

# CONTOUR

## 2012-2013

University of Wisconsin - Madison  
Department of **Landscape Arch**itecture

edited by Eric J. Schuchardt



## PREFACE

Welcome to *Contour*, our second annual catalog of senior capstone projects, and the University of Wisconsin-Madison's Department of Landscape Architecture profile of student work. This issue focuses on a select group of capstone projects completed during the 2012-2013 school year.

The two-semester capstone provides students the opportunity to demonstrate their skills, knowledge and ability to resolve a "real-world" design problem. All students in the accredited undergraduate program are required to pass the capstone in order to graduate.

The capstone coordinator pairs students with a client(s) and related project.

Most projects fall within community design, urban redevelopment, conservation, or regional design. Since the 1980s, our capstone projects have addressed the needs of more than 225 client organizations, the majority of these being Wisconsin communities representing more than 55 counties. In addition, past capstone projects have occurred in Minnesota, Texas, New York and Illinois.

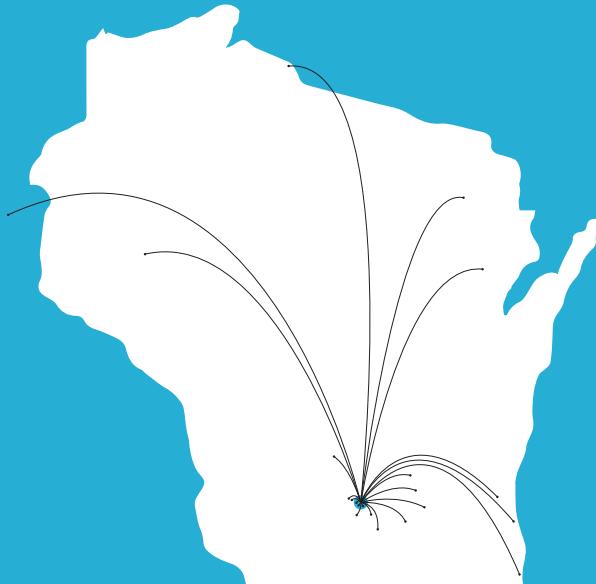
Please enjoy this issue of *Contour* and we encourage you to share your comments with the Department. We are always looking for complex and engaging projects for students to undertake.

John Harrington, Chair  
Department of *Landscape Architecture*

Fall 2013

# TIE

<b>Badger, Mark</b>	Stoughton, WI
<b>Bodurtha, Kristen</b>	Shorewood Hills, WI
<b>Brochtrup, Stacey</b>	Columbus, WI
<b>Christensen, Kevin</b>	Anoka, MN
<b>Dhein-Schuldt, Jeffrey</b>	Milwaukee, WI
<b>Eastman, Elyse</b>	Waterloo, WI
<b>Farrell, Samantha</b>	Kenosha, WI
<b>Groh, Emily</b>	Wabeno, WI
<b>Hong, Theresa</b>	Cambridge, WI
<b>Janicki, Sylvia</b>	Middleton, WI
<b>Koberle, Kate</b>	Aztalan State Park, WI
<b>Krueger, Kristin</b>	Chippewa County, WI
<b>O'connor, Patrick</b>	Menomonee Falls, WI
<b>Rask, Elisabeth</b>	Lena, WI
<b>Schimek, Jody</b>	Madison, WI
<b>Schmidt, Kurt</b>	Madison, WI
<b>Xie, Zehao</b>	Hurley, WI
<b>Yeska, Kevin</b>	Madison, WI



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E

## The Wisconsin Idea

*The Wisconsin Idea is the principle that the university should improve people's lives beyond the classroom. It spans UW-Madison's teaching, research, outreach and public service.*

-University of Wisconsin-Madison

Most of us understand The Wisconsin Idea, and we often live it well after graduating from University of Wisconsin-Madison. It is a simple yet powerful concept that dates back to 1912, and it should not be overlooked, especially since its meaning is still relevant over 100 years later.

This year's senior class proved, yet again, they are ready to represent The Wisconsin Idea as they enter the profession of landscape architecture to become tomorrow's design and planning leaders.

Over the past year, our 2013 Capstone class took part in service projects that provided design and planning

assistance to various communities from southeastern to northwestern Wisconsin. Students worked in towns with populations as small as 500 to cities the size of Milwaukee. Their projects generated progressive design and planning strategies ranging from urban waterfront and business district developments, to rural silica sand mine reclamations and state park restorations.

Each of these projects would not have been possible without the generous support of time, knowledge, and resources from our capstone clients, guest lecturers, and supporting faculty members within the various departments of the University of Wisconsin-Madison.

Special thanks to Deborah Griffin for her assistance throughout the year, and to Stefan Golos for helping to organize this year's Contour publication.

I hope you enjoy the publication, and please contact our Department if you have any suggestions for future capstone projects.

Eric J. Schuchardt, MLA, Associate ASLA

Editor, Capstone Coordinator & Course Instructor  
Department of [Landscape Architecture](#)

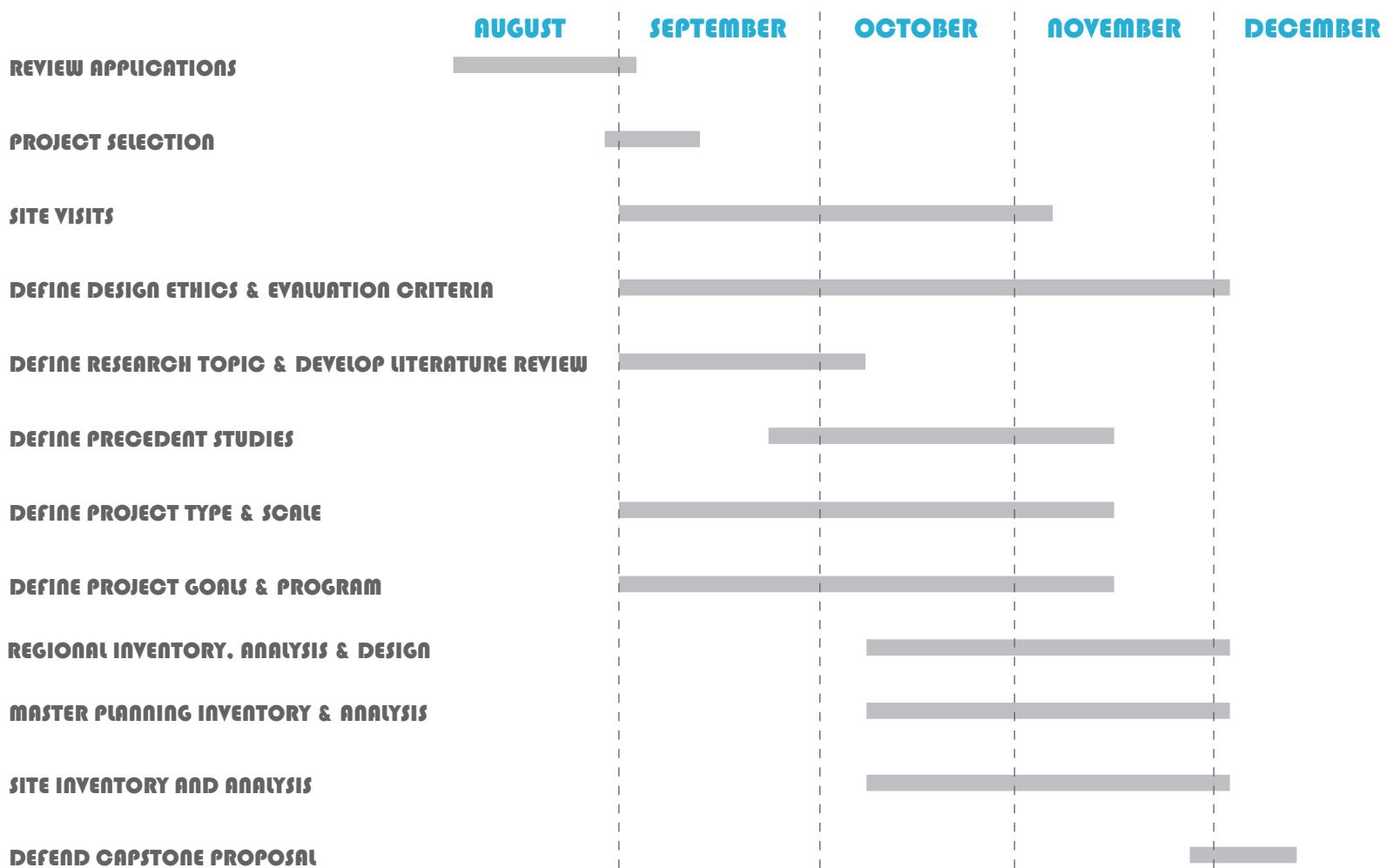
## **SEMESTER 0 I**

Capstone Proposal - Research & Analysis

Instructor: Eric J. Schuchardt, MLA, Associate ASLA

The first semester is all about developing the Capstone proposal from a regional to site scale. Throughout the semester students make several site visits with clients to gain a better understanding of local conditions and the client's expectations. The final proposal document

is grounded in research and includes literature reviews, precedent studies, programmatic development, and inventory and analysis that address issues from ecology to public/private partnerships.



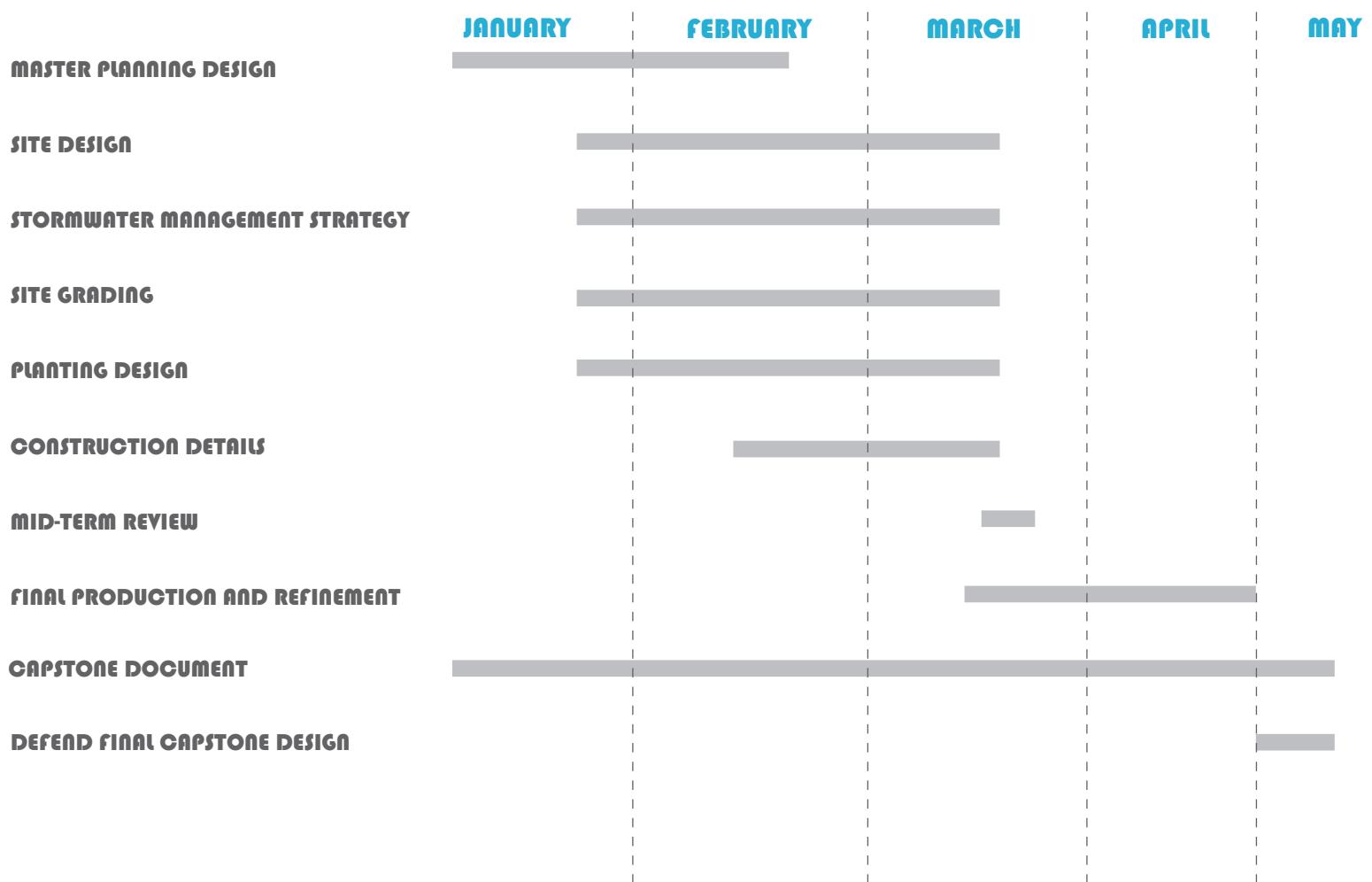
## SEMESTER 02

### Capstone Design

Instructor: Eric J. Schuchardt, MLA, Associate ASLA & Shawn T. Kelly, PLA, FASLA

The second semester is less about research and analysis, and more about executing the design of the previous semester's proposal. Eventually this leads to planting, grading, drainage, details, and open space design schemes that are presented to the public dur-

ing the month of May. Each community also receives a comprehensive design and planning Capstone document that captures all the work produced from both the fall and spring semesters.





## YAHARA RIVERFRONT STATION

Student: Mark Badger

Location: Stoughton, WI

Client: Stoughton City Council

Steering Committee: Donna L. Olson & Rodney Scheel

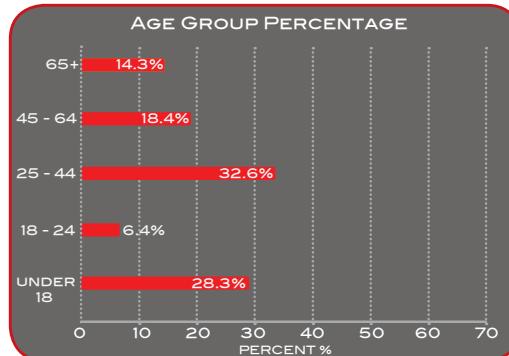
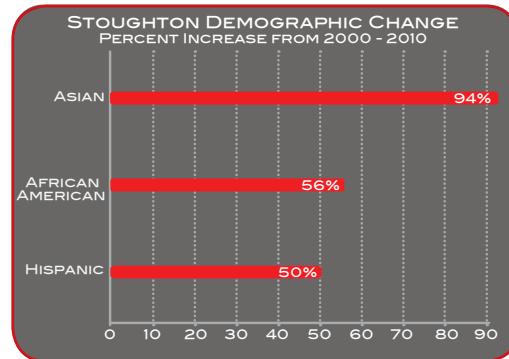
Research Topic: Socioeconomics

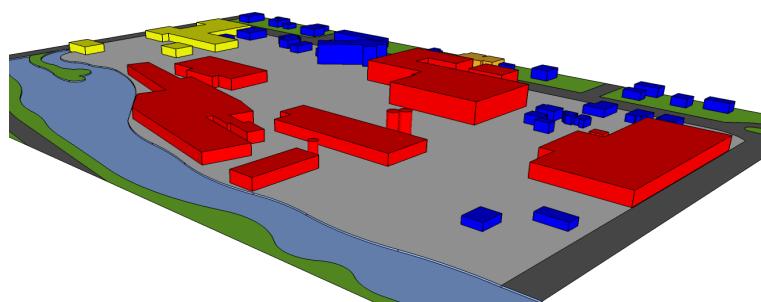
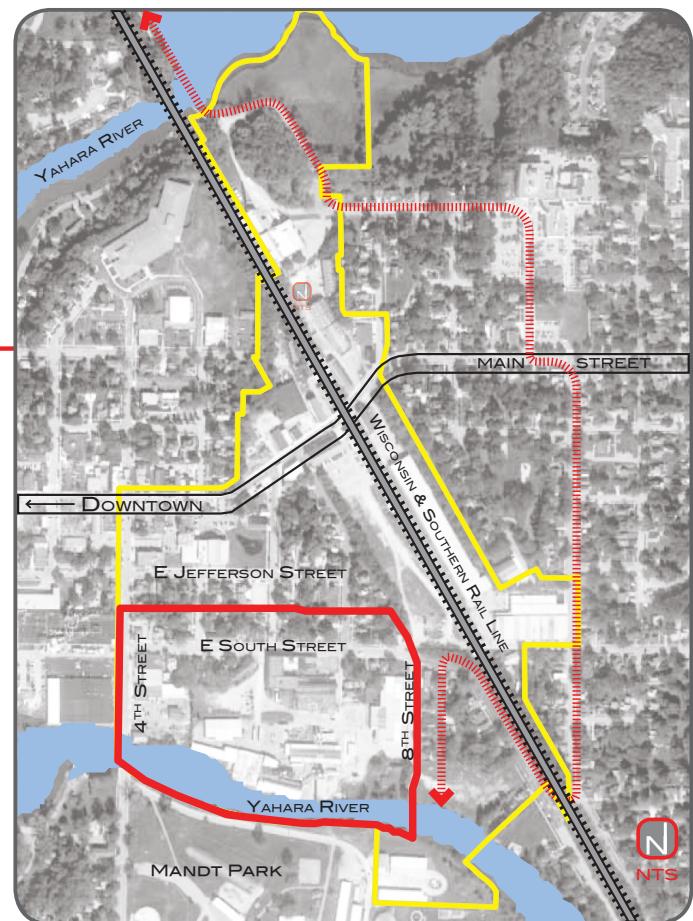
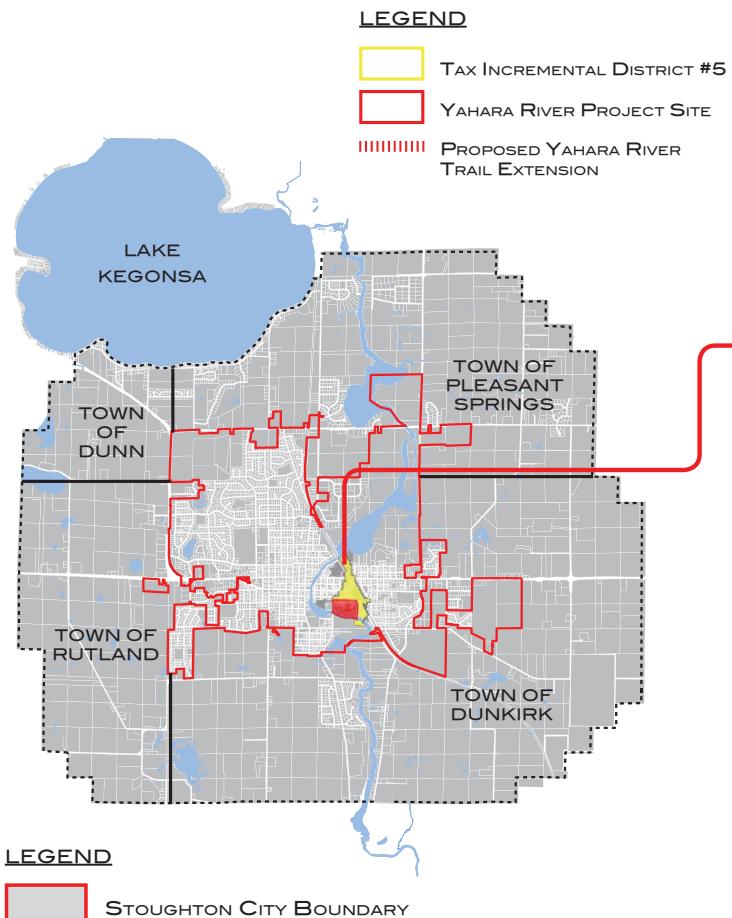
Type of Project: Waterfront Revitalization

Mark's project investigates how ideas of socioeconomics may inform the design of a new mixed-use urban housing development.

The primary goals of the project include:

- Revitalizing a 26-acre industrial parcel adjacent to the Yahara River
- Improving the riparian ecosystem
- Creating a culturally diverse neighborhood
- Providing a pedestrian oriented urban open space integrated into a regional trail system
- Maintaining visual and physical connections to existing site adjacencies





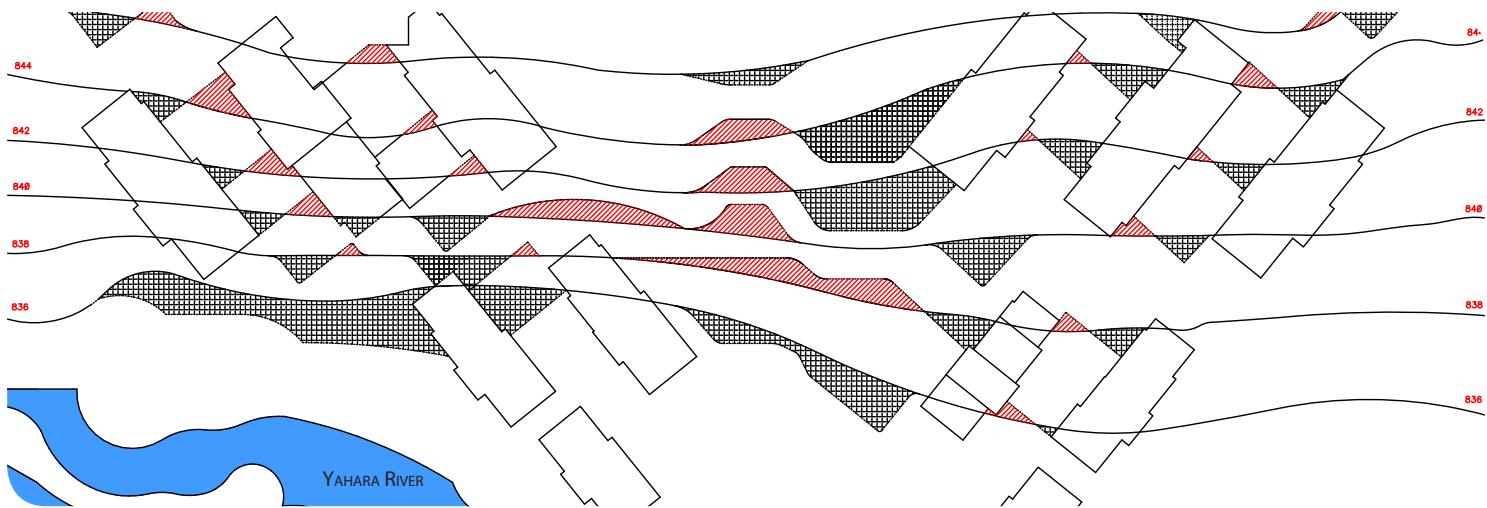
Massing model of existing zoning



Riverfront trail connection



Community master plan



Cut and fill diagram



Site elevation



Site elevation



Entry plaza



## 'NATURAL' EDUCATION

Student: Kristin Bodurtha

Location: Shorewood Hills, WI

Client: Village of Shorewood Hills

Steering Committee: Corey George

Research Topic: Environmental Education

Type of Project: Park & Community Design

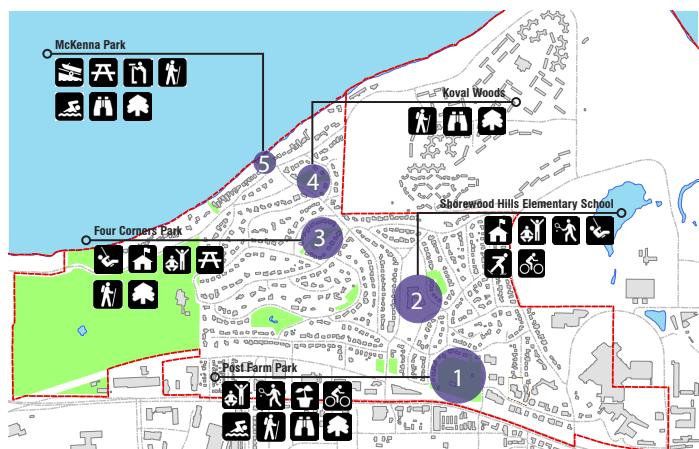
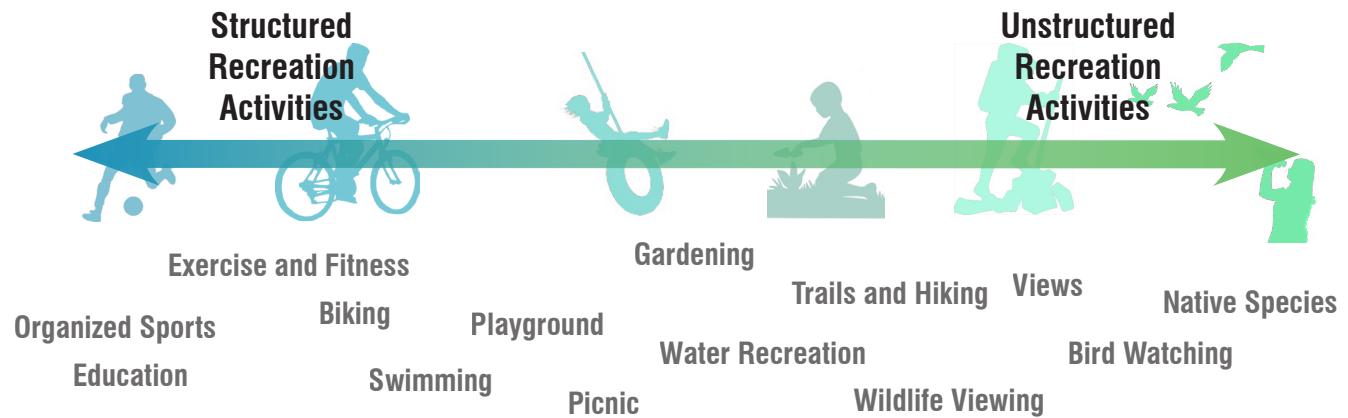
Kristin's project investigates how the ideas of environmental education and landscape ecology may inform community design.

The primary goals of the project include:

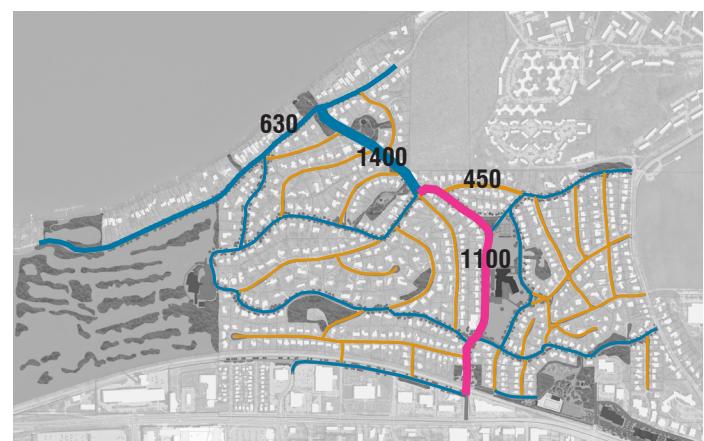
- Creating outdoor spaces that educate people about their local environment
- Improving the mobility between existing parks for pedestrians, bicycles and fauna
- Providing new wayfinding opportunities
- Developing a comprehensive park management plan



Community site plan



Neighborhood park programming



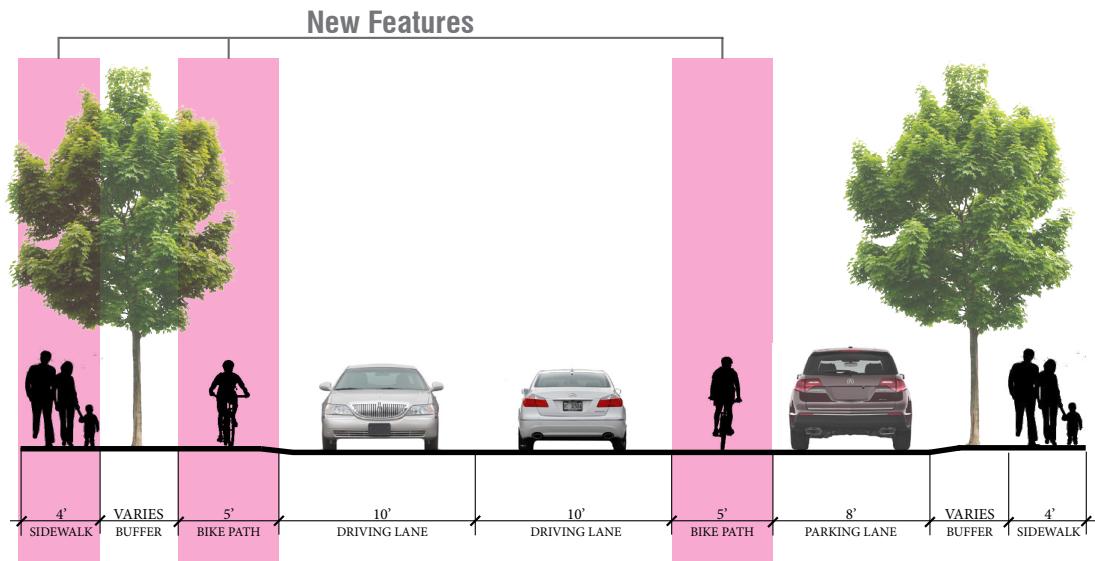
Daily traffic counts (vehicular)

## **High Density Roads**

- 1-way Bike Lanes
- 2 Sidewalks
- 2 Travel Lanes
- 1 Parking Lane

### **New Features**

- Designated bike lanes
- Additional sidewalk

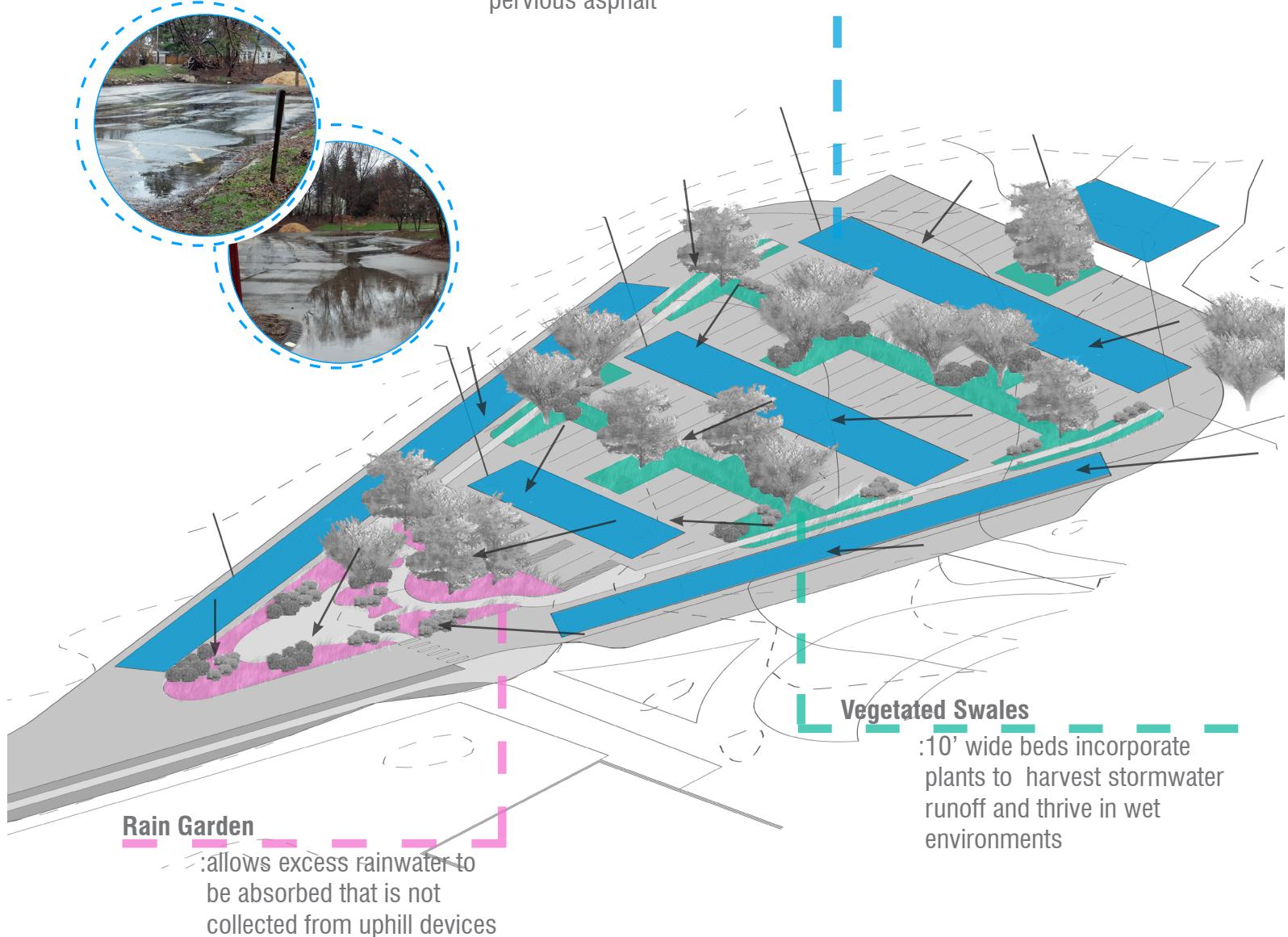


Natural play area



Community garden

## Stormwater Collection Devices





## AN URBAN RENAISSANCE

Student: Stacey Brochtrup

Location: Columbus, WI

Client: Columbus Community Development Authority

Steering Committee: Steven Sobiek & Boyd Kraemer

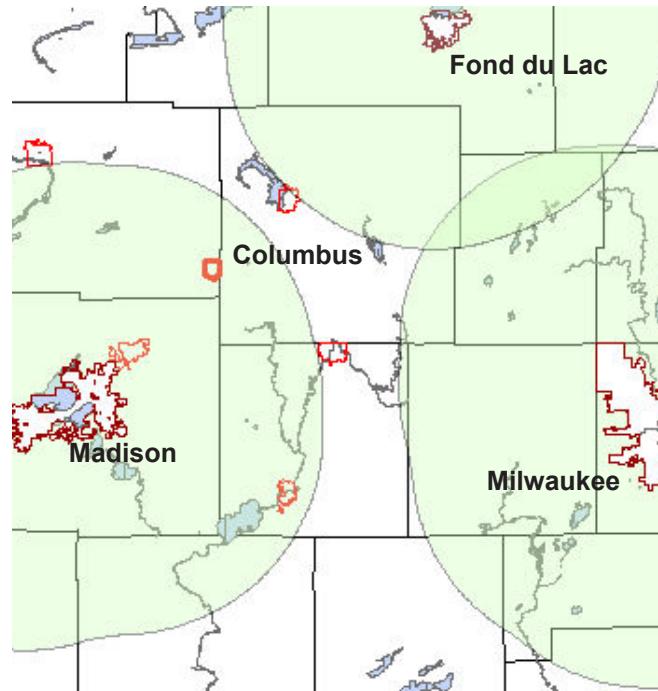
Research Topic: Sustainable Energy and Multi-modal Transportation

Type of Project: Community Redevelopment

Stacey's project investigates how energy sustainability and multi-modal transportation may inform the design of downtown Columbus.

The primary goals of the project include:

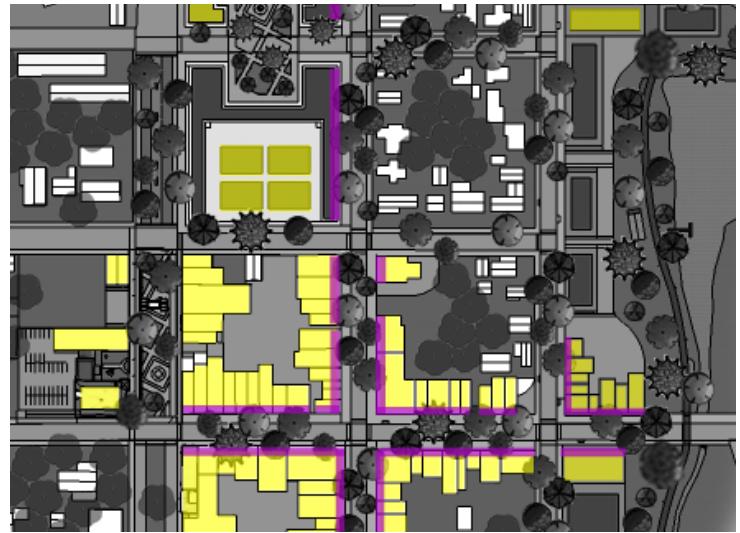
- Evaluating the potential of new urban growth
- Presenting an innovative, practical, and feasible economic and energy sustainability plan
- Integrating solar and wind energy harvesting techniques
- Developing a "complete streets" initiative
- Creating new open spaces for large and small public events



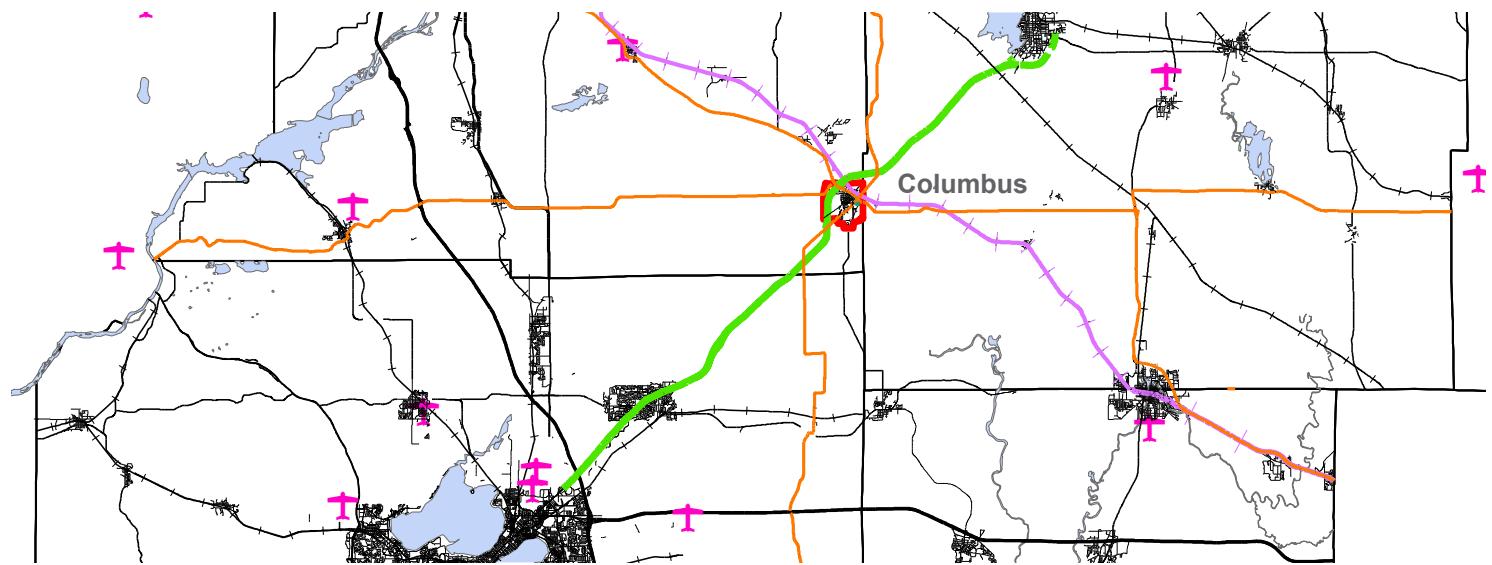
Proximity to urban areas (25 mile diameters)



Community master plan



Proposed renewable energy areas



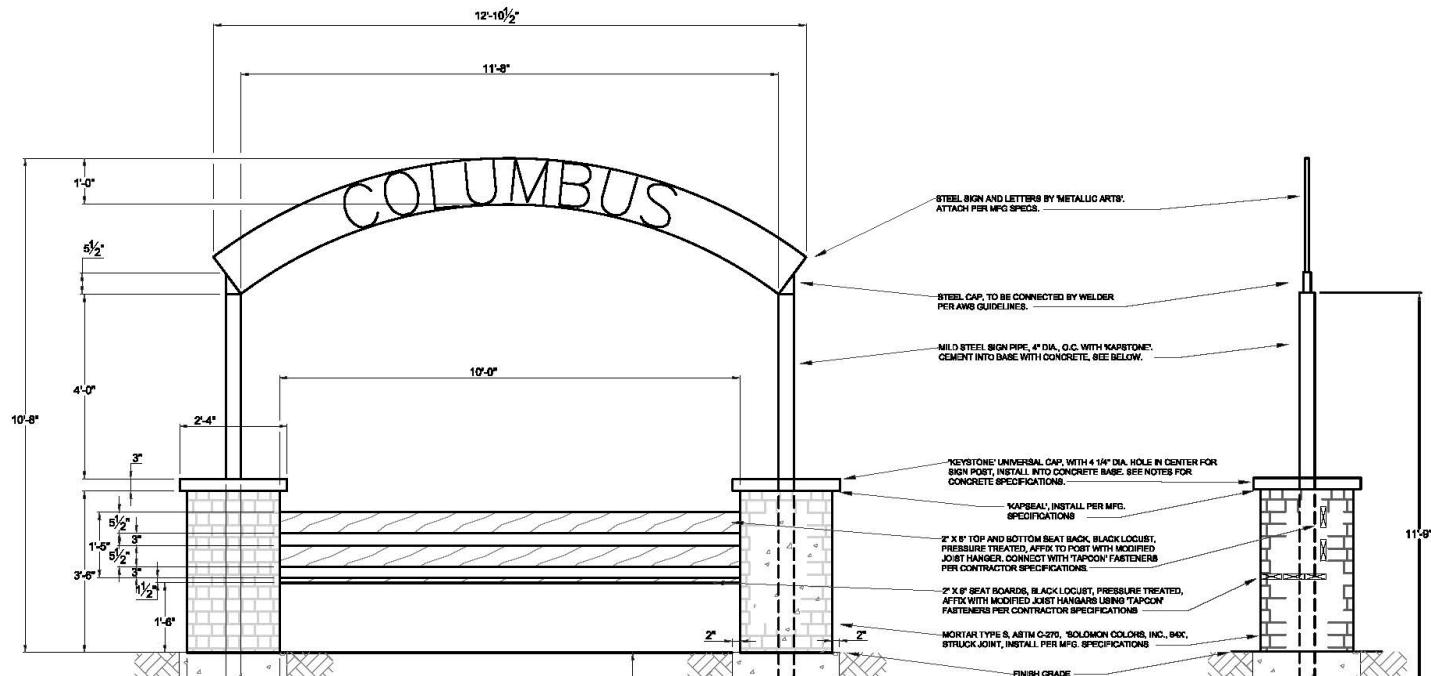
Highway 151  
 Highways 16, 60, 73  
 Amtrak

Airport/Airfield  
 Columbus Boundary  
..... Lamer Bus Route

Regional transit connections



Streetscape enhancements



Detail of entry gate



Entry to Empire Plaza



## RUM RIVER NEIGHBORHOOD DEVELOPMENT

Student: Kevin Christensen

Location: Anoka, MN

Client: City of Anoka Department of Parks & Recreation

Steering Committee: Carolyn Braun & Erik Thorvig

Research Topic: Conservation Development

Type of Project: Suburban Multi-Use Neighborhood

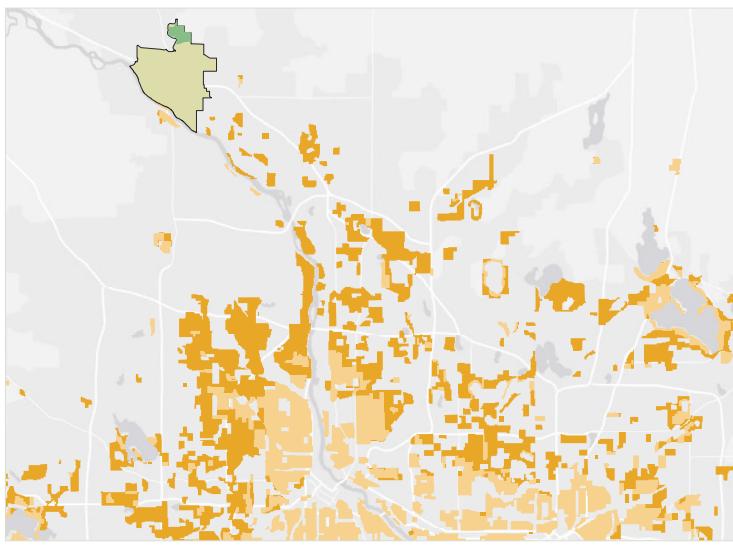
Kevin's project investigates how the ideas of conservation development may inform the design of a suburban multi-use neighborhood and regional activity hub.

The primary goals of the project include:

- Creating non-motorized connections within the site, and expanding them to a regional scale
- Providing a variety of housing types
- Referencing Anoka's character and history through the use of materials and site programming
- Maintaining public access to preserved natural areas that are integrated into new open-spaces

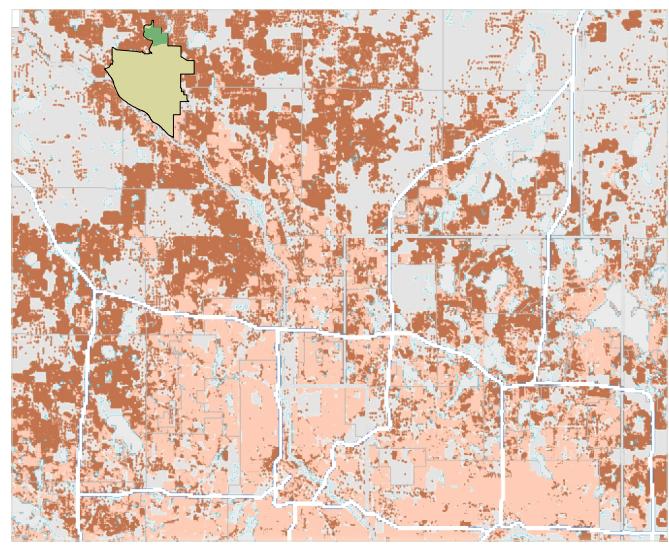


Mixed-use district



1945      1959

Urban growth towards Anoka

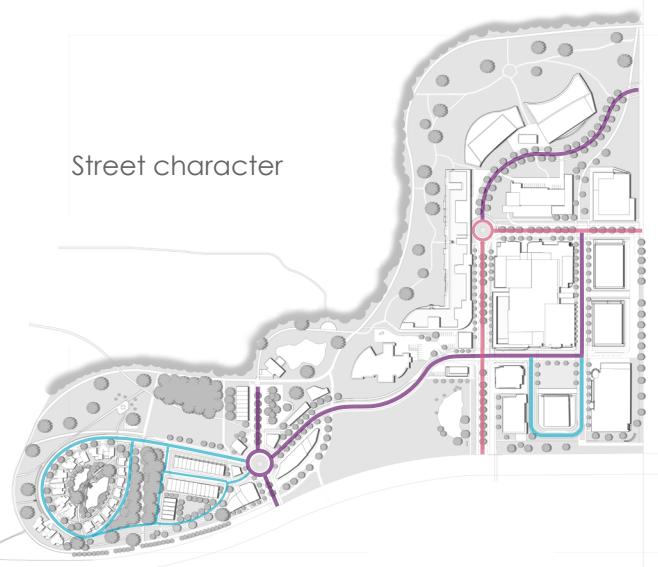


1966      2010

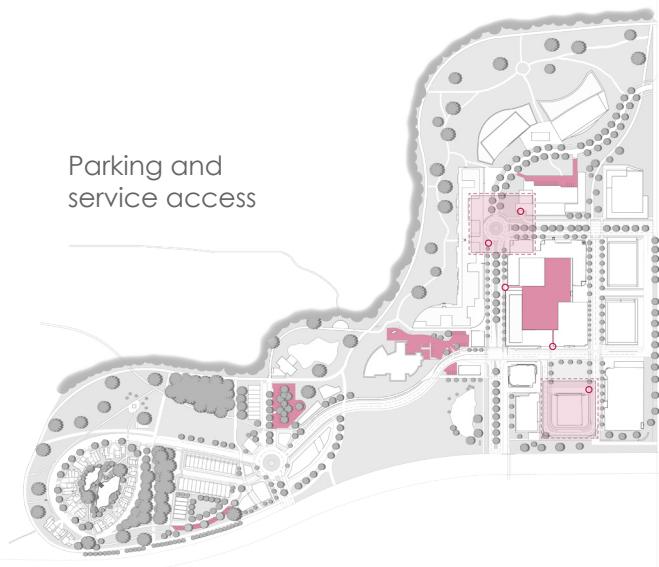


Community master plan

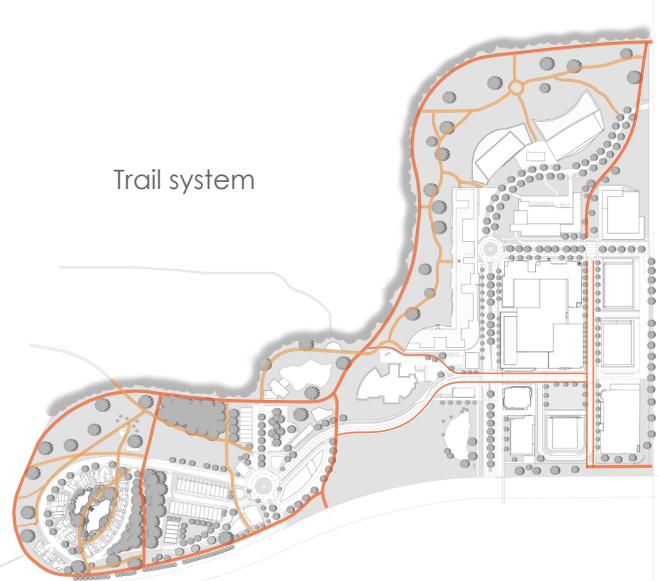
Street character



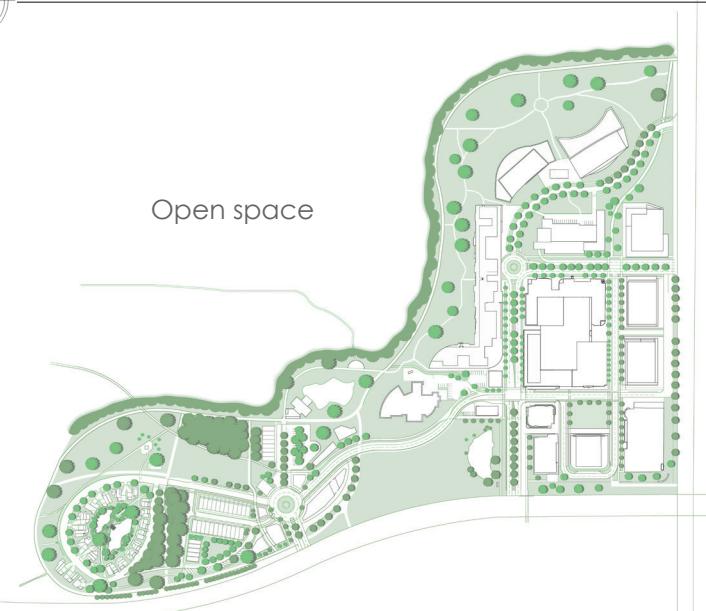
Parking and service access



Trail system



Open space



Community master plan systems



Street improvements



## THE NORTHWEST QUADRANT

Student: Jeff Dhein-Schuldt

Location: Milwaukee, WI

Client: University of Wisconsin - Milwaukee & Quorum Architects

Steering Committee: James Steiner & Allyson Nemec

Research Topic: Sustainability

Type of Project: Campus Design

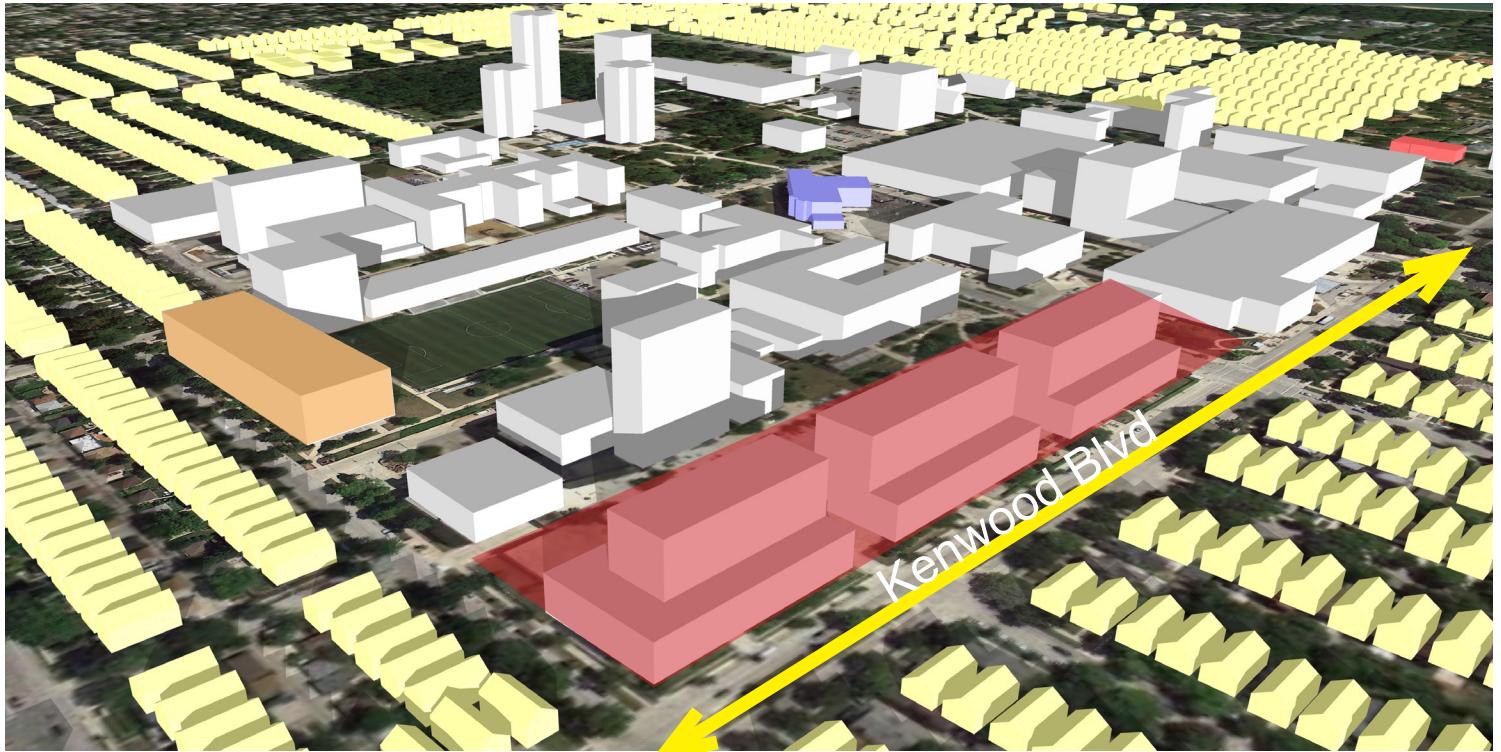
Jeff's project investigates how the ideas of sustainability may inform new campus planning and design initiatives at UW-Milwaukee.

The primary goals of the project include:

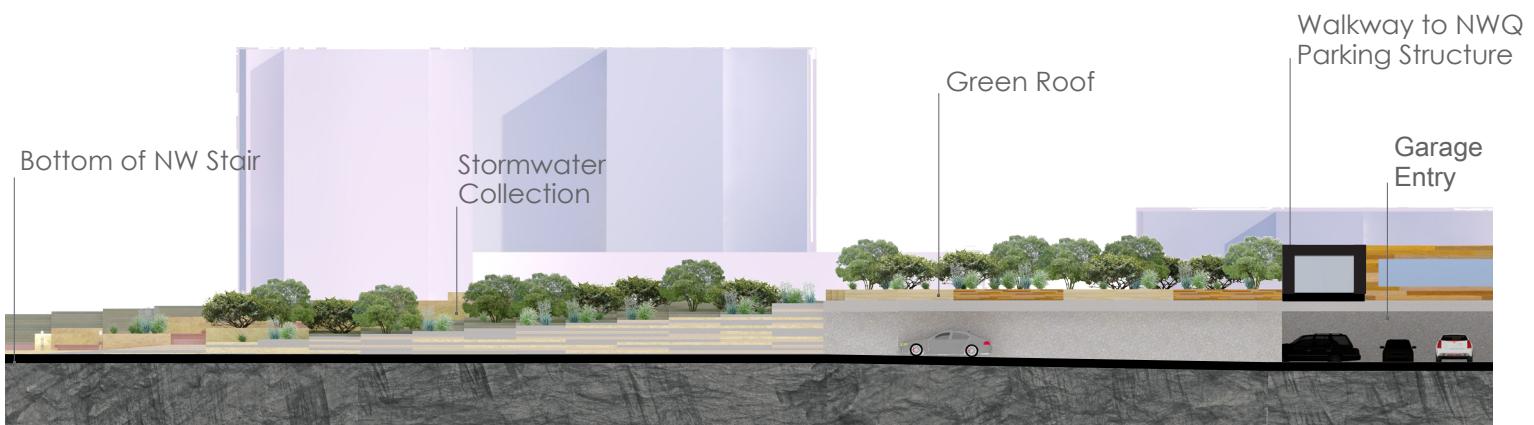
- Creating a campus that relates to adjacent residential neighborhoods
- Providing open spaces that allow for intermingling
- Prioritizing pedestrian connections
- Working with natural features to maximize their functional qualities
- Enhancing connections between indoor and outdoor building environments



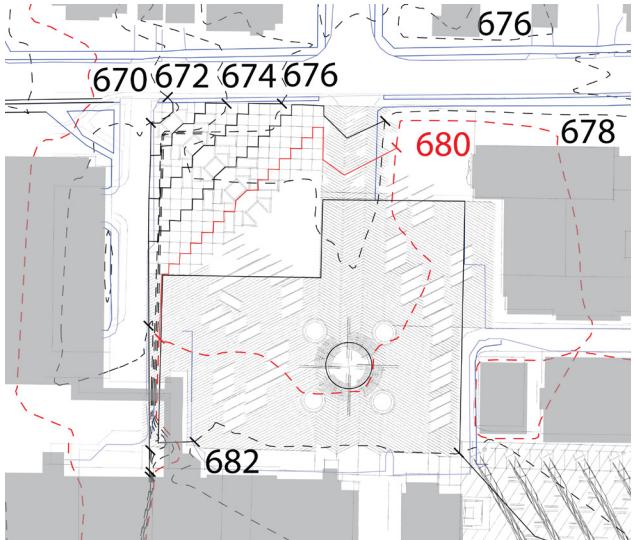
Campus site plan



Higher density proposed along Kenwood Blvd.



Plaza over parking structure



Grading plan diagram



Grand stair



North promenade



Section through grand stair



Plaza fountain



## RECYCLING AN URBAN WATERFRONT

Student: Elyse Eastman

Location: Waterloo, WI

Client: City of Waterloo

Steering Committee: Maurice Hansen, Eric Seidl, Craig Strobel, Gary Yerges, Jeni Quimby, Laura Cotting, Tim Schultz, Bill Springer

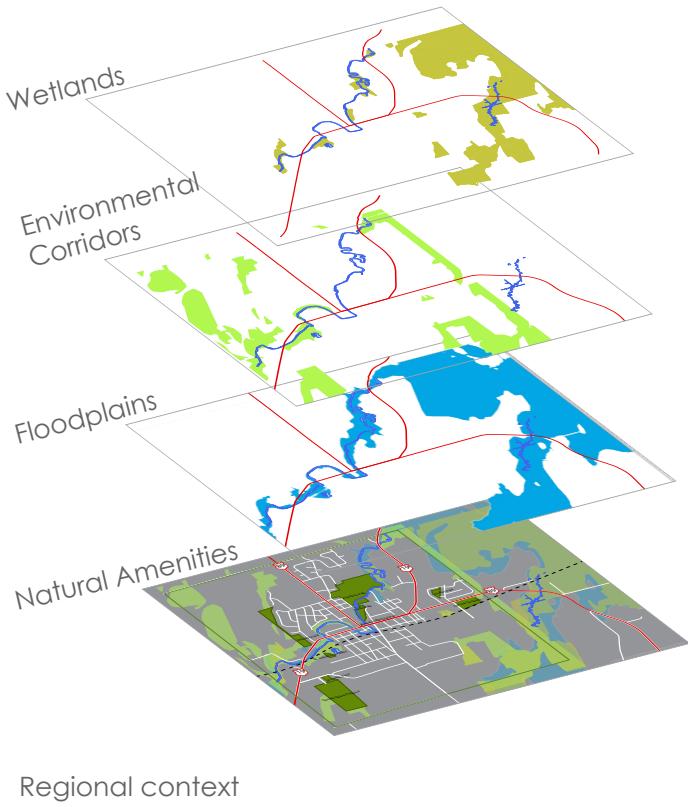
Research Topic: Environmental Ethics

Type of Project: Downtown Waterfront Revitalization

Elyse's project investigates how aspects of environmental ethics may inform the development of a downtown revitalization project.

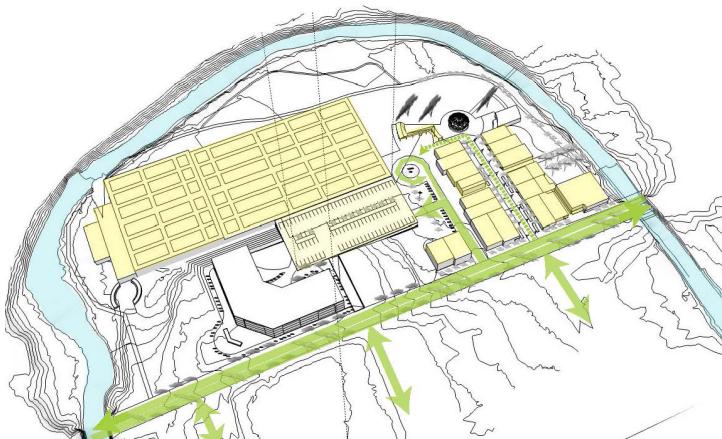
The primary goals of the project include:

- Employing a sustainable community framework
- Integrating riparian restoration strategies with new bicycle trails and recreational programming
- Revitalizing the old Perry-Judd Printing plant site
- Preserving Waterloo's small-town charm
- Diversifying the economic base by introducing new small scale industries

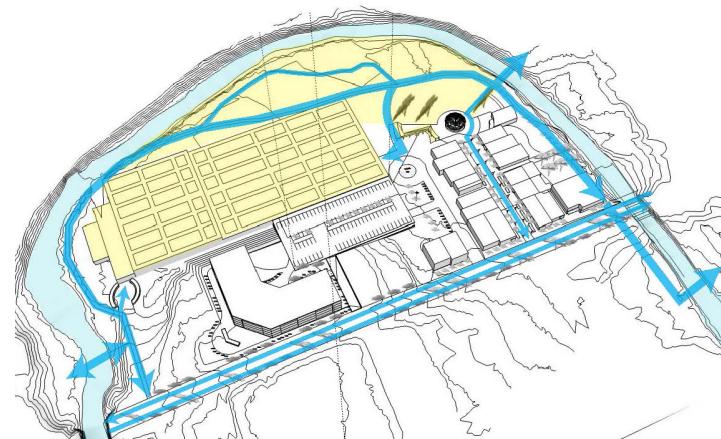




Community master plan



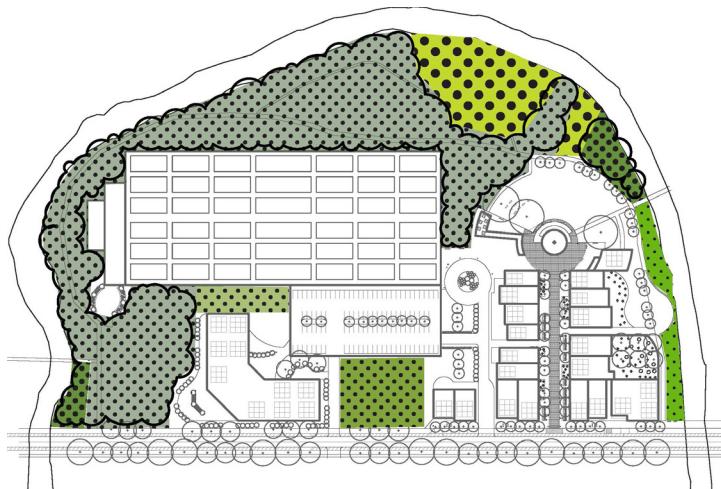
Vehicular circulation



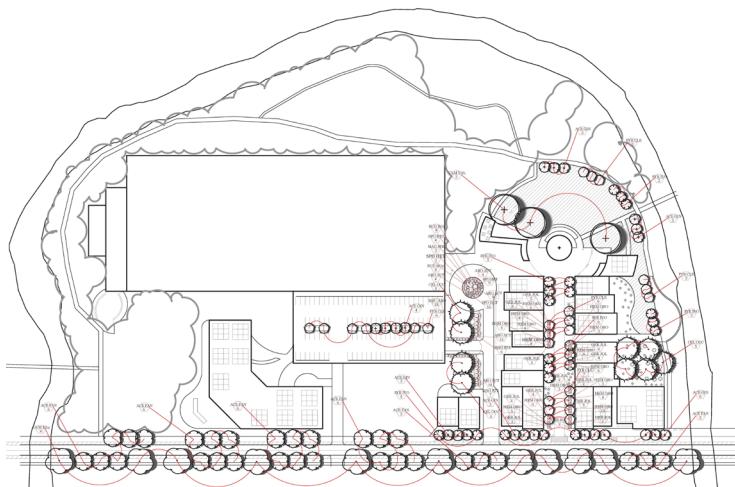
Pedestrian and bicycle circulation

Botanical Name	Common Name	Remarks	Fall Color	Bloom	Shade	Height	Spread
<b>FORESTED, LIGHT UNDERSTORY</b>							
<b>TREES</b>							
<i>Carya cordiformis</i>	bitternut hickory	Not sold at McKay	bright gold		Full sun	60-80	40-50
<i>Fraxinus nigra 'Fall Gold'</i>	Fall Gold black ash	Must have wet soil	gold		Full sun	40-50	20-25
<i>Quercus bicolor</i>	swamp white oak				full sun	50-60 +	50-60
<b>SHRUBS</b>							
<i>Carpinus caroliniana</i>	musclewood	Not sold at McKay. Can't be in constantly wet soils. Use as understory	variable		Part shade	20-30	20-30
<b>SLOPE STABILIZER, WET SOILS</b>							
<b>TREES</b>							
<i>Betula nigra</i>	river birch	Multi-leader form	yellow (fair)		Full sun	40-70	40-50
<i>Nyssa sylvatica</i>	black gum	Not sold at McKay	orange		Full sun	40-50	30-50
<b>SHRUBS</b>							
<i>Cornus amomum</i>	silky dogwood				Part shade	6-10	6-10
<i>Ilex verticillata 'Red Sprite'</i>	Red Sprite winterberry	Winter interest (red fruit from Sept. through winter)		May-June	Part shade	3-10	4-10
<i>Rhus aromatica</i>	fragrant sumac		orange-red to purple		Full sun	3-6	6-8
<b>SHRUBBY SLOPE, WET SOILS</b>							
<b>SHRUBS</b>							
<i>Aronia melanocarpa</i>	black chokeberry	Suckering	wine red	May, white	Part shade	4	4-5
<i>Cornus sericea</i>	redtwig dogwood	Winter interest	yellow to purple	June, cream (okay)	Part shade	7-9	8-10
<i>Viburnum cassinoides</i>	With-rod viburnum	Not sold at McKay	crimson	July, creamy white	Full sun preferred	6-10	6-10
<b>SHRUBBY SLOPE, FULL SUN</b>							
<b>SHRUBS</b>							
<i>Aronia melanocarpa</i>	black chokeberry	Suckering	wine red	May, white	Part shade	4	4-5
<i>Cornus amomum</i>	silky dogwood				Part shade	6-10	6-10
<i>Kerria japonica</i>	Japanese kerria	Not native			Any		
<i>Rhus aromatica</i>	fragrant sumac		orange-red to purple		Full sun	3-6	6-8
<i>Ribes alpinum</i>	Alpine currant	Not native			Any		

Riparian planting schedule



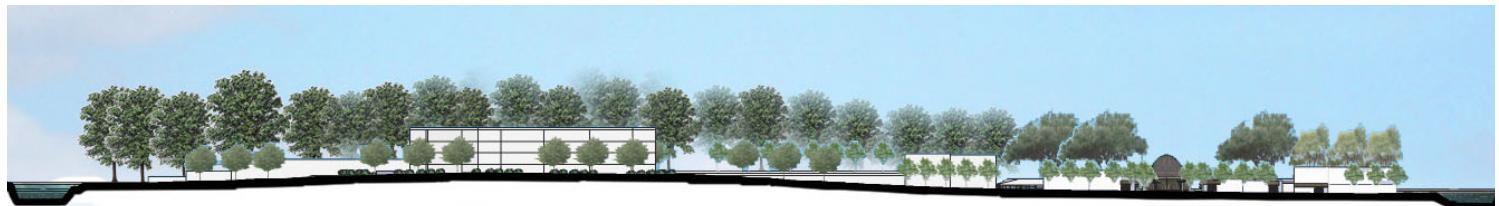
Riparian planting plan



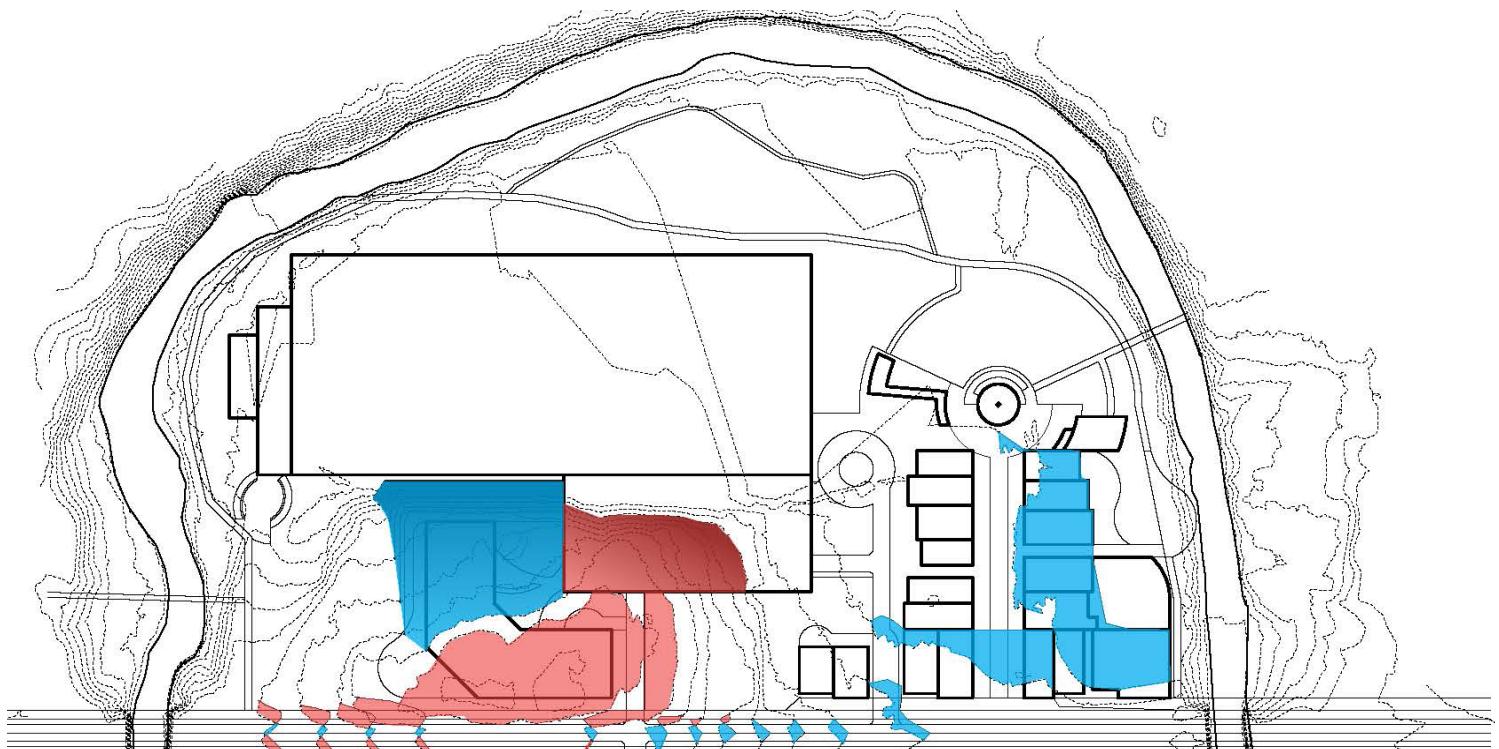
Detailed planting plan



Site section



Site section



Cut and fill grading diagram



## A THERAPEUTIC CAMPUS

Student: Samantha Farrell

Location: Kenosha, WI

Client: Brookside Care Center, Gateway Technical College, & the City of Kenosha

Steering Committee: Ray Arbet, Barbara Larson, Fran Petrick, Stephanie Skiba

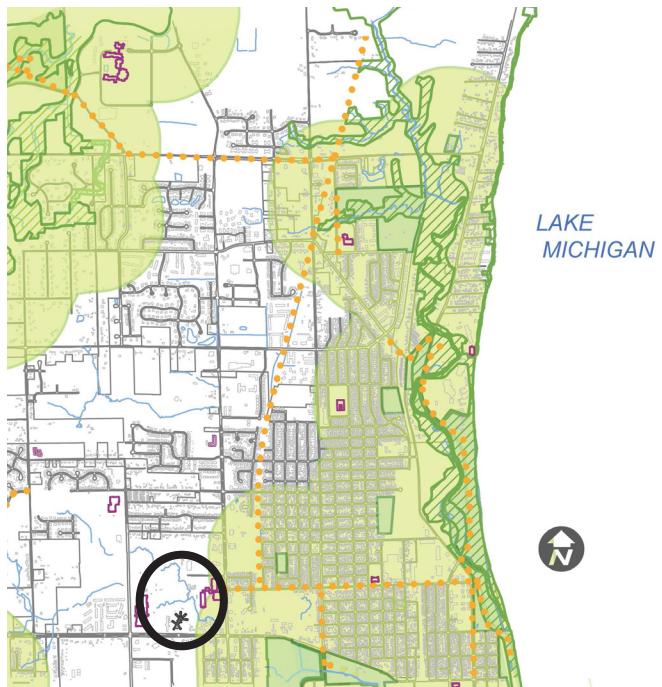
Research Topic: Environmental Psychology

Type of Project: Park and Therapeutic Landscape

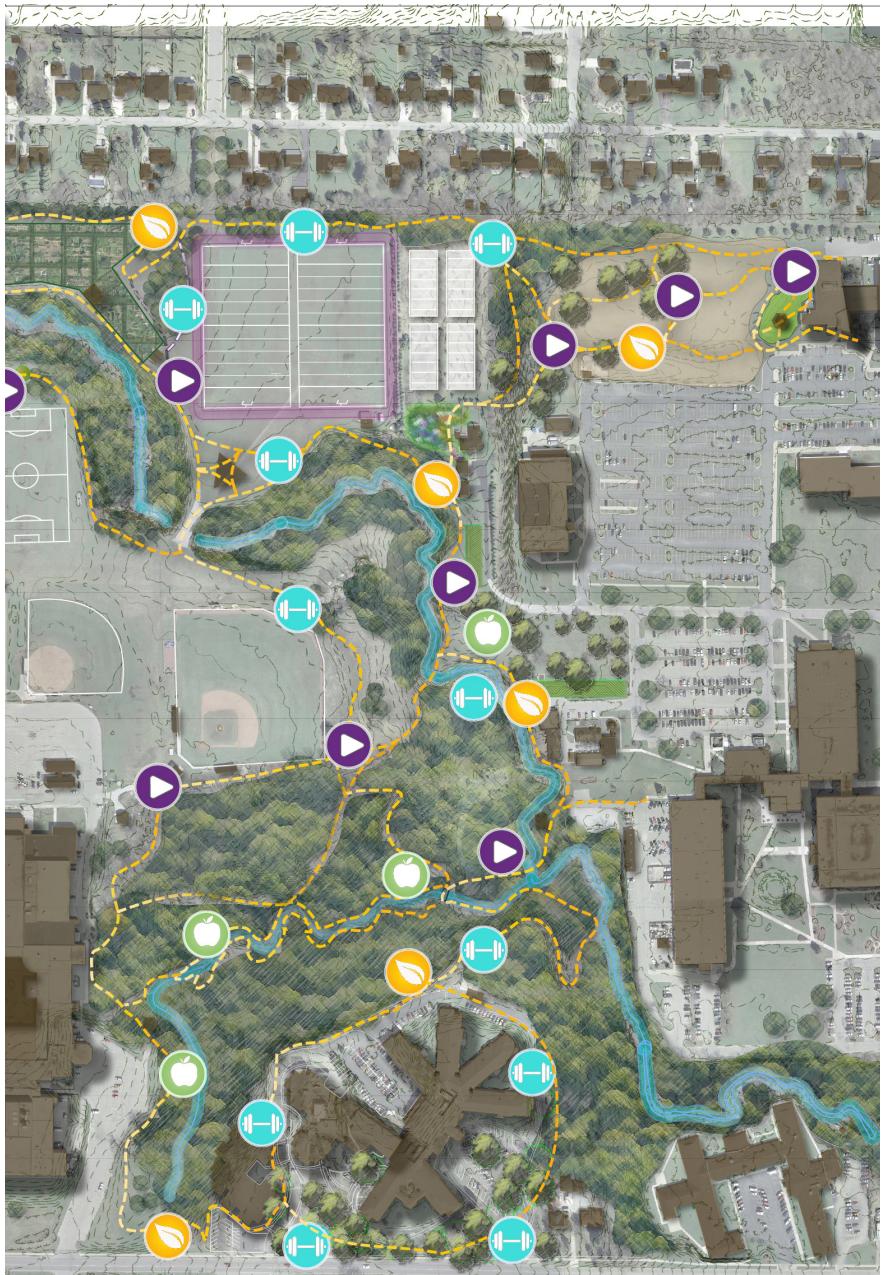
Samantha's project investigates how ideas of environmental psychology may inform the design of a therapeutic landscape and multi-nodal path system.

The primary goals of the project include:

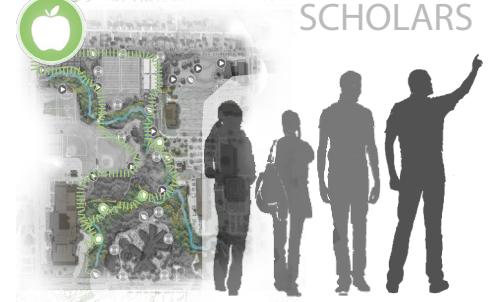
- Designing a shared therapeutic landscape, sensory garden and multi-nodal path system for Brookside, Gateway and the extended community
- Implementing ADA accessible activity and environmental education nodes
- Decreasing existing maintenance requirements
- Minimizing impact on natural systems
- Expanding Brookside's rehabilitation program



Proximity to existing regional park systems



Activity nodes within proposed community park system

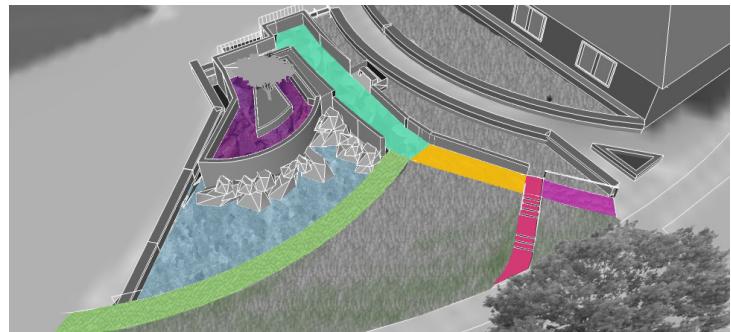




Accessible garden



Fragrant garden



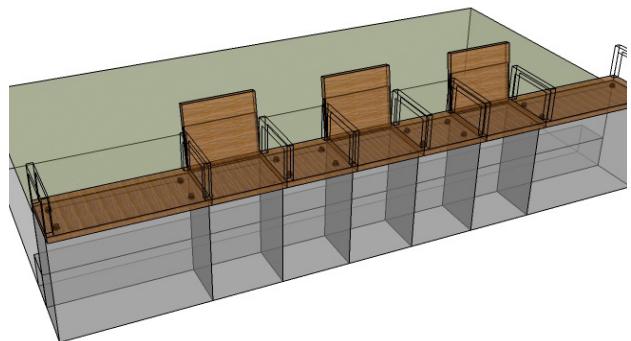
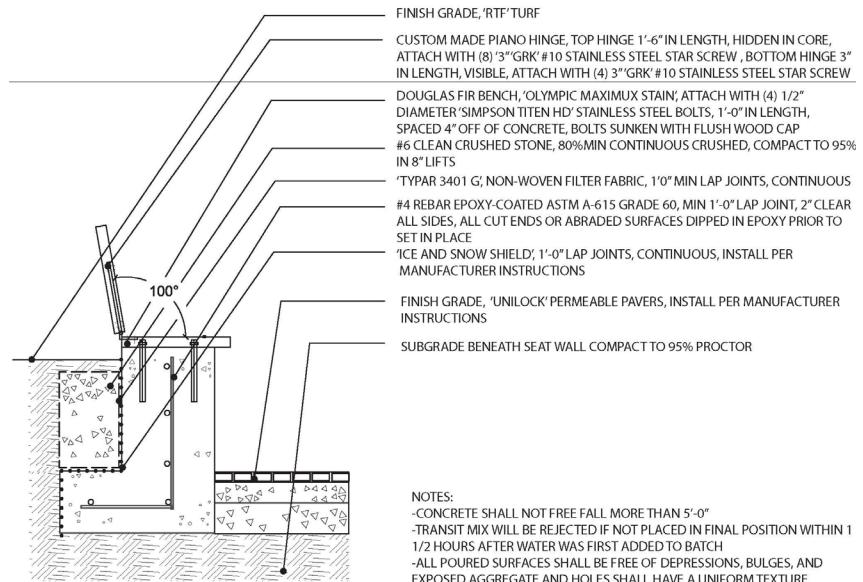
Rehabilitation garden showing slope variation



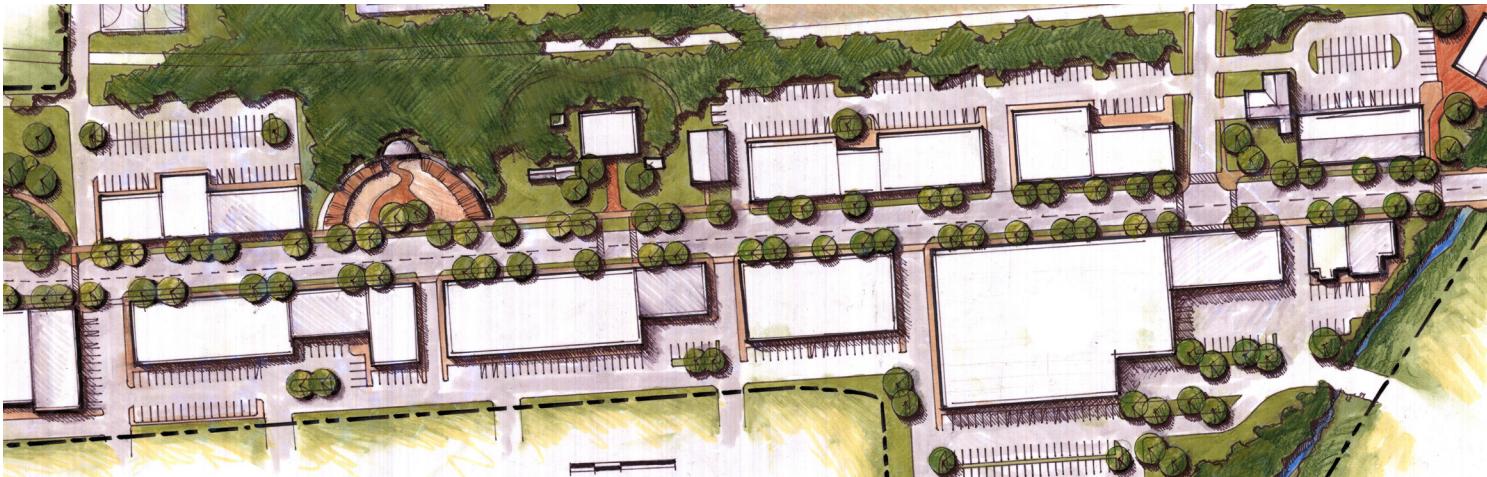
Brookside Care Center site plan



Bench with foldable back support



Bench detail



## FROM HIGHWAY TO MAIN STREET

Student: Emily Groh

Location: Wabeno, WI

Client: Wabeno Town Board

Steering Committee: Edward Piontek, Dennis Kopecky, Paul Ehlinger, Tom Tallier & Dawn Jakubiak

Research Topic: Municipal Growth

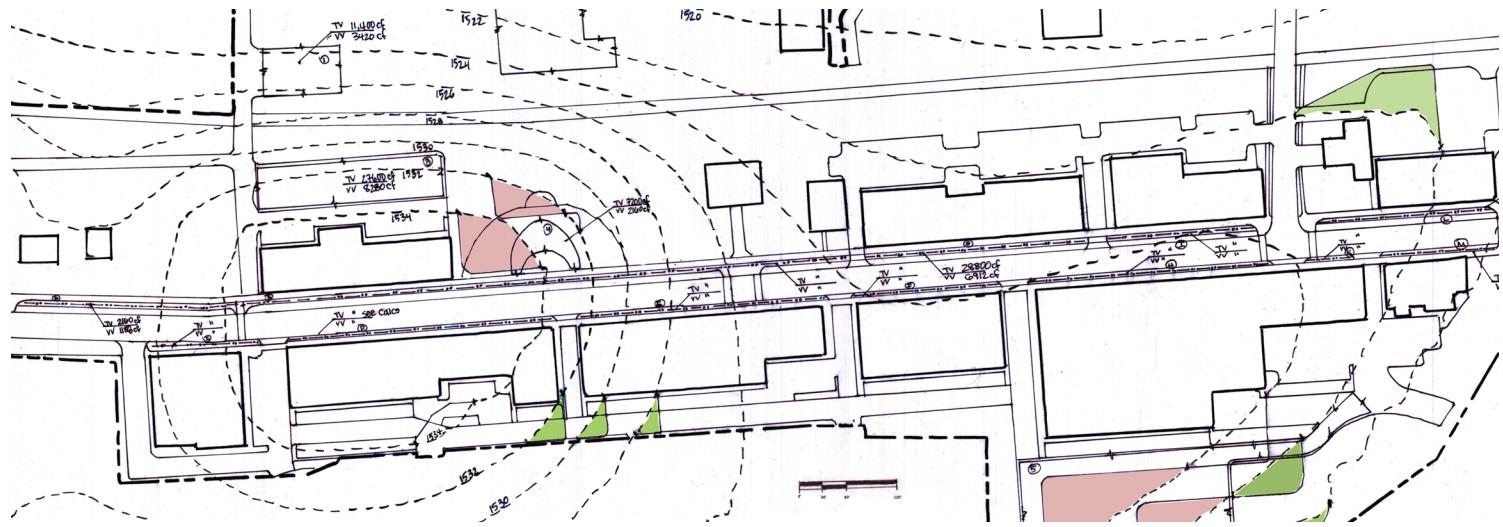
Type of Project: Downtown Revitalization

Emily's project investigates how historical approaches to community planning may influence the design of an "ideal" main street.

The primary goals of the project include:

- Improving the safety and accessibility of the downtown for pedestrians and bicyclists
- Increasing connectivity to and awareness of existing amenities and public spaces
- Enhancing the appeal of the streetscape
- Designing additional public spaces
- Providing aesthetic visions for businesses
- Incorporating two new commercial developments

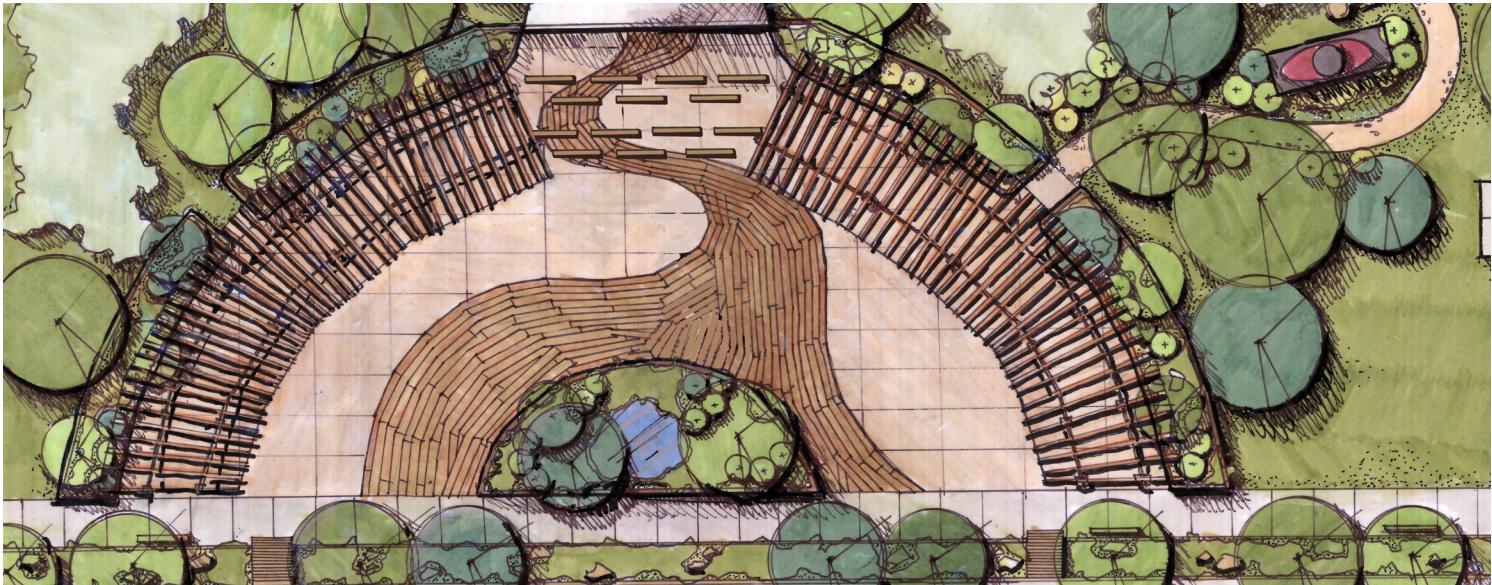




Cut and fill grading diagram



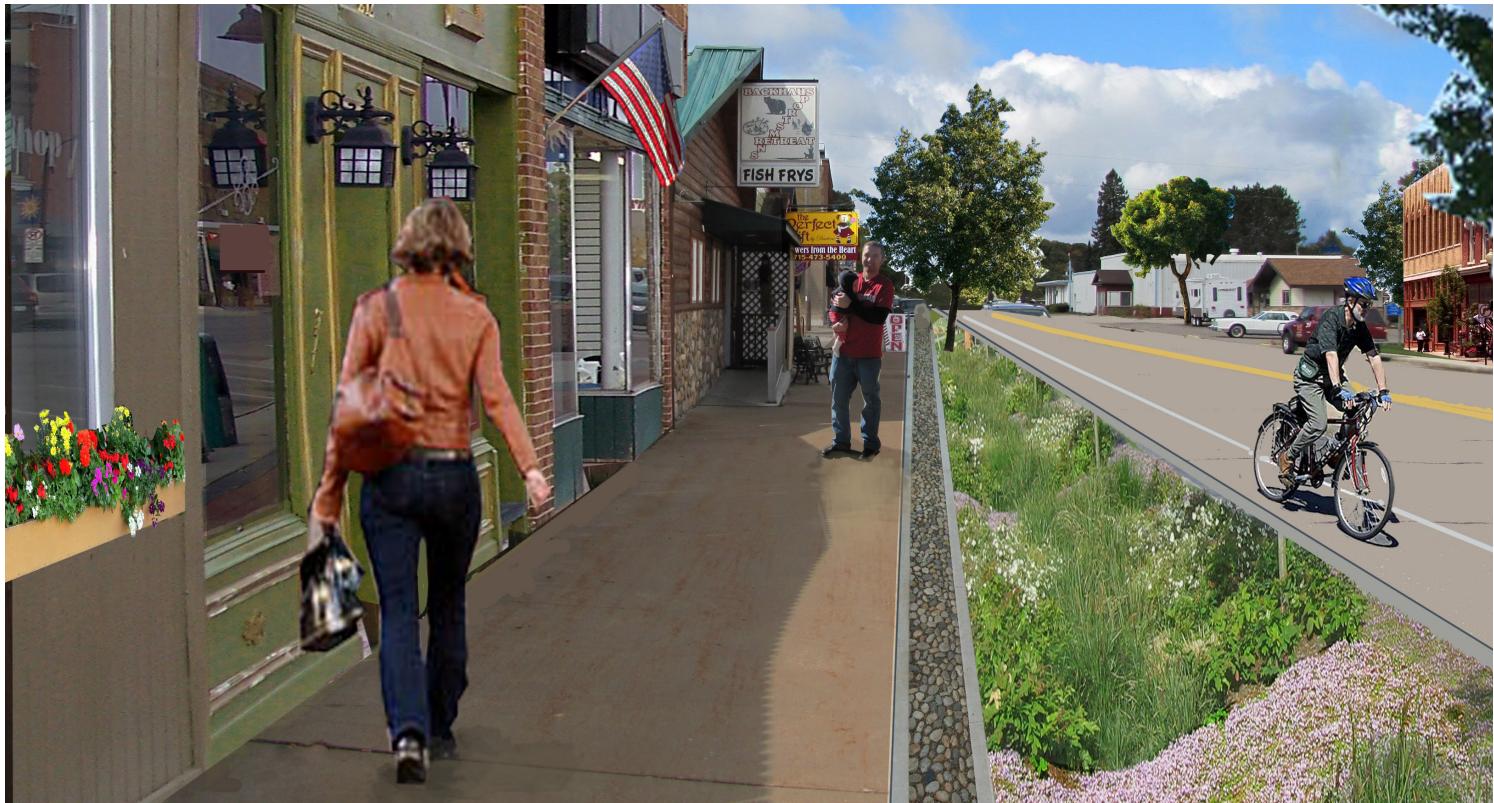
Streetscape enhancement plan



Site plan of new community park



Band shell and pergola



Streetscape enhancements



Streetscape enhancements



## A VINEYARD COMMUNITY

Student: Theresa Hong

Location: Cambridge, WI

Client: Village of Cambridge

Steering Committee: Norma Dehaven, Economic Development Committee and Village Board

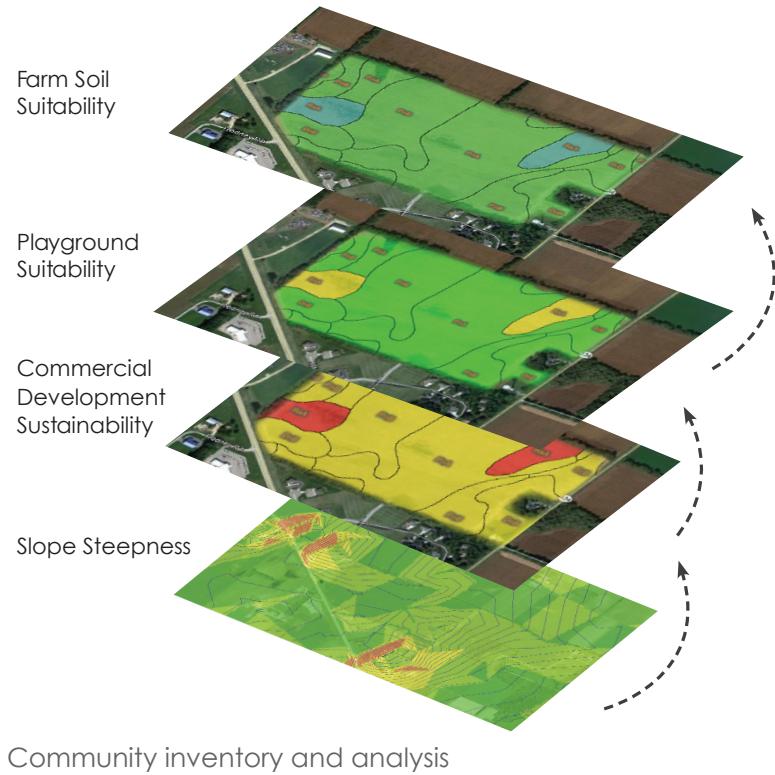
Research Topic: Environmental Design

Type of Project: Agricultural and Community Planning

Theresa's project investigates how the ideas of environmental design may inform residential and open space planning.

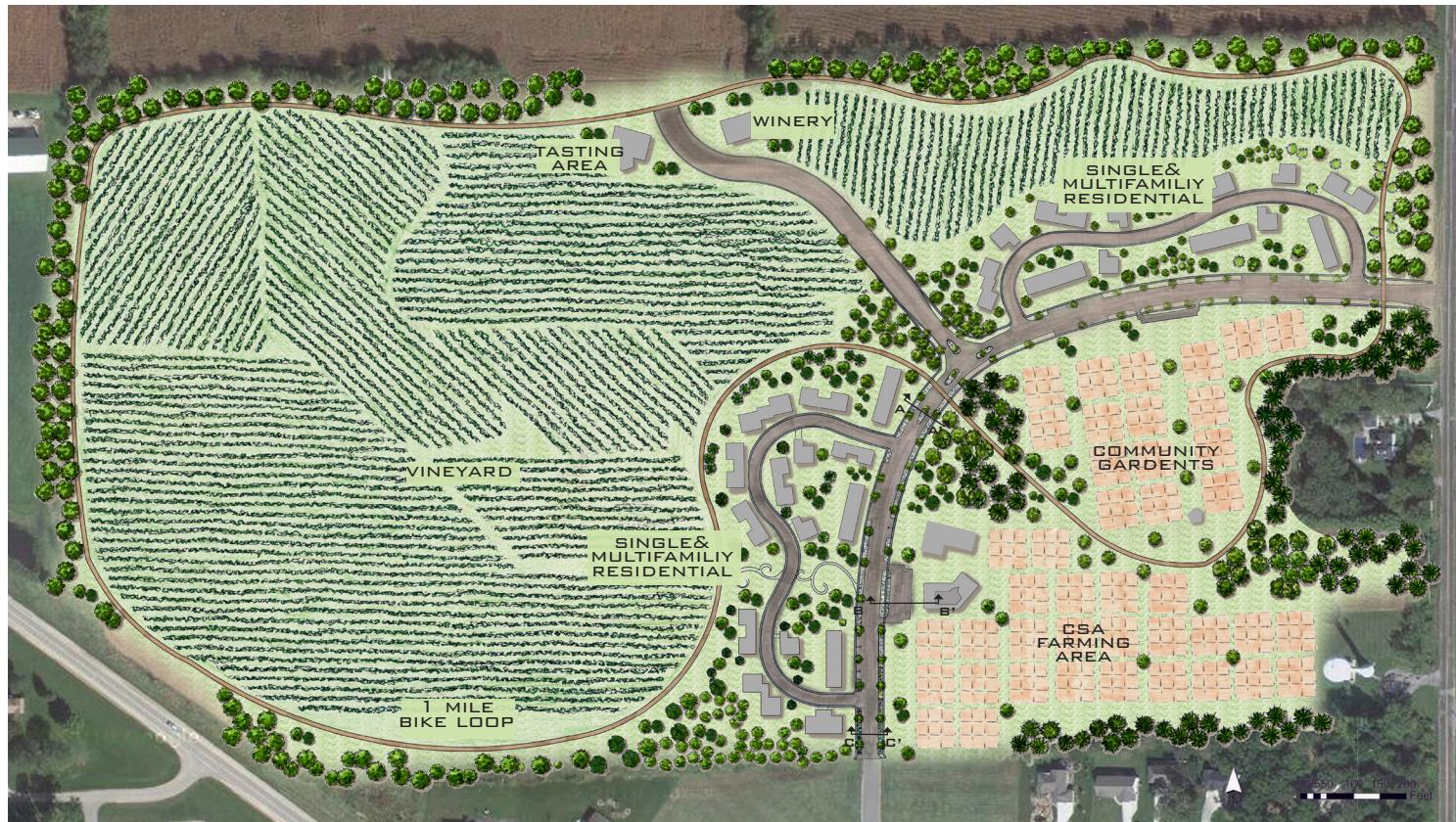
The primary goals of the project include:

- Utilizing existing economic and agriculture assets to enhance the proposed community
- Integrating residential expansion with new types of rural agriculture, such as a vineyard and CSA farming
- Designing a vineyard that helps generate revenue by increasing tourism
- Creating a multi-use path system that ties into Cambridge

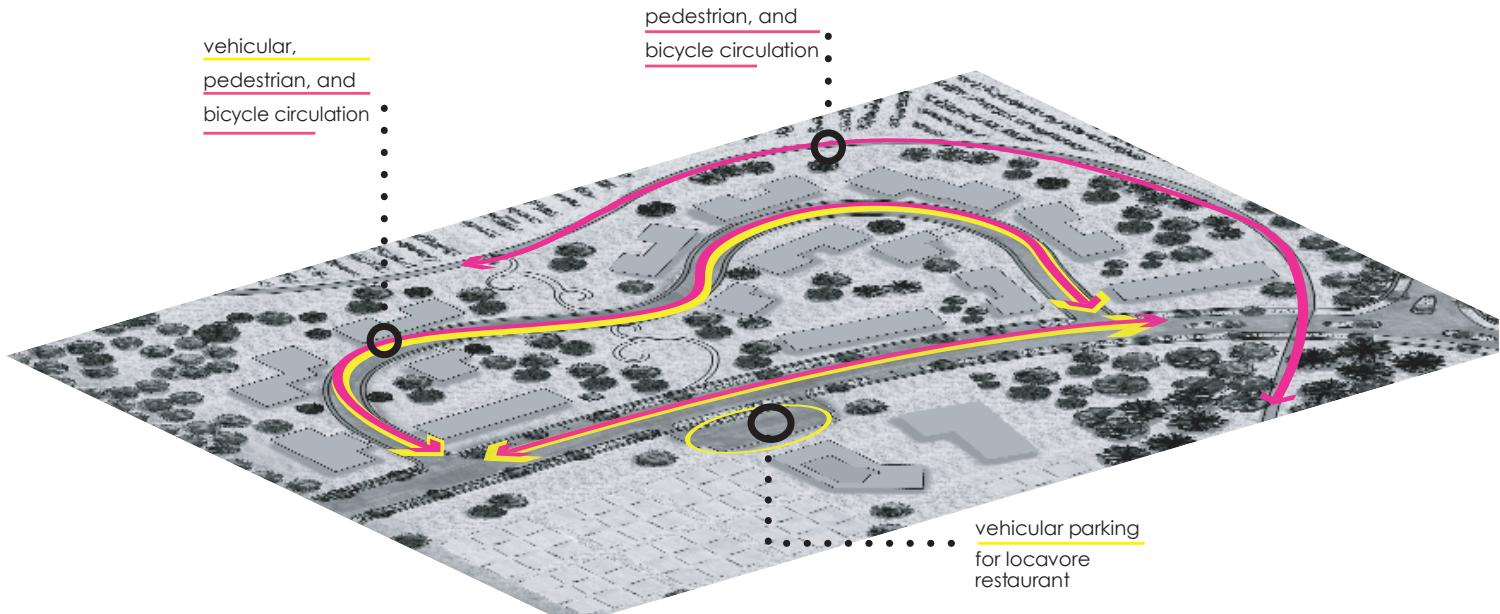
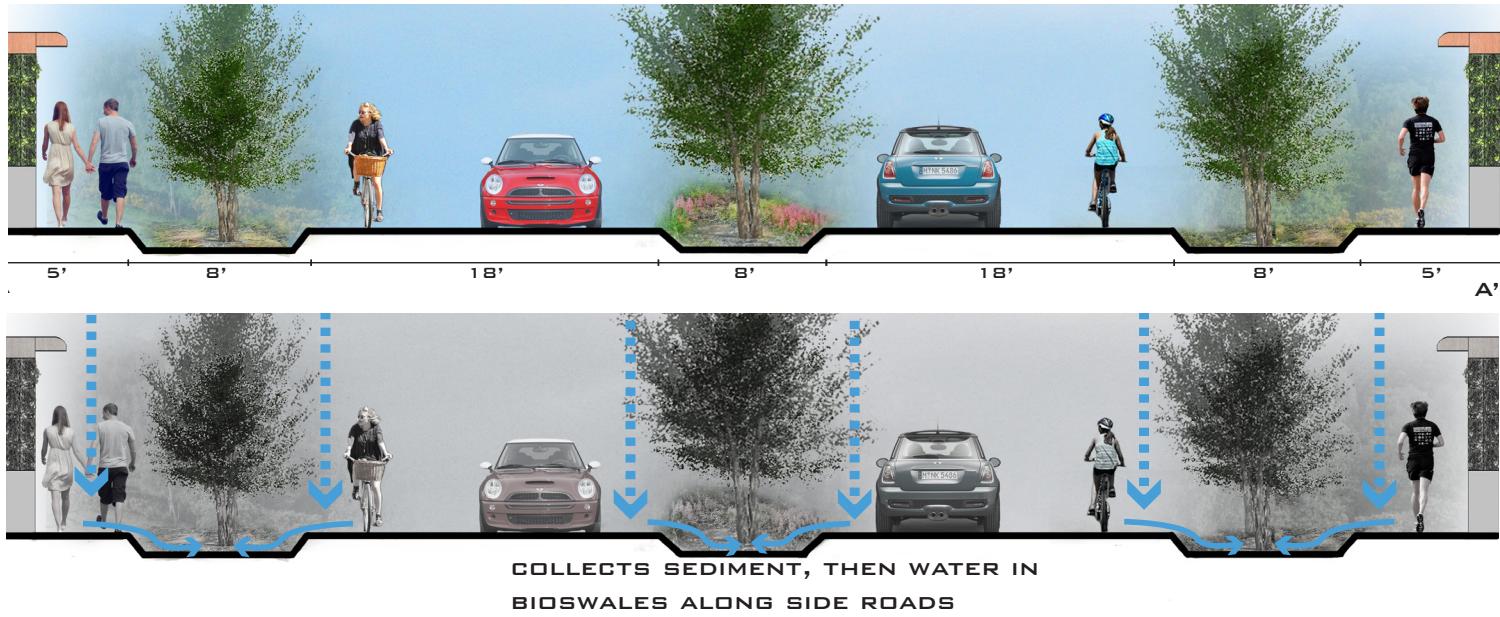




Regional context



Community master plan



Street system plan



Seasonal planting diagram



- Leon Millot
- Marquette
- Marechal Foch



Vineyard and wine production opportunities



## THE GOOD NEIGHBOR TRAIL CORRIDOR

Student: Sylvia Janicki

Location: Middleton, WI

Client: City of Middleton Planning Department & City of Middleton Public Lands and Recreation

Steering Committee: Penni Klein

Research Topic: Landscape Ecology & Greenways

Type of Project: Urban Infill

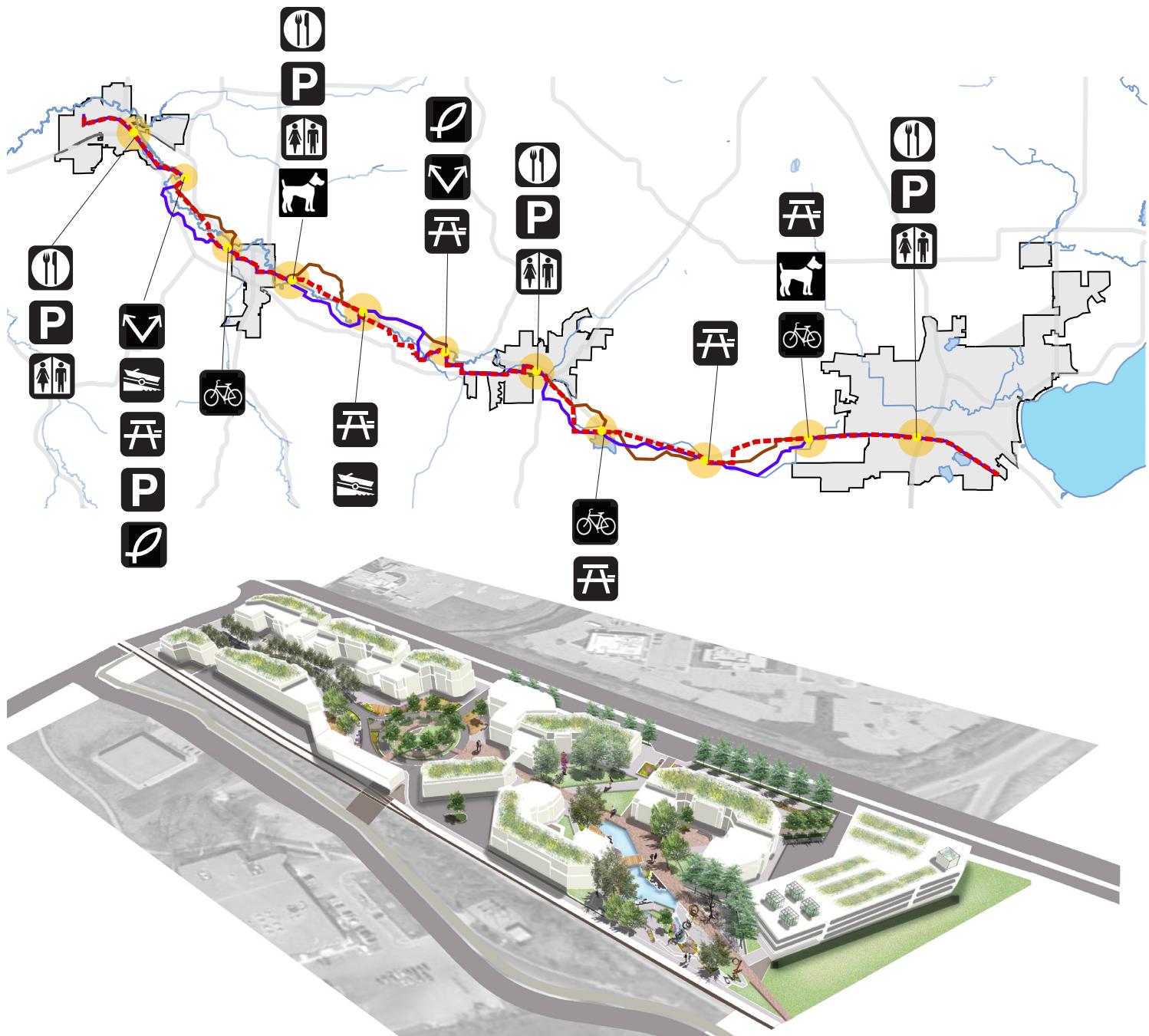
Sylvia's project investigates how the ideas of landscape ecology and subsequently the idea of greenways may inform the design of community trail corridors and comprehensive town planning.

The primary goals of the project include:

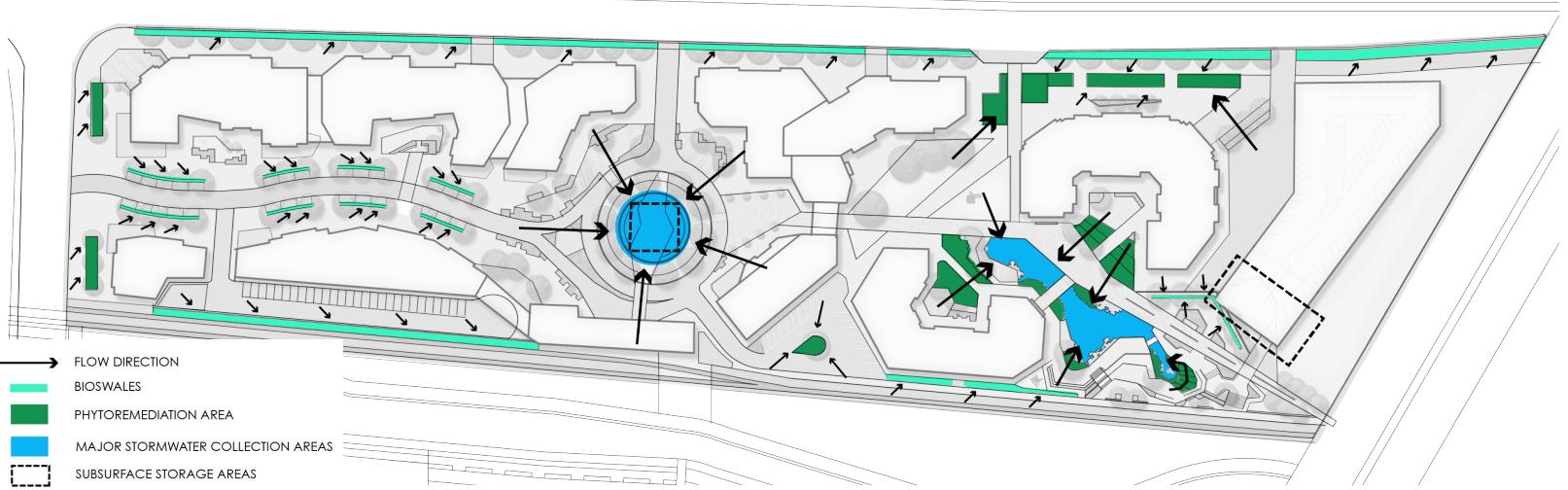
- Creating connections to important recreational, ecological, cultural and historical sites
- Creating a regional transportation hub
- Implementing advanced stormwater management practices
- Designing two non-contiguous sites, one for mixed-use development and the other for affordable housing



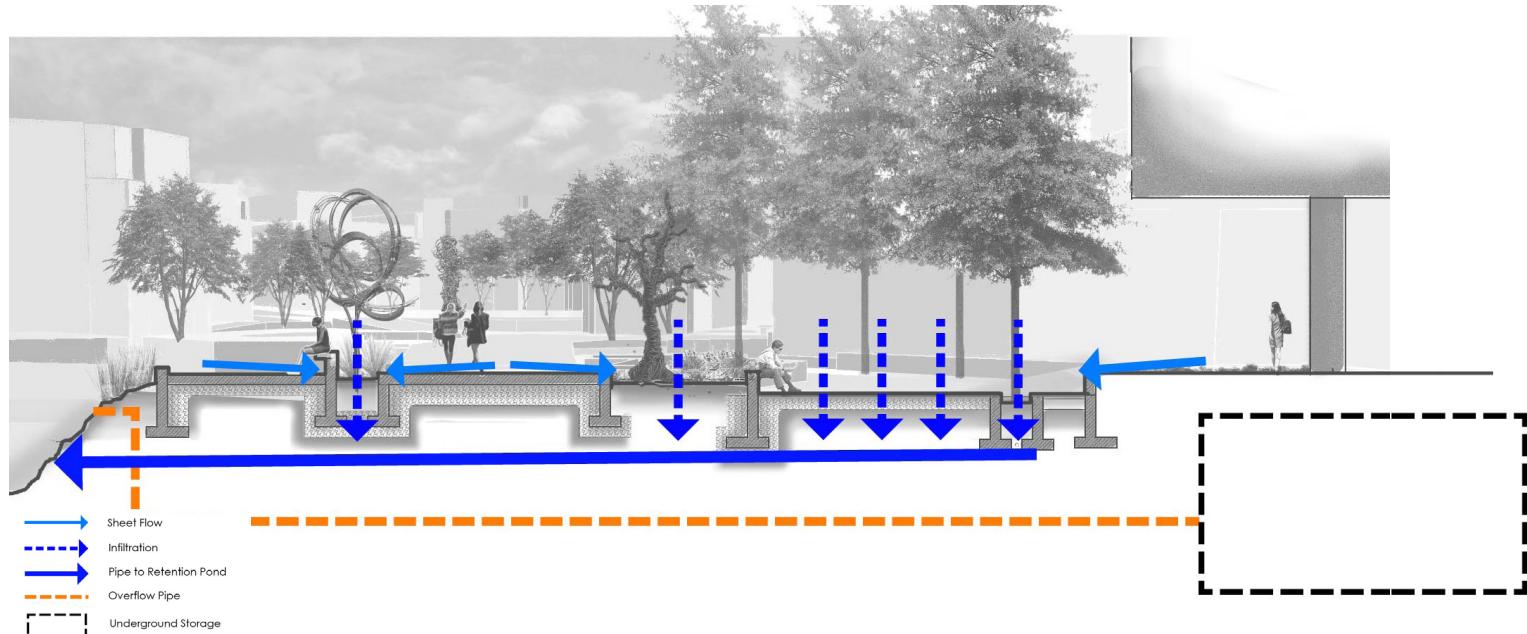
Extents of project sites along Good Neighbor Trail



Regional trail system integrated into proposed “Connector” site



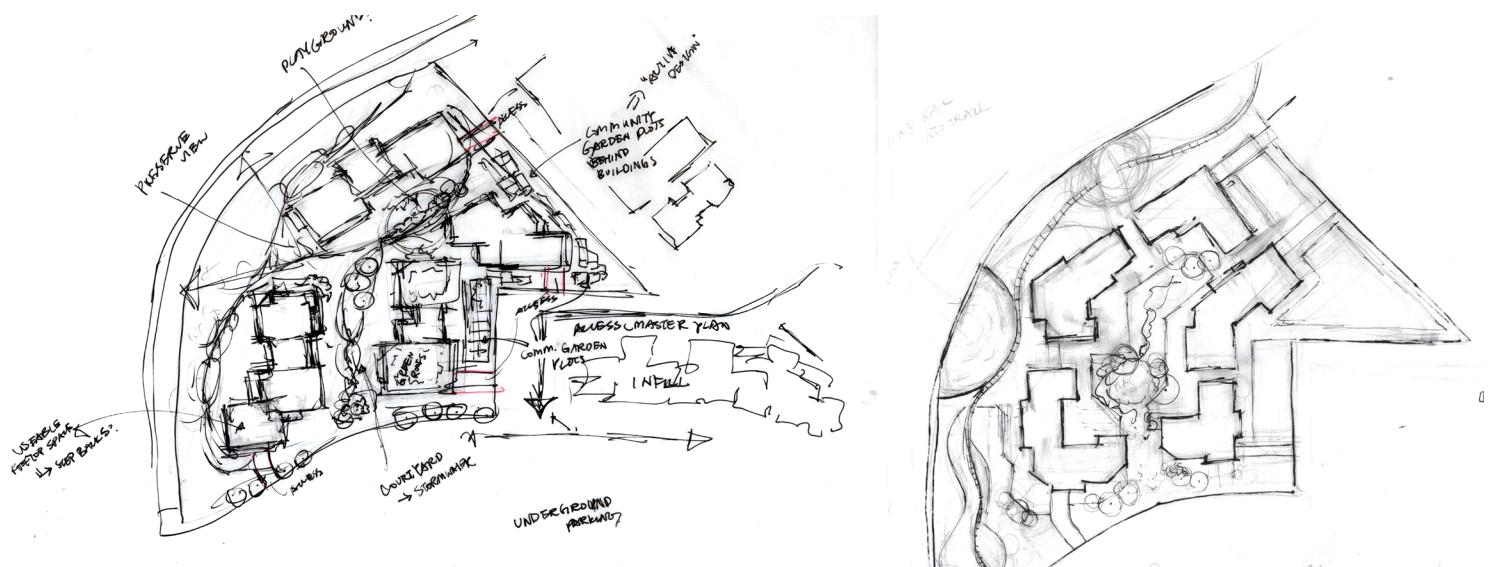
Stormwater concept diagram



Stormwater concept diagram



Design strategy for the "Greenway" site



Preliminary designs for "Greenway" site



## PRESERVING AZTALAN STATE PARK

Student: Kate Koberle

Location: Aztalan, WI

Client: Wisconsin Department of Natural Resources

Steering Committee: Mark Dudzik, Therese Gripentrog, Lance Stock, & Ann Runyard

Research Topic: Ecological Restoration & Preservation of Historical Landscapes

Type of Project: State Park Restoration

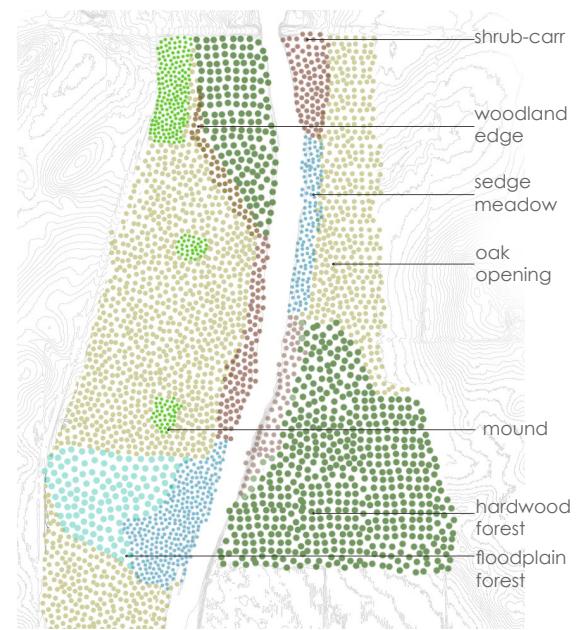
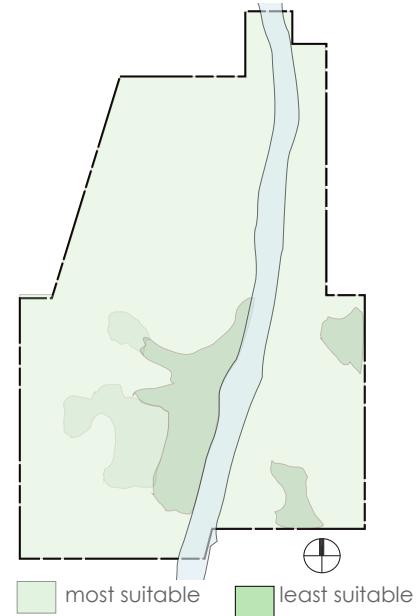
Kate's project investigates how the ideas regarding preservation and restoration may inform the design of public state parks.

The primary goals of the project include:

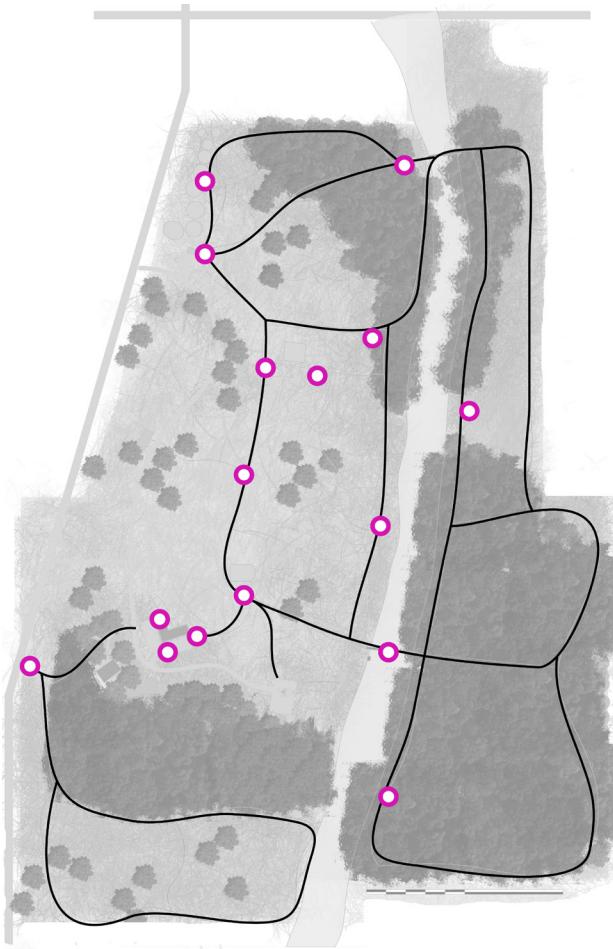
- Preserving historic view-sheds throughout the site
- Providing an ecological restoration strategy for the Crawfish River shoreline
- Implementing interactive and wayfinding signage
- Locating a new appropriately scaled visitor center
- Creating a realistic management and master plan strategy



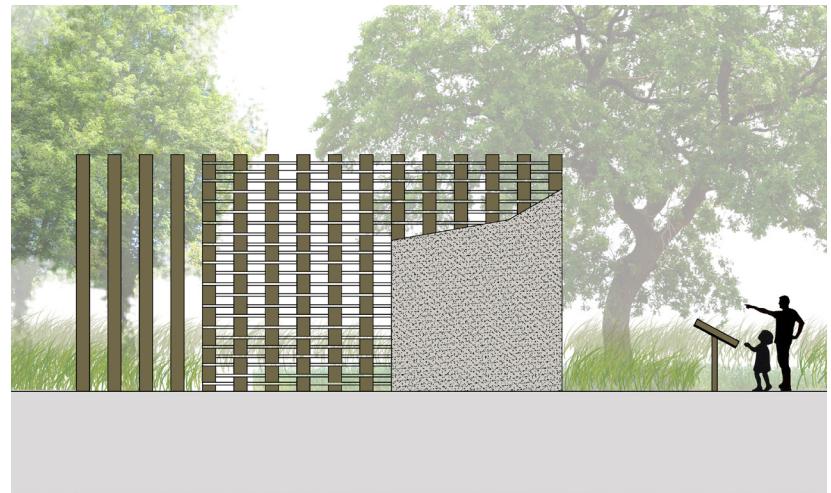
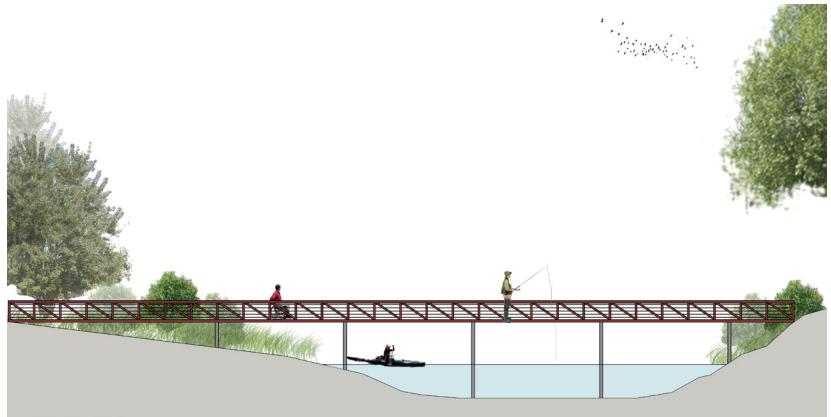
Site with regional context







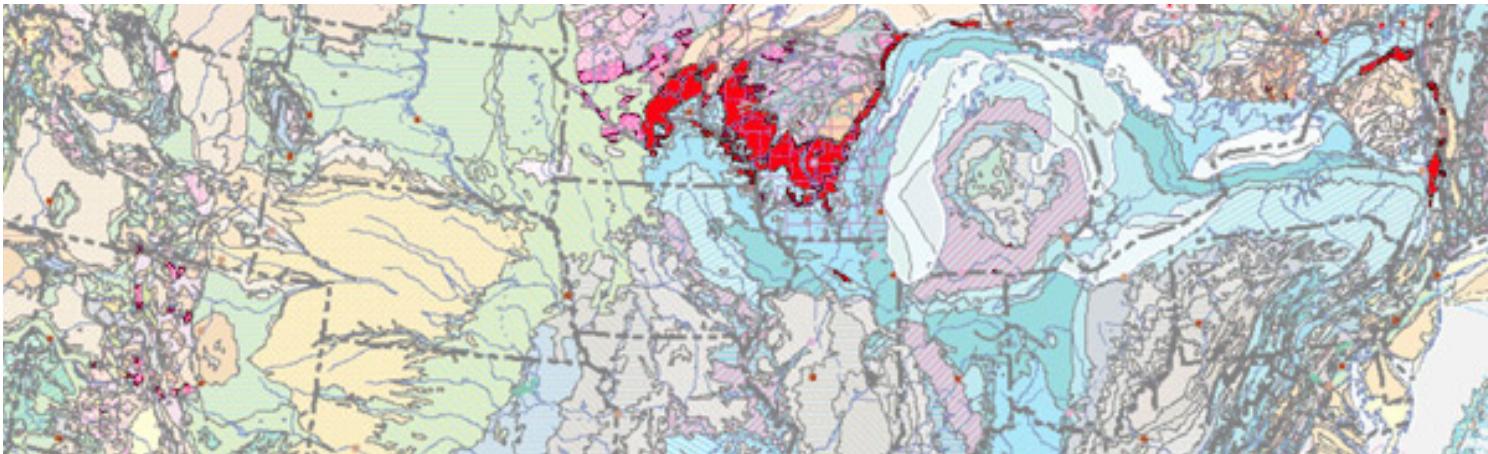
Education and interpretation nodes



Stockade restoration and bridge crossing



Relationship between new visitor center and archeological feature



## SILICA SAND MINING: A RECLAMATION INVESTIGATION

Student: Kristin Krueger

Location: Chippewa County, WI

Client: West Central WI Regional Planning Commission

Steering Committee: Ann Schell, Chris Straight & Jing Duan

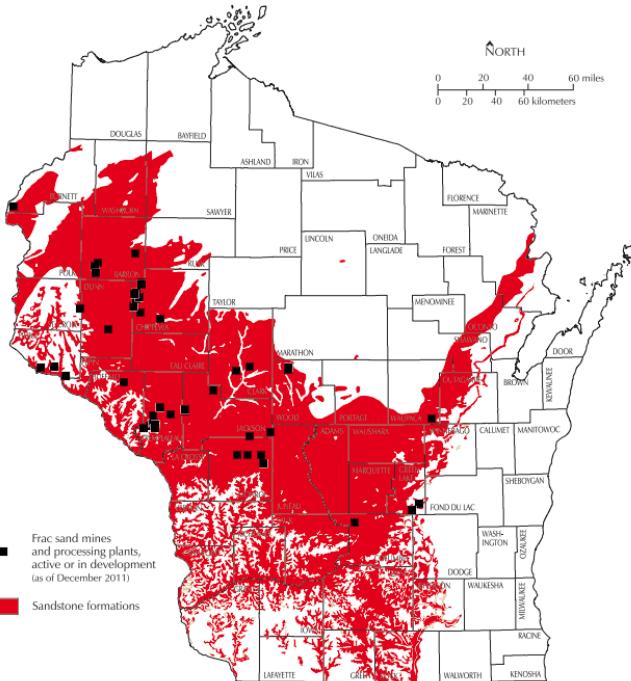
Research Topic: Silica Sand Mine Reclamation

Type of Project: Rural Development

Kristin's project investigates how a potentially destructive silica sand mining process can be reorganized into something that can positively contribute to rural communities.

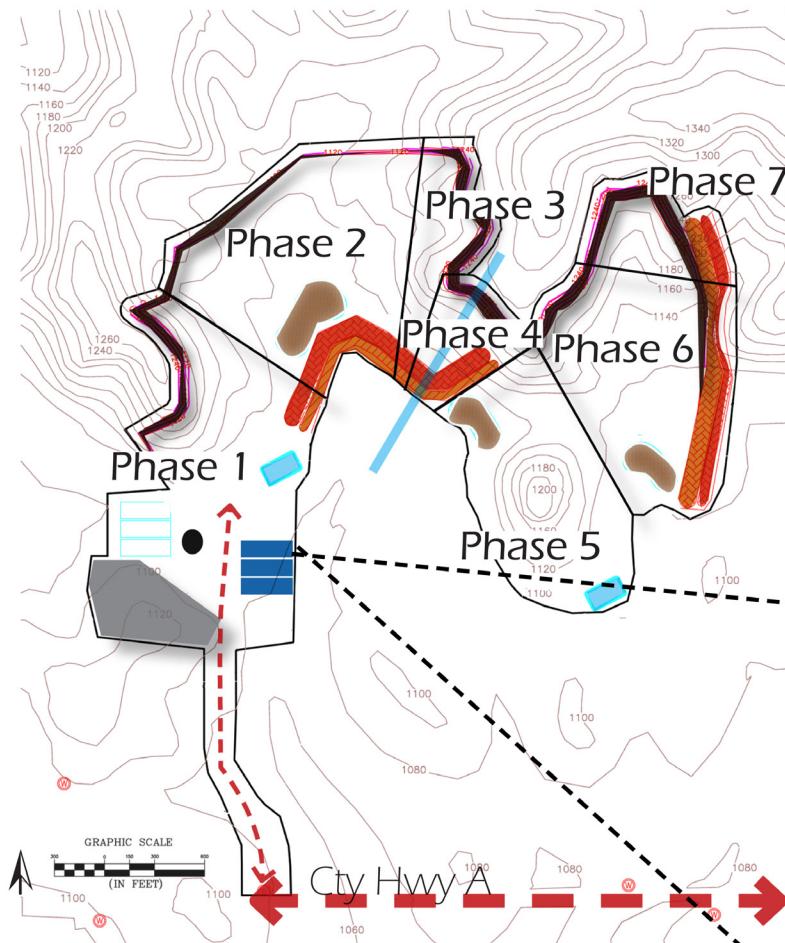
The primary goals of the project include:

- Fostering a discussion about the heavy reliance of fossil fuels used during silica sand mining
- Providing a reclamation planting strategy that adds nutrients back to the soil
- Integrating ideas of agroecology as part of the restoration process and rural economy



Silica sand mines and sandstone formations (2011)

**176 Acres**  
Conditional Use Permit Approved in 2011  
Lifespan: 14 years  
Each phase: 2 years



Silica sand mine operations

**MAIN POINTS**  
-PHASING  
-SETTLING PONDS  
-OVERBURDEN/TOPSOIL STOCKPILES

## Legend

- Wet Plant
- Overburden Berm
- Settling Ponds
- Stormwater Pond
- Overburden Stockpile
- Horizon B Stockpile
- Horizon A Stockpile
- Watershed Edge
- Access Routes
- High Capacity Well

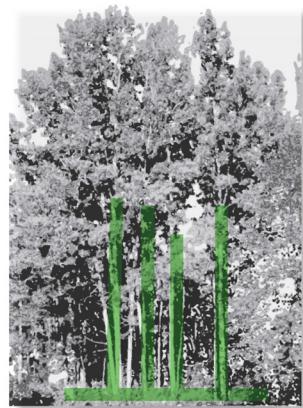
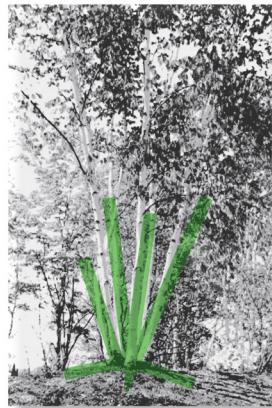


# STRATEGY

-Stabilize slopes without intensive nutrient inputs to maintain trees

-Monitor spreading with forest sampling doubling as an educational opportunity

-Stage trees on site during mining to be planted as regrading is done



## NITROGEN FIXING

European  
Black Alder  
*Alnus  
glutinosa*



Black Locust  
*Robinia  
pseudoacacia*



## ESTABLISH COVER QUICKLY

Paper  
Birch  
*Betula  
papyrifera*



Hybrid  
Cottonwood  
*Populus x*



River  
Birch  
*Betula  
nigra*



Sweet  
Birch  
*Betula  
lenta*



## LOW INPUTS

Hackberry  
*Celtis  
occidentalis*



Tulip Tree  
*Liriodendron  
tulipifera*



Quaking  
Aspen  
*Populus  
tremuloides*



## SPREADING SHRUBS

Silky  
Dogwood  
*Cornus  
amomum*



Smooth  
Sumac  
*Rhus  
glabra*



Staghorn  
Sumac  
*Rhus  
typhina*



Bristly  
Locust  
*Robinia  
hispida*



Buttonbush  
*Cephaelanthus  
occidentalis*



Sweet Fern  
*Comptonia  
peregrina*



Gray  
Dogwood  
*Cornus  
racemosa*



Sugar Maple  
*Acer saccharum*



Red Maple  
*Acer rubrum*

## NATIVES

White Oak  
*Quercus alba*



Red Oak  
*Quercus rubra*



Habitat restoration strategy

## ACTUAL PLAN

As provided in mining permit



## MY PLAN

Emphasis on vegetation and future land use



## TEST FIELDS

## SOIL RESEARCH

## HABITAT & BUFFER



Exposed Bedrock

Greatly Disturbed  
Soil Horizons

Topsoil  
Stockpile

Existing mine



Compost Using  
Cover Plants

Topsoil Rebuilding  
and Amendments

Test Plots

Proposed changes to mine



## AN ACTIVE RECREATION COMMUNITY

Student: Patrick O'Connor

Location: Menomonee Falls, WI

Client: Franklyn Development LLC & Village of Menomonee Falls

Steering Committee: Dan Peplinski

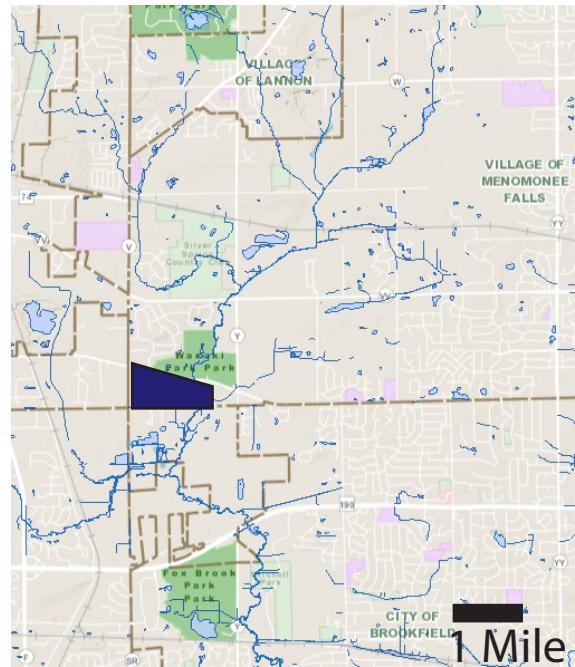
Research Topic: Placemaking

Type of Project: Community Design

Patrick's project investigates how the ideas of placemaking can inform the planning of a new mixed-use development.

The primary goals of the project include:

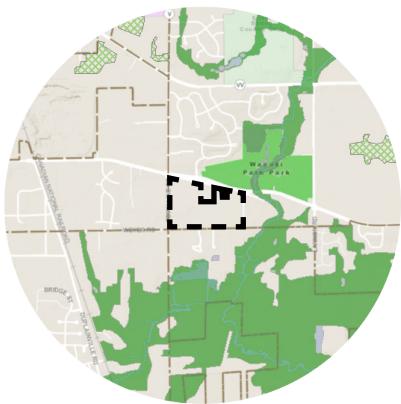
- Providing opportunities for multi-generational recreation
- Creating community gardens for local residents that also provide a sense of place and relate to Menomonee's farming history
- Developing a planting plan that relates to species within regional environmental corridors
- Designing a walkable community that revolves around an active recreation life style



Regional environmental corridors



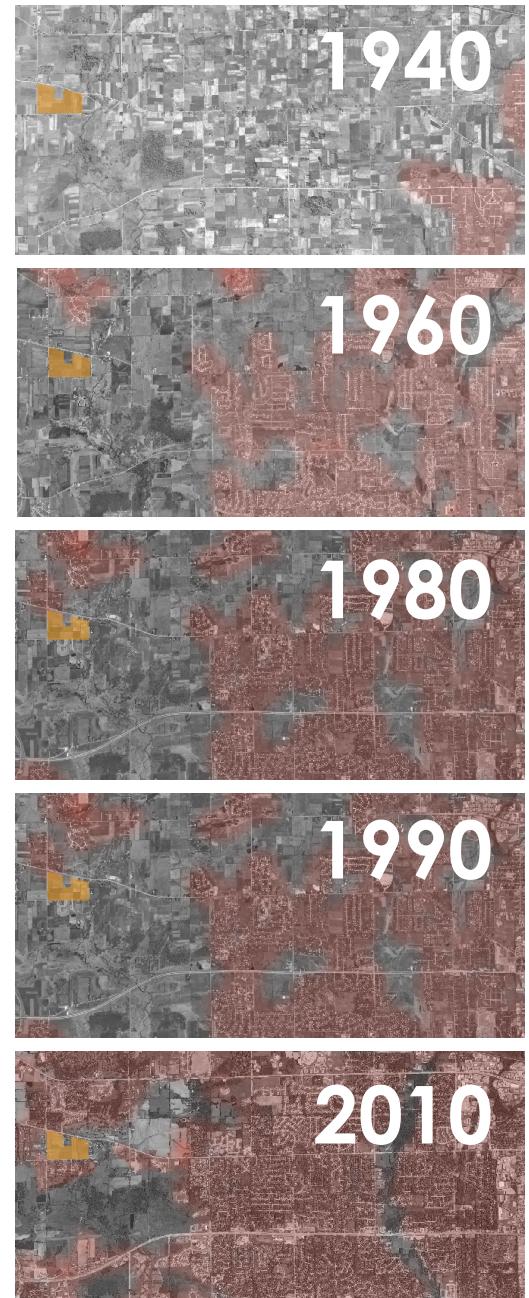
Community master plan



Environmental corridor



Residential land-use



Urban Expansion (1940-2010)



Cut and fill grading diagram



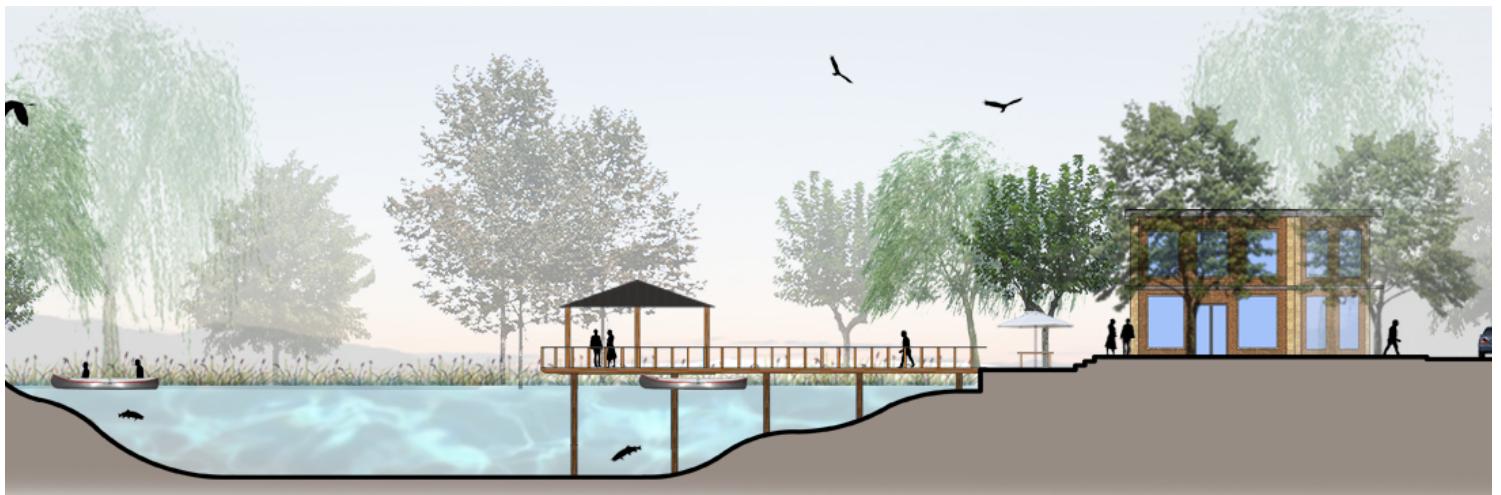
Stormwater management diagram



Proposed recreation fields



Proposed co-housing units



Retention pond used for community recreation



Community neighborhoods integrated around recreation fields



## HOP PRODUCTION AND COMMUNITY PLANNING

Student: Elisabeth Rask

Location: Lena, WI

Client: Town of Lena Planning and Development Board

Steering Committee: Ken Linzmeyer, Steve Marquardt, Richard Glime, Tom Schall, Ken Duhm & Ed Patenaude

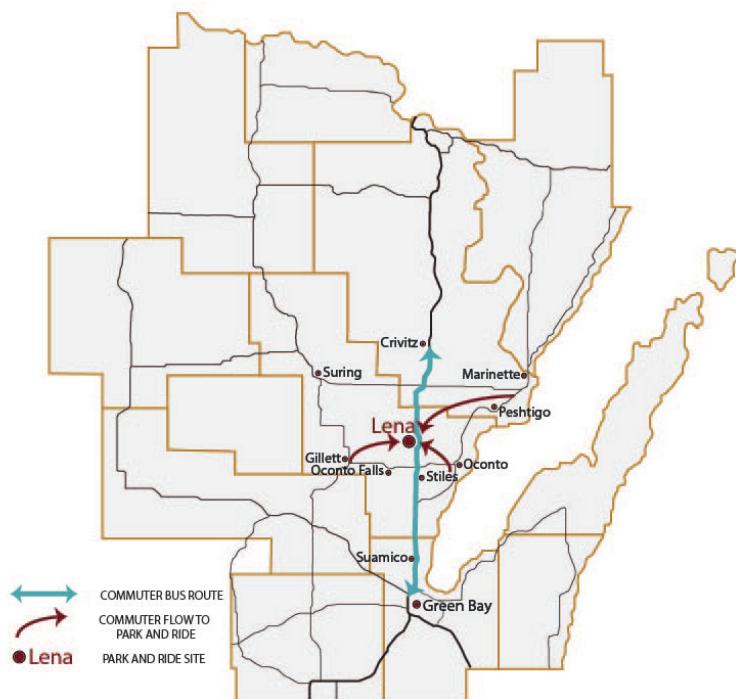
Research Topic: Rural Development Strategies

Type of Project: Community Development

Elisabeth's project investigates how the ideas of rural development strategies can inform comprehensive planning at the scale of a small village.

The primary goals of the project include:

- Providing economic growth and business recruitment through mixed-use development
- Restructuring Lena's main street corridor with new parking and building strategies
- Improving the streetscape aesthetics
- Creating an agritourism redevelopment strategy that focuses on hops cultivation
- Capturing the Village's historic, rural character



Regional commuter map

# projected demand by 2025:



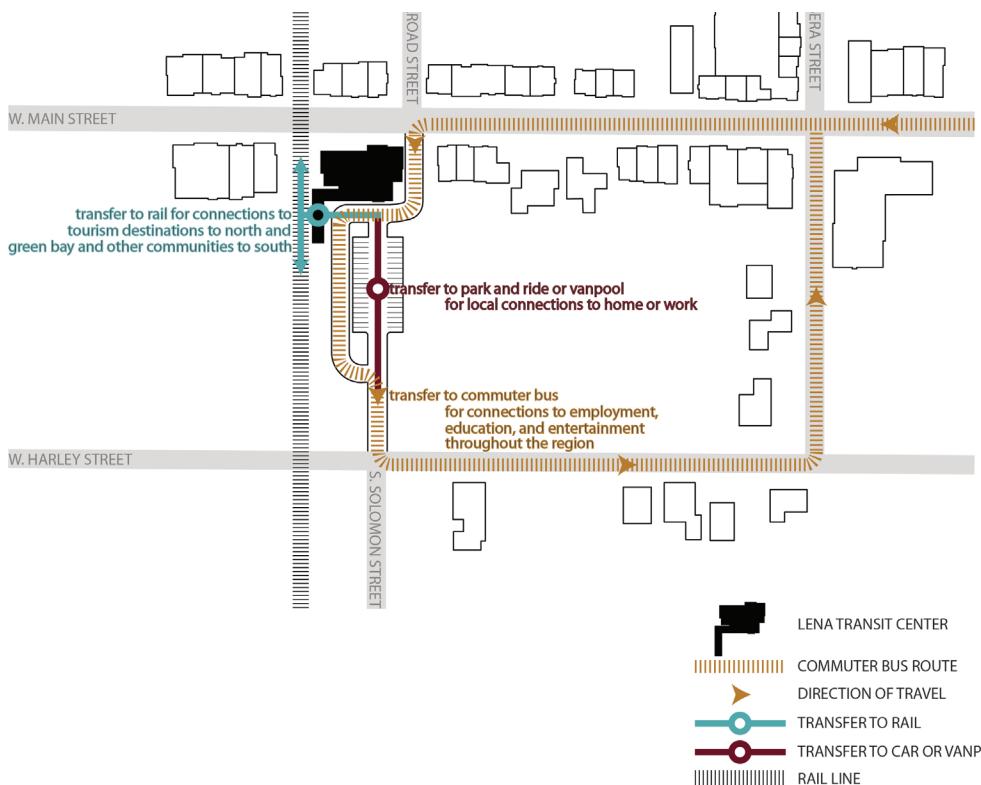
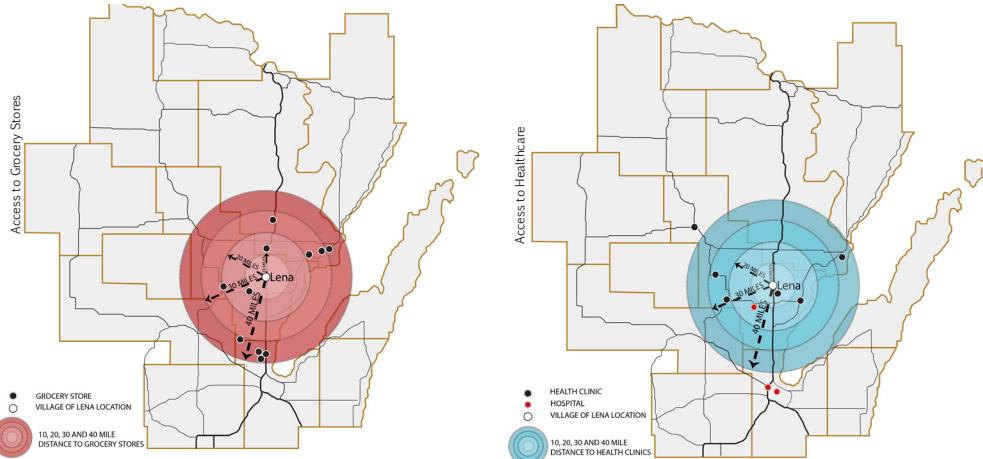
523



61

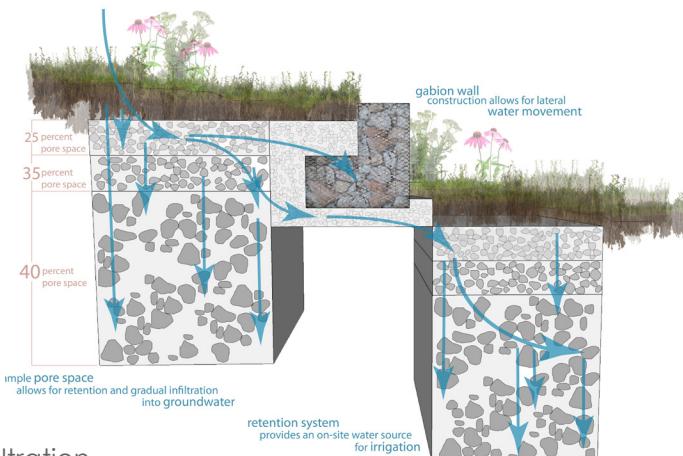


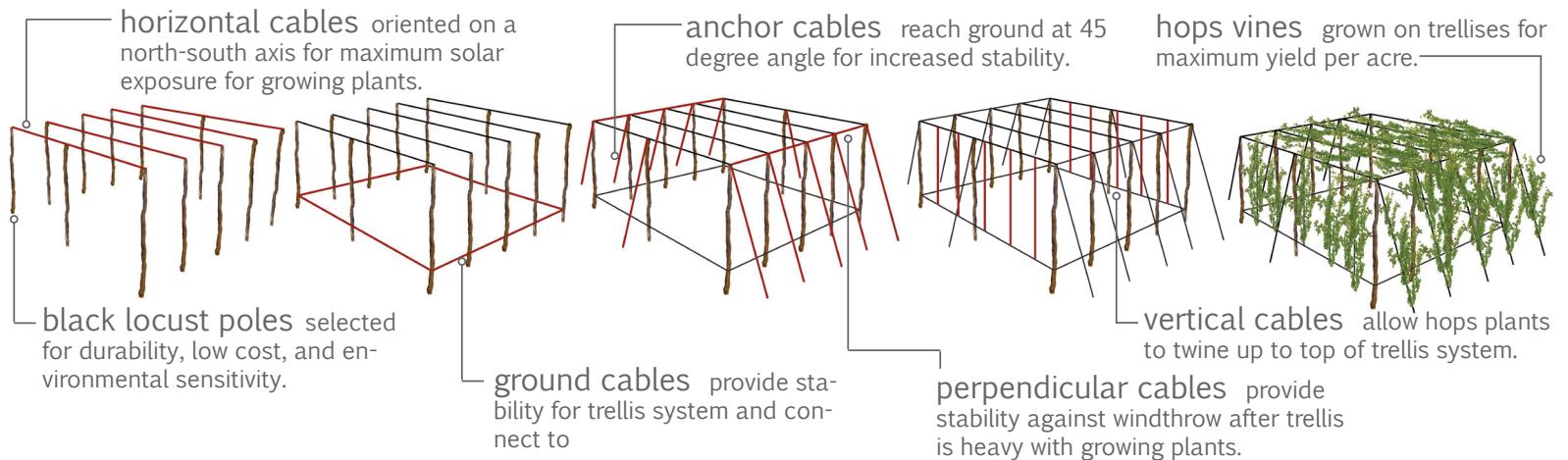
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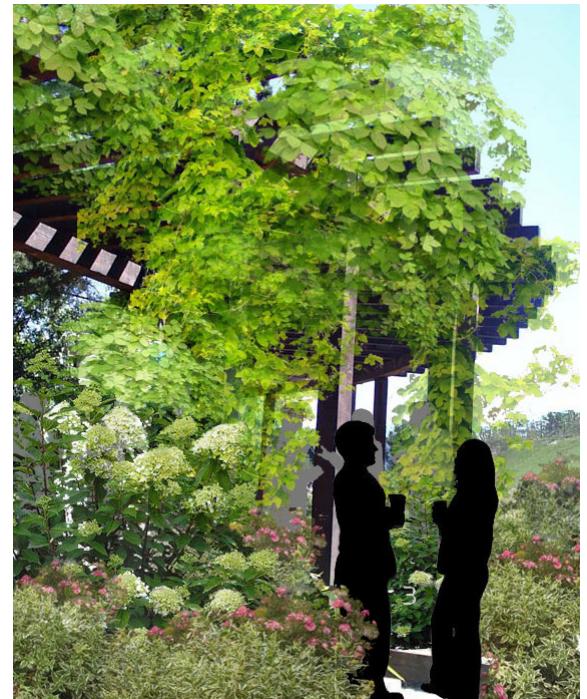
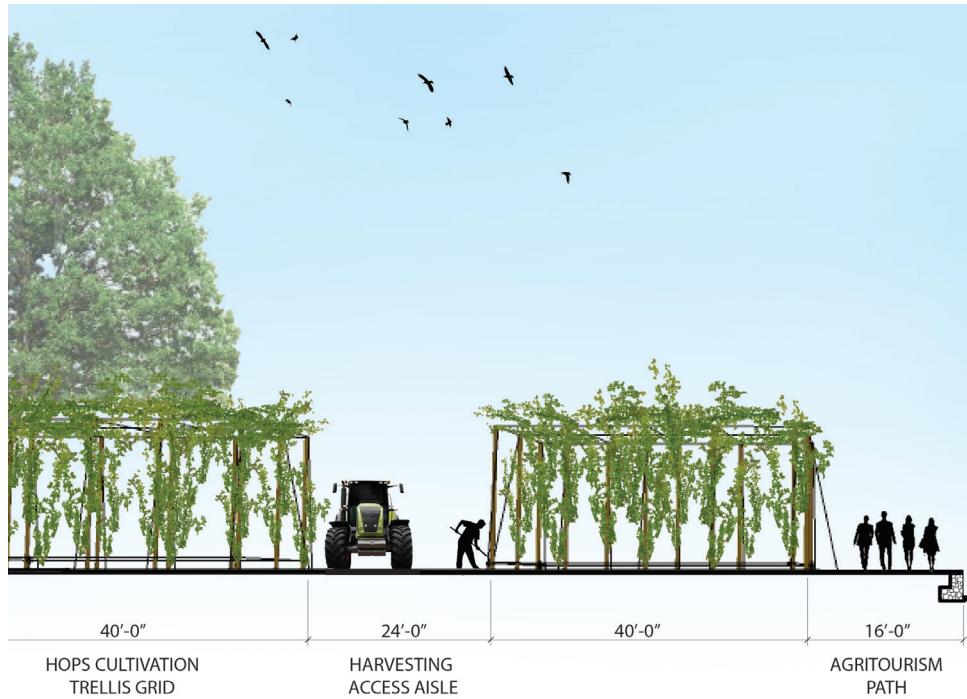


Terraced gabion walls used for seating and groundwater infiltration





Hops cultivation and agro-tourism trellis system





## SLOWING DOWN MONROE

Student: Jody Schimek

Location: Madison, WI

Client: Friends of Lake Wingra

Steering Committee: Jim Lorman & Steve Arnold

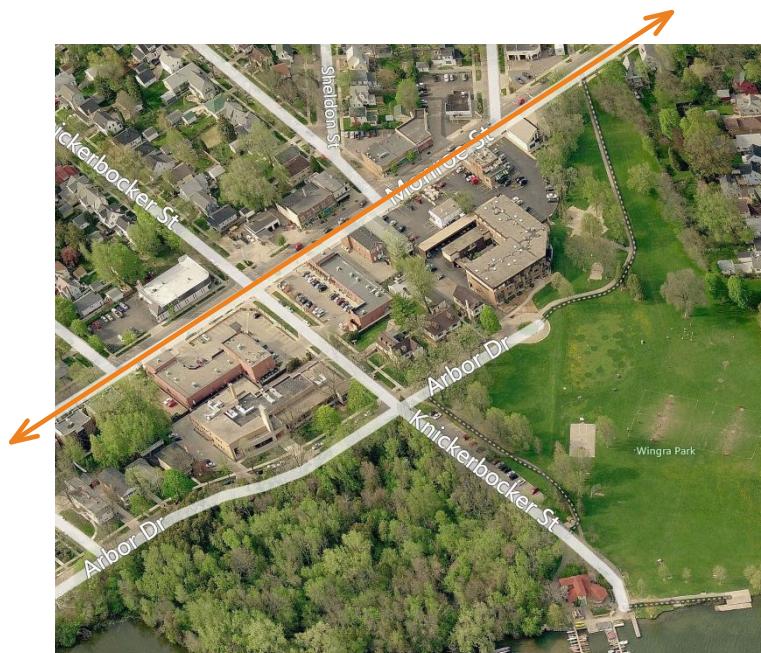
Research Topic: Public Health & Human Behavior

Type of Project: Mixed-use Infill

Jody's project investigates how the relationship between public health and the built environment, and the ideas of human behavior in streets and public spaces, can inform the design of a mixed-use urban corridor.

The primary goals of the project include:

- Improving connections between neighborhood assets
- Moving from a car-dominated streetscape towards a pedestrian-oriented mixed-use center
- Improving surface water quality in the Wingra Watershed by using 'green street' design strategies
- Creating multi-family housing choices for a mix of ages, incomes, and ownership types

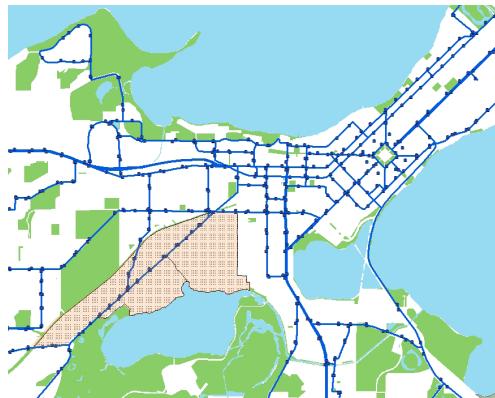


Aerial of existing site



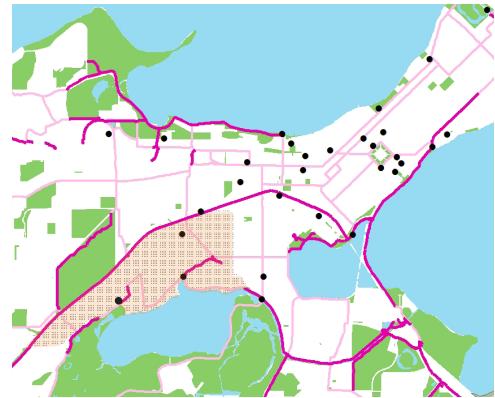
### Street Network

Monroe Street is a minor arterial road with average daily traffic counts up to 19,000 in parts of the corridor.



### Bus Routes & Stops

Monroe Street is serviced by public bus.



### Bicycle Paths & On-Street Routes

B-Cycle Bike Share Station  
Existing Bike Path ——————  
Existing On-Street Bike Route ——————

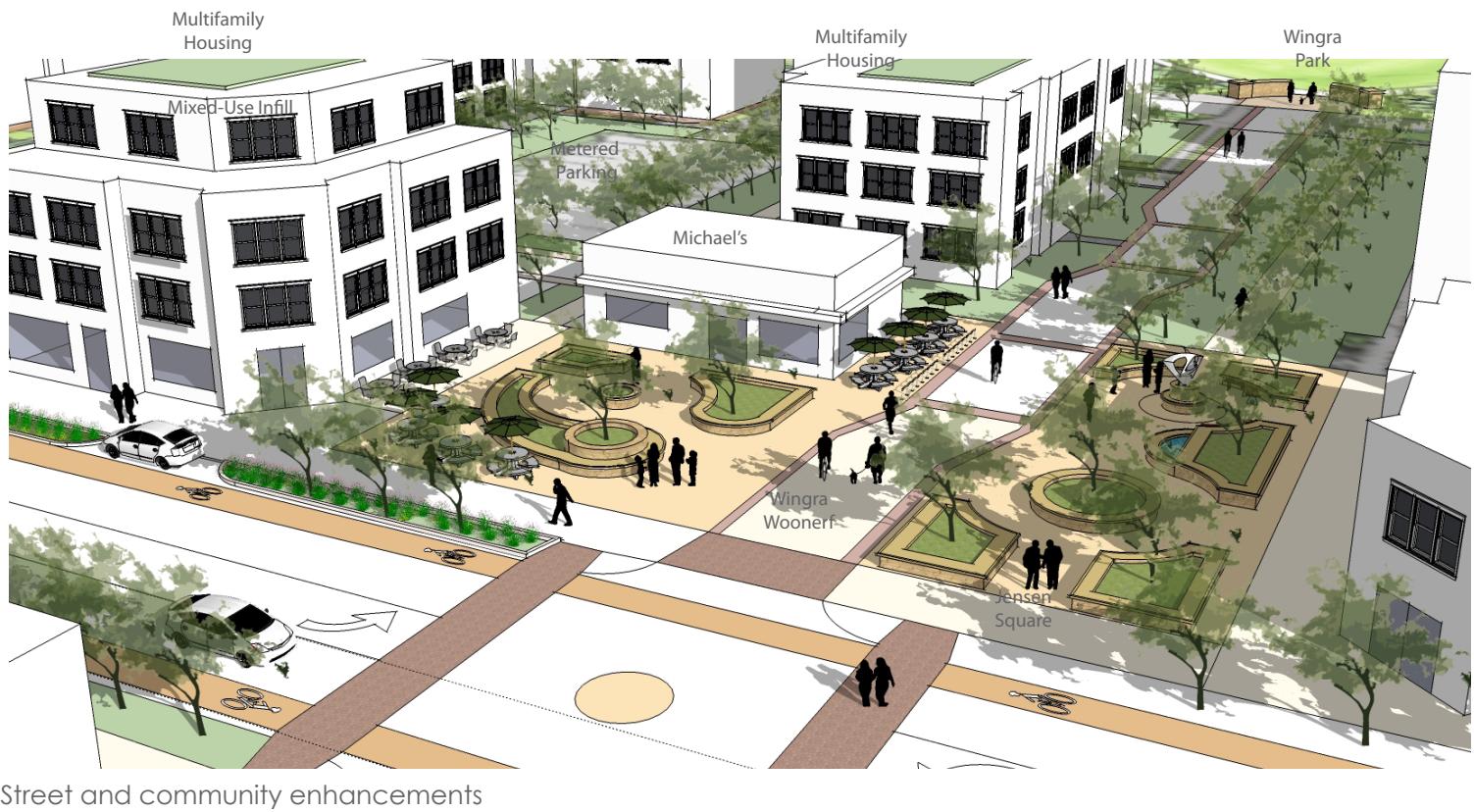
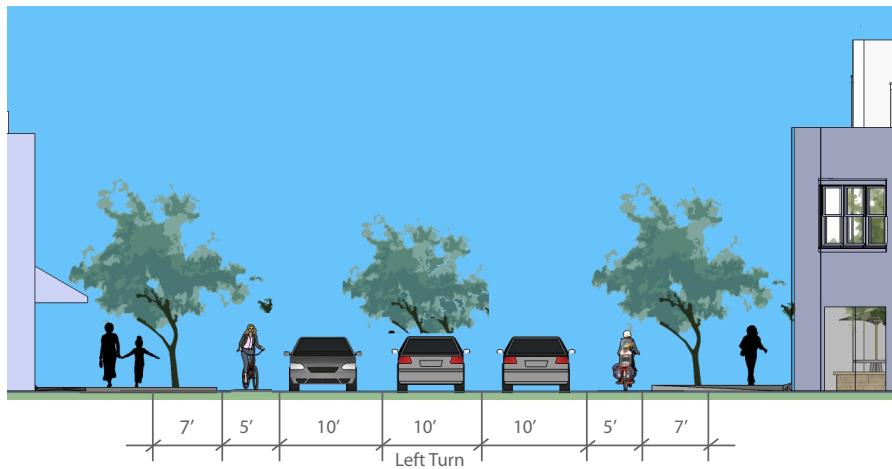


Existing Conditions



Proposed smart growth infill & multi-modal street network







## VILAS PARK & LAKE WINGRA SHORELINE RESTORATION

Student: Kurt Schmidt

Location: Madison, WI

Client: Friends of Lake Wingra

Steering Committee: Jim Lorman & Steve Arnold

Research Topic: Environmental Education & Public Health

Type of Project: Lakeshore Restoration and Park Design

Kurt's project investigates how ideas of environmental education and public health may inform the revitalization and design of a lake shore restoration project.

The primary goals of the project include:

- Restoring native habitat along the urban lakeshore
- Improving the lagoon water quality in Vilas Park
- Engaging the community with interactive exhibits that focus on Lake Wingra's environmental conditions
- Providing a pedestrian and bicycle path system that ties into existing neighborhoods

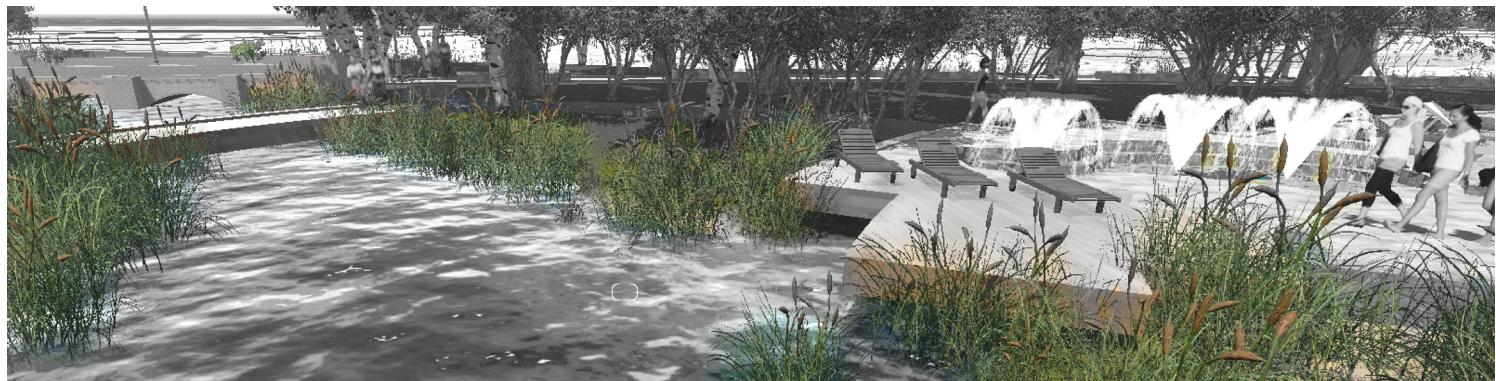


Community parkway corridor

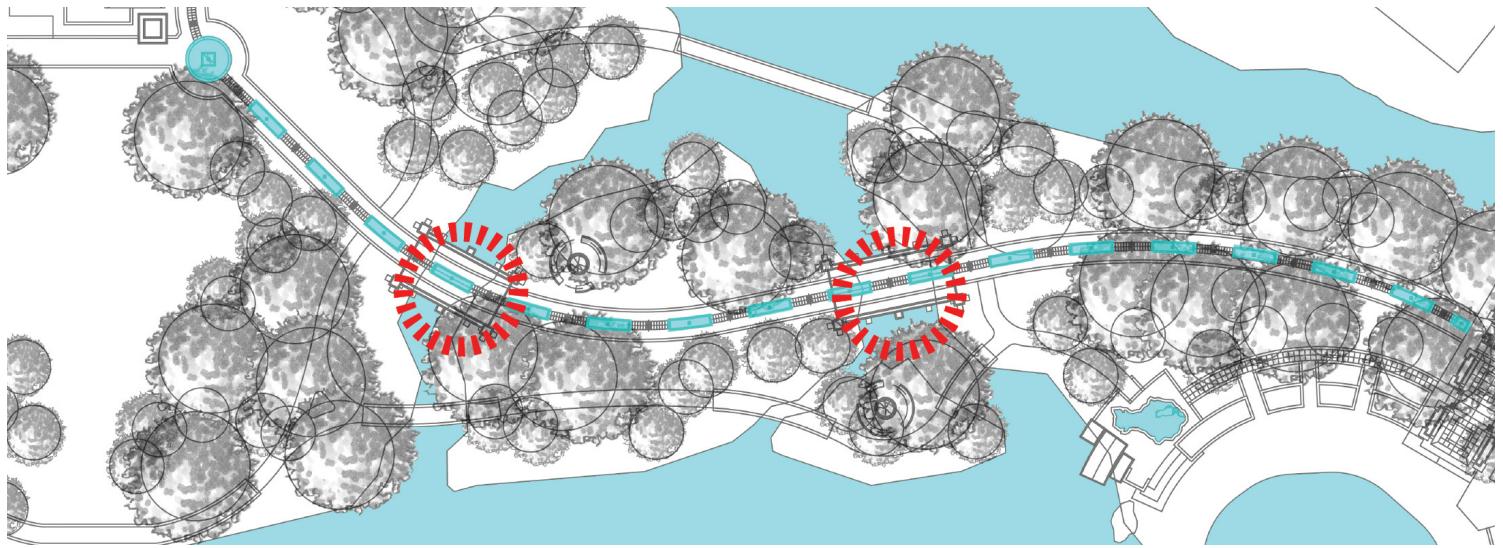


Park master plan

## Water Filtration Buffer



Shoreline restoration



New bridge locations along bicycle and pedestrian path



Mycoremediation water pump located within bridge structure



## INTEGRATING URBAN & RIPARIAN SYSTEMS

Student: Zehao Xie

Location: Hurley, WI & Ironwood, MI

Client: The City Riverside Trail Committee

Steering Committee: Char Musatti, Larry Holcombe, Ron Ahonen, John Smith, Sam Davey, Annette Burchell

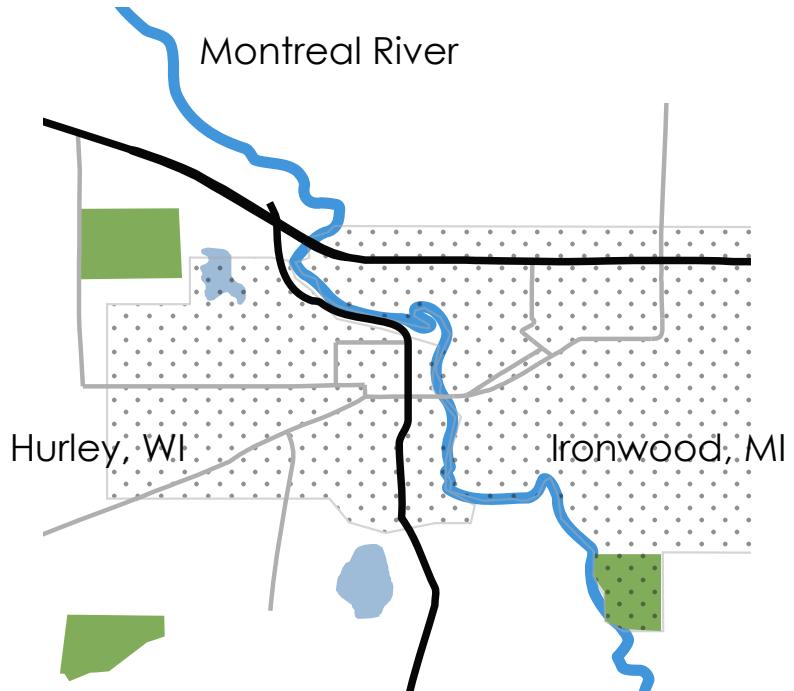
Research Topic: Space-time Ecology

Type of Project: Rural & Riparian Design

Zehao's project investigates how the concept of 'space-time' ecology may inform the design of a trail system that improves the Montreal River's ecological value while generating local economic growth.

The primary goals of the project include:

- Attracting recreational visitors who will also take advantage of local hotels, restaurants, and retail shops
- Integrating environmental and educational nodes along the proposed trail system
- Providing residents and visitors the ability to experience vast deciduous forests, evergreen forests, and wetlands





Regional master plan



Trail overlook at Peterson Waterfalls



Trail system between river and US 2 Hwy

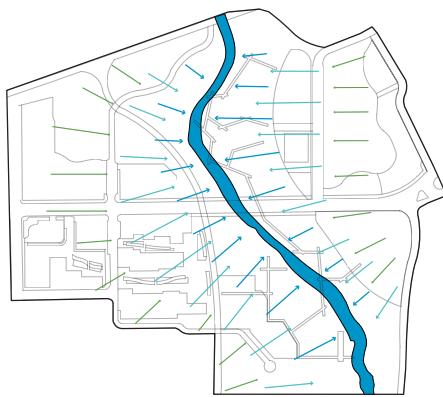


Trail flowing through residential area



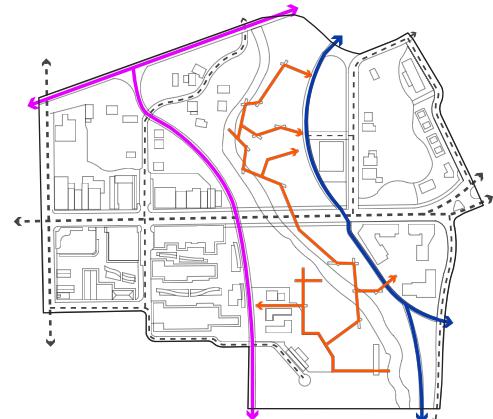
Softscape

- Forest
- Urban Green
- River Buffer



Water Movement

- 1st Level Runoff
- 2nd Level Runoff
- 3rd Level Runoff



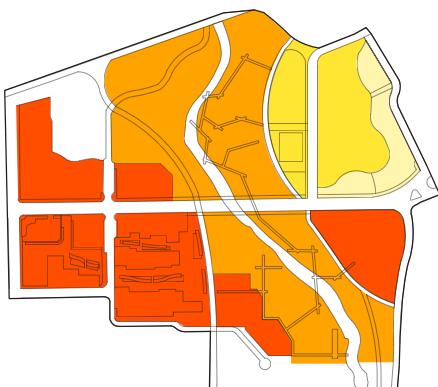
Circulation

- Vehicular Road
- ATV Trail
- Hiking Trail
- Boardwalk



Development

- Existing
- New Commercial
- New Residential



Public-Private

- Public
- Public (Enclosed)
- Semi-Public
- Private



Hardscape

- Commercial Paving
- Wood
- Sports Field
- Residential Paving

Community master plan systems



Community master plan



Proposed commercial development



Proposed incremental housing integrated around existing residential units



## ENERGIZING THE ALLIANT ENERGY GROUNDS

Student: Kevin Yeska

Location: Madison, WI

Client: Alliant Energy Center

Steering Committee: Rick Phelps, Jim Bower, Jim

Carley, Fred Arnold and Jane Grabowski-Miller

Research Topic: Community Psychology

Type of Project: Urban Infill

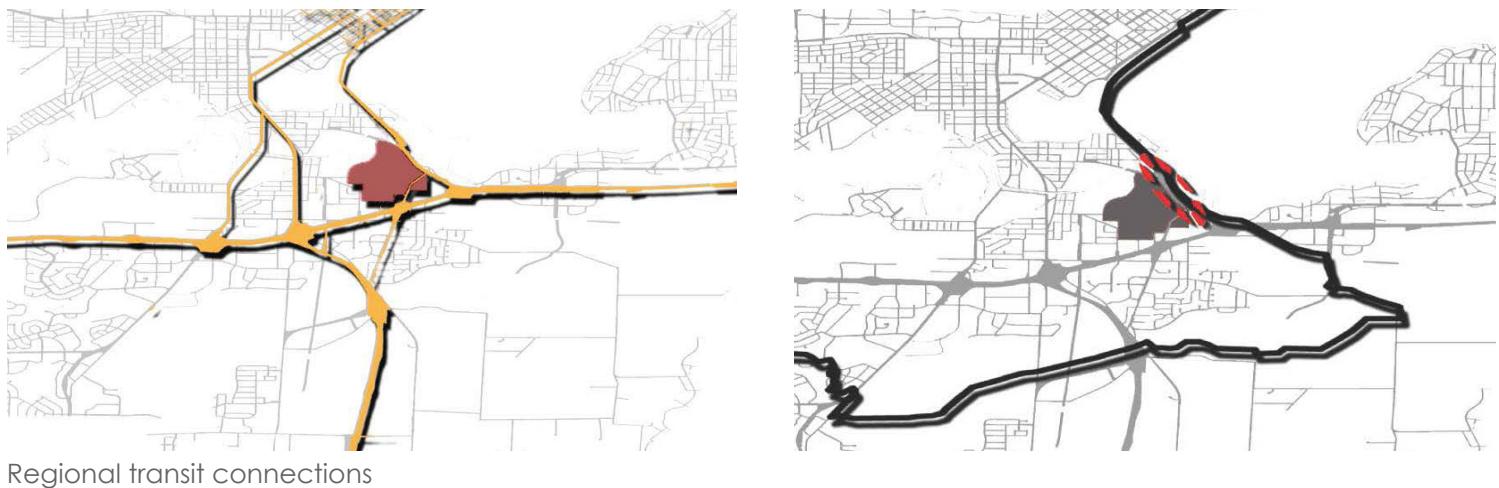
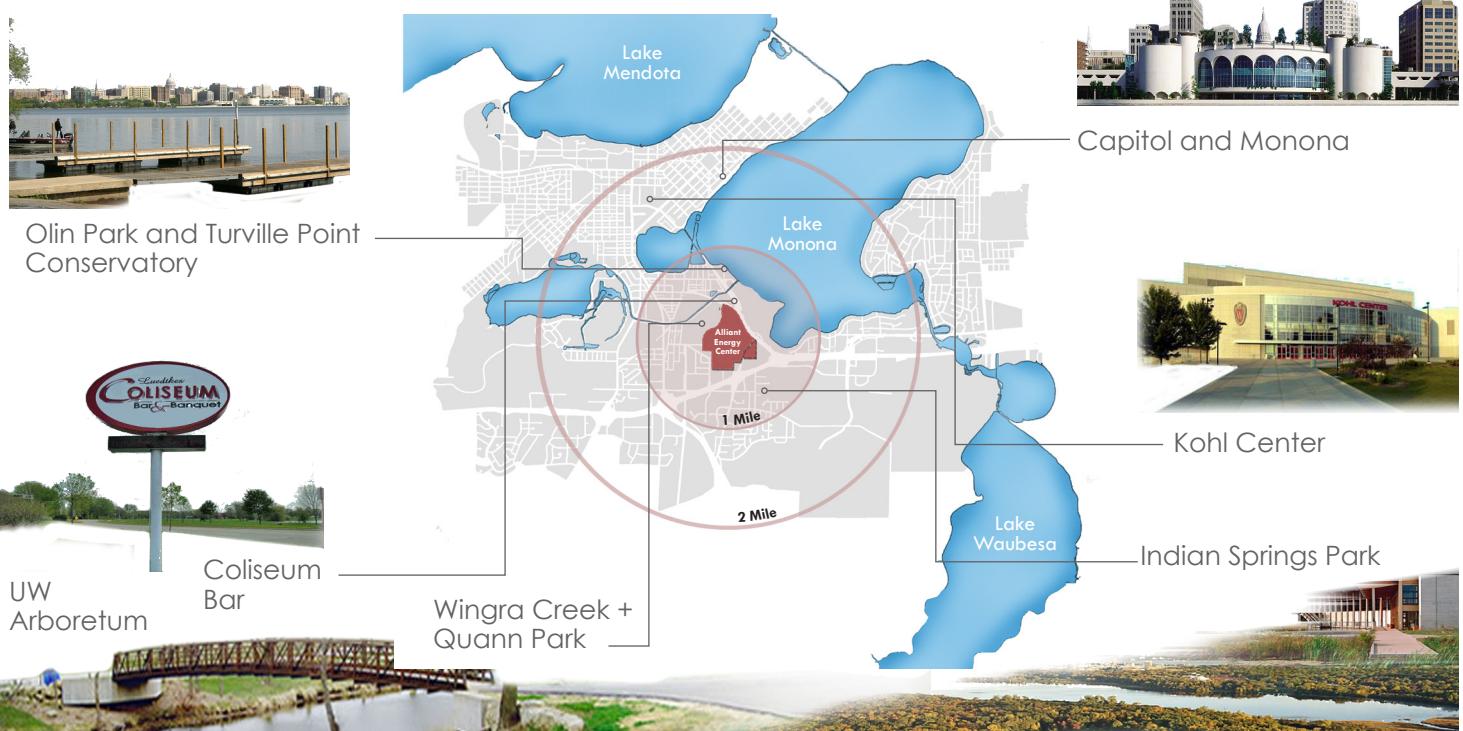
Kevin's project investigates the ideas related to community psychology and how they may inform the design of the Alliant Energy Center grounds.

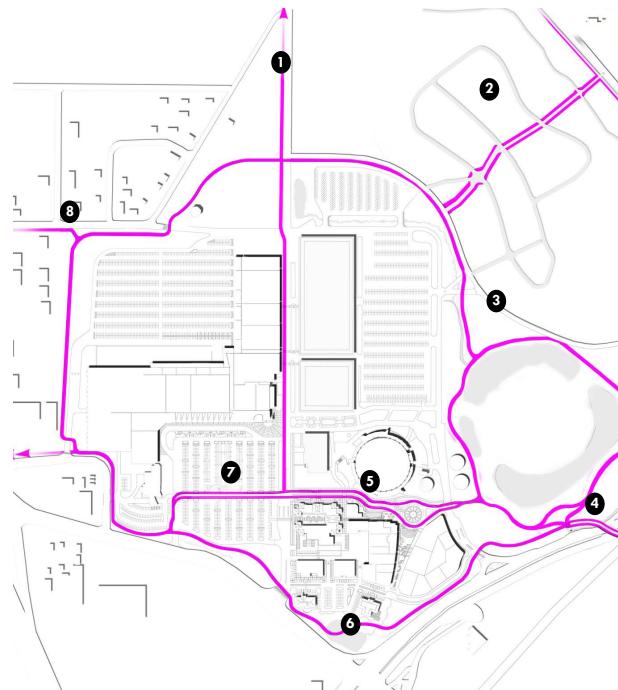
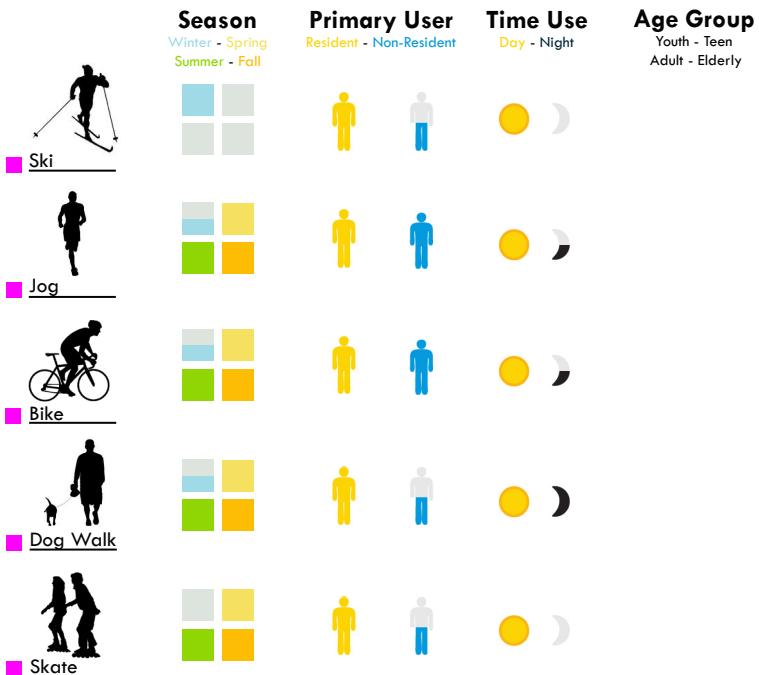
The primary goals of the project include:

- Increasing revenue by attracting more users into the site during off hours
- Connecting the various open spaces surrounding the Alliant Energy Center
- Improving wayfinding throughout the grounds by introducing new entry focal points
- Developing a design strategy that reduces storm-water runoff within parking lots

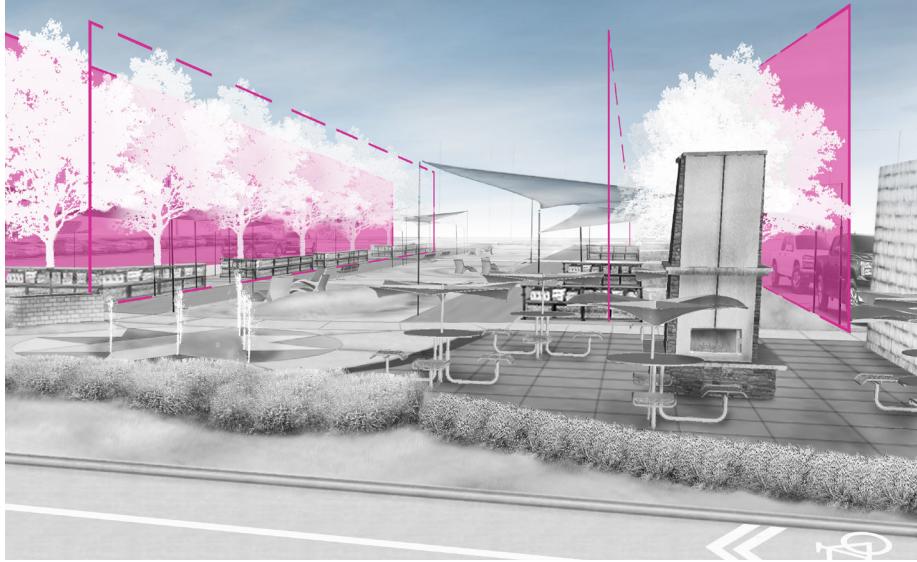


Community master plan

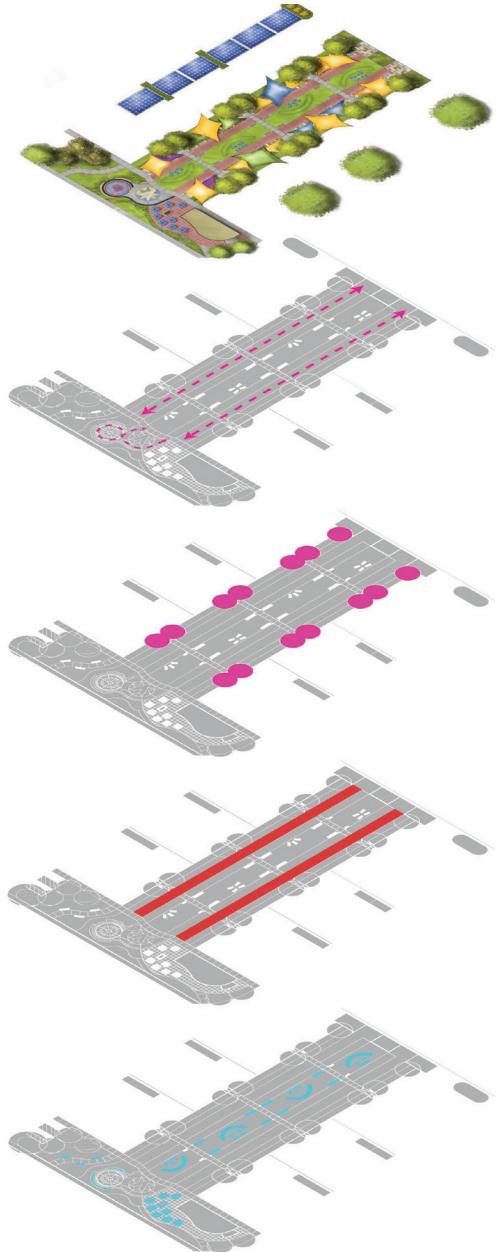




Community trail system diagrams



New entry plaza to the Alliant Energy Center



Plaza systems

# What our clients have to say:

Our project from last year was amazing - our engineers are completing it now for submission to CARPC. Thanks so much.

-Linda Begley-Korth  
Village of Cambridge  
Economic Development

The Wabeno Capstone has generated lots of excitement and is a catalyst for a group that has convened and been meeting regularly for the last couple of months. They are energized. Thank you!

-Steve Nelson  
Forest County Extension office  
Community and Youth Development

The project successfully addressed our proposal, and we would like to thank Kurt for his excellent work.

-Jim Lorman, Phd  
Friends of Lake Wingra