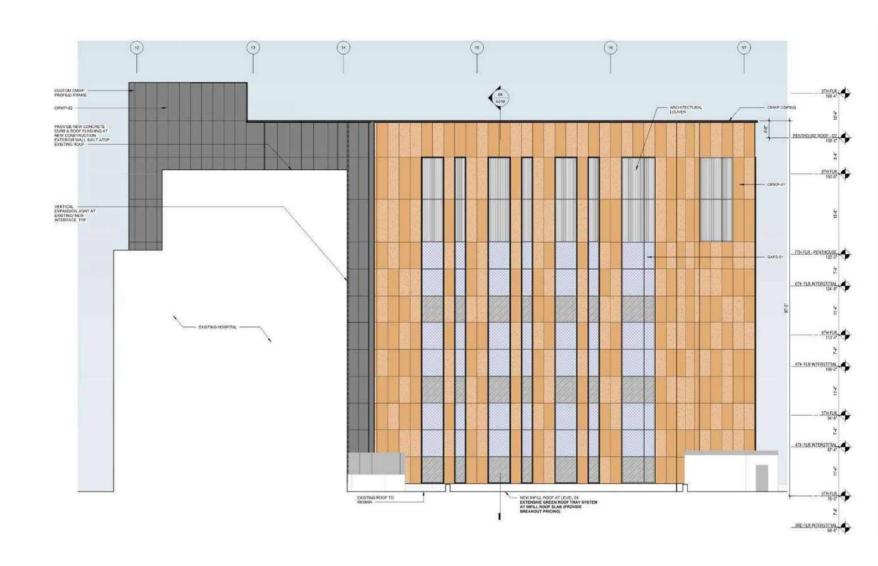
# Exterior Design Courtyard





### **Exterior Elevations**

East Elevation





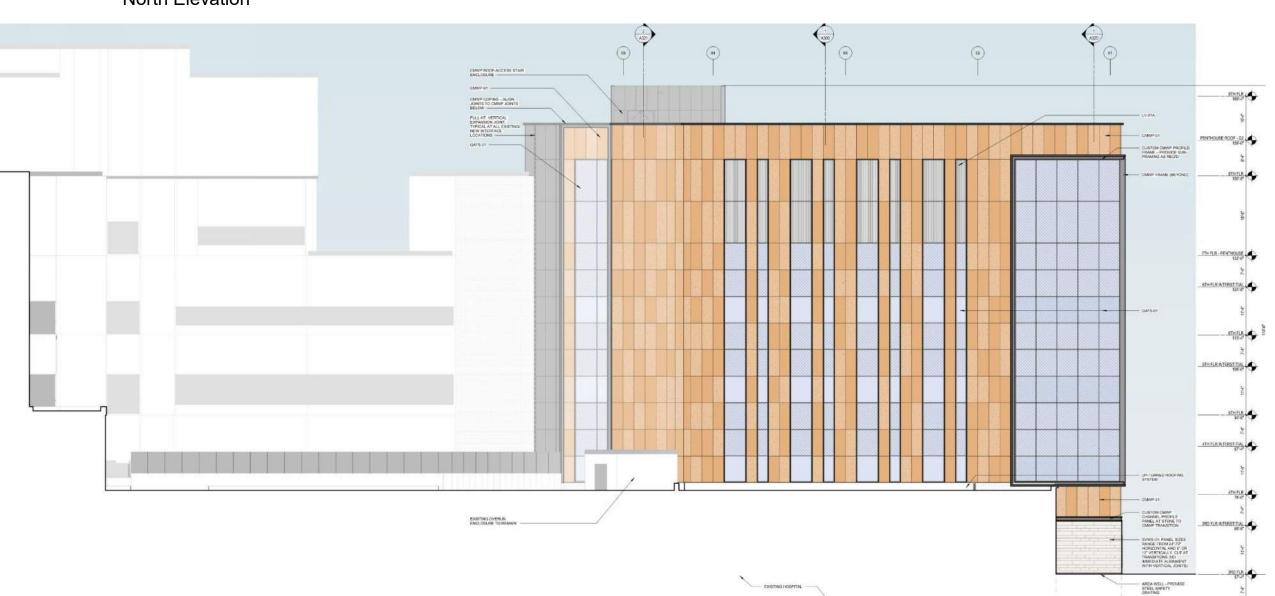
### **Exterior Elevations**

South Elevation



### **Exterior Elevations**

North Elevation



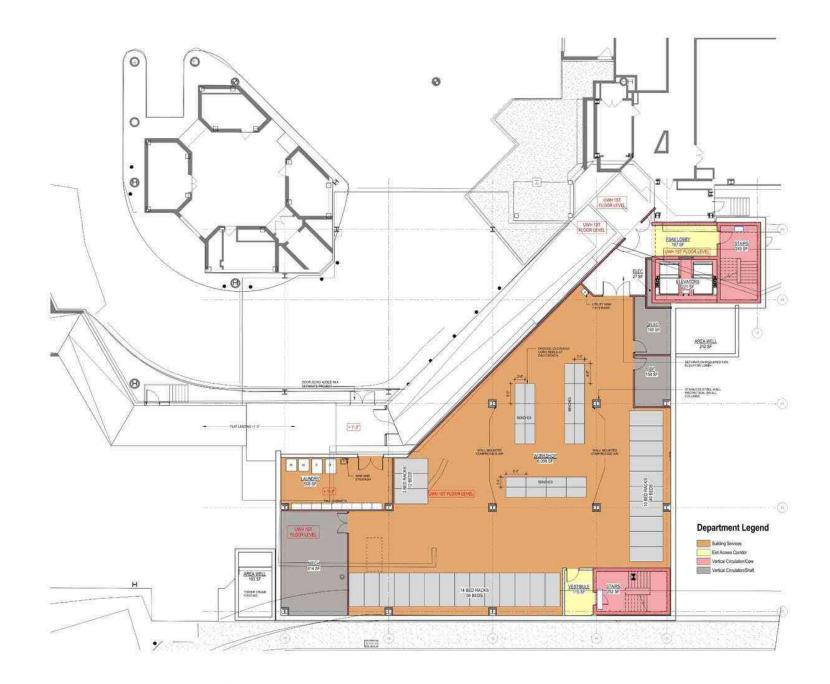
### **Exterior Materials**

Material Palette



### **Floor Plans**

L1 (Below Grade)



L2 (Below Grade)



#### Floor Plans L3 (At Grade)



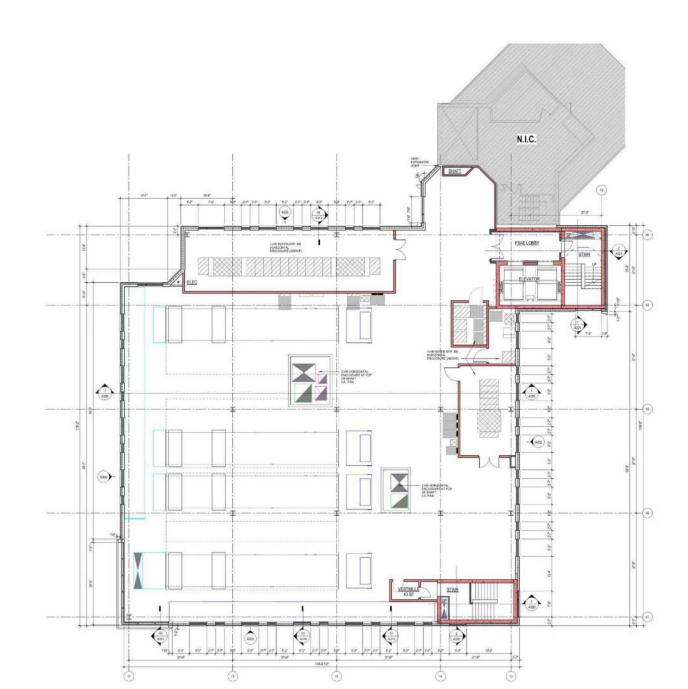




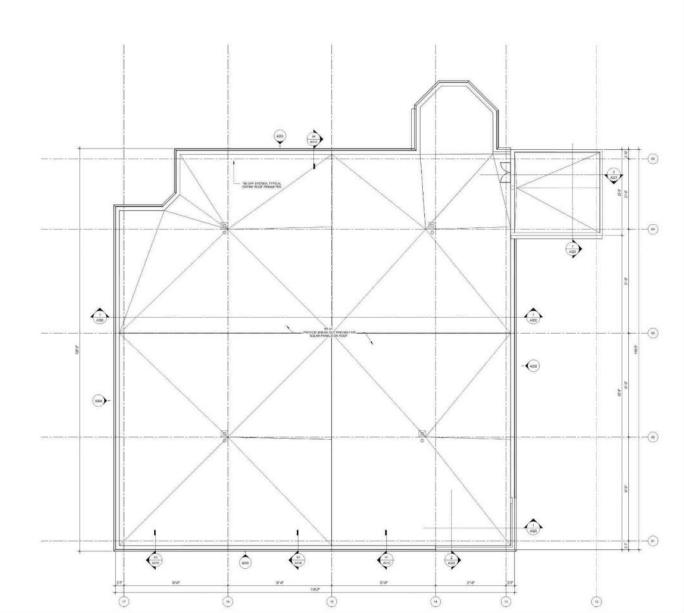
L6



L7 (Penthouse)



L8 (Roof)



# **QA/ Next Steps**









### Design Review Board Meeting #1

Lakeshore Path Pedestrian and Bicycle Limnology Bypass Route (#22A2N)
February 20, 2024



### Lakeshore Path Bicycle & Pedestrian Bypass Route

### Design Review Board Meeting #1 Agenda

- 1. Introductions
- 2. Project History and Overview
- 3. Project Need
- 4. Bypass Options
- 5. Retaining Wall Textures
- 6. Estimate Costs
- 7. Schedule
- 8. Next Steps

### **Project History and Overview**

- 1. Lakeshore Path, Limnology Route Study: 2018
- 2. Advance Planning Study: 2021
- 3. Lakeshore Path/Bridge: 2022-2023

