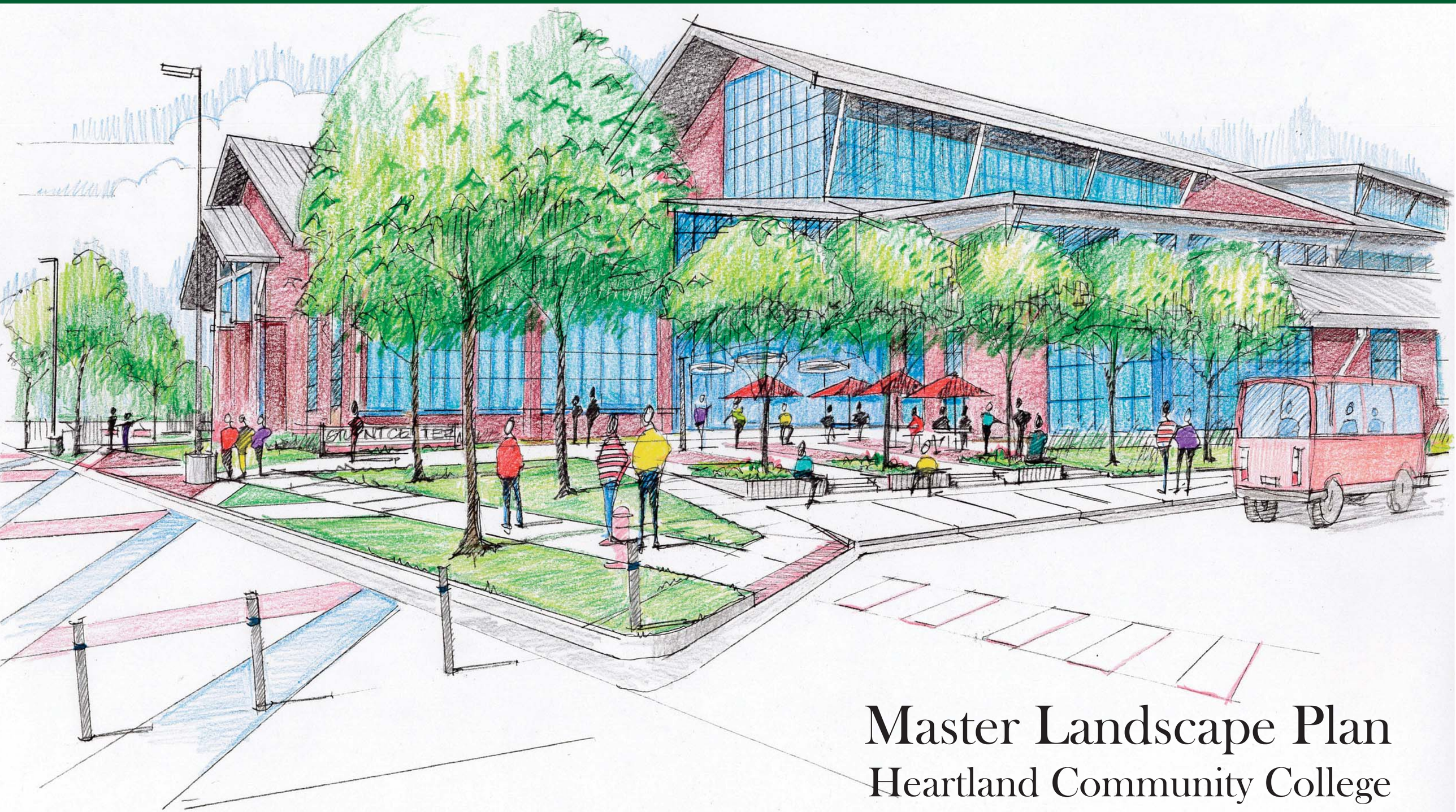

Master Landscape Plan

Heartland Community College

September 2022

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Springfield, IL 62703
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Overview

Introduction

The Heartland College Campus is located on the north side of Normal, IL just south of Interstate 55. The campus is situated with residential and commercial uses to the east and south. The 2021-22 student enrollment population was 4,697 drawn from its broad service region that includes the Normal, Lincoln, and Pontiac greater communities.

Campus development began in the 1990s. The campus now has a new Agriculture Complex under construction and plans underway for additions and renovations to several existing buildings.

To gain an understanding of existing and anticipated future improvements, the planning team reviewed available documents and plans including the 2020 Facilities Master Plan. That plan includes a site design section with well-considered recommendations. MMA staff toured the area with faculty and facilities maintenance staff who identified concerns and shared thoughts about the future of the campus. With this information in mind, the team began an eight-month collaboration with the Heartland College Landscape Steering Committee to develop this Landscape Master Plan for Heartland College. The process involved phases: analysis and overall approach, concept planning, and project plans.

The Heartland Landscape Steering Committee (Steering Committee) was involved throughout the process, providing information and ideas, reviewing plans during their development, and reaching recommendations documented in this report.

Site Conditions and Overall Objectives

To understand the campus site, the overall campus lay out and the site improvements currently existing were recorded. Conditions of the site and particular problem areas were noted. College faculty and facilities maintenance staff provided site tours, offering observations from their experience at the college. Their input was very helpful. The land use and improvements of the area surrounding the campus were also noted with respect to the potential for connections to streets and trails and enhancement of views and visual screening. Plans for a new Agriculture Complex and renovation of other buildings were reviewed and incorporated in the overall analysis of the campus.

Discussions with the Steering Committee led to their adoption of five overall objectives for campus landscape improvements.

1. Emphasize safety and security.
2. Create a vibrant and attractive campus aesthetic.
3. Enhance outdoor spaces for student and staff enjoyment.
4. Improve vehicular and pedestrian circulation.
5. Minimize campus maintenance.

These objectives align with Heartland's Strategic Plan Goals of increasing student and faculty satisfaction and success. (Following are excerpts from the 2020 *Facilities Master Plan.)*

PROMOTE STUDENT SUCCESS • Increase percentage of students progressing toward and completing their educational and career goals • Improve student satisfaction • Increase student achievement of the College's Essential Competencies

ENSURE RESOURCE STEWARDSHIP • Improve employee satisfaction • Maintain or increase the College's financial health • Maintain or increase value of the College's physical assets

Concept Planning Objectives

- Develop a distinguished campus image using unified components that tie the campus together.
- Feature Millennium Boulevard as the primary visitor entry to the college.
- Design a wayfinding and signage plan providing directions to campus facilities and contributing to the unified campus image.
- Develop a primary pedestrian route through campus and connect secondary walkways to reach all facilities on campus.
- Connect campus trails and walkways to Constitution Trail providing for pedestrian and bicycle commuters and access to campus by trail users.
- Provide outdoor facilities for students and faculty to encourage socializing and outdoor activities, events, and learning.
- Improve environmental quality, sustainability, and opportunities for environmental study.
- Solve problems that have been identified.
  - Areas around building entrances are hard to maintain.
  - Edges along sidewalks and roadways hold storm water runoff.
  - Certain pavement and ground areas drain poorly.
  - Soil conditions retard plant growth.
  - Some trees are not suited to their conditions, others have outgrown their locations.
  - Mowers are damaging trees.

Heartland Project Plans

Project plans were developed to address the opportunities and concerns outlined during concept planning. Each project incorporates the initial objectives of safety and security, creating a vibrant and attractive campus aesthetic, enhancing outdoor spaces for student and staff enjoyment, improve vehicular and pedestrian circulation, and minimizing campus maintenance.

Maintenance Projects

Maintenance projects are those focused on solving particular problems. These projects are reasonably low cost. They could be completed in a relatively short time or they could be completed incrementally over a longer time period. Some or all of these projects might be completed by maintenance staff.

Ten Maintenance Projects are identified.

1. **Prune trees.**
2. **Improve drainage.**
3. **Regrade sidewalk edges.**
4. **Replace gravel edges with precast concrete borders.**
5. **Replace birch trees with shade trees.**
6. **Replace tinted concrete at SCB with trees and plant beds.**
7. **Replace ornamental trees with shade trees.**
8. **Provide for recycling at dumpsters.**
9. **Stripe parking lots.**
10. **Screen utilities and dumpsters.**

Enhancement Projects

Enhancement projects are those that involve a larger area of campus or require specialized equipment and operations. The costs are much more than maintenance projects and the time required for completion is greater. As such, these projects are subject to available funds and campus priorities.

Ten Enhancement Projects are identified.

1. **Millennium Boulevard**: *Enhance this main entrance to the college with elements that are both functional and aesthetic creating a distinctive character that will be carried throughout Heartland's campus.*

2. **Pedestrian Spine**: *Define a primary walkway through the center of campus connecting primary facilities.*

3. **Student Use Area**: *Develop a central area along the pedestrian spine for multiple uses by students and faculty.*

4. **Wayfinding and Signs**: *Devise a system of wayfinding signs to direct motorists and pedestrians to facilities on campus and a corresponding design for building name signs.*

5. **Building Entry Plazas and Terraces**: *Develop attractive, welcoming entrances to buildings, highlighting entrance locations and providing social space for students and faculty.*

6. **Outdoor Commons**: *Create park-like areas on campus, providing for casual activities and forming more sustainable and attractive environments.*

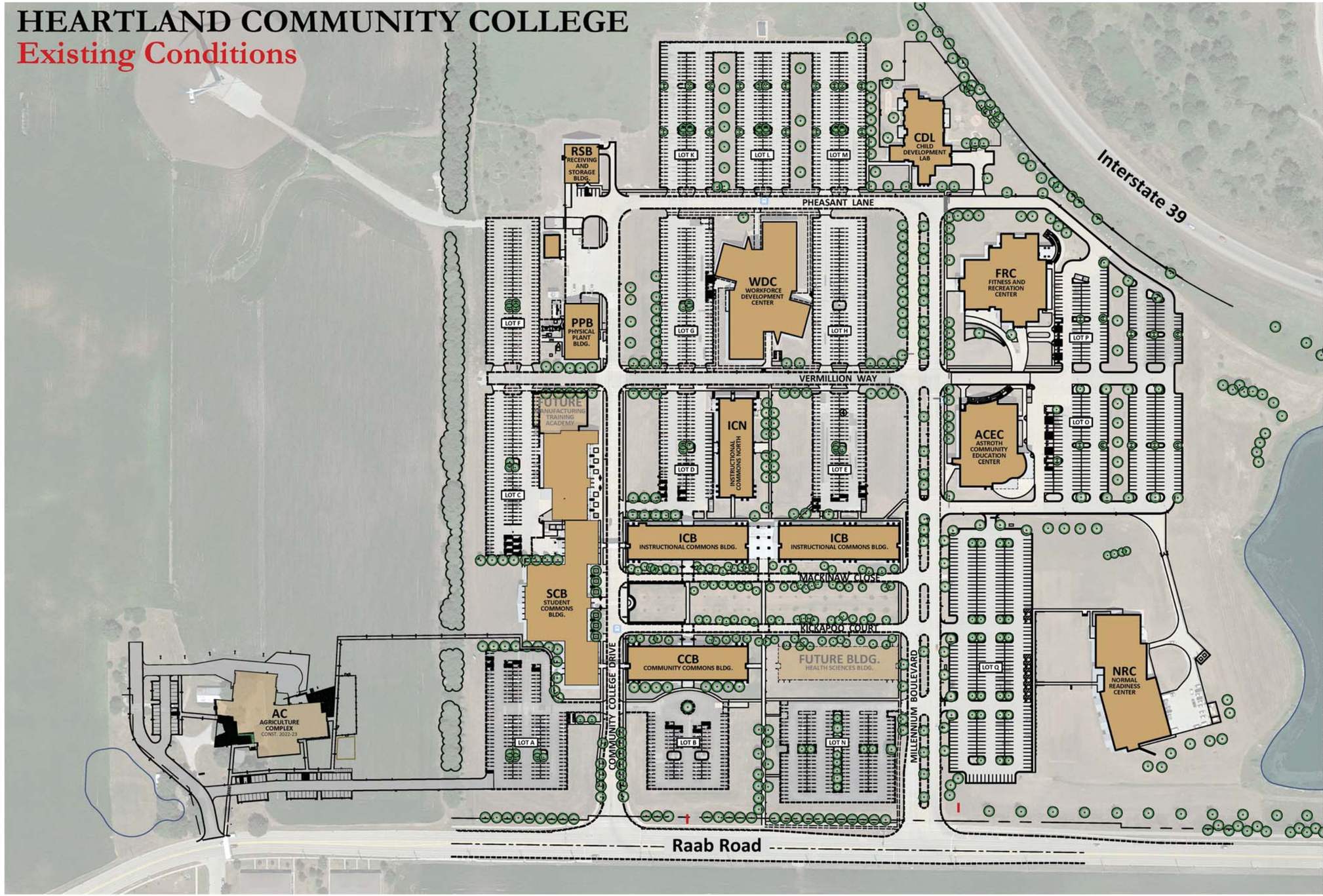
7. **Entry Enhancements**: *Enhance entrance areas that are difficult to maintain by installing stabilizing materials, attractive plantings, etc. as needed.*

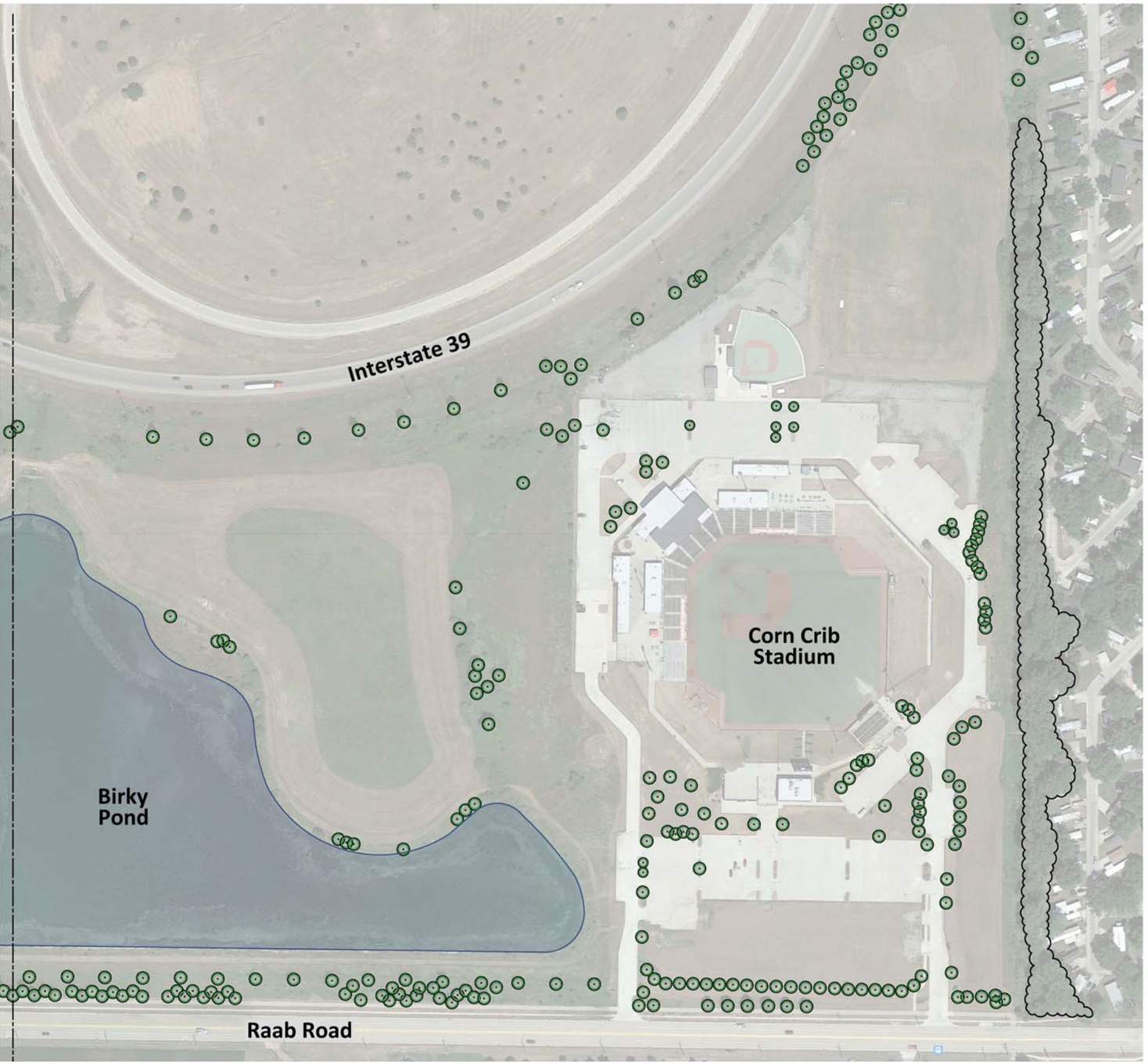
8. **Sidewalk Connections**: *Provide connections from the pedestrian spine to other facilities on campus.*

9. **Constitution Trail Connections**: *Connect the campus sidewalk system with Constitution Trail to encourage bicycle commuting and community interaction with the campus.*

10. **Sculpture and Site Elements**: *Use outdoor art and other features to highlight special areas of campus.*

Site Conditions





LEGEND

CCB Community Commons Building

SCB Student Commons Building

ICB Instructional Commons Building

ICN Instructional Commons North

PPB Physical Plant Building

RSB Receiving and Storage Building

WDC Workforce Development Center

CDL Child Development Lab

FRC Fitness and Recreation Center

ACEC Astroth Community Education Center

NRC Normal Readiness Center

AC Future Agriculture Complex

HSB Future Health Sciences Building

The Corn Crib Stadium

N

Graphic Scale

0' 200' 400'

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Site Conditions

Looking north from Raab Road on Millennium Boulevard

Looking east from Student Commons at Quad

Looking north to the CCB

Looking west to the Quad

Looking east to the Readiness Center

Looking east to the Pond behind the Readiness Center

Looking beyond the Pond to the Corn Crib

Looking northwest to the Fitness and Recreation Center

Looking northwest at the ACEC and Windmill

Looking west to the Quad from the Readiness Center

Site Conditions

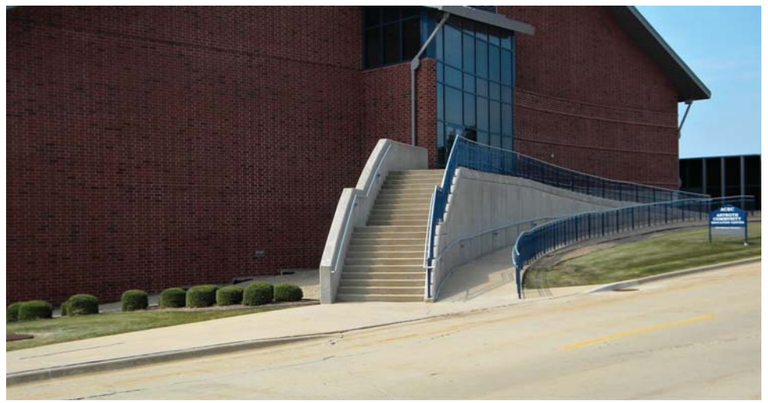
Millennium Boulevard looking south to Raab Road

Looking north along sidewalk

Looking north at SCB

Monument sign on Raab Road

Looking north at parking with FRC and Fitness/Recreation area



North Entrance to CEC

Looking north between ICB buildings

Looking north at CEC

Looking west at crosswalk between ICN and WDC

South entrance to FRC

Conditions along sidewalks

Drain inlet, mowing obstruction

Typical condition at building entrances

Parking lot north of Corn Crib Stadium

Open space south of Corn Crib Sta-

East Side of Corn Crib Stadium

Exposed utility equipment

Irregular pavement color

The Primary Entrance to Campus: Millennium Boulevard

From Raab Road, both Millennium Boulevard and Community College Drive provide access to the college. Once the Agriculture Center is built farther west another entrance from Raab Road will be constructed. Visitors need to recognize Millennium Boulevard as the primary entrance to the college.

