**2018-2019**FINAL REPORT

## UniverCity Year

Better • Places • Together

# Placemaking and streetscape design for the City of Monroe

LANDSCAPE ARCHITECTURE 611: SENIOR CAPSTONE IN LANDSCAPE ARCHITECTURE

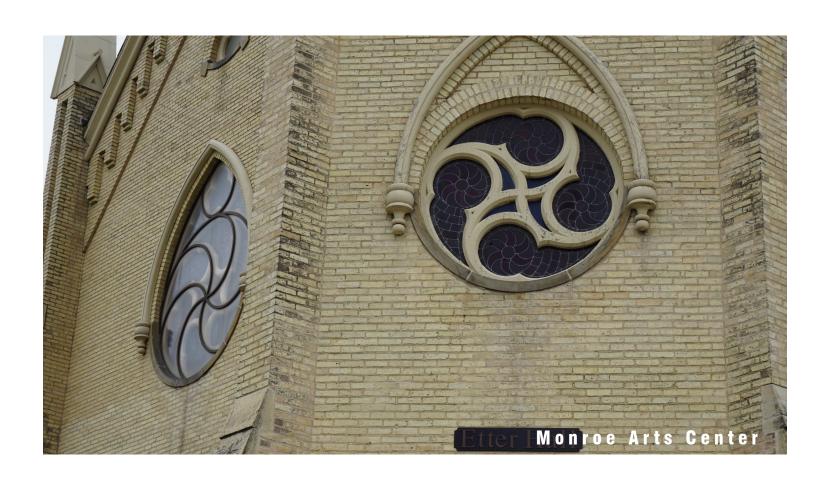


## **AC** acknowledgements

I would like to thank the individuals who invested time to assist me in the capstone project and design process.

Louis Armstrong, Mayor of Monroe, soft-spoken but passionate about the health and well-being of the community and environment.

Sam Liebert, Assistant City Adminstrator of Monroe. Providing insight on community goals, concerns, and resources that assisted with the development of the project.





The City of Monroe.
A small suburban community whose rich culture has led to its success in dairy industries. However, in today's age, the city has concerns adapting and providing competitive benefits to younger generations.

This capstone will aim to address those issues by revitalizing the public realm through landscape design and increasing city attractiveness by applying ideas of public health to design attractive public spaces, and educating landscapes to in turn, create revenue generating landscapes in the city for the city.



### contents

Part I	
ntroduction	Dagas
Project Workflow	Pages
PART II	Pages
Project Context, Background & History	
Project Goals and Concerns	Pages
Programmatic Elements	Pages
Research Topic & Literature Review	Pages
Type of Project and Professional Focus	Pages
Precedent Review	Pages
The Region & Community	_ ~
The Site	Pages
Professional Design Ethics	Pages
Evaluation Criteria	Pages
PART III	Pages
Design Strategies and Rationales	Pages
Reflection	3
Expected Results	Pages
Appendix	
	Pages
	Pages
	Pages