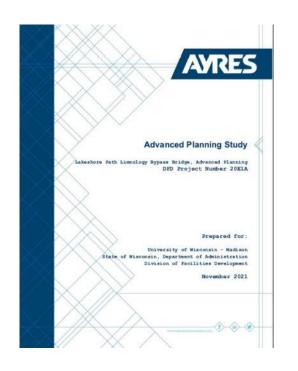


4. Lakeshore Path/Bypass Route: 2023 - ongoing

#### LAKESHORE PATH



UW-Madison Campus Madison, Wisconsin 2018



### Project Stakeholders and On-going Coordination

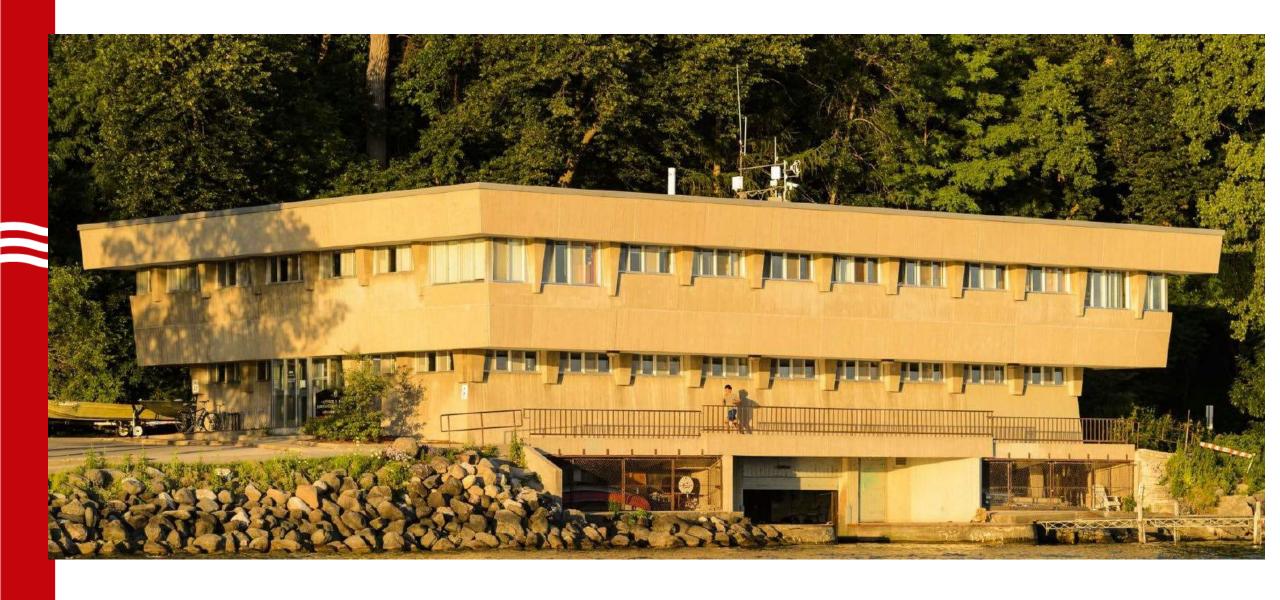
### Campus Groups:

- UW Center for Limnology
- Water Science and Engineering
- Transportation
- Grounds
- Campus Planning & Landscape Architecture
- Lakeshore Nature Preserve
- City of Madison Fire Department
- Environmental Health & Safety
- Sustainability
- Capital Project Delivery

### **Project Location**



# **Project Location**



### Trail Logistics and Flow



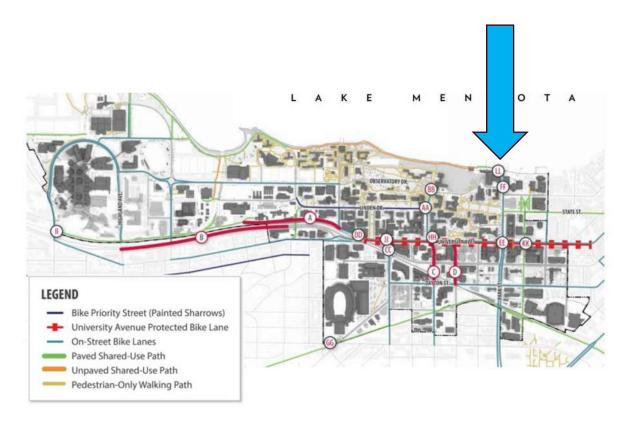
### **Existing Memorial Site**

- John "Vietnam" Nguyen
- 2012 Student
- Coordination with Nguyen family





# Consistency with 2015 UW Long Range Transportation Plan

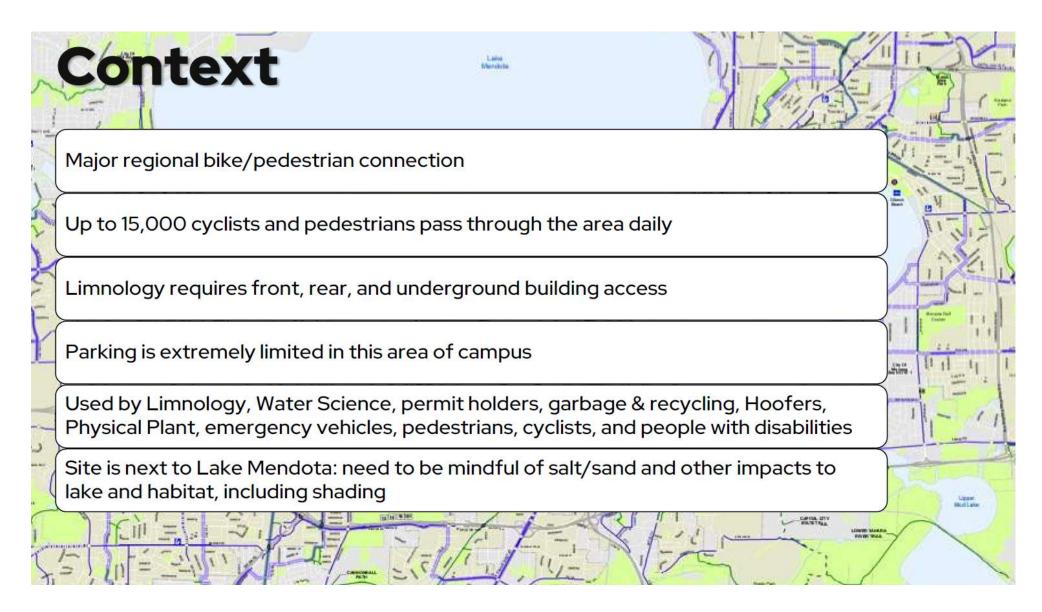


| Route ID  | Location  | Challenge/Need  |
|-----------|---|---|
| a<br>A So | Campus Drive<br>Path and Linden<br>Drive                                  | Need for connection between end of path at<br>Veterinary Medicine to Babcock Drive and<br>University Avenue to the east   |
| i do      | West Campus<br>Connection over<br>Campus Drive                            | Additional north-south crossing of Campus Drive<br>for pedestrians and bicyclists between existing<br>bridge and Walnut Street  |
| À€.       | N. Charter Street<br>between W.<br>Dayton Street and<br>University Avenue | Primary north-south route connecting north campus with campus and neighborhoods to the south Need for bicycle accommodations on N. Charter Street between W. Dayton Street and University Avenue  |
| える        | N. Mills Street<br>between W.<br>Dayton Street and<br>University Avenue   | Primary north-south route, similar to N. Charter<br>Street Need for bicycle accommodations between W.<br>Dayton Street and University Avenue to connect<br>northern parts of campus to the neighborhood<br>area to the south<br>Will have to integrate with on-street parking |

| Location ID | Location                                      | Challenge  |
|-------------|---|--|
| 外で          | N. Charter Street<br>and Linden Drive         | High non-motorized volumes; peak 15 minute<br>pedestrian volume from 10:45 – 11:00 a.m. on<br>a Tuesday in April 2015 of 2,199 pedestrians<br>and 95 bicyclists<br>Conflicts between modes, major transit delay  |
| 火命          | N. Charter Street<br>and Observatory<br>Drive | High non-motorized volumes; peak 15 minute<br>pedestrian volume from 10:45 – 11:00 a.m. on<br>a Tuesday in April 2015 of 1,299 pedestrians<br>and 26 bicyclists<br>Conflicts between modes, major transit delay: |
| × 60        | Campus Drive and<br>N. Randall Avenue         | Skewed intersection, long crossing<br>Various turning movements, high vehicle<br>speeds and volumes<br>Pedestrian, bicyclist, and vehicle yielding<br>confusion<br>Railroad crossing                             |

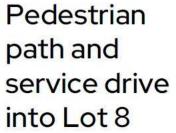
| Location ID | Location  | Challenge  |
|-------------|---|--|
| 次合          | Campus Drive,<br>University Avenue,<br>and Babcock Drive                                      | Skewed intersection, long crossing<br>Various turning movements, high vehicle<br>speeds and volumes<br>Pedestrian, bicyclist, and vehicle yielding<br>confusion<br>Railroad crossing                                     |
| 水の          | N. Park Street and<br>University Avenue   | Various turning movements, high vehicle<br>speeds and volumes<br>Pedestrian, bicyclist, and vehicle yielding<br>confusion<br>Very high pedestrian and bicycle traffic  |
| 大分          | N. Park Street and<br>Observatory Drive   | Highly skewed and offset intersection<br>Transit layover area on west side of Memorial<br>Union<br>All mode turning movements<br>Low pedestrian and bicycle compliance   |
| 水が          | Southwest Path,<br>Regent Street,<br>Breese Terrace,<br>Crazy Legs Lane,<br>and Monroe Street | City has worked to address green pavement markings, bike specific signal going westbound, and other measures Highly skewed intersection results in a lot of confusion between all modes and intersectior shared-use path |
| がか          | University Avenue<br>and N. Charter<br>Street   | Skewed intersection with difficult crossings<br>for pedestrians and bicyclists<br>Modal conflicts, transit delay   |
| " 大か        | University Bay Drive<br>and Campus Drive<br>Path  | Bicyclists crossing this intersection come<br>into conflict with buses, emergency hospital<br>vehicles, and high vehicle volumes   |
| 次合          | University Avenue<br>and N. Randall<br>Avenue   | No pedestrian crosswalk at the west leg of the intersection Long crossing with high motor vehicle traffic speeds and volumes   |
| KK          | in front of Chazen<br>Museum  | Intercity buses park in its analyse of the forcing Metro Transit buses to use the westbound bike lane to pass  |
| 水の          | Lakeshore Path<br>at the Limnology<br>Building  | Lakeshore Path ends and users must use<br>the narrow sidewalk next to the Limnology<br>Building or travel through the building's<br>parking lot to access N. Park Street   |

### Project Need



### **Project Need**







Blind corner and dumpsters at Water Science Building

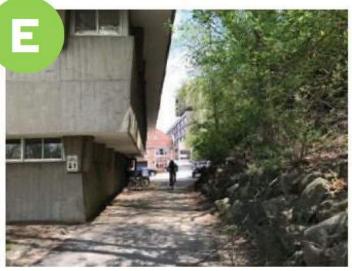


Boat access on north side of Limnology Building

### **Project Need**



Primary bike/bike conflict point



Pinch point south of Limnology (looking east)

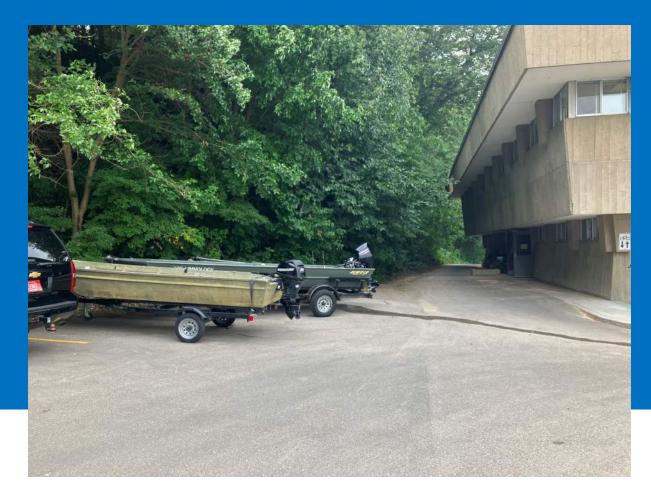


Loading zone conflict south of Limnology (looking west)

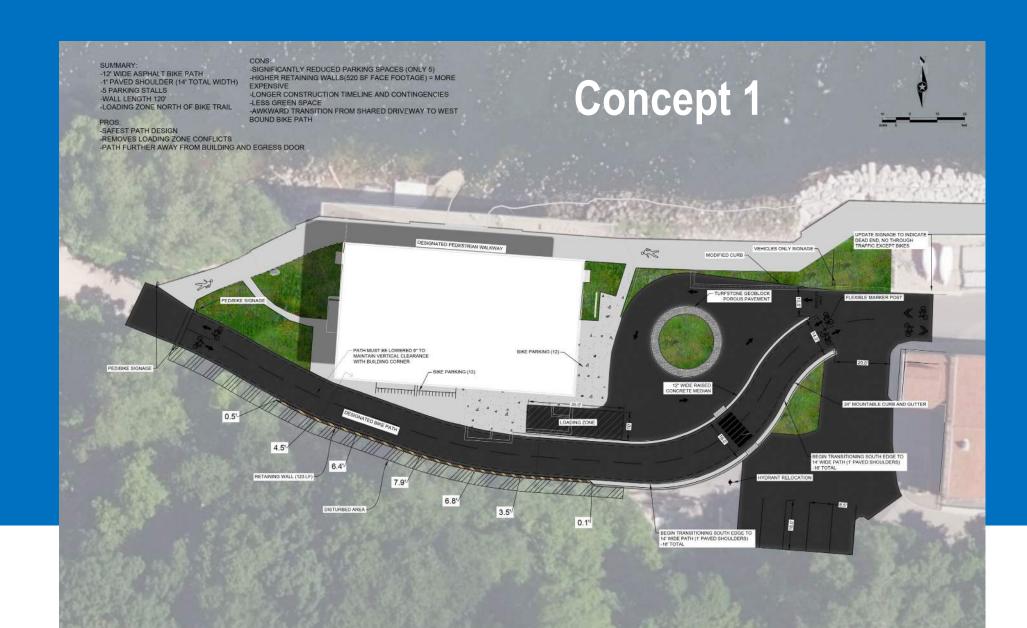
# Two Bypass Concepts Developed

### Concept 1 & Concept 2

- Conceptual/planning level detail only
- Primary difference is treatment of parking lot
- Both Concepts 1 & 2 retain pedestrian-only access on northside of Limnology
- There are not significant differences in overall costs between the two concepts



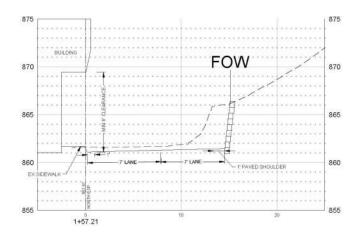


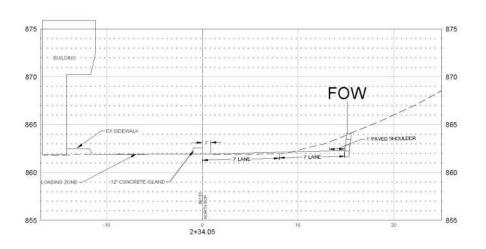




# Concept 1

Date





**UW-PATH** 

MADISON, WI

CONCEPT 1 -

**CROSS SECTIONS** 







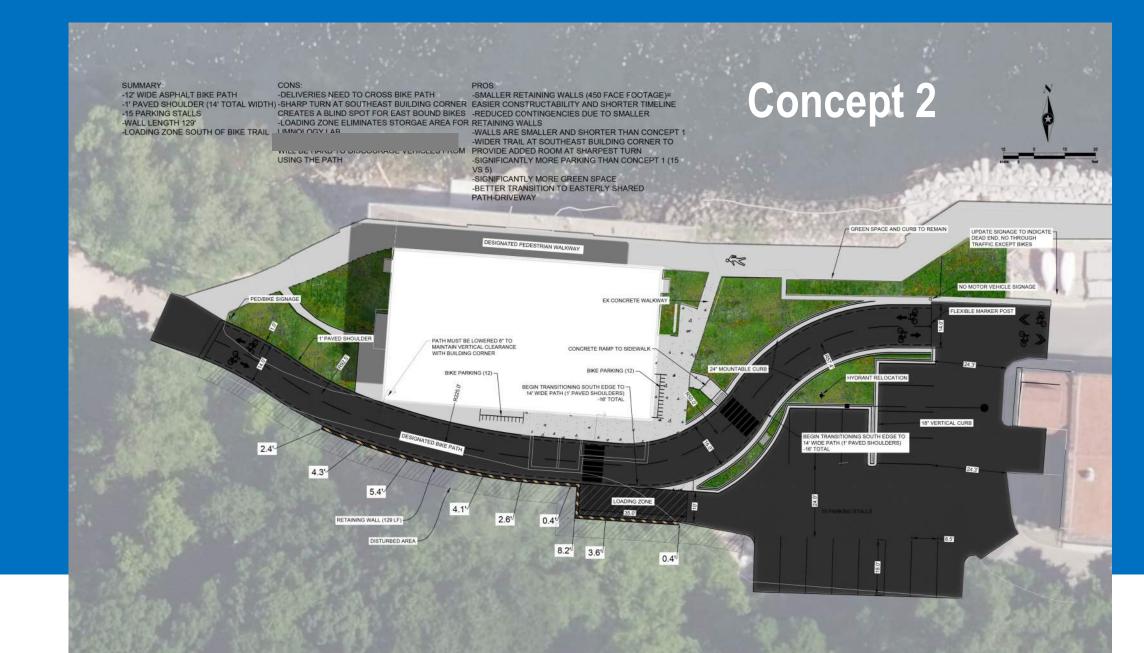
# **Concept 1**

### **SUMMARY:**

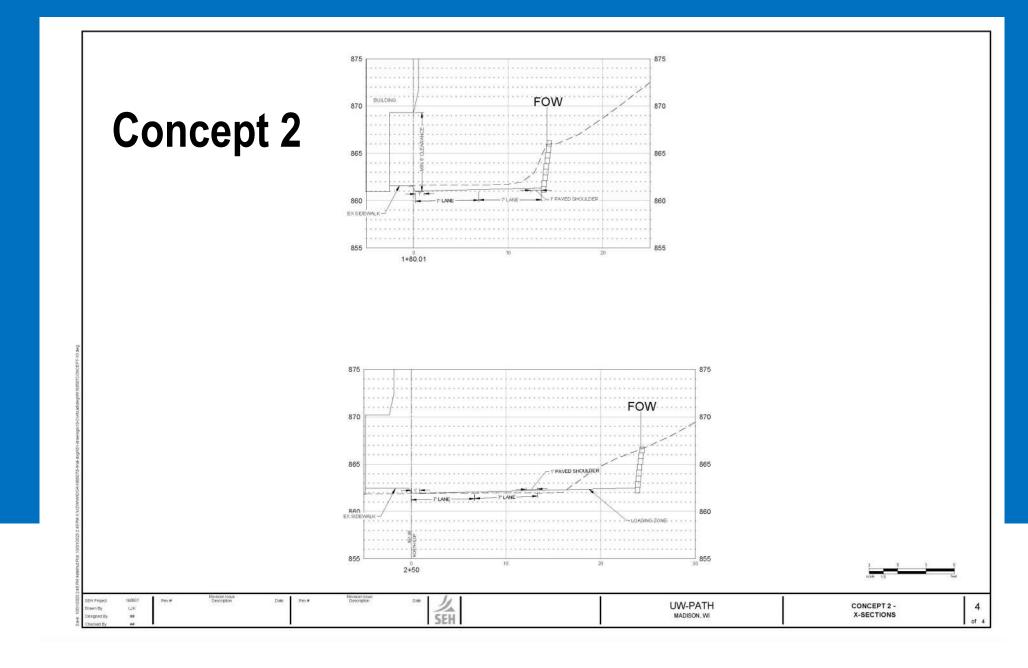
- -12' wide asphalt bike path
- -1' paved shoulder (14' total width)
- -5 parking stalls
- -Wall length ~170'
- -Loading zone north of bike trail

















# Concept 2

### **SUMMARY:**

- -12' wide asphalt bike path
- -1' paved shoulder (14' total width)
- -15 parking stalls
- -Wall length ~180'
- -Loading zone south of bike trail







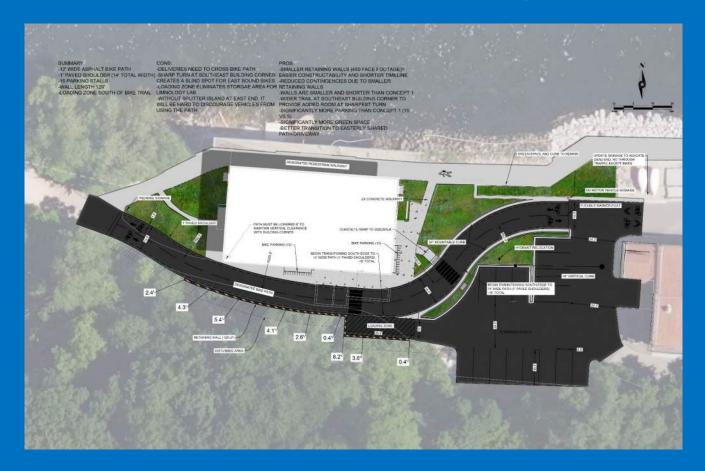




**Concept 2** 



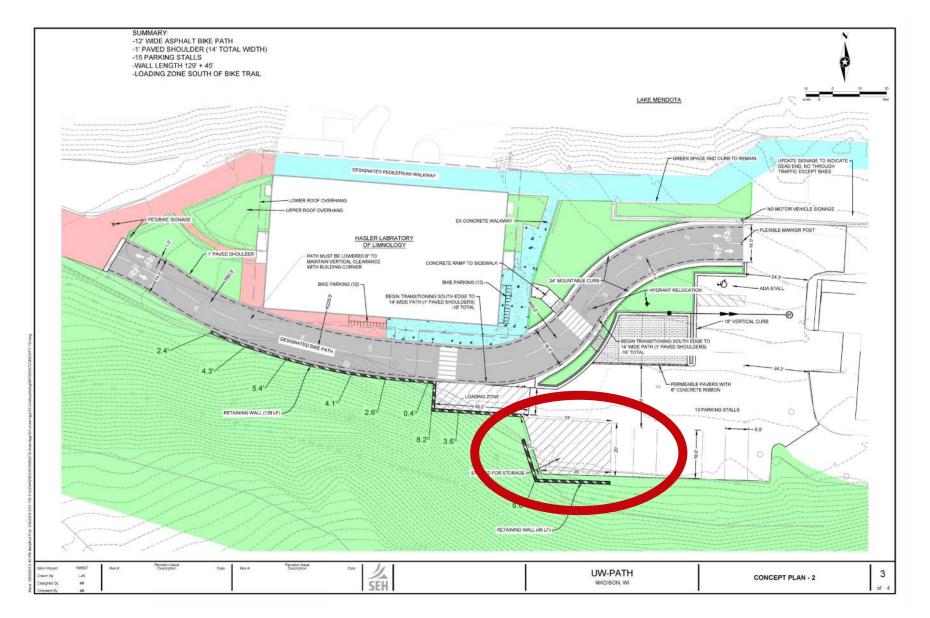
# **Concept 2 Selected By Stakeholders**







# Project Variation – Retaining Wall Extension



### **Proposed Retaining Wall**

- Prefabricated Modular Block Retaining Wall
  - Most economical
  - Several options for block texture
  - Allows use of smaller equipment
  - Does not impact existing water pipe
  - Reduced vibration and disturbance



# Retaining Wall Block Texture



Ledgestone



Cobblestone

### Retaining Wall Block Texture



Limestone



Kingstone

### Retaining Wall Block Texture



**LeSueur County Limestone** 



**Weathered Edge** 



**Old World** 



**Northshore Granite** 



Rustic

https://reconwalls.com/block-texture/

#### **Estimated Costs**

- Construction \$1,200,000
- Contingency (15%) \$180,000
- A/E Fees \$330,000
- DFD Fees \$55,200
- Total \$1,765,200

### Project Timeline & Milestones

- DRB Meeting #1 February 2024
- JCAC #1 February 2024
- 35% Submittal April 2024
- Board of Regents April 2024
- JCAC #2 April 2024
- DRB Meeting #2 May 2024
- SBC May 2024
- 90% Final Review May 2024
- Bid Opening July 2024
- Construction September 2024 January 2025







## Design Review Board Meeting #1

Lakeshore Path Pedestrian and Bicycle Limnology Bypass Route (#22A2N)
February 20, 2024



### 23B2J UW Madison Solar PV Canopy Advanced Plan Lot 67 – Linden Drive Parking Ramp

PHASE 2:

DESIGN REVIEW BOARD MEETING 02/20/2024









11/10/2023

#### Project Goals, Scope, and Schedule

- Goal: Determine the Feasibility of Adding PV Panels over the Parking Structure of Lot 67
- Phase 1
  - Evaluate Technical Feasibility
  - Develop Schematic Design
- Phase 2
  - Perform financial analysis
    - Include solar and solar + battery storage scenario
    - Identify incentives
    - Investigate alternative ownership arrangements

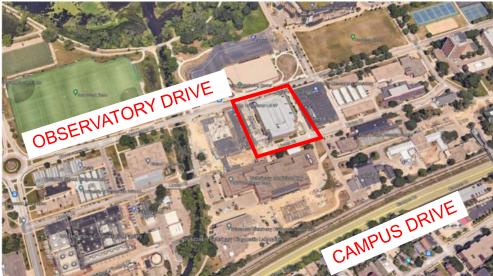
#### Schedule

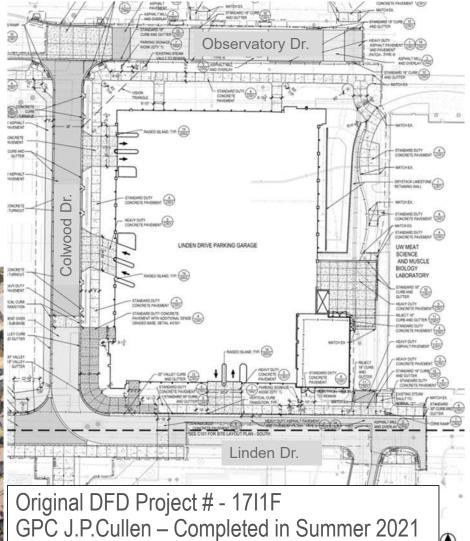
- Begin Summer 2023
- Phase 1 Presentation: 12/5/2023
- Phase 2 Presentation: Feb 2024
- DRB Meeting February 20, 2024
- Report Issuance March 2024

#### Location and Site Plan

Near West Campus Neighborhood







### Lot 67 Parking Structure

#### Parking Summary

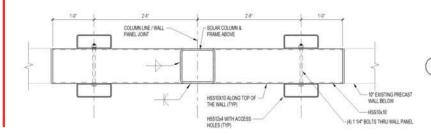
- Precast Structure with Shallow Foundations
- 604 Spaces Original and with PV System
- Overhead Clearance is Maintained

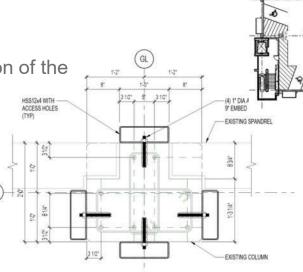
#### **PV** Support

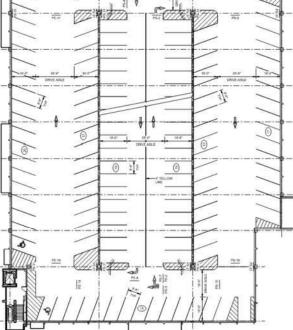
- Precast Structure with Shallow Foundations
- 604 Spaces Original and with PV System
- Existing Precast and Foundations have the Capacity to support the Proposed PV System

#### **PV Frame Connections**

 Largest Structural Challenge is the connection of the proposed frame to the existing Structure.







## Drone View over Rec. Center & Observatory Dr.



#### Drone View Vet Med & Linden Dr.



## Ground View across Observatory Drive



# Rendering from the Parking Deck



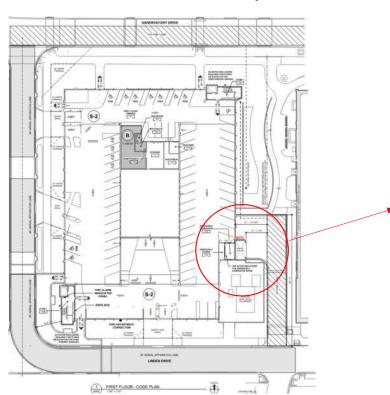
# Solar PV System Details



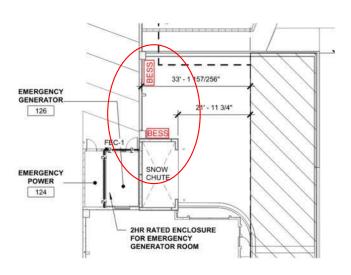
| Description              | Details               |
|--------------------------|-----------------------|
| System Size (kW)         | 456 kW-dc / 400 kW-ac |
| Estimated Cost (\$/W-dc) | \$4.75/W-dc           |
| Cost (pre-incentive)     | \$2,200,000           |
| Cost (after incentives)  | \$1,500,000           |
| Panel Wattage & Quantity | 480W / 960 Panels     |

### **Energy Storage Feasibility**

- Currently Evaluating Inclusion of small Battery Energy Storage System (BESS)
  - Not required for grid tied solar
  - o Appx. 125 kW, 220 kwh
  - Lithium Ion Chemistry



#### Potential BESS Locations-TBD



#### Project Financial, Incentives and Grants

- Financial analysis performed as part of final deliverable
  - Solar and solar+storage scenarios included
- Incentives
  - o 30% IRA Federal Incentive
  - Focus on Energy, appx 2% of system cost or \$45k
- Grants
  - Potential grant funding including PSC Office of Energy Innovation, up to \$250-\$500k
- Alternative ownership options to be summarized
  - Third party, for-profit
  - o Third party, non-profit or cooperative
  - Utility ownership

#### **Electrical Interconnection Review**



© 2018 HGA

### Future Design Items to Consider

- Drainage Sheet flow onto the deck
  - Option for Gutters
- Snow Option 1
  - Recommend retention onto the panel
  - Prevents large sheets of snow dropping onto the deck
- Snow Option 2
  - · Seal off gaps
  - Provide gutters and downspouts
  - Optional Heat Trace in gutters.





### Phase 2 Next Steps

- Budgetary pricing
- Construction / Erection
- Perform financial analysis
  - Include solar and solar + battery scenario
  - Identify incentives
  - Investigate alternative ownership arrangements
  - Battery feasibility
  - Sample submittal information
  - Final presentation Mid January
  - Final report Early February







### Questions?





HGA