To highlight that entrance, large-scale plant beds on each side of the boulevard will add significance at this location. Improvements along Millennium Boulevard will add interest and set a theme for the entire campus. Elegant light fixtures, banners and trees will run along the center median with dramatic bands of low shrubs or tall grass between. Trees and bands will run along the sides of the boulevard to screen parking lots where they exist. Pedestrian crossings will be highlighted with contrasting pavement and well-marked for safety. Custom-designed wayfinding signs will be positioned along the boulevard, contributing to a distinctive and appealing primary entrance to the college.

Building Entry Plazas and Terraces

Improvements at the existing entryways into campus buildings can create distinguished, recognizable building entrances and provide inviting social space for students and faculty. Paved plaza entrances would provide areas for students to rendezvous with friends before and after class. Outdoor benches and planters could be added for comfort and appeal. Nearby, trees and in-ground plants could be incorporated for shade and visual interest.

Directions and Names: Wayfinding and Signs

Wayfinding signs, both large and small, and facility name signs should be designed as complementary pieces. Large wayfinding signs will direct motorists, while smaller profile wayfinding signs will be used for pedestrians and bicyclists. Name signs will be provided for buildings and other campus facilities. Signs will help people find their way and will also be an attractive visual element tying the campus together.

Outdoor areas for Students and Faculty: Student Use Area

A central area on campus can be designated as a multi-purpose area for students and staff. Here, individuals or groups could spend time studying, socializing, or playing informal games and activities. Special events could be held here. Having such a facility would encourage students and faculty to stay longer on campus getting to know one another and enjoy their college experience.

Environmental Sustainability: Tree Groves in Campus Commons

Several large areas of campus are vacant and turf covered. Two of these areas are north of the Instructional Commons Building and south of Vermilion Way. Here, a naturalistic planting primarily of shade trees will create a pleasant environment for walking, picnicking, and informal games. Picnic tables could be scattered about. Other perimeter areas can be treated much the same way. Groves of trees will absorb harmful CO2, moderate ground temperatures, and stabilize the area. Tree planting can transform what is now raw land into an attractive amenity unifying the campus.

Highlighting Special Locations: Sculpture and Site Features

Sculpture and other site features can create especially strong focal points in the landscape. At Heartland, a large scale sculpture could be used terminate the campus quadrangle and separate it from Millennium Boulevard. Other recommended locations are the termini of views along roadways and walkways. It is advisable for institutions to establish guidelines and perhaps recommendations for sculpture to be used on campus. Fountains, flags and banners, and trees and planting beds are also effective focal features.

Buildings Welcoming to Students: Building Entry Enhancements

Entrances to the other buildings can be enhanced by expanding the paved area somewhat, adding a few benches and other site amenities. Trees can be used for shade and other plants for visual interest. If the entrance is used after dark, campus-style light fixtures could add character. Bicycle access and parking may be needed, especially as the campus interconnects with local and regional bikeways.

Pedestrian and Bicycle Circulation: Sidewalks, Trails and Nature Study

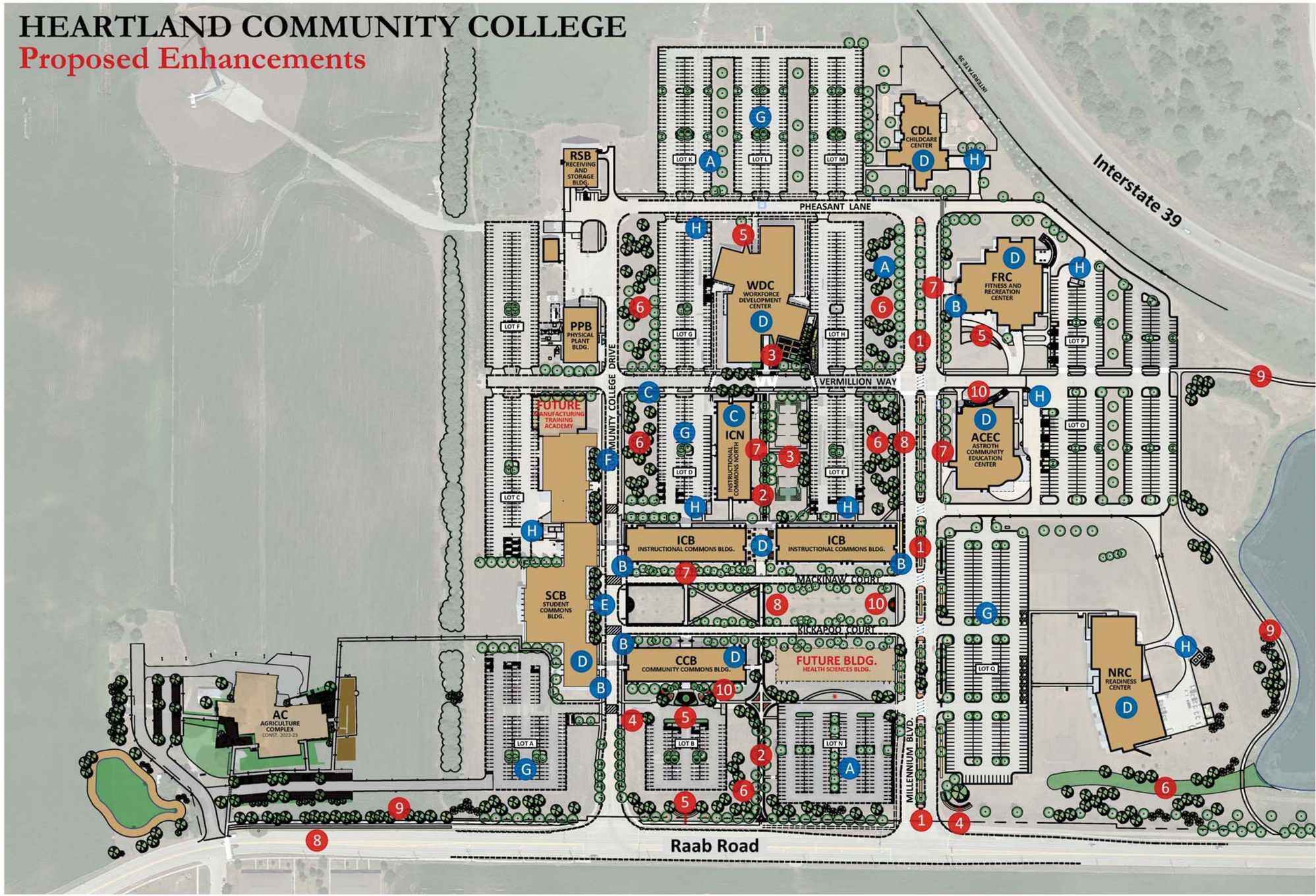
Facilities and areas of Heartland campus can be linked together to form convenient access attractive for walking and bicycling. A major spine can be created from Raab Road, north along the east edge of the Community Commons Building (CCB), between the Instructional Commons Buildings (ICB), past the proposed outdoor Student Use Area to the Workforce Development Center. Diagonal sidewalks would be provided through the Widmer Quad allowing convenient connections between the heavily used CCB and ICB.

From this spine secondary walkways and bikeways will extend to additional buildings and campus facilities. In some cases, sidewalk segments already exist that can be used to make the connections. From the campus core a trail will extend to and along Birky Pond where the focus will be nature and connect into Constitution Trail for outreach to the community. It could be used as an outdoor science lab. Intermittent benches could be placed along the route along with trail maps and mile markers. A facility on campus could be identified as a trail head with access to drinking water and toilets to be available at prescribed times. The trail may be used by pedestrian and bicycle riders commuting to campus and by community trail riders exploring the campus.

Enhancement Projects

Enhancement Projects

1. Millennium Boulevard
2. Pedestrian Spine
3. Outdoor Use Area
4. Wayfinding and Signs
5. Building Entry Plazas and Terraces
6. Outdoor Commons
7. Building Entry Enhancements
8. Sidewalk Connections
9. Constitution Trail Connections
10. Sculpture and Site Features



Maintenance Projects

- A Prune Trees
- B Improve Drainage
- C Re-grade Sidewalk Edges
- D Replace Gravel Edges with Precast Conc. Borders
- E Replace Birch Trees with Shade Trees
- F Replace Tinted Concrete with Trees and Plant Beds
- G Replace Ornamental Trees with Shade Trees
- H Provide for Recycling at Dumpsters
- I Stripe Parking Lots
- J Screen Utilities and Dumpsters

N

Graphic Scale

0' 200' 400'

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Millennium Boulevard

Enhance the boulevard as the primary entrance to the college.

Use streetscape elements to develop an overall campus identity that reflects the character of the college.

Utilize elements that can also be used in other areas of the campus to further develop campus identity and unify campus.

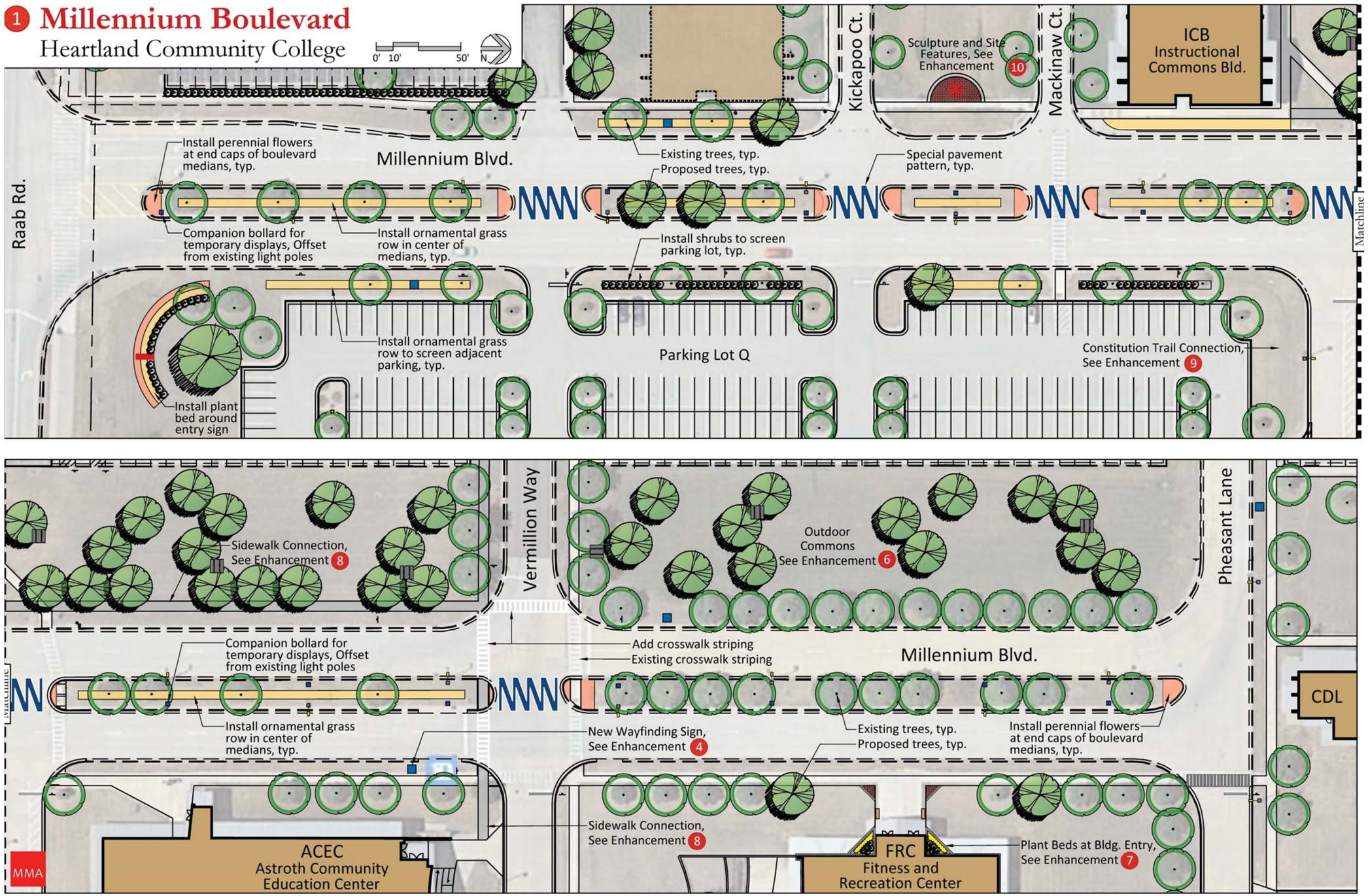
Streetscape elements to be used:

- Wayfinding signs
- Street lights
- Bollards (custom, pre-cast) designed to accept poles holding flags or banners
- Special pavement at intersections and cross-walks
- Street trees to fill gaps
- Screening of parking lots with rows of tall grass or shrubs
- Plant beds at ends of center medians for visual interest and maintenance reduction
- Ornamental grass along center of median for visual interest and snow collection

1 Millennium Boulevard

Heartland Community College

0' 10' 50' N



Enhancement Project 2

Pedestrian Spine

Develop a north-south pedestrian route connecting core campus buildings

Spine will extend along the Widmer Quad and proposed new Outdoor Use Area

Spine will intersect with several secondary walkways that can be completed.
See Project #8.

Spine will connect to Constitution Trail.
See Project #9.

Elements of the Pedestrian Spine

- Walkway widened to 16’ with brick edges providing drainage control
- Wayfinding signs and building name signs
- Benches
- Pedestrian light fixtures replacing existing bollards
- Trees and other plant material
- Sculpture
- Outdoor classrooms, site furnishings, and light rings in covered area between ICB buildings.

2 Pedestrian Spine

Heartland Community College

Enhancement Project 3

Student Use Area

Create a vibrant area for outdoor activities and social interaction.

The outdoor Student Use Area will provide an opportunity for students and faculty to stay longer at the college and enjoy campus life.

Elements in the Student Use Area south of Vermillion Way

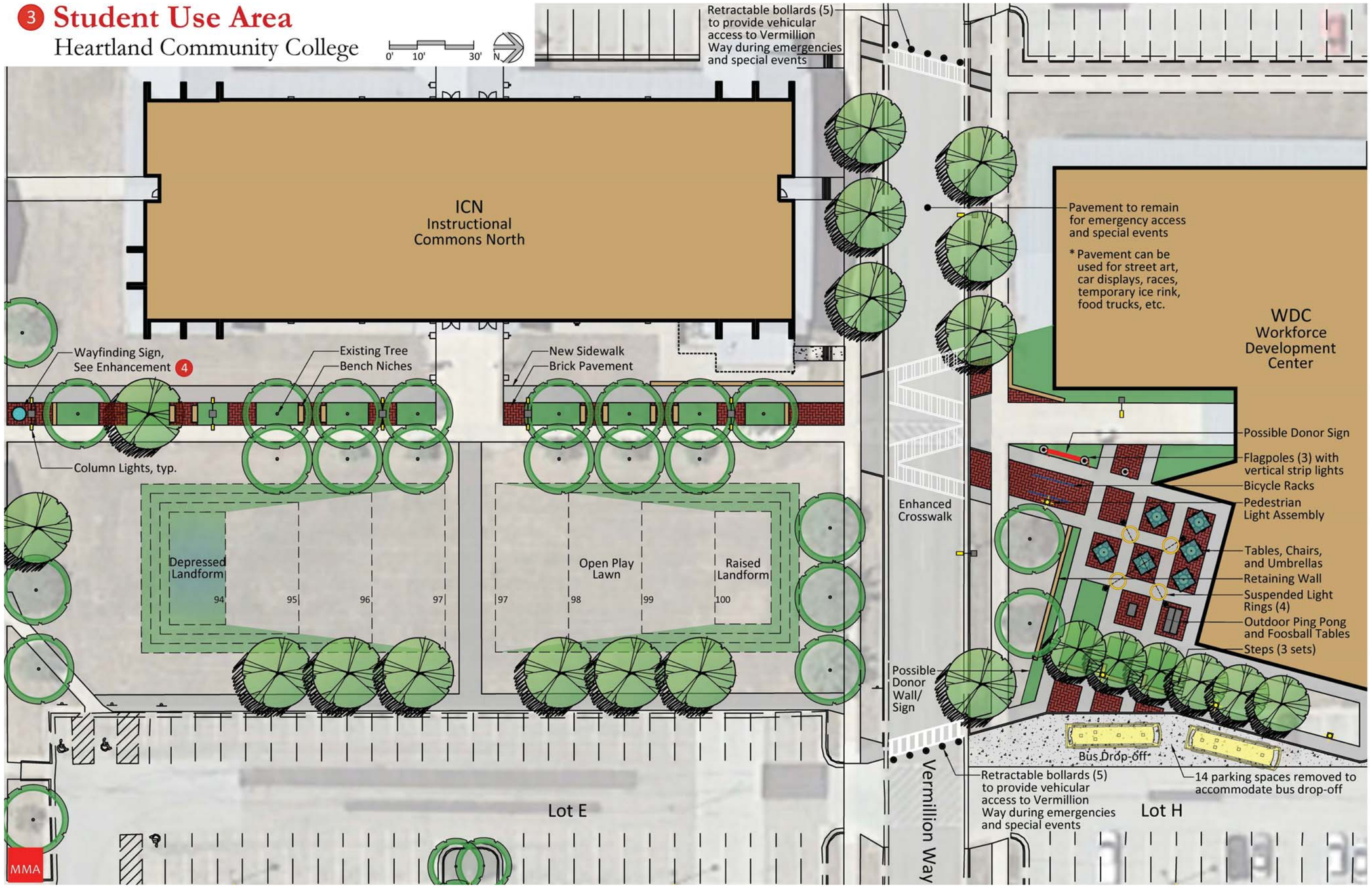
- Site grading to create subtle landforms
- Turf development
- Brick Sidewalk
- Bench niches
- Light fixtures
- Shade trees
- Improve Vermillion Way crosswalks between the Workforce Development Center and Instructional Commons North

Elements in the Student Use Area north of Vermillion Way

- Plaza with tables, chairs, umbrellas, ping pong and foozball tables, etc.
- Suspended specialty light rings
- Bus stop
- Improved entrance to the Workforce Development Center
- Bicycle racks, donor sign/name sign
- Sitting walls and steps

3 Student Use Area

Heartland Community College



Wayfinding and Signs

Implement a comprehensive wayfinding and sign system that is used throughout the campus. Signs will be a unifying campus element and will contribute to the overall appearance and image of the college.

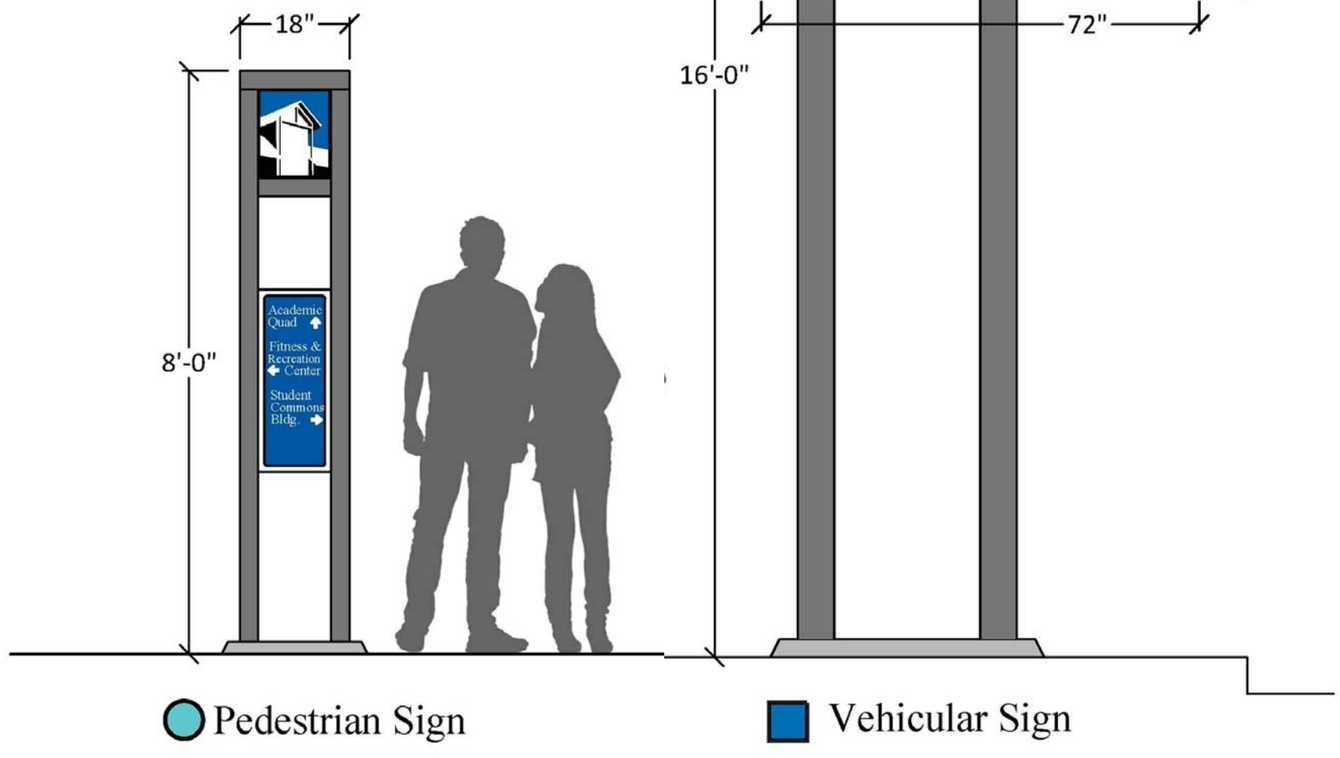
The system should include wayfinding signs at the entrances to campus, along campus streets and driveways, and along walkways and bikeways within the campus.

The system should include standard ways of naming the buildings and outdoor areas such as the student use area including the size, color, font, and placement.

Signs must have good contrast in colors and font styles that are easy to read.

Considerations in the Wayfinding and Sign design

- Signs for motorists must be high enough off the ground for motorists to have a clear view. Images and text must be large enough to be seen from the viewing distance.
- Signs for pedestrians and bicyclers should have the sign text near or close to eye level.
- Safety must be considered in the design and placement of signs.



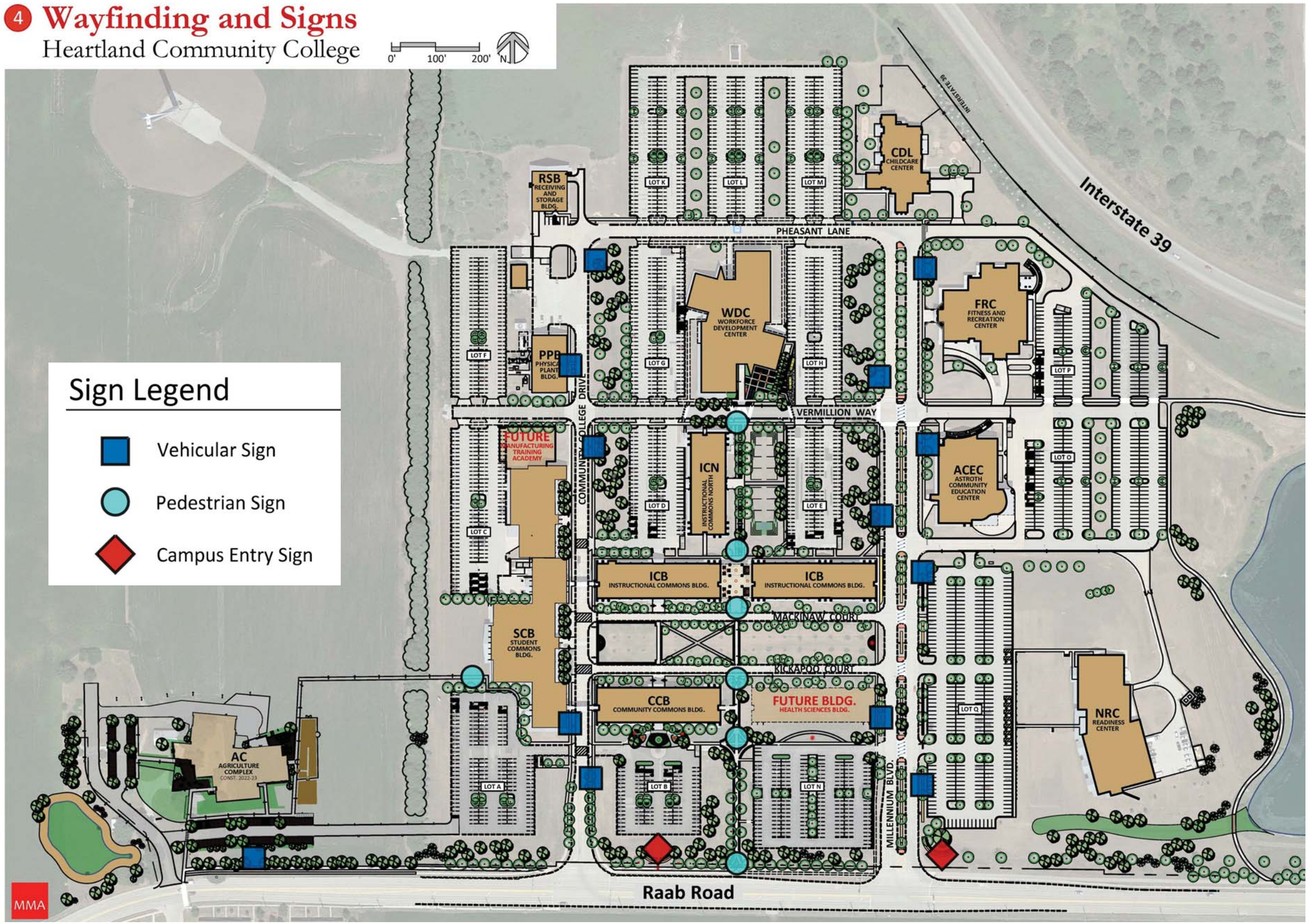
Campus Entrance Sign

Pedestrian Sign

Vehicular Sign

4 Wayfinding and Signs

Heartland Community College



Building Entry Plazas and Terraces

Improvements at the existing entryways into campus buildings can add vitality to the campus and create attractive social areas for students. Providing surfaced areas outside the building entrances with outdoor furnishings and plants will call attention to the entrances, making it clear where students and faculty are to enter. Entrance plazas would have a paved surface, one compatible with materials used in nearby buildings, yet distinctive. Outdoor benches and planters could be positioned on the pavement, adding warmth and hospitality. Nearby, ornamental trees with broad canopies and in-ground plants provide shade and color.

Each entrance plaza should have similar characteristics, however, each should be designed to fit the particular site. Some entrances now have irregular spaces that have poor drainage and are difficult to maintain. These can be eliminated by site-specific design of the entrance terraces.

Two entrance areas shown below are already well along in design and development.

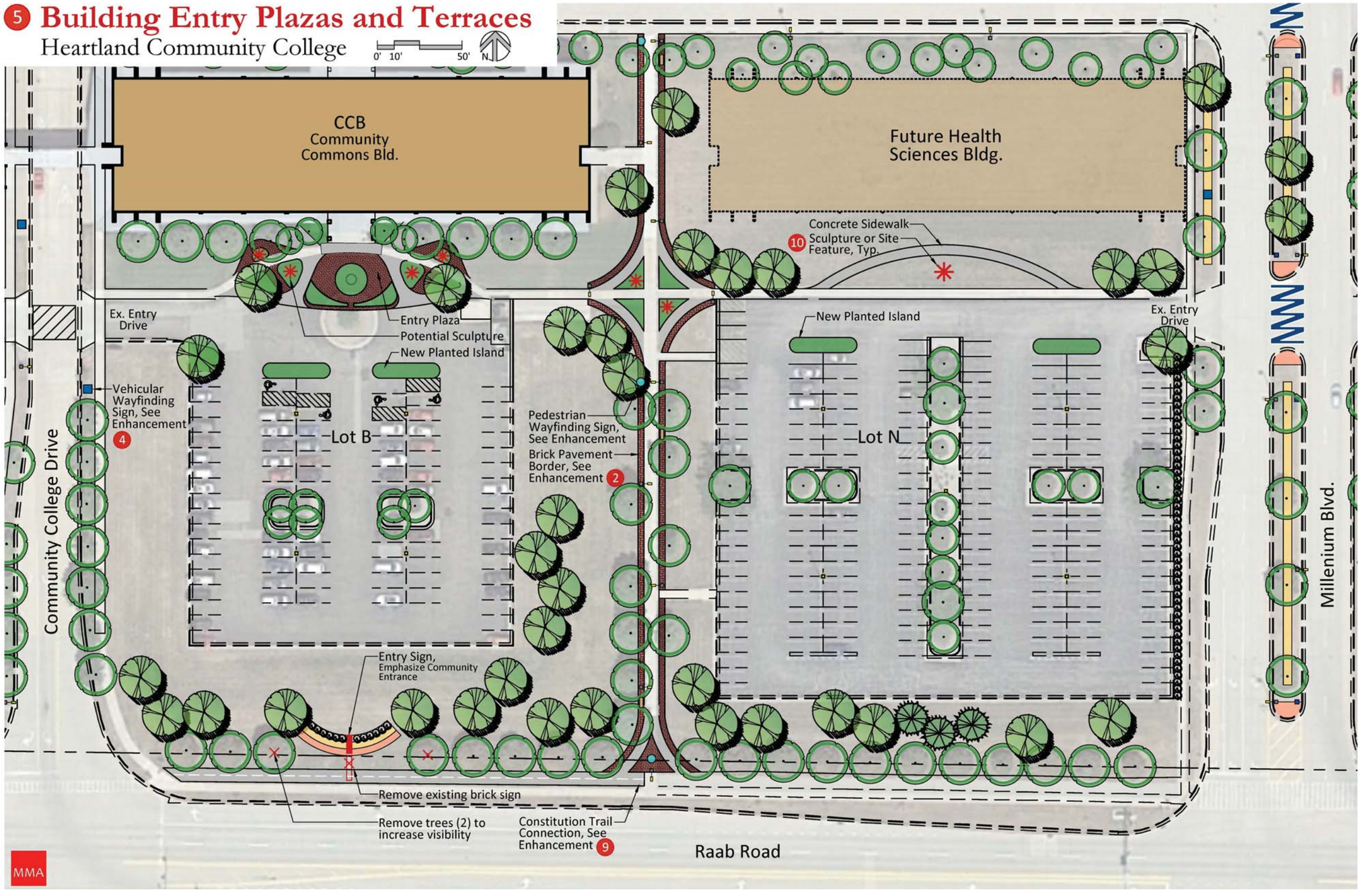
Design and rendering by BLDD Architects

Design and rendering by Demonica Kemper Architects

5 Building Entry Plazas and Terraces

Heartland Community College

0' 10' 50' N



Outdoor Commons

Develop an outdoor commons in the large area north of the Instructional Commons Building and south of Vermilion Way.

A naturalistic planting of primarily shade trees will create a pleasant environment for walking, picnicking, and informal games. Picnic tables would be scattered about.

The grove of trees will absorb harmful CO2, moderate ground temperatures, and stabilize the area.

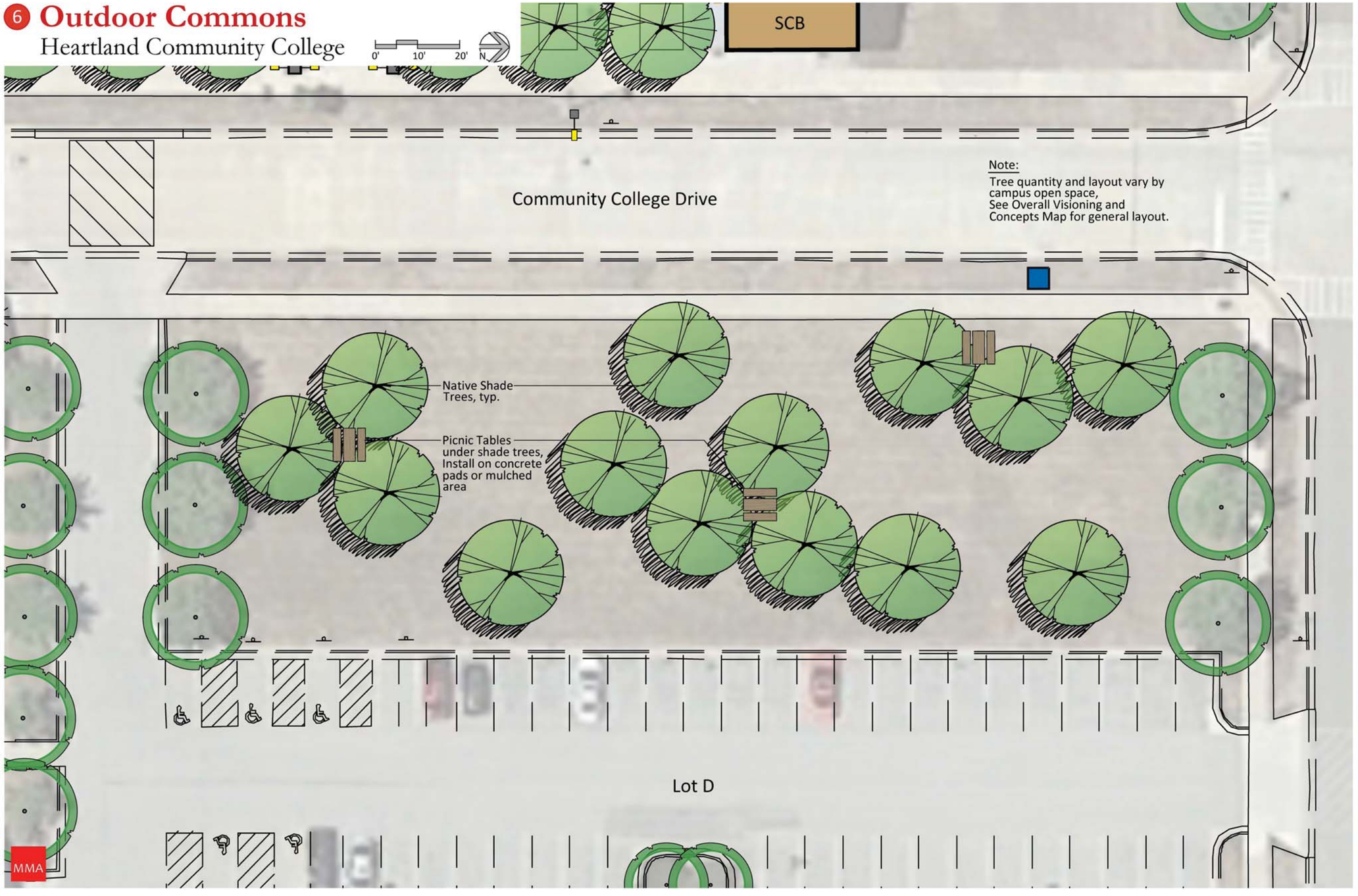
The area will transform what is now raw land into an attractive amenity.

Other areas on campus could be planted in a similar way to create environments that are sustainable, useable, and attractive. Those include the area south of the Readiness Center, along Raab Road, and in open space (NE, NW, SE, SW) quadrants.

The groves of trees will become a unifying element of the campus.

6 Outdoor Commons

Heartland Community College



Building Entry Enhancements

The entrances to many buildings on campus are basically sidewalks to the front doors. Storm water drainage often collects nearby and surface erosion is evident.

To mitigate these conditions, entrances could be enlarged to cover the corners where water from pavement collects.

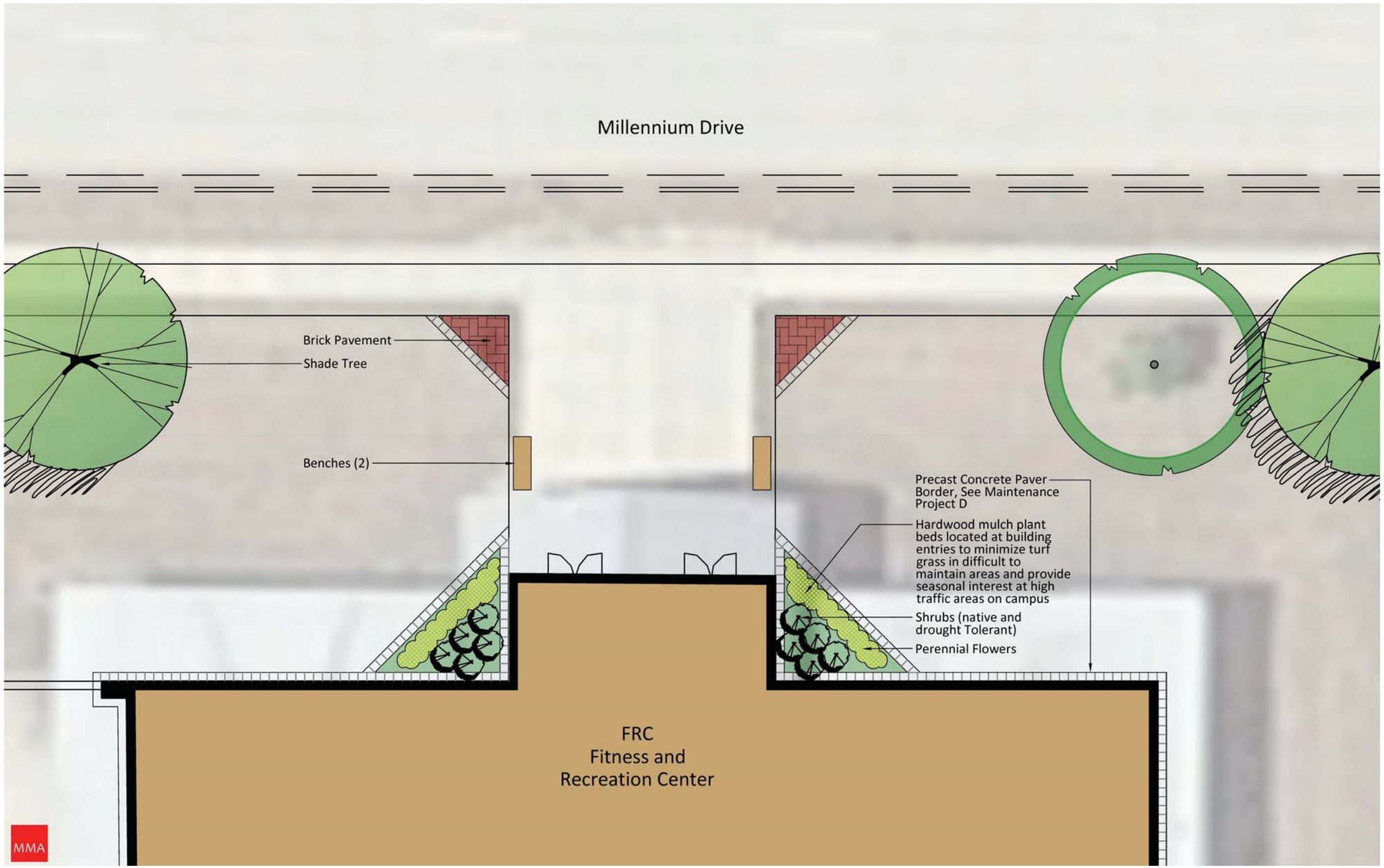
The new pavement could include brick pavers or other pavement materials to create small entrance terraces where students could meet before or after class, sit and study, or talk with friends. Benches or small tables and chairs would be provided in some locations.

Plants would be added. Trees would be planted for shade and shrubs and perennials for soil stabilization. The plants will provide a colorful feature repeated at each building entrance throughout campus.

7 Building Entry Enhancements

Heartland Community College

0' 5' 10' N

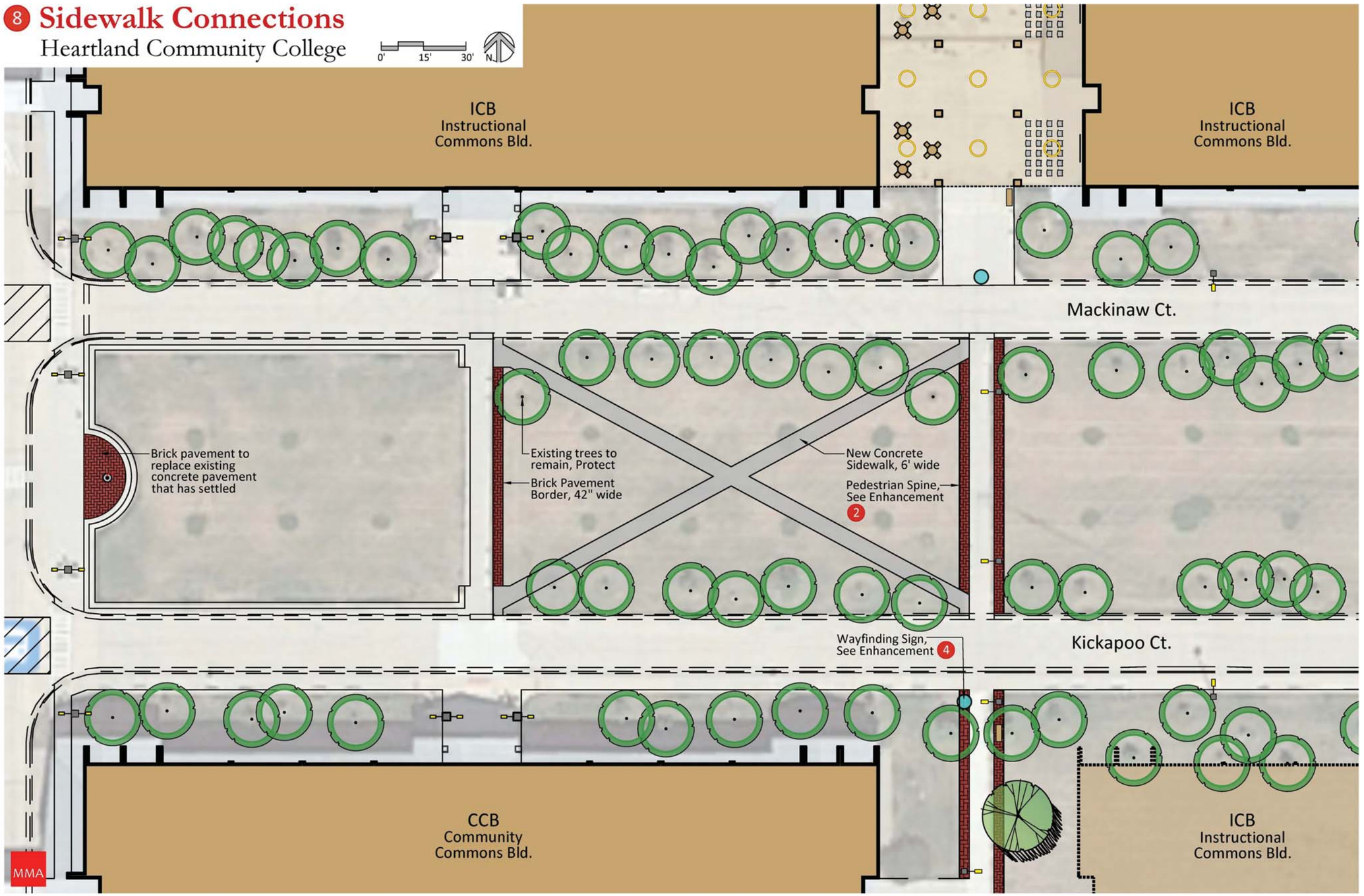


Sidewalk Connections

Sidewalks leading from the pedestrian spine to facilities on campus using existing sidewalks where they exist

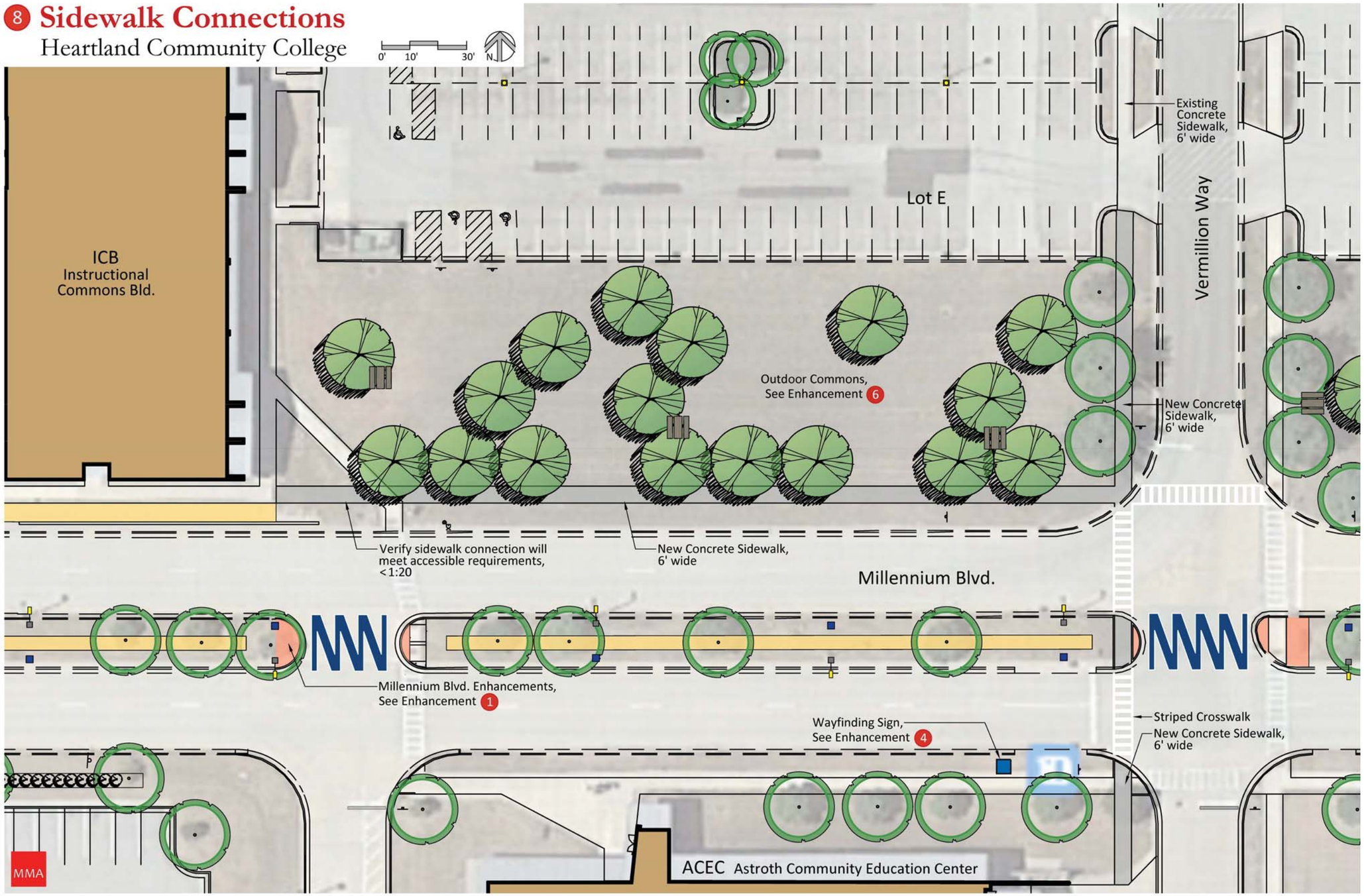
Construct sidewalks

- Crosswalks within the Widmer Quad
- Upgrade west end feature of Widmer Quad
- Sidewalks along Millennium Boulevard
- Sidewalk extension along Raab Road to the Agriculture Complex



8 Sidewalk Connections

Heartland Community College



Constitution Trail Connections

Constitution Trail now extends west along the north side of Raab Road ending at the Pedestrian Spine. Extensions and connections to this trail would provide hiking/biking opportunities within the campus.

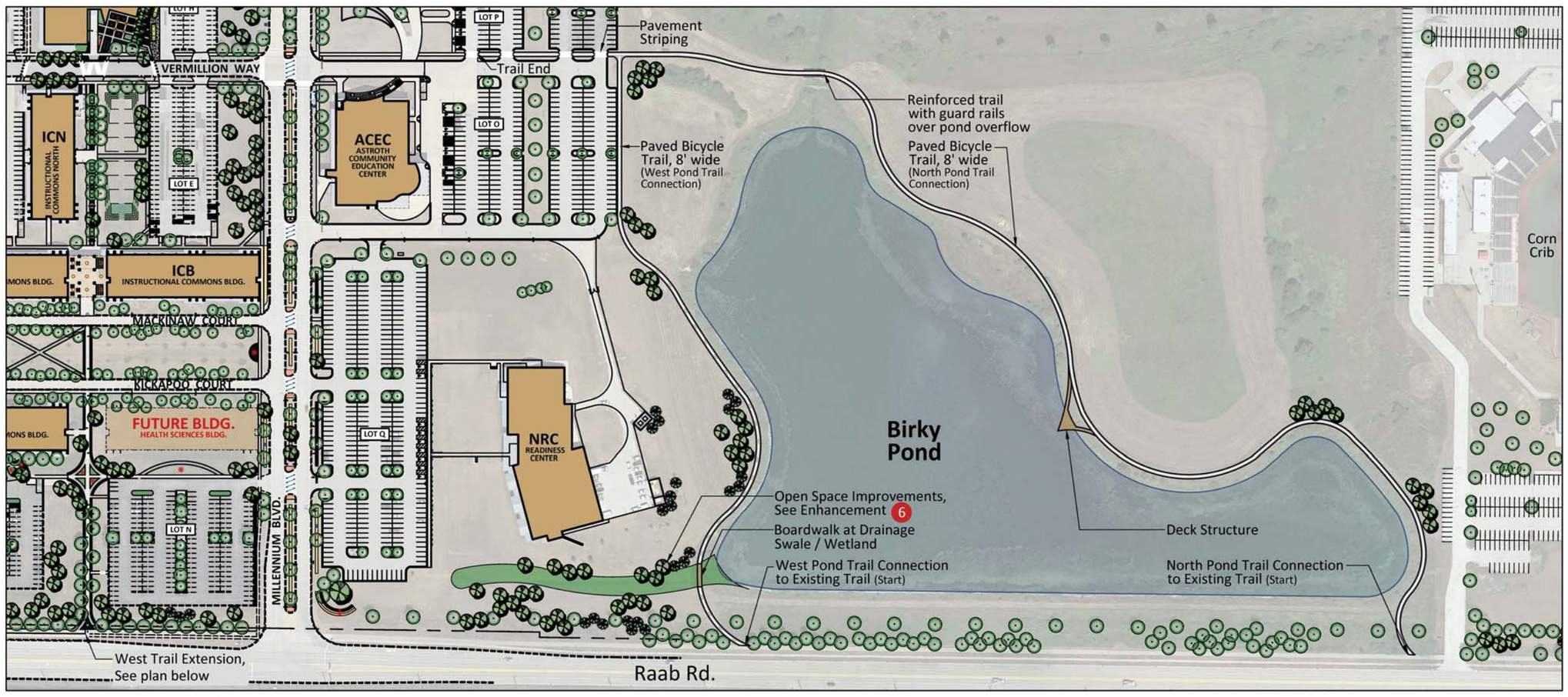
West Extension: Extend the existing trail west along Raab Road to the entrance to the future Agriculture Center and apartment complex southwest of campus.

East Connection: Build a bike/hike trail around Birky Pond with the northwest section connecting to the campus core. Connect this new trail to the existing trail along Raab Road near the southeast and southwest edges of the pond.

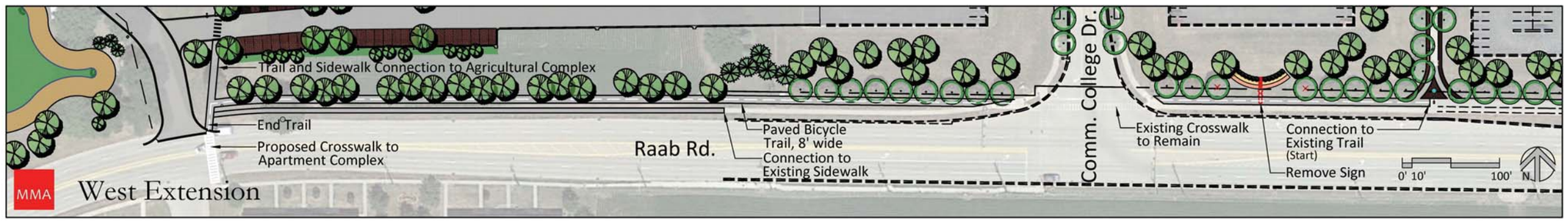
- Expand opportunities for scientific study, recreational use, and commuting.
- Enhance natural environment by introducing more native species and managing invasive plants.
- Provide access for riparian study and other student projects.
- Amenities could be provided such as a deck at the pond's edge, a boardwalk, shade, benches, mile markers, and trail-head facilities.

9 Constitution Trail Connections

Heartland Community College



East Extension - Includes West Pond and North Pond Trail Connections



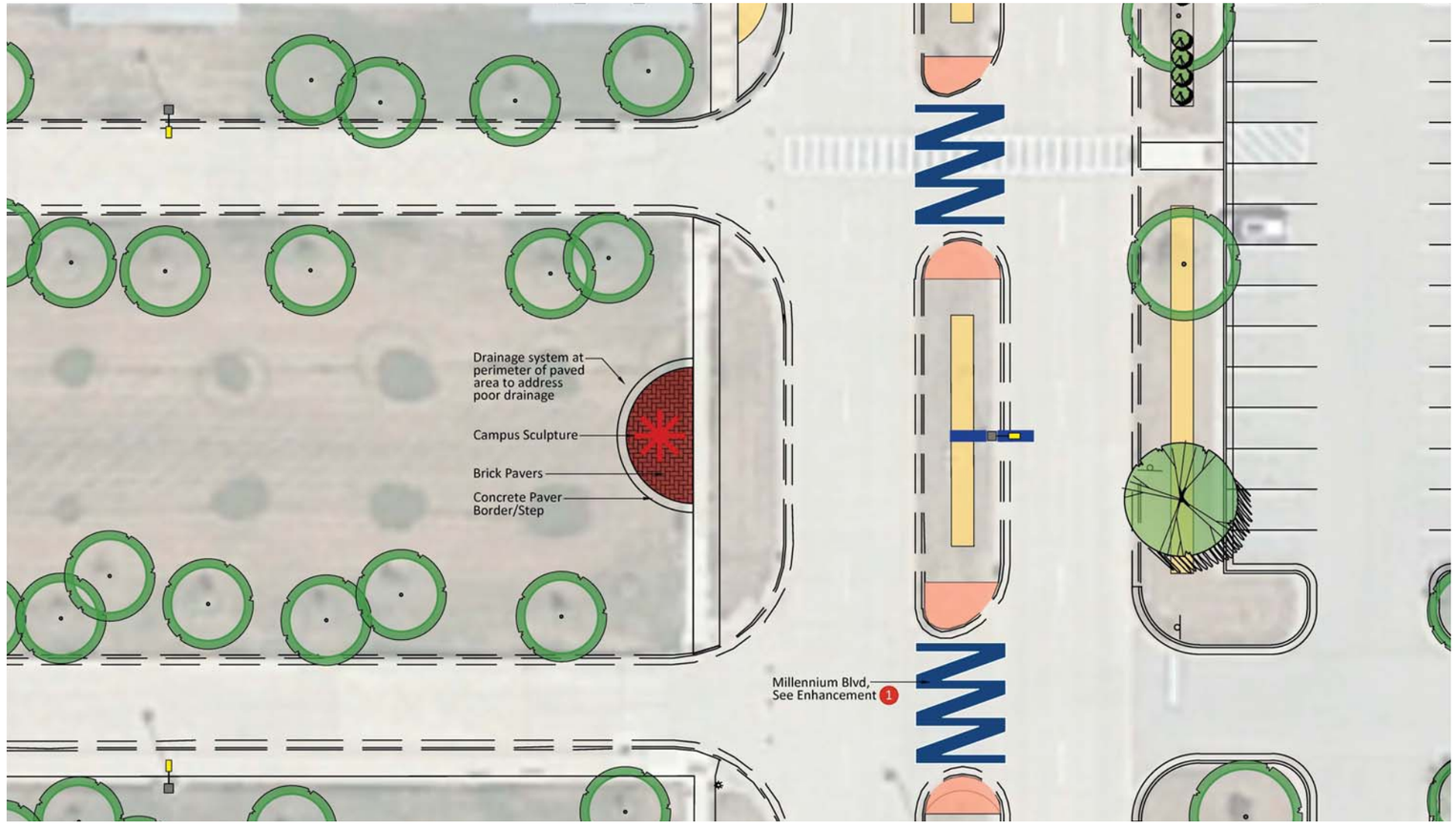
Sculpture and Special Features

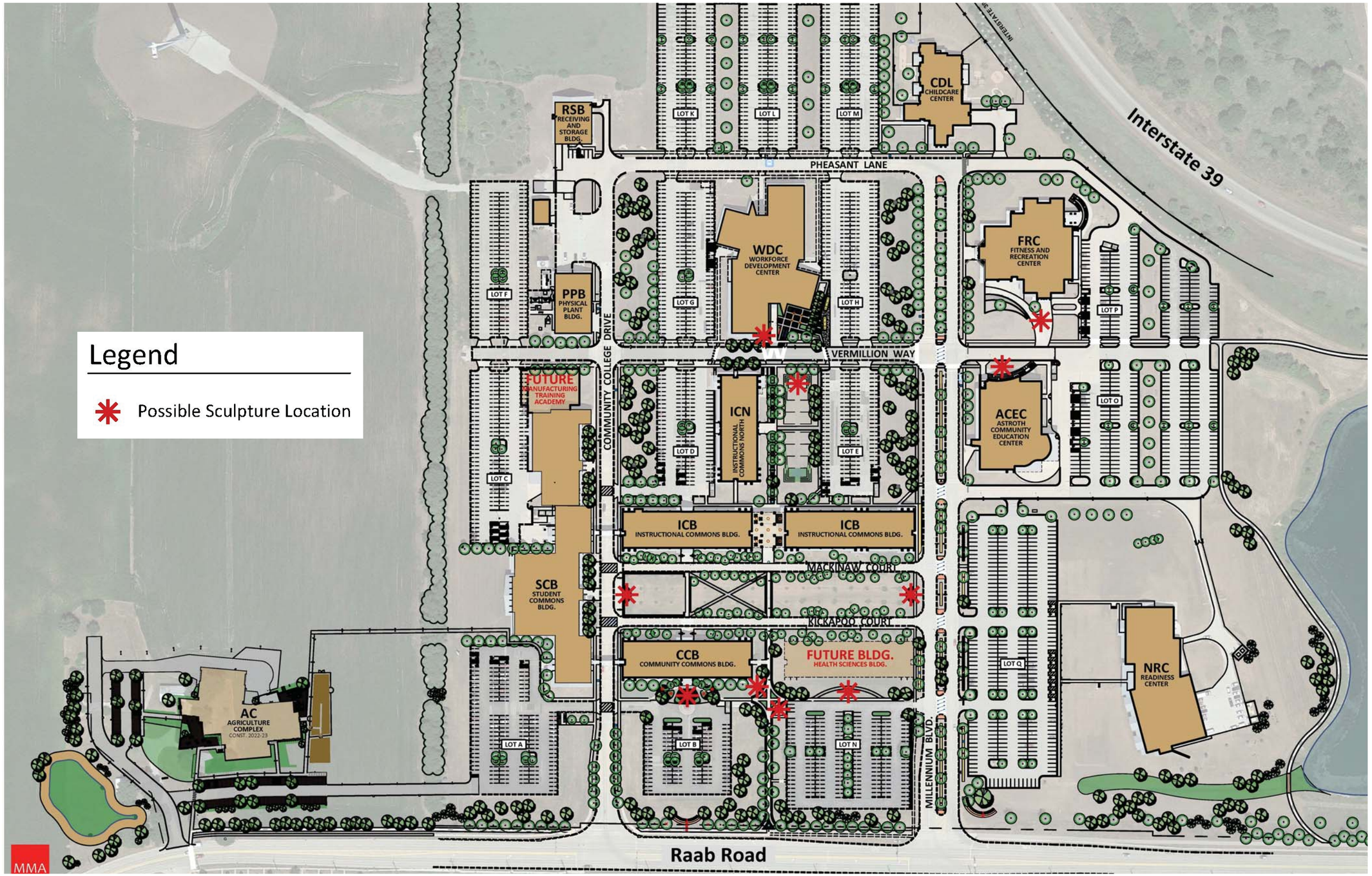
Sculpture can create especially strong focal points in the landscape. At Heartland, large scale sculpture could be used in strategic locations such as to terminate the campus quadrangle and separate it from Millennium Boulevard. Other locations for sculpture are at the Community Commons Building and near the proposed outdoor Student Use Area.

It is advisable for institutions to establish guidelines and perhaps recommendations for sculpture to be used on campus.

Other elements can be used to highlight areas including:

- Fountains
- Rigid flags and banners
- Trees and planting beds




Legend
Possible Sculpture Location
RSB
RECEIVING AND STORAGE BLDG.
CDL
CHILDCARE CENTER
Interstate 39
PHEASANT LANE
WDC
WORKFORCE DEVELOPMENT CENTER
FRC
FITNESS AND RECREATION CENTER
PPB
PHYSICAL PLANT BLDG.
VERMILLION WAY
FUTURE
MANUFACTURING TRAINING ACADEMY
ICN
INSTRUCTIONAL COMMONS NORTH
ACEC
ASTROTH COMMUNITY EDUCATION CENTER
COMMUNITY COLLEGE DRIVE
LOT K
LOT L
LOT M
LOT F
LOT G
LOT H
LOT P
LOT O
LOT C
LOT D
LOT E
ICB
INSTRUCTIONAL COMMONS BLDG.
ICB
INSTRUCTIONAL COMMONS BLDG.
MACKINAW COURT
SCB
STUDENT COMMONS BLDG.
KICKAPOO COURT
CCB
COMMUNITY COMMONS BLDG.
FUTURE BLDG.
HEALTH SCIENCES BLDG.
LOT Q
NRC
READINESS CENTER
AC
AGRICULTURE COMPLEX
CONST. 2022-23
LOT A
LOT B
LOT N
MILLENNIUM BLVD.
Raab Road
MMA

Enhancement Project Budgets

Project 1, Millennium Boulevard

Budget Total : $ 160,000

Based on estimated 2022 costs of material and labor.

1 - Millennium Boulevard

Item #	Description	Unit	Quantity	Unit Cost	Total Cost
Hardscape Improvements					
1	Pavement Striping	linear ft.	810	$ 12.00	$ 9,720.00
Hardscape Improvements Sub-Total					**$ 9,720.00**
Site Features and Furnishings					
2	Companion Bollards	each	15	$ 2,500.00	$ 37,500.00
3	Existing Pole Reflect Bands	each	15	$ 250.00	$ 3,750.00
Site Features and Furnishings Sub-Total					**$ 41,250.00**
Plant Material, Turf, and Finish Grading					
4	Trees	each	14	$ 1,000.00	$ 14,000.00
5	Shrubs	each	112	$ 85.00	$ 9,520.00
6	Ornamental Grass	each	950	$ 20.00	$ 19,000.00
7	Perennials	each	825	$ 18.00	$ 14,850.00
8	Finish Grading (Plant/Turf Prep)	LS	-	-	$ 10,000.00
9	Topsoil - Furnish and Place	cu. yd.	50	$ 60.00	$ 3,000.00
Plant Material, Turf, and Finish Grading Sub-Total					**$ 70,370.00**

Construction Sub-Total	**$ 121,340.00**
Contingency (15%)	**$ 18,201.00**
Professional Fees (15%)	**$ 18,201.00**
01 - Millennium Boulevard Project TOTAL	**$ 157,742.00**

Project 2, Pedestrian Spine

Budget Total : $775,000

Based on estimated 2022 costs of material and labor.

2 - Pedestrian Spine

Item #	Description	Unit	Quantity	Unit Cost	Total Cost
Site Preparation					
1	Light Bollard Removal	lump sum	1	$ 10,000.00	$ 10,000.00
2	Sidewalk Pavement Removal	sq. ft.	405	$ 4.00	$ 1,620.00
Site Preparation Sub-Total					**$ 11,620.00**
Hardscape Improvements					
3	Concrete Sidewalk	sq. ft.	2250	$ 10.00	$ 22,500.00
4	Brick Pavers	sq. ft.	5055	$ 30.00	$ 151,650.00
5	Flush Concrete Paver Border	linear ft.	1215	$ 20.00	$ 24,300.00
Hardscape Improvements Sub-Total					**$ 198,450.00**
Site Features and Furnishings					
6	Light Assembly - Dual Fixture	each	5	$ 10,000.00	$ 50,000.00
7	Light Assembly - Single Fixture	each	12	$ 8,000.00	$ 96,000.00
8	Circular Light Ring	each	9	$ 5,000.00	$ 45,000.00
9	Sculpture	each	2	$ 10,000.00	$ 20,000.00
10	Seat Wall	linear ft.	85	$ 400.00	$ 34,000.00
11	Benches	each	14	$ 2,000.00	$ 28,000.00
12	Outdoor Classroom Furnishings	lump sum	1	$ 60,000.00	$ 60,000.00
Site Features and Furnishings Sub-Total					**$ 333,000.00**
Plant Material, Turf, and Finish Grading					
13	Trees	each	9	$ 1,000.00	$ 9,000.00
14	Shrubs	each	112	$ 85.00	$ 9,520.00
15	Groundcover	each	1725	$ 15.00	$ 25,875.00
16	Finish Grading (Plant/Turf Prep)	LS	-	-	$ 5,000.00
17	Topsoil - Furnish and Place	cu. yd.	50	$ 60.00	$ 3,000.00
Plant Material, Turf, and Finish Grading Sub-Total					**$ 52,395.00**

Construction Sub-Total	**$ 595,465.00**
Contingency (15%)	**$ 89,319.75**
Professional Fees (15%)	**$ 89,319.75**
2 - Pedestrian Spine Project TOTAL	**$ 774,104.50**

3 - Outdoor Use Area

Item #	Description	Unit	Quantity	Unit Cost	Total Cost
Site Preparation					
1	Curb and Gutter Removal	linear ft.	155	$ 15.00	$ 2,325.00
2	Pavement Removal	sq. ft.	3500	$ 4.00	$ 14,000.00
Site Preparation Sub-Total					**$ 16,325.00**
Hardscape Improvements					
3	Curb and Gutter	linear ft.	165	$ 45.00	$ 7,425.00
4	Concrete Driveway Pavement	sq. ft.	1975	$ 10.00	$ 19,750.00
5	Pavement Striping	linear ft.	700	$ 12.00	$ 8,400.00
6	Concrete Sidewalk	sq. ft.	6115	$ 10.00	$ 61,150.00
7	Concrete Stairs (3 risers x 5' wide)	each	3	$ 4,000.00	$ 12,000.00
8	Stair Railing	linear ft.	30	$ 150.00	$ 4,500.00
9	Brick Pavers	sq. ft.	2125	$ 30.00	$ 63,750.00
10	Seat Wall	linear ft.	90	$ 450.00	$ 40,500.00
11	Retaining Wall	linear ft.	50	$ 600.00	$ 30,000.00
Hardscape Improvements Sub-Total					**$ 247,475.00**
Site Features and Furnishings					
12	Light Assembly - Indirect Light	each	4	$ 8,500.00	$ 34,000.00
13	Light Assembly - Single Fixture	each	1	$ 8,000.00	$ 8,000.00
14	Light Ring System	each	1	$ 35,000.00	$ 40,000.00
15	Tables and Chairs	each	6	$ 3,500.00	$ 21,000.00
16	Umbrellas	each	6	$ 1,500.00	$ 9,000.00
17	Outdoor Ping Pong Table	each	1	$ 6,000.00	$ 6,000.00
18	Outdoor Foosball Table	each	1	$ 8,500.00	$ 8,500.00
19	Donor Wall/Sign	each	1	$ 10,000.00	$ 10,000.00
20	Flagpoles	each	3	$ 6,500.00	$ 19,500.00
21	Removable Bollards	each	10	$ 3,000.00	$ 30,000.00
22	Relocated Bicycle Racks	each	2	$ 500.00	$ 1,000.00
Site Features and Furnishings Sub-Total					**$ 187,000.00**
Plant Material, Turf, and Finish Grading					
23	Trees	each	20	$ 1,000.00	$ 20,000.00
24	Perennials	each	1000	$ 18.00	$ 18,000.00
25	Site Grading (Plant/Turf Prep)	LS	-	-	$ 30,000.00
26	Topsoil - Furnish and Place	cu. yd.	100	$ 60.00	$ 6,000.00
27	Turf Sod	sq. yds.	240	$ 12.00	$ 2,880.00
28	Seeding (Turf)	sq. ft.	19480	$ 0.50	$ 9,740.00
29	Seeding (Special)	sq. ft.	4360	$ 0.75	$ 3,270.00
Plant Material, Turf, and Finish Grading Sub-Total					**$ 89,890.00**
Construction Sub-Total					**$ 540,690.00**
Contingency (15%)					**$ 81,103.50**
Professional Fees (15%)					**$ 81,103.50**
3 - Outdoor Use Area Project TOTAL					**$ 702,897.00**

Project 3, Student Use Area

Budget Total : $705,000

Based on estimated 2022 costs of material and labor.

Project 4, Wayfinding and Signs

Budget Total : $785,000

Based on estimated 2022 costs of material and labor.

4 - Wayfinding and Signs

Item #	Description	Unit	Quantity	Unit Cost	Total Cost
Site Preparation					
1	Masonry Sign Removal	each	1	$ 4,000.00	$ 4,000.00
Site Preparation Sub-Total					**$ 4,000.00**
Site Features and Furnishings Sub-Total					
2	Electronic Entry Sign	each	1	$ 155,000.00	$ 155,000.00
3	Vehicular Wayfinding Sign	each	13	$ 25,000.00	$ 325,000.00
4	Pedestrian Wayfinding Sign	each	7	$ 12,500.00	$ 87,500.00
Site Features and Furnishings Sub-Total					**$ 567,500.00**
Plant Material, Turf, and Finish Grading					
5	Plant Material around Entry Sign	each	1	$ 5,000.00	$ 5,000.00
6	Plant Material - Vehicular Sign	each	12	$ 1,500.00	$ 18,000.00
7	Plant Material - Pedestrian Sign	each	7	$ 1,000.00	$ 7,000.00
Plant Material, Turf, and Finish Grading Sub-Total					**$ 30,000.00**
Construction Sub-Total					**$ 601,500.00**
Contingency (15%)					**$ 90,225.00**
Professional Fees (15%)					**$ 90,225.00**
4 - Wayfinding and Signs Project TOTAL					**$ 781,950.00**

Enhancement Projects Budgets

Project 5, Building Entry Plazas and Teraces

Budget Total : $580,000

Based on estimated 2022 costs of material and labor.

5 - Building Entry Plazas and Terraces

Item #	Description	Unit	Quantity	Unit Cost	Total Cost
Site Preparation					
1	Grading, concrete curb, parking repair	lump sum			$ 30,000.00
Site Preparation Sub-Total					**$ 30,000.00**
Hardscape Improvements					
2	Concrete Sidewalk	lump sum			$ 15,000.00
3	Brick Pavers	lump sum			$ 51,000.00
Hardscape Improvements Sub-Total					**$ 66,000.00**
Site Features and Furnishings					
4	Lighting, Electrical	lump sum			$ 25,000.00
5	Benches	lump sum			$ 5,000.00
6	Site Signage	lump sum			$ 10,000.00
Site Features and Furnishings Sub-Total					**$ 40,000.00**
Plant Material, Turf, and Finish Grading					
7	Plant material	lump sum			$ 12,000.00
Plant Material, Turf, and Finish Grading Sub-Total					**$ 12,000.00**
Construction Sub-Total					**$ 148,000.00**
Contingency (15%)					**$ 22,200.00**
Professional Fees (15%)					**$ 22,200.00**
Plazas and Terraces at Key Building Entries Sub-Total (Multiply by 3 locations)					**$ 192,400.00**
5 - Building Entry Plazas and Terraces TOTAL (cost for 3 major building entries)					**$ 577,200.00**

* Note: Estimated cost provided by BLDD on 2/28/2022 for CCB Entry Plaza.

Project 6, Outdoor Commons

Budget Total : $235,000

Based on estimated 2022 costs of material and labor.

6 - Outdoor Commons

Item #	Description	Unit	Quantity	Unit Cost	Total Cost
FOUR MAIN OPEN SPACES NEAR MAIN CAMPUS (NE/NW/SE/SW)					
Site Features and Furnishings					
1	Picnic Tables	each	12	$ 3,000.00	$ 36,000.00
Site Features and Furnishings Sub-Total					**$ 36,000.00**
Plant Material, Turf, and Finish Grading					
2	Trees	each	50	$ 800.00	$ 40,000.00
Plant Material, Turf, and Finish Grading Sub-Total					**$ 40,000.00**
Construction Sub-Total					**$ 76,000.00**
Contingency (15%)					**$ 11,400.00**
Professional Fees (15%)					**$ 11,400.00**
6 - Open Spaces near Main Campus Project TOTAL					**$ 98,800.00**
ALONG RAAB ROAD					
Plant Material, Turf, and Finish Grading					
3	Trees	each	75	$ 800.00	$ 60,000.00
4	Wetland Seeding	sq. ft.	18200	$ 1.50	$ 27,300.00
5	Site Grading (Plant/Turf Prep)	LS	-	-	$ 15,000.00
Plant Material, Turf, and Finish Grading Sub-Total					**$ 102,300.00**
Construction Sub-Total					**$ 102,300.00**
Contingency (15%)					**$ 15,345.00**
Professional Fees (15%)					**$ 15,345.00**
6 - Open Spaces along Raab Road Project TOTAL					**$ 132,990.00**

Project 7, Building Entry Enhancements

Budget Total : $210,000

Based on estimated 2022 costs of material and labor.

7 - Building Entry Enhancements

Item #	Description	Unit	Quantity	Unit Cost	Total Cost
Hardscape and Site Furnishings Improvements					
1	Paver Edge	linear ft.	50	$ 25.00	$ 1,250.00
2	Brick Pavement	sq. ft.	100	$ 30.00	$ 3,000.00
3	Benches	each	2	$ 2,000.00	$ 4,000.00
Hardscape Improvements Sub-Total					**$ 8,250.00**
Plant Material, Turf, and Finish Grading					
4	Shrubs	each	10	$ 85.00	$ 850.00
5	Perennials	each	75	$ 18.00	$ 1,350.00
6	Finish Grading (Plant/Turf Prep)	LS	-	-	$ 750.00
7	Topsoil - Furnish and Place	cu. yd.	6	$ 60.00	$ 360.00
Plant Material, Turf, and Finish Grading Sub-Total					**$ 3,310.00**

Construction Sub-Total	**$ 11,560.00**
Contingency (15%)	**$ 1,734.00**
Professional Fees (15%)	**$ 1,734.00**
Plant Beds at each Building Entry Sub-Total (multiply by 14 locations)	**$ 15,028.00**
7- Building Entry Enhancements TOTAL (cost for 14 total entry plant beds)	**$ 210,392.00**

* Note: Costs will vary for each building entry to be enhanced. Enhancements at approximately eighteen (14) building entries are recommended.

Project 8, Sidewalk Connections

Budget Total : $130,000

Based on estimated 2022 costs of material and labor.

8 - Sidewalk Connections

Item #	Description	Unit	Quantity	Unit Cost	Total Cost
QUAD					
Site Preparation					
1	Sidewalk Pavement Removal	sq. ft.	350	$ 4.00	$ 1,400.00
Site Preparation Sub-Total					**$ 1,400.00**
Hardscape Improvements					
2	Concrete Sidewalk	sq. ft.	2290	$ 10.00	$ 22,900.00
3	Brick Pavers	sq. ft.	620	$ 30.00	$ 18,600.00
4	Flush Concrete Paver Border	linear ft.	80	$ 20.00	$ 1,600.00
Hardscape Improvements Sub-Total					**$ 43,100.00**

Construction Sub-Total	**$ 44,500.00**
Contingency (15%)	**$ 6,675.00**
Professional Fees (15%)	**$ 6,675.00**
8 - Sidewalk Connection - Quad Project TOTAL	**$ 57,850.00**

MILLENNIUM BOULEVARD					
Hardscape Improvements					
5	Concrete Sidewalk	sq. ft.	2350	$ 10.00	$ 23,500.00
6	Warning Border	sq. ft.	12	$ 40.00	$ 480.00
Hardscape Improvements Sub-Total					**$ 23,980.00**

Construction Sub-Total	**$ 23,980.00**
Contingency (15%)	**$ 3,597.00**
Professional Fees (15%)	**$ 3,597.00**
8 - Sidewalk Connection - Millennium Boulevard Project TOTAL	**$ 31,174.00**

RAAB ROAD					
Hardscape Improvements					
7	Concrete Sidewalk	sq. ft.	2625	$ 10.00	$ 26,250.00
Hardscape Improvements Sub-Total					**$ 26,250.00**

Construction Sub-Total	**$ 26,250.00**
Contingency (15%)	**$ 3,937.50**
Professional Fees (15%)	**$ 3,937.50**
8 - Sidewalk Connection - Raab Road Project TOTAL	**$ 34,125.00**

Project 9, Constitution Trail Connections

Budget Total : $910,000

Based on estimated 2022 costs of material and labor.

9 - Constitution Trail Connections

Item #	Description	Unit	Quantity	Unit Cost	Total Cost
EAST EXTENSION - WEST POND TRAIL CONNECTION					
Hardscape Improvements					
1	Asphalt Trail incl. base prep.	sq. ft.	9625	$ 12.00	$ 115,500.00
2	Boardwalk (50'x8')	lump sum			$ 80,000.00
Hardscape Improvements Sub-Total					**$ 195,500.00**
Plant Material, Turf, and Finish Grading					
3	Trees	each	30	$ 1,000.00	$ 30,000.00
Plant Material, Turf, and Finish Grading Sub-Total					**$ 30,000.00**
Construction Sub-Total					**$ 225,500.00**
Contingency (15%)					**$ 33,825.00**
Professional Fees (15%)					**$ 33,825.00**
9 - EAST EXTENSION - West Pond Connection Project TOTAL					**$ 293,150.00**

EAST EXTENSION - NORTH POND TRAIL CONNECTION					
Site Preparation					
4	Curb Cuts	linear ft.	65	$ 12.00	$ 780.00
Site Preparation Sub-Total					**$ 780.00**
Hardscape Improvements					
5	Asphalt Trail incl. base prep.	sq. ft.	19700	$ 12.00	$ 236,400.00
6	Reinforced trail and Guard Rails	linear ft.	80	$ 100.00	$ 8,000.00
7	Pavement Striping	linear ft.	320	$ 6.00	$ 1,920.00
8	Deck Structure	sq. ft.	1325	$ 55.00	$ 72,875.00
9	Deck Railing	linear ft.	230	$ 130.00	$ 29,900.00
Hardscape Improvements Sub-Total					**$ 349,095.00**
Plant Material, Turf, and Finish Grading					
10	Trees	each	15	$ 1,000.00	$ 15,000.00
Plant Material, Turf, and Finish Grading Sub-Total					**$ 15,000.00**
Construction Sub-Total					**$ 364,875.00**
Contingency (15%)					**$ 54,731.25**
Professional Fees (15%)					**$ 54,731.25**
9 - EAST EXENTION - North Pond Connection Project TOTAL					**$ 474,337.50**

WEST EXTENSION - AGRICULTURAL COMPLEX					
Hardscape Improvements					
11	Asphalt Trail incl. base prep.	sq. ft.	8875	$ 12.00	$ 106,500.00
Hardscape Improvements Sub-Total					**$ 106,500.00**
Construction Sub-Total					**$ 106,500.00**
Contingency (15%)					**$ 15,975.00**
Professional Fees (15%)					**$ 15,975.00**
9 - WEST EXTENTION - Agricultural Complex Project TOTAL					**$ 138,450.00**

Project 10, Sculpture and Features

Budget Total : $315,000

Based on estimated 2022 costs of material and labor.

10 - Sculpture and Site Features

Item #	Description	Unit	Quantity	Unit Cost	Total Cost
Hardscape Improvements					
1	Concrete Foundation	each	1	$ 2,500.00	$ 2,500.00
2	Brick Pavers	sq. ft.	350	$ 30.00	$ 10,500.00
3	Flush Concrete Paver Border	linear ft.	55	$ 20.00	$ 1,100.00
Hardscape Improvements Sub-Total					**$ 14,100.00**
Site Features and Furnishings					
4	Sculpture	each	1	$ 10,000.00	$ 10,000.00
Site Features and Furnishings Sub-Total					**$ 10,000.00**

Construction Sub-Total	**$ 24,100.00**
Contingency (15%)	**$ 3,615.00**
Professional Fees (15%)	**$ 3,615.00**
Sculptures or Featured Elements Project Sub-Total (multiply by 10 locations)	**$ 31,330.00**
10 - Sculpture and Site Features TOTAL (cost for 5 total locations)	**$ 313,300.00**

* Note: Sculpture size, complexity, and cost vary greatly. Once the criteria for the sculpture(s) is established a more accurate cost estimate should be obtained. Sculptures at approximately ten (10) locations are recommended.

Budget Summary

Budget Total : $3,850,000

Based on estimated 2022 costs of material and labor.

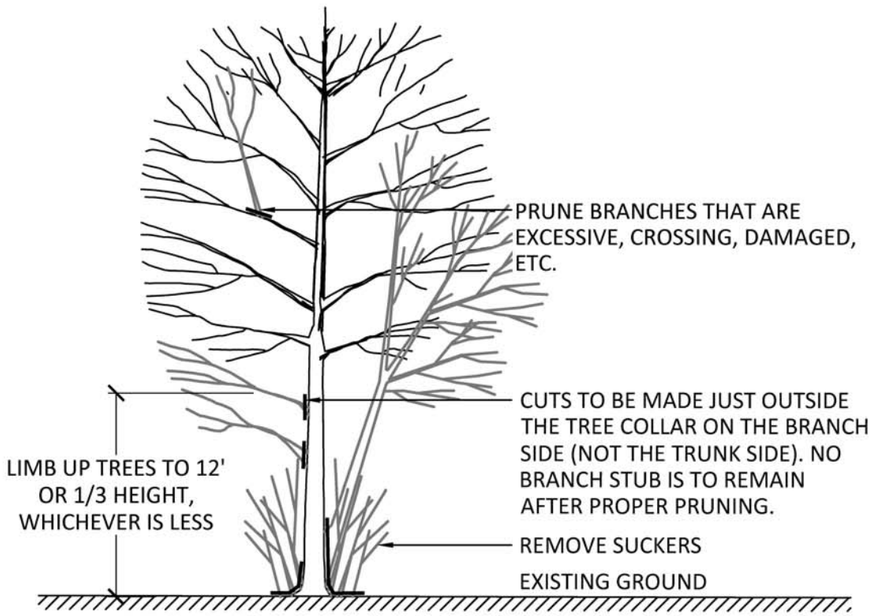
Campus Enhancement Projects Budget Summary

1	Millennium Boulevard		**$ 160,000.00**
2	Pedestrian Spine		**$ 775,000.00**
3	Outdoor Use Area		**$ 705,000.00**
4	Wayfinding and Signs		**$ 785,000.00**
5	Building Entry Plazas and Terraces (3 locations)		**$ 580,000.00**
6	Outdoor Commons		**$ 235,000.00**
	Open Spaces Near Main Campus	$ 100,000.00	
	Open Spaces Along Raab Road	$ 135,000.00	
7	Building Entry Enhancements (14 entry locations)		**$ 210,000.00**
8	Sidewalk Connections		**$ 130,000.00**
	Quad Sidewalks	$ 60,000.00	
	Along Millennium Blvd.	$ 35,000.00	
	Along Raab Road	$ 35,000.00	
9	Constitution Trail Connections		**$ 910,000.00**
	East Extension - West Pond Connection	$ 295,000.00	
	East Extension - North Pond Connection	$ 475,000.00	
	West Extenstion (Ag Complex Connection)	$ 140,000.00	
10	Sculpture and Site Features (10 locations)		**$ 315,000.00**
Budget Estimate for all Campus Enhancement Projects			**$ 4,805,000.00**

*Note: Enhancement project costs are rounded. See itemized budget estimates for each enhancement project for more detailed cost breakdown.

A Prune Trees

Heartland Community College



Tree Pruning Guidelines

1. Prune trees according to the American National Standards Institute Standard for Tree Pruning (ANSI A300).
2. Limb-up trees 12' above the ground or $\frac{1}{3}$ of the tree height, whichever is less. Cuts to be made just outside the tree collar on the branch side (not the trunk side) without leaving a stub of the branch to be removed.
2. Remove all dead limbs and branches from trees by cutting at nearest joint.
3. Prune erratic growth and establish symmetry of crown.
4. Remove all vegetative material from the site and dispose of properly.

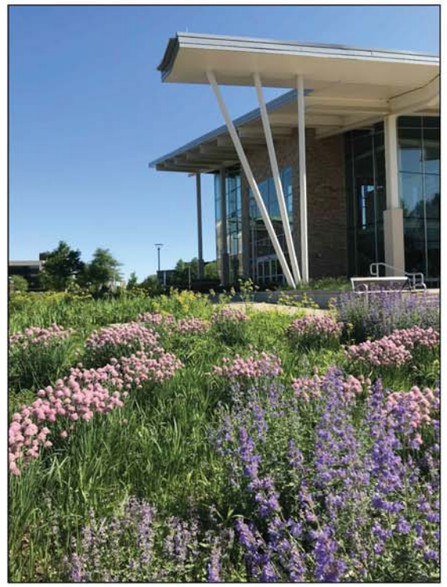
Existing trees in Parking Lot Q with low branches

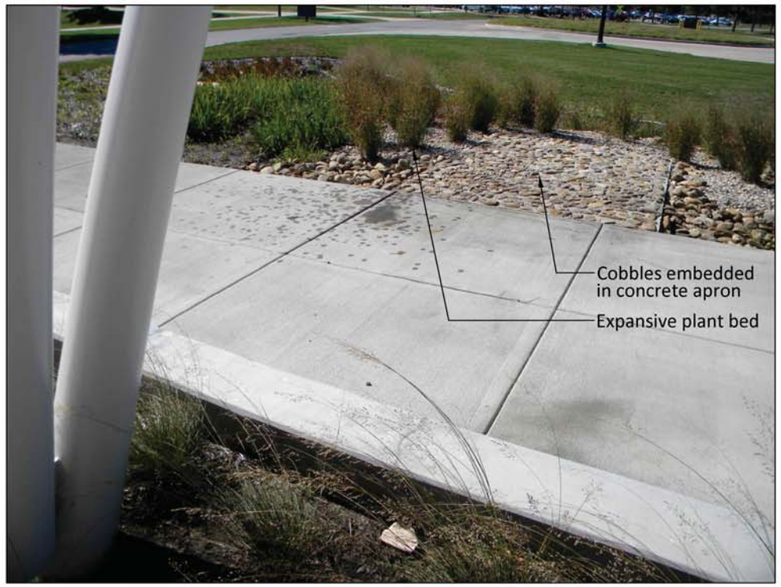
- Prune trees to provide adequate visibility

Existing trees along Pedestrian Spine

- Prune trees to provide adequate clearance

B Improve Drainage
Heartland Community College


Expansive plant bed around "water fall zone"



Reinforced "Water Fall Zone"


Gravel displacement and erosion at the southeast corner of Instructional Commons Building (east)


Erosion along west side of Fitness & Recreation Cente


Vegetative swale preparation

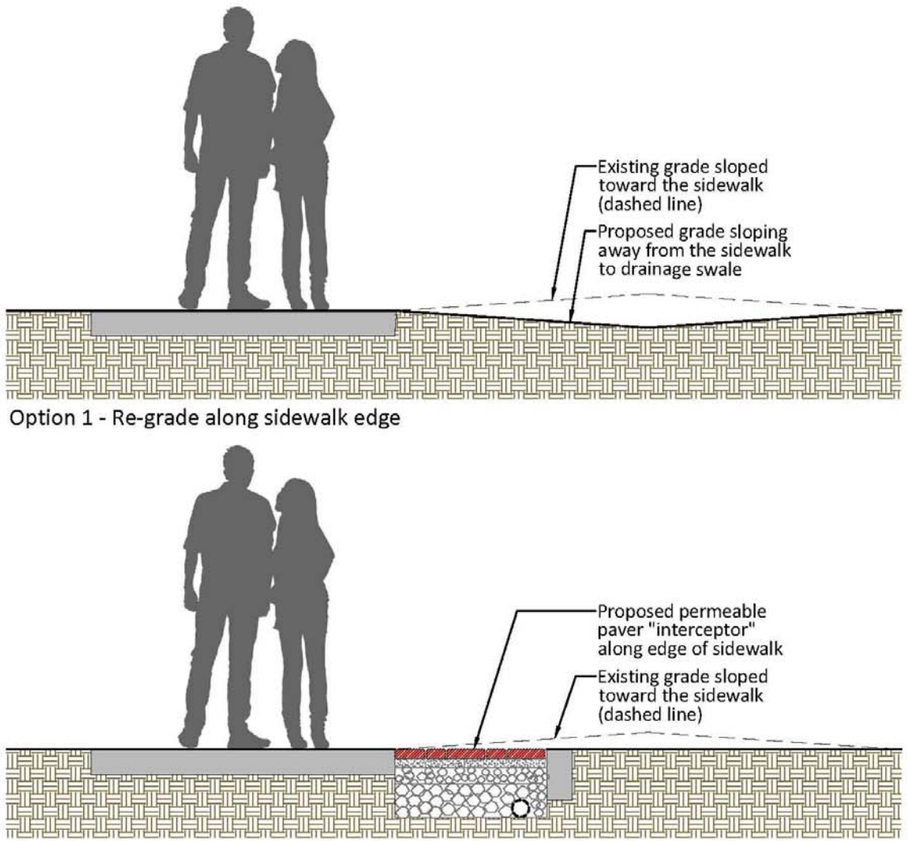

Vegetative swale planting


Vegetative swale establishment


Drainage swale south of Normal Readiness Center

C Regrade Sidewalk Edges

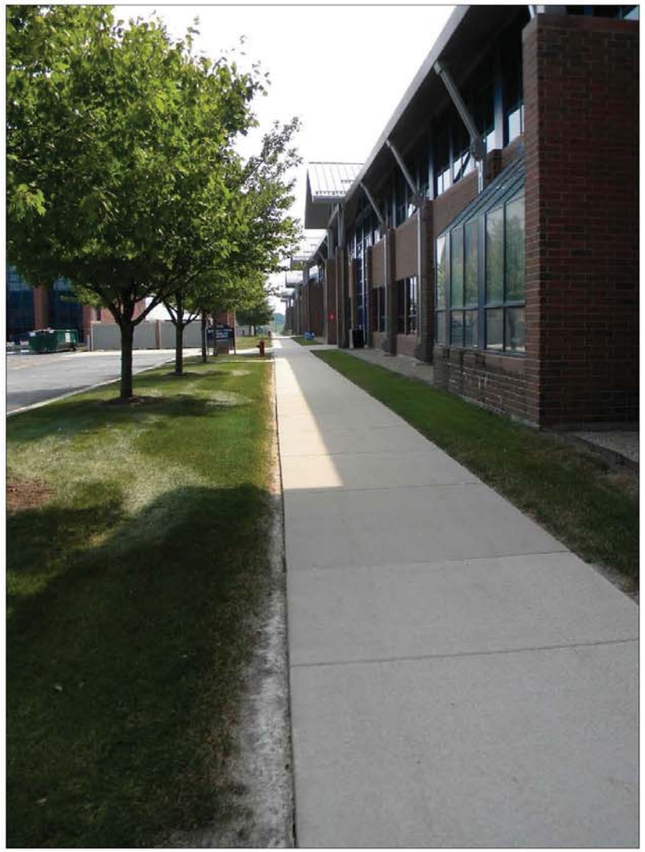
Heartland Community College



Option 1 - Re-grade along sidewalk edge

Option 2 - Install interceptor along sidewalk edge

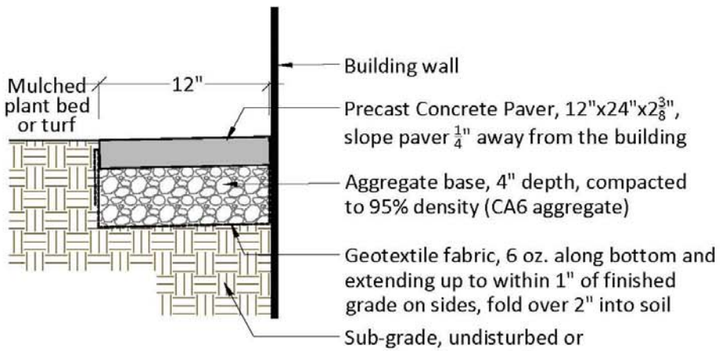
Sidewalk north of Vermillion Way



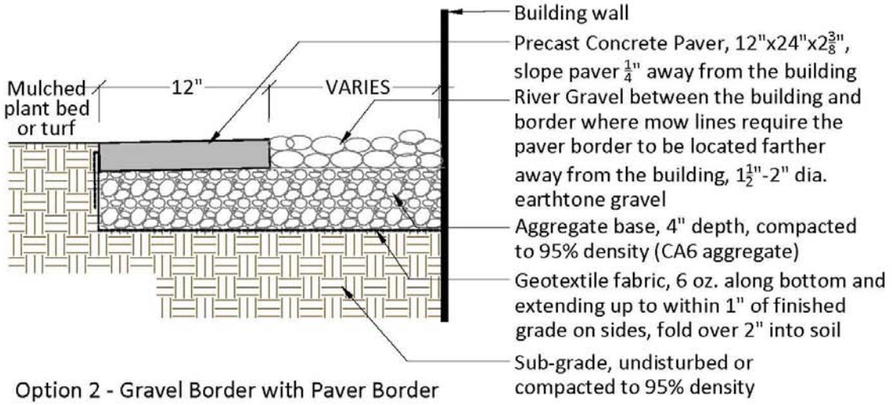
Sidewalk east of Student Commons Building

D Replace Gravel Edges with Precast Concrete Borders

Heartland Community College



Option 1 - Pavers Adjacent to Building



Option 2 - Gravel Border with Paver Border

Existing gravel border and edging images

E Replace Birch Trees with Shade Trees

Heartland Community College

Existing birch trees to be removed, soil excavated, and new soil and trees installed

F Replace Tinted Concrete with Trees and Plant Beds

Existing tinted concrete to be removed, soil excavated and replaced, and trees and groundcover installed

G Replace Ornamental Trees with Shade Trees

Existing ornamental trees (4) to be removed and replaced with shade trees (2) to shade parking and increase visibility

H Provide for Recycling at Dumpsters

Recycling to be provide directly adjacent to existing trash/utility enclosures. Provide brick screen wall and gate to match existing materials

I Stripe Parking Lot

Heartland Community College

Stripe parking spaces to clearly define drive aisles and parking stalls at the Corn Crib parking lots

J Screen Utilities and Dumpsters

Screen dumpster and utility equipment at the Corn Crib with brick screen walls and metal gates to match the main campus dumpster/utility enclosures.

Wayfinding and Signs

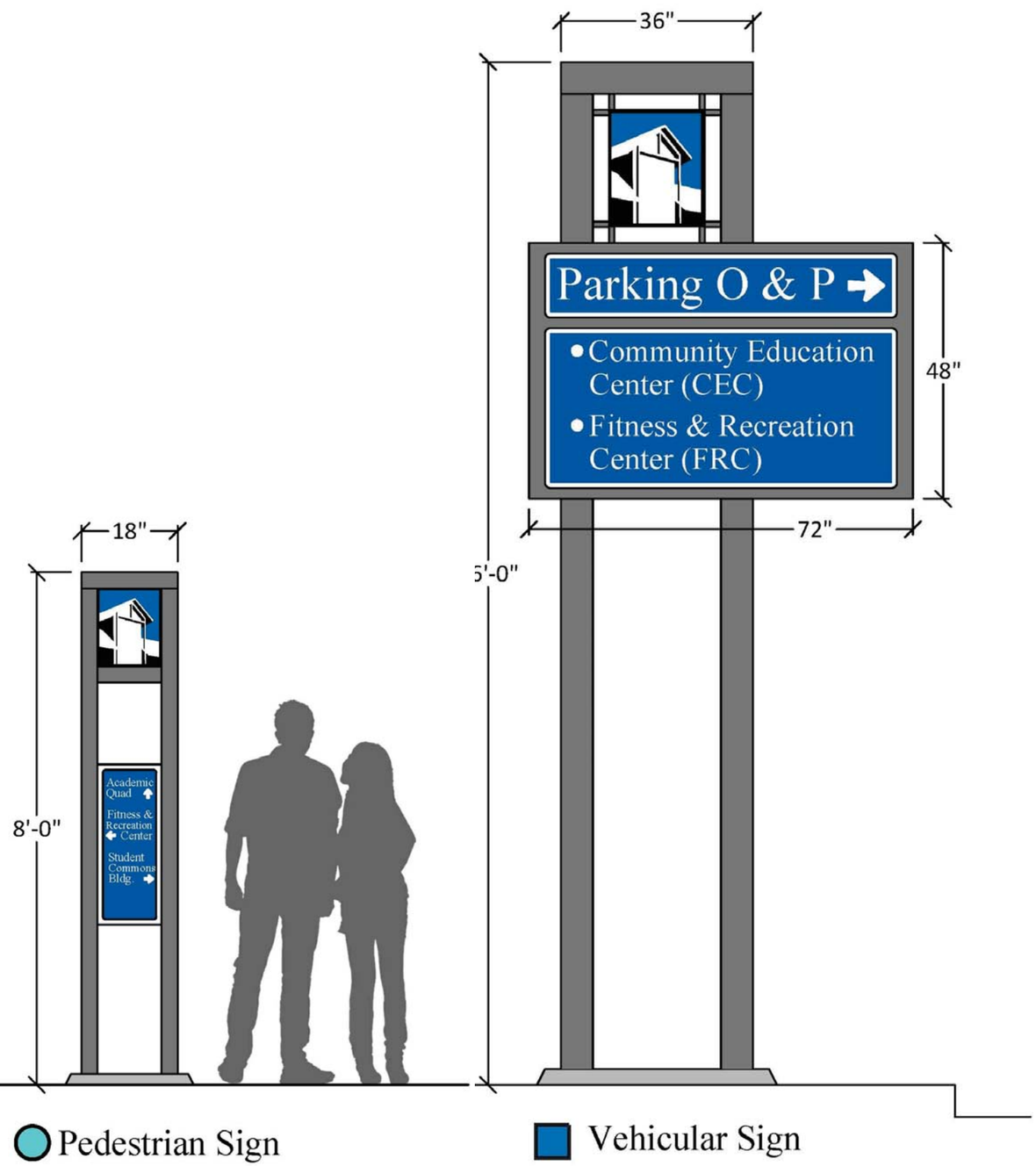
Implement a comprehensive wayfinding and sign system that is used throughout the campus. Signs will be a unifying campus element and will contribute to the overall appearance and image of the college.

Entrance Sign

Electronic sign to match existing sign at the northeast corner of Raab Road and Millennium Boulevard.

Wayfinding Signs

- Incorporate Heartland Community College logo
- Design to emphasize destination
- Sign posts to be square steel poles with polyurethane acrylic exterior paint
- Fasteners and anchors to be break-away bolts for safety
- Sign panels to be sheet aluminum with high intensity prismatic, reflective sheeting.
- Heartland blue color
- Sign panel bracing to be tubular steel



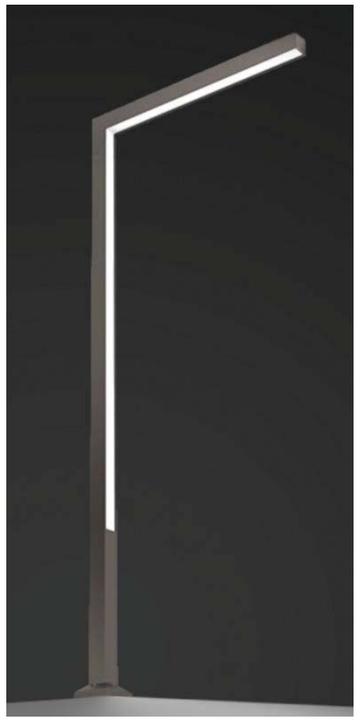
Campus Entrance Sign

Pedestrian Sign

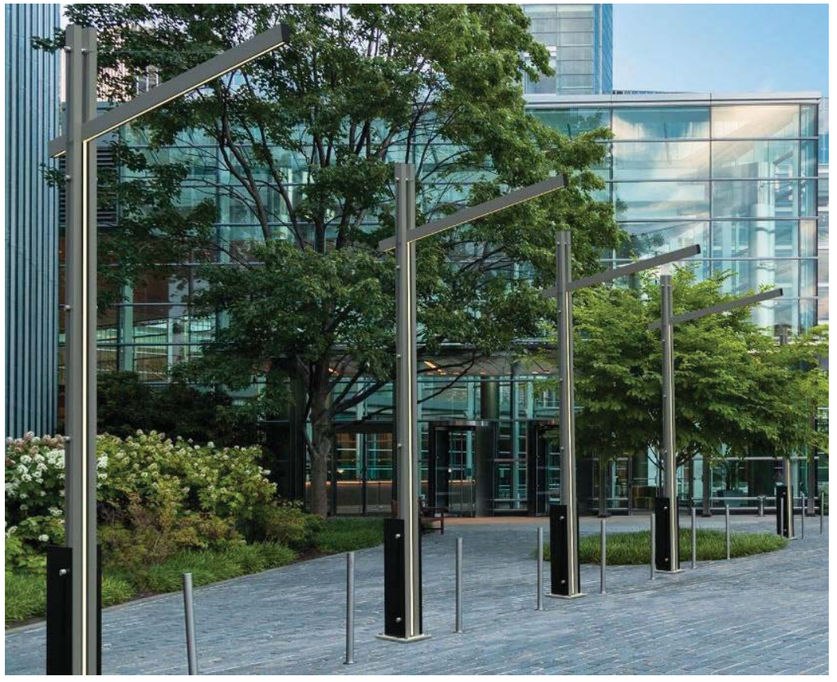
Vehicular Sign

Light Fixtures

- Light fixtures and optics should be selected to illuminate the type and use of particular areas.
- Although most fixtures within the campus should have the same style, contrasting fixtures can be used to accentuate special areas. Light ring fixtures are recommended for the Student Use Area and the Outdoor Classroom.
- Along streets with sidewalks, lighting should typically include a combination of high-mast streetlights at regular intervals with lower height pedestrian-scale fixtures between streetlights. The combination is both functional and attractive. Along sidewalks or walkways through open areas, the lower height lights should be uniformly spaced along the walkways. In locations where light poles are not wanted for aesthetic reasons, low-profile lights can be used to line sidewalks, light outdoor terraces, or highlight areas for improved pedestrian safety.
- Special features on the campus landscape such as signs, buildings, entrances, other architectural features, sculpture, and trees can be highlighted with flood or spotlights. The lights can be mounted on structures, on the ground, or in trees. The number of highlighted elements and the intensity of lighting should show restraint.
- Selections of new poles and light fixtures should be based on several criteria. First is their overall capability to perform as required. With lighting technology advancing rapidly, consideration should be given to the capability of light sources (fixture) to be replaced in the future with improved units. A second criteria is the visual compatibility with other



- light fixtures used within campus. Although there is convenience in using the same fixtures, doing so can be overly repetitious. Use of contrasting fixtures in certain areas can help create a strong visual statement.
- Environmental considerations must also be respected. Areas should not be lighted to excess, showing disregard for energy use and economy. Lights should have cut-offs and optics that restrain lights within the areas to be lighted. Economic lighting technologies and controls should be employed where possible to encourage energy conservation.



Site Furnishings

Uniform styles of outdoor furnishings – benches, tables and chairs, planters, bicycle racks – used throughout a campus aid in providing cohesion and a collective image throughout a campus. Specialty furnishings, however, can be used in particular areas such as courtyards, open space areas, and pathways and trails to develop individualized character and uniqueness. Movable furniture should be reserved for areas where its use can be monitored.

Topography and Land Forms

The Heartland College campus is built on relatively flat ground with Birky Pond built to provide storm water detention. With minimal topographic change, providing adequate stormwater drainage can be a challenge. Swales , broad roadway ditches, and underground storm sewers have been employed within the campus to provide needed drainage. Sustainable stormwater management techniques such as permeable pavers, bioswales, rain gardens, and green roofs can also be used to reduced stormwater runoff.

Berms and other landforms have been used to a limited extent on the campus. Along Raab Road berms help to screen surface parking lots. “Negative landforms” or sunken courtyards are proposed at the Student Use Area and a terrace south of the Fitness and Recreation Center.

Erosion and Sediment Control

Erosion and sediment control is essential where ground is being disturbed or construction is underway to keep a graded site intact and prevent sediment from draining through channels into the detention pond. Temporary controls such as temporary turf cover, straw mulch, silt fences, straw wattles, and excelsior blankets should be used until work is completed and permanent controls such as turf reinforcement mats, planted drainage channels, and revetment mats are in place.

General Pavement

Pavements within the campus include streets and parking areas, service drives and utility pads, patios and terraces, sidewalks, and bikeways. For future improvements ,a variety of pavement types may be used. When using pavements, the use of sustainable methods to control runoff should be considered. Where streets are being resurfaced or new sections are being constructed, sustainable approaches to minimize storm water runoff into storm sewers can be effective.

Unit Pavers

Unit pavers provide color, texture, and interest to surfaces. Pavers can be used to define pedestrian routes and enhance building entrances, gathering areas, and courtyards. Paver shapes and setting pattern can relate to adjacent structures and to nearby pavement. Pavers are typically set on a sand bed over a concrete base surrounded by a concrete border. (Standards for using pavers in vehicular areas is substantially different than for pedestrian use only areas.)

Permeable Unit Pavers

Permeable pavers are recommended for use for large plazas where a significant reduction of storm water runoff can be achieved and the pavers can be installed economically by mechanical methods. Permeable pavers are also recommended in parking lots where large commercial vehicles are restricted.

Permeable pavers are generally not recommended for small or linear applications as the benefit of reducing storm water runoff is minimal and the installation cost is relatively high due to hand installation and the quantity of edge restraints.

Permeable pavers reduce storm water runoff by allowing storm water to quickly flow down between the paver units into a subsurface drainage system. Water is collected and detained within graduated aggregate courses where it percolates into the ground and slowly discharges through a pipe system.

Borders

Gravel borders are recommended around buildings where large canopy overhangs exist. The borders hold vegetation away from buildings, reduce damage to buildings from mowing, and provide access for building maintenance.

Where borders are adjacent to turf that mowers could throw, however, a row of large unit pavers are recommended instead.

Cast-in-place Concrete Walls

Concrete walls can be crafted into retaining walls, sitting walls, and free-standing elements. Typically, surfaces are hand-rubbed to a smooth uniform condition or are faced with another material.

Dry-laid Stone Walls

Dry laid stone can be used to create retaining walls or free-standing elements. The scale and height can vary, with the structural and visual qualities being the primary considerations. An aggregate-filled trench and perforated drain tile are recommended behind all retaining walls.

Screening

To the extent possible, service areas and equipment should be located away from the view of motorists and pedestrians. Where service areas are visible, screening should be provided. The type of screening should be determined by the nature of the service component including its frequency of use, service access required, generation of noise, and size and visual impact.

Site walls may be used for screening when they can be attached or visually associated with a building. Walls should be compatible with the design and materials of the associated structure. Durable gates may be a necessary component. Plant material can soften the appearance of the site walls.

Where service areas are remote (not associated with a building) screening with plant material instead of structural walls will usually be more compatible with the campus environment. Evergreen trees or shrubs that are adapted to the Midwest can be used. Where evergreen screening must have a rigid layout, some deciduous plants may be added for a more naturalistic appearance. This would apply most directly to areas beyond the center of campus where native and naturalistic landscapes are important.

Parking lots should also be screened, or partially screened, to avoid the appearance of vast areas of uninterrupted pavement. Screening with trees and other plants can be done within parking lot islands and around the perimeters. (Trees in these areas provide the added benefit of shade for cars and motorists using the areas.) The placement and species selected for parking lot areas should not block visibility needed for safe vehicular use or for a sense of security within the areas. Strategies and guidelines established by Crime Prevention through Environmental Design (CPTED) such as natural surveillance, access control, and territorial reinforcement should be considered during the design process.

Sculpture and Fountains

Outdoor sculpture can be dramatic addition to a campus landscape. Sculpture should be located where it has a purpose or a relationship to the campus. Those locations could include prominent positions to highlight the campus entrances, environmental settings to emphasize particular themes, or campus building vicinities where they relate to academic studies.

The grounds around any sculpture or artwork can be enhanced to create a more compatible setting. The elevation may be raised, a base built, and restrained lighting provided for nighttime viewing. Generally, elements should not be “dolled-up” with unnecessary accouterments. Fine artwork is usually complete unto itself.

Generally, sculpture and fountains should be scaled to fit the environment in which they are located. Pieces should be selected that will have a timeless quality. If pieces are of a contemporary nature, consideration should be given to whether they will remain significant in the future. This is not to say that temporary or limited-term art should be not be exhibited. Such additions can add a sense of spontaneity, growth, and energy within a campus.

Plant Material

Throughout campus, tree, shrub, and hedge plantings should be appropriate to the scale of the space. A broad stroke use of plants in large rows and masses is generally preferred to fussy, intricate plantings in order to maintain a proper scale relationship with large college buildings. More intricate and small-scale plantings may be are appropriate only in small courtyards and in proximity to small campus buildings.

Plantings should reinforce the basic campus structure defined by streets, buildings, and walkways. Plantings should provide structure to open spaces. Plant material should be used for ground stabilization, climate moderation (wind, sun, and precipitation), and aesthetic qualities.

Throughout campus, plantings must avoid creating conditions that cannot be easily seen and monitored for safety. In vicinities of streets, driveways, and sidewalks, plants should be positioned to avoid obstructing visibility. A 25' x 25' visibility triangle free from obstructions, should be maintained at every street intersection. Strategies and guidelines established by Crime Prevention through Environmental Design (CPTED) such as natural surveillance, access control, and territorial reinforcement should be considered during the design process.

In general, plantings should be simple and restrained. The variety of species within a defined area should be limited. Planting should not, however, be monocultures and plants should not be used such that species-targeting insects or disease would adversely affect the design. The currently ongoing devastation of ash trees is such an example. This principle should also apply to the streetscapes and walkways within and approaching the campus.

Throughout campus, plant selections should favor plants that are well adapted to the climate and conditions of the site. Native species and their cultivars are adapted to local conditions when planted in species-appropriate locations.

Plants should be selected for their overall suitability for their purpose and site conditions. The recommended plant list includes but is not limited to the following species.

Shade (Overstory) Trees

Scientific Name	*Common Name*
*Acer saccharum	Sugar Maple
*Celtis occidentalis	Hackberry
Ginkgo biloba	Ginkgo
*Gleditsia triacanthos var. inermis	Thornless Honeylocust
*Nyssa sylvatica	Black Tupelo
*Quercus bicolor	Swamp White Oak
*Quercus macrocarpa	Bur Oak
*Quercus muehlenbergii	Chinquapin Oak
*Quercus rubra	Red Oak
*Taxodium distichum	Bald Cypress
*Tilia americana	American Linden
Ulmus hybrids	Asian Elm Cultivars

Evergreen Trees

Scientific Name	*Common Name*
*Juniperus virginiana	Eastern Redcedar
Picea abies	Norway Spruce
*Pinus strobus	Eastern White Pine

Ornamental (Understory) Trees

Scientific Name	*Common Name*
*Amelanchier arborea	Downy Serviceberry
*Carpinus caroliniana	American Hornbeam
*Cercis canadensis	Eastern Redbud
*Crataegus crusgalli vas. Inermis	Thornless Cockspur Hawthorn
*Hamamelis virginiana	Common Witchhazel
Malus x 'Prairifire'	Prairifire Crabapple
*Ostrya virginiana	Ironwood
Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac

Evergreen Shrubs

Scientific Name	*Common Name*
Buxus ‘Chicagoland Green’	Chicagoland Green Boxwood
Ilex x meserveae ‘China Boy’	China Boy Holly
Ilex x meserveae ‘China Girl’	China Girl Holly
*Juniperus horizontalis ‘Green Acres’	Green Acres Creeping Juniper
Juniperus x pfitzeriana ‘Kallay’s Compact’	Kallay’s Compact Juniper
Juniperus x pfitzeriana ‘Sea Green’	Sea Green Chinese Juniper
*Juniperus virginiana ‘Grey Owl’	Grey Owl Eastern Redcedar
Juniperus sabina ‘Buffalo’	Buffalo Juniper
Taxus x median ‘Densiformis’	Dense Anglojap Yew

Deciduous Shrubs

Scientific Name	*Common Name*
Azalea Girard Series ‘Pleasant White	Pleasant White Azalea
Aronia arbutifolia ‘Brilliantissima’	Brilliantissima Red Chockberry
*Aronia melanocarpa ‘Ground Hog’	Ground Hog Black Chokeberry
*Ceanothus americanus	New Jersey Tea
Forsythia x intermedia ‘Golden Nugget’	Golden Nugget Forsythia
*Hydrangea arborecens ‘Annabelle’	Annabelle Smooth Hydrangea
Hydrangea paniculata ‘Limelight’	Limelight Panicled Hydrangea
Hydrangea paniculata ‘Little Lime’	Little Lime Panicled Hydrangea
*Ilex verticillata ‘Red Sprite’	Red Sprite Winterberry (Female)
*Ilex verticillata ‘Jim Dandy’	Jim Dandy Winterberry (Male)
Itea virginica ‘Little Henry’	Little Henry Sweetspire
Itea virginica ‘Henry’s Garnet’	Henry’s Garnet Sweetspire
*Rhus aromatic ‘Gro Low’	Gro Low Fragrant Sumac
Rosa x ‘Radtko’	Double Knock Out Rose
Spiraea japonica ‘Double Play Red’	Double Play Red Spirea
Spiraea japonica ‘Froebelii’	Froebelii Japanese Spirea
Spiraea nipponica ‘Snowmound’	Snowmound Spirea
Viburnum dentatum ‘Autumn Jazz’	Autumn Jazz Arrowood Viburnum
Viburnum plicatum f.tomentosum‘Mariesii’	Mariesii Doublefile Viburnum
Viburnum rhytidophyllum	Leatherleaf Viburnum

Ornamental Grass

Scientific Name	*Common Name*
*Bouteloua gracilis ‘Blonde Ambition’	Blonde Ambition Blue Grama Grass
Calamagrostis acutiflora ‘Karl Foerster’	Karl Foerster Feather Reed Grass
Calamagrostis acutiflora ‘Overdam’	Overdam Feather Reed Grass
*Carex pensylvanica	Pennsylvania Sedge
*Panicum virgatum ‘Shenandoah’	Shenandoah Switch Grass
*Sporobolus heterolepis	Prairie Dropseed
*Sorghastrum nutans ‘Indian Steel’	Indian Steel Indian Grass
*Schizachyrium scoparium	Little Bluestem

Perennial Flowers, Groundcover, and Bulbs

Scientific Name	*Common Name*
*Aster Novae-angliae ‘Vibrant Dome	Vibrant Dome Aster
*Asclepias tuberosa	Butterfly Milkweed
Coreopsis verticillata ‘Moonbeam’	Moonbeam Threadleaf Coreopsis
*Echinacea ‘Pow Wow Wildberry’	Pow Wow Wildberry Coneflower
*Eupatorium ‘Phantom’	Phantom ‘Joe Pye Weed
Hemerocallis species	Daylilies
Hosta ‘Blue Angel’	Blue Angel Hosta
Hosta ‘Francee’	Francee Hosta
*Iris cristata	Crested Iris
*Iris virginica var. shrevei	Blue Flag Iris
Iris sibirica ‘Ceasar’s Brother’	Ceasar’s Brother Siberian Iris
*Liatris spicata ‘Kobold’	Kobold Blazing Star
Liriope spicata	Creeping Lilyturf
Leucanthemum x superbum ‘Snowcap’	Snowcap Shasta Daisy
Narcissus ‘Dutch Master’	Dutch Master Daffodil
Nepeta x faassenii ‘Walker’s Low’	Walker’s Low Catmint
*Rudbeckia fulgida ‘Goldsturm’	Goldstrum Black-eyed Susan
Salvia nemorosa ‘May Night’	May Night Sage

* Native plant species.

- Use of other species will be allowed as approved by the College.
- All trees are to conform to the American Nursery Stock Standards. Upon installation, trees within the main campus area should not be less than the following sizes:
  - Shade Tree: 2-1/2 inch caliper minimum, as measured 48 inches above grade
  - Evergreen Tree: Six (6) feet height minimum
  - Ornamental Tree: 1-3/4 inch caliper minimum, as measured 48 inches above grade (single-stem) or six (6) feet height minimum (multi-stem)
- Typically, trees are to be located a minimum of ten feet from the edge of the sidewalk or pavement. Shade trees with larger canopies at maturity should be positioned greater than ten feet away.
- Plant choices for the center of campus could be made to develop a learning opportunity for students. Species can be grouped or sorted in meaningful ways, ie. plants from a certain region or country could be grouped together. Similarly, native plants could be grouped in other areas. Information could be provided by tours, labels, QR codes, and/or brochures.
- For areas outside the central campus, where forest management and enhancement are recommended, and where prairies are being established, only native species and or native ecotypes should be used.
- For courtyards and other small areas within the campus, planting should be done to suit the character and purpose of each space.

PLANT MAINTENANCE

Maintaining plants potentially involves a myriad of functions, from establishing fresh new plants to managing aging plants as they deteriorate. Day-to-day tasks often involve watering and weeding. Seasonal activities include pruning, trimming, and control of invasive plants. From time-to-time treatment of insects and disease, control of natural areas, and removal of dead or dying trees is necessary.

Maintenance activities should be done under the watchful eyes of trained and experienced individuals. Left unnoticed, insects and disease can quickly spread. A lack of soil moisture or excess water can kill plants outright or weaken them allowing insects and disease to invade. A person experienced in management will likely notice irregular in plants before they are seriously damaged or spread problems to other plants.

Understanding the site conditions, selecting appropriate plant species, and proper installation can reduce the need for future maintenance.

Site Conditions. Prior to selecting plants, site conditions that impact plant growth should be considered such as soil content, soil compaction, soil pH, prevailing winds, sun and shade conditions, heat transfer from nearby pavements and structures, and other plants in the vicinity.

Plant Selection. Species should be those that are adapted to the site conditions or that can tolerate the existing conditions after improvements are made. Selected plants should be healthy and vigorous.

Planting. Plants should be installed at optimum times, generally spring and fall, avoiding the hot summer weather. Plants should be installed correctly and given optimum attention during their establishment.

The following sections highlight critical aspects of plant installation and maintenance. Additional information about these pointe and others is readily found in publications and on-line. When faced with conditions that are not fully understood, we recommend research and consulting with experts to determine the best practices.

Trees

Installation

- Determine tree species suited to the specific site conditions and determine if special treatment is needed.
- Select healthy trees with roots or root balls sized appropriately.
- Over-excavate planting holes.
- Test the hole for percolation and provide for drainage if necessary.
- Install plants at the levels they were originally grown.
- Backfill and tamp topsoil in lifts and form ridges of soil around backfill area to hold water.
- Water immediately to consolidate backfill. As a rule of thumb, water every 4 days providing 10 gallon or the equivalent considering rainfall, and water one year for each 1” diameter of tree.
- Mulch the backfill surface preferably with wood mulch to conserve soil moisture.

Pruning

- Trees should be “limbed-up” as they grow so the tree canopy is the appropriate height for the location and purpose of the tree. Along a street or sidewalk, canopy heights should allow vehicles and people to pass under. In open areas trees can be left with lower branches provided visibility is maintained for security reasons.
- Trees should be pruned to remove dead or unhealthy sections, crossing branches, sharp crotches, and erratic grow that is detrimental to the long-term health or appearance of the tree.
- Species should be pruned at optimum times, for instance oak trees should be pruned only during winter to minimize the risk of Oak Wilt disease.
- Pruning should be done by a licensed arborist or an experienced individual following arborists’ standards.

Monitoring

- Be sure that trees are not damaged by mowers or other equipment. A mulched area around each tree will hold moisture in the soil and provide a mowing buffer to prevent damage to tree trunks. If construction activity is planned near existing trees, fencing and other methods should be used for tree protection.
- Check trees regularly for dying branches, lose bark, damaged or wilting leaves, etc. that could indicate the presence of insects or disease. If the cause cannot be readily determined, a tissue sample can be sent to a botanical laboratory for identification. Treatments should be done promptly as prescribed by knowledgeable individuals.
- Observe trees for proper growth and health. Stunted growth or off-color leaves may indicate lack of sufficient moisture, adverse soil pH, poor drainage, etc. Provide remedial treatments that might be available.
- Large dead or dying trees can be hazardous particularly in heavily used areas and should be removed promptly. Trees that have lost major limbs from disease or storms may also need to be removed. Replacement trees of the same or difference species could be considered.

Shrubs

Installation

- Determine shrub species suited to specific site conditions and determine if special treatment is needed.
- Select healthy shrubs with roots or root balls sized appropriately.
- Over excavate planting holes.
- Test the hole for percolation and provide for drainage if necessary. If shrubs are in a cluster or row, one drainage sump can serve several plants.
- Install plants at the levels they were originally grown.
- Backfill and tamp topsoil in lifts. Form ridge of soil around backfill of one or multiple plants to hold water.
- Water plants immediately to consolidate backfill. As a rule of thumb, water every 4 days with the equivalent of 5 gallons of water considering rainfall.
- Mulch backfill area preferably with wood mulch to conserve soil moisture.

Pruning

- Deciduous shrubs should be pruned when needed to remove dead or unhealthy sections, crossed branches, and erratic grow that is detrimental to health or appearance of the plant. In late fall or early spring, some species can be cut to within a few inches of the ground to restore plants' youthful and healthy form.
- When needed, evergreen shrubs should have branches pruned to allow light into the center of plants, keeping the entire shrub healthy and vigorous.
- Replenish mulch when needed to maintain soil moisture and reduce mowing time.
- Pruning should be done by a licensed arborist or an experienced individual following arborists' standards.

Herbaceous Material and Ground Covers

- Although ground covers are often considered low-maintenance, a certain amount of weeding is inevitable particularly during its establishment. Ground cover species should be carefully selected for the location it will occupy. Some species spread far beyond their boundaries requiring frequent pruning to keep it in bounds. Vining species should not be allowed to grow on walls where they damage mortar and siding, or on trees or other plants where they can overtop and kill the specimens.
- Ground cover should be planted into a prepared bed and mulched to hold soil moisture and control weed growth. During establishment, areas should receive 5 gallons of water per square yard via watering and/or rainfall. Beds can be treated with pre-emergent herbicide to control weed germination, though treatment should be done once plants are established.
- Ground cover should be monitored for insects and disease and treated as necessary.
- Leave attractive plant structure through the winter and remove dead foliage in late winter/early spring before new growth emerges.
-

Turf Seeding

Seeding for mowed turf should be scheduled to coincide with optimum climatic times of the year, with a late-summer seeding typically the best. Areas that can be irrigated or watered could have a broader seasonal window. Seeded areas should generally have 6-8" of topsoil in place. Seed mixes should be selected to suit the conditions and fertilizing during establishment should be planned. A turf-type tall fescue seed mix is recommended due to its good drought and wear tolerance and low maintenance requirements. A mix of three or more varieties of turf type-tall fescue with one of the varieties being rhizomatous is preferred, see recommended seed mixes below.

Turf-Type Tall Fescue Lawn Seed mix (high maintenance – Mow weekly)

* Turf-Type Fescue – 200 lbs./acre: mixture of three or more of the following varieties with one variety being a rhizomatous tall fescue (RTF): Labarinth (RTF) Tall Fescue, Barrington Tall Fescue and Barrera Tall Fescue.

** Blue Grass – 20 lbs./acre: one or more of the following varieties: Barrister, Chateau, Destiny, Enmundi, Gnome, Marquis, and Suffolk.

*** Rye Grass – 20 lbs./acre: mixture of three or more of the following varieties: All Star, Caddie, Caliente, Dasher II, Diplomat,, Pennant, and SR 4000.

**** Creeping Red (Fine) Fescue – 20 lbs./acre: either Dawson or Pennlawn.

Note: Alternate varieties, selected for their drought-hardiness, insect and disease resistance, good color, low-growth character, and availability can be considered.

Fescue Area (Medium Maintenance – Mow Monthly)

- Blend of 5-6 Fescues including sheep fescue, chewings fescue, hard fescue, and creeping red fescue. The breakdown of the species should be about even at 15-20% each.
- Sow seed at a rate of 220 lbs./acre

Eco-Grass Low Maintenance Lawn Blend

Supplied by Prairie Moon Nursery (32115 Prairie Lane, Winona, MN 55987, 866-417-8156) or equivalent.

Turf Maintenance

- Turf is typically mowed on a regular basis during the growing season. It is often managed with chemicals to encourage growth, suppress weeds, kill insects, treat mildew, etc.
- Many grass species are available as seed or sod, and many hybrids have been developed for particular niches. Blue grass turf, as a cool-season grass, can go dormant and brown-out during the heat of Illinois summers without supplemental watering.
- Turf-type fescue is deep-rooted reaching soil moisture to stay green without supplemental watering. The rhizomatous hybrids allow the plants to spread, a great advantage in most circumstances. It is one of the species most tolerant of both sun and shade conditions.
- Warm-season grasses tolerate heat through the summer but do not green-up until the ground warms, usually in early May. The most common in our area is Buffalo Grass that has a short stature, 6-8" high and is typically mowed only once or twice a season to remove the flowering "flags" that rise above the leaves.

Plant Installation and Maintenance

Prairie Seeding

- Marginal land and farm fields may be converted to native prairie area. Prairie development is a 3 to 5 year process.
- Soil preparation may or may not involve disturbance of the soil surface.
- Seed selection should include grasses and forbs, and species and rates should be selected with an understanding of the competition among species.
- The optimum seeding time is late spring for these are warm-season species. Monitoring and maintenance by knowledgeable individuals are essential.
- Lower growing native grasses and forbs are often desired for a clean appearance and visibility. This criteria can be achieved by use of the seed mixes listed below.

Buffalo Grass Mix

- Buffalo Grass – 100 lbs./acre, Spring Oats or Rye (Annual) – 50 lbs/acre

Low Prairie Mix

- Knee-Hi Mix – Species less than 24” high and provides neater appearance than taller mixes
- Low-Growing Mix – Species less than 16” high and provides a manicured appearance
- Supplied by LaCrosse Seed and distributed locally, 2541 Commerce Street, La Crosse, WI 54603

Prairie Maintenance

- Prairie plants, both grasses and forbs, are often used as landscaping plants in rows, clusters, or garden areas. Prairie species are durable. With deep roots they tap into moisture deep in the ground. Prairie species should be selected for the soil conditions and moisture availability. Generally, prairie types are divided into aquatic (wet), mesic (intermediate), and xeric (dry). Like traditional herbaceous plants, they should be planted, watered, and kept weeded during establishment.
- Some prairie species remain attractive throughout the year. These should be cut off in the late winter in preparation for the new growth. Other prairies plants can be cut in the late fall after they die back.
- Prairie areas are comprised of a variety of native grass and forb species. Prairies are valuable for the habitat they provide, for their ability to recharge groundwater, for their preservation of open space, and protection of rare plants they often contain. Establishing a prairie requires effort and patience over a period of time. As the prairie species establish weeds and non-natives need to be edited out by naturally evolving processes, physical removal, and/or chemical treatment.

Wetland Development

Drainage swales and areas around Birky Pond could be converted to wetlands in keeping with the desire to promote sustainable environments. Development of wetlands may include seeding with wetland species as well as planting of plugs. The recommended minimum plant plug size is 3-1/2” deep. Protection from geese and other birds is likely necessary.

Reforestation

Reforestation of select areas and planting along existing forest areas to create an irregular, transitional forest edge is proposed. Site preparation to remove undesirable species and planting of various size woody species should be done optimally in fall. Tree sizes in reforestation areas can be smaller than those planted on the main campus. Bare root or container grown trees are recommended in reforestation areas. Protection from deer is likely necessary

Enhancement Projects, Priority Listing

1. Millennium Boulevard
2. Building Entry Plazas and Terraces
3. Sidewalk Connections
4. Building Entry Enhancements
5. Wayfinding and Signs
6. Pedestrian Spine
7. Outdoor Commons
8. Outdoor Use Area
9. Constitution Trail Connections
10. Sculpture and Site Elements

Maintenance Projects, Priority Listing

1. Prune trees
2. Improve drainage
3. Regrade sidewalk edges
4. Screen utilities and dumpsters
5. Provide for recycling at dumpsters
6. Replace tinted concrete at SCB with trees and plant beds
7. Replace birch trees with shade trees
8. Replace gravel edges with precast concrete borders
9. Stripe parking lots
10. Replace ornamental trees with shade trees

Millennium Boulevard