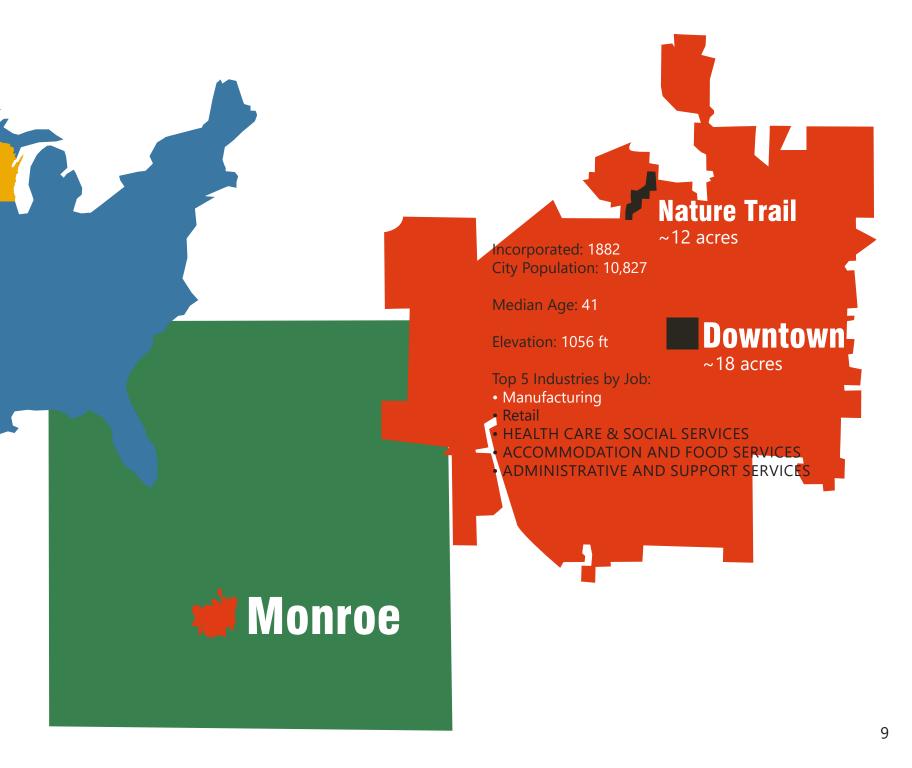


To fulfill the requirements of the Senior Capstone Program in the Department of Landscape Architecture at the University of Wisconsin-Madison I will investigate how ideas of public health may inform the design of public spaces and the routes that connect them.

This investigation will be given context and focus by the concerns and goals of the City of Monroe, which include improvement of the health and well-being of the community to create a more attractive community.

The historical downtown, parcel:2325140001300, and 9th street will be the sites for this study.







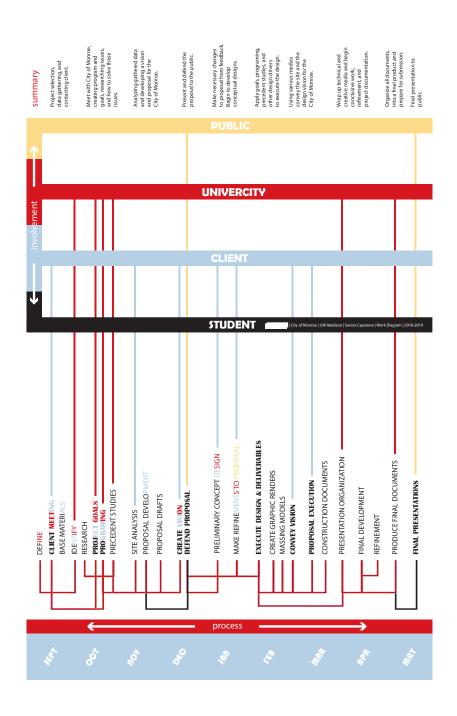


### goals/drivers/program

A workflow diagram guides the project throughout the academic year.

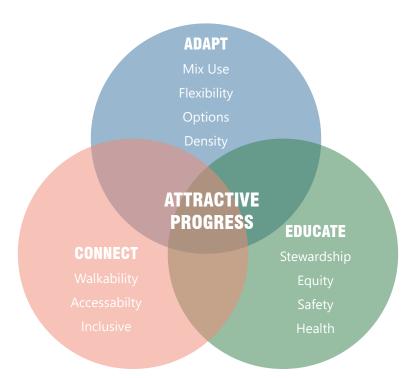
Thd diagram incorporates:

- timeline
- summary of tasks to be completed
- design process
- involvement of various clients



### PROJECT COALS

The goals revolve around adapting, connecting, and educating Monroe in hopes to improve public health and promote a sustainable and resilient future. Through these lenses we can futher develop specific ecological, economic, and social goals.



#### **ECOLOGICAL**

- Provide Human-environment interaction
  - educating landscapes
  - nature play opportunities
- Reduce urban heat island effect
  - remove unneccesary paving
  - Use plant material wherever possible
  - Plant more trees for public realm
- Green use of water downtown
  - Re-use
  - Geodesign
  - water efficient use

#### **ECONOMIC**

- Create revenue generating public spaces
  - Food Carts
  - Cheese days
  - Farmers Markets
  - Concerts
  - Competitions
- Design for future mix-use development
  - Store/park relationship
  - walk/bike friendly ammenities
  - Paid Parking on square

#### **SOCIAL**

- Provide infrastructure for active community
  - Plantings
  - bike lanes
  - safe cross-walks
- Be all-inclusive at all scales
  - infrastructure reaches all demographics
  - Accessibility
- Promote and educate bicycle safety
  - signage

## Rt research topic & literature review

Active transport is an easy way to improve both physical, and mental public health. Not only does designing active transportation infrastructure make walking and biking more desirable, but it also contributes to the health and well-being of people and the environment by planting vegetation, reducing impermeable surfaces, providing safety and comfort to the public realm, beautifying the outdoor environment, and reducing greenhouse gases by minimizing car usage and reliance. Hansen de Chapman provides a peer-reviewed article that talks about realistic distances. people are willing to travel and how to design desirable streets people want to traverse on foot. Another by Jonathan M. Gallimorea focuses on walking routes to school. Many schools in the City of Monroe are in close proximity or located in residential areas, thus for the safety and wellbeing of children, teenagers, and parents, streets must be designed so that persons on foot can have confidence, using active transportation to reach destinations such as school.

#### 1. INCLUSIVE DESIGN

2. Cassidy, Robert. "Designing Cities that Meet Elderly Women's Needs." Building Design & Construction 49.8 (2008): 7. ProQuest. Web. 8 Oct. 2018.

This is not a peer-reviewed article but has some significant points in designing landscapes. Because life expectancies today are much longer than they used to be, and women outliving their significant others. It seems that there are old women who we can assume live in our cities by themselves. Thus we must design for this group, and although their homes may not be able to meet their physical needs, 2/3's of a surveyed group said they want to stay in their current homes. And although we cannot change those factors in their homes, we can change the built environment around them to make navigation easier. Thinks like fixing broken sidewalks, poorly designed stairs, and too short of time traffic signals.

The city of Monroe consists of a high demographic of elderly, and so designing walkable streets for them means address the problems listed above and making sure there is equity in all aspects of the built landscapes around them. The city of Monroe is a small but dense area, with very walkable distances even for the elderly, they just aren't desirable, and designing for the elderly can help with that.

### 2. PLACE MAKING

7. Hansen, de Chapman. "Design Codes for Healthy Communities: The Potential of Form -Based Codes to Create Walkable Urban Streets." Order No. 3416445 University of Florida, 2008. Ann Arbor: ProQuest. Web. 7 Oct. 2018.

This article gives practical data on what to take into consideration when designing for the health of communities. I specifically took out some significant evidence presented from the national Personal Transportation Survey which says that "70% of people will walk no more than 500 feet for daily errands, 40% will walk one-fifth of a mile, and only 10% are willing to walk a half mile(approximately 8-10 minutes)." These statistics are applicable to my project because I want to encourage walkability and I usually use buffers of a mile, but realistically, statistics show people will really only walk a fraction of that distance, which is important when mapping, creating corridors and locating significant places for people to travel to. The article also talks about determinants of walkability, land use zoning, gardens, and designing public spaces. Although Kind of broad, still brings up significant factors to think of when designing such as enclosures, transparency, human scale, complexity, and imageability.

#### 3. STREETSCAPE DESIGN

11. Lindqvist AK, Rutberg S. "One Step Forward: Development of a Program Promoting Active School Transportation" JMIR Res Protoc 2018;7(5):e123

This article can help provide the framework to promoting active school transportation. Active transportation are means of traveling actively, walking, biking, skateboarding, etc. This article talks specifically about transportation to and from school to home. However, upon reading some of the content, I feel many of these suggestions can be applied to every age group no matter the destination. The article talks about using intervention mapping or (IM), a 6-step model similar to the design process, including steps like problem identification and programing, to implementation and evaluating. Another interesting concept called gamification peaked my interest as this is a way to add a game aspect to activities that normally would not consist of game characteristics. I think providing some kind of initiative or challenge to the community and then to reward them for participation may be a great way to get people to use active transportation for their everyday errands and tasks.

Additional articles in the appendix.

#### TYPE OF PROJECT

The outdoor public realm consists of streets, landmarks, corridors, and spaces like plazas, parks, downtown cores, etc. These factors aid the region in defining its sense of place, its communities, and culture.

For this project, I will focus primarily on downtown redevelopment, and on secondarily on streetscape and nature trail designs.

The historic downtown will be redeveloped to better connect small shops around on its perimeter to the inner park to increase flow of pedestrian traffic and provide ammenities that keep people downtown.

Streetscape design will primarily focus on 9th street adjacent to the historic downtown. This is a focus area because crossing the street becomes a safety concern because the street is a primary corridor east to west. As a primary corridor, bicycle opportunities should also be created.

Lastly, the nature trail is something the mayor wanted to incorporate to provide a nature/educational ammenity for the community. This will involve diverse plantings, a walk and bike trail, and several open space areas for education opportunities.

Using streetscapes and navigability strategies, I am aiming to connect both the downtown and the nature trail and provide a fulfilling experiences for the community and visitors.

#### PROFESSIONAL FOCUS

To foster a healthy community, that is able to educate and provide competitive economic opportunities, the city must be attractive to all demographics.

To design this attractive city, professional foci in urban design, green infrastructure, and place making. The landscape architecture practices will work to improve walkable and bikeable streetscapes and increase qualtiy of destinations that will liven the downtown core, excite the community, and provide more desirable opportunities to be physically active.

### **CAPSTONE PRODUCTS**

The products of this capstone will include a set of design documents and recommendations for The City of Monroe, which will be submitted to Sam Leibert, Assistant City Administrator, and Gavin Luter, Director of UniverCity Alliance, and a capstone document, which will be submitted to the Department of Landscape Architecture in partial fulfillment to the degree of Bachelor of Science in Landscape Architecture.





Landscape architecture projects that have addressed similar problems Monroe is facing. They are great ways of generating ideas.

### PORTLAND MALL REVITALIZATION

- Street scape programming
- Aesthetic cohesiveness
- Connecting community resources

### **KLYDE WARREN PARK**

- Place making
- Community Unifer
- Intentional Multi-program design

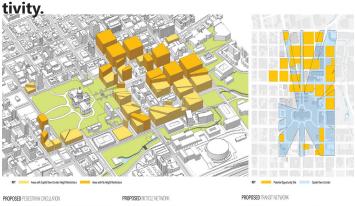
### **TEXAS CAPITOL**

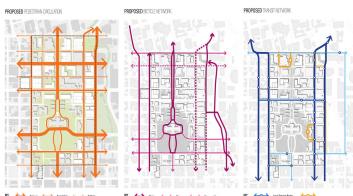
- Analyses
- Public Realm Improvement
- Designing around city core

This project and the firms that worked on it demonstrate how strong **site analysis** can be utilized in landscape architecture. The City of Monroe does not have a capitol building, but does have its historic

downtown courthouse. This building and square is the center of many events and activities that culturally define the city. The Texas Capitol Complex Master Plan analyzes viewsheds, culturally significant buildings and landscapes, connectivity etc. to design a resilient and sustainable landscape that will provide the framework for the

downtown's new development and redevelopment, as well as increases **legibility and connec** 





The Portland Mall precedent identifies key features to revitalizing an urban corridor similar but in different scale to the City of Monroe. It does not over program its streets but provides elements like street furnishings and signage for the success of public transportation, and also shows how increasing the public realm through wider sidewalks can allow people to establish their own program such as tables and chairs for a restaurant or planters outside a business.

Unique Paving Facades Wide Details Klyde Warren Park was designed to **connect urban and suburban**, a goal the City of Monroe has as well. I feel its **location** was key to the park's success, **blocking undesirable views**, and allowing for **easy flow** in and out from all directions. The parks design is **versatile yet intentional** in its space planning. A landscape **accessible and designed for all users**. Lastly its **planting design** and materials accentuate paths and views, and **defines the different spaces** within. This creates many **different and new experiences** traveling through one park.



## An analysis: regional and community

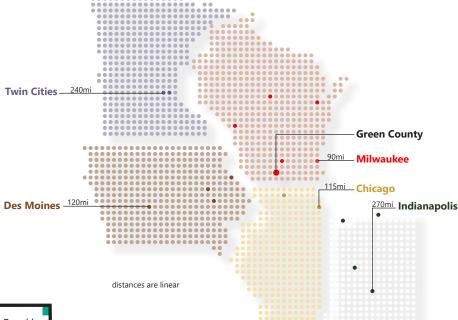
The region will be defined by political borders that represent Green County. These boundaries were chosen as the regional definition because the county boundary truly encapsulate its own culture due to the people it consists of.

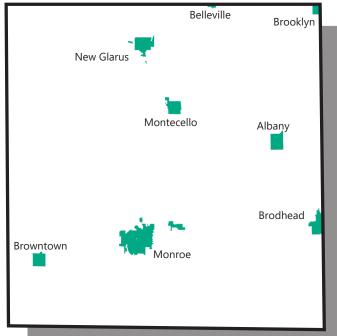
Regional analysis will consist of three broad topics: natural, cultural, and experiential. These categories allow for thorough data analyzation of Green County, both in how geography affects the region and how that has attracted a certain population and derived a unique human culture.

In the natural topic, location is analyzed to understand how place is defined. Ecological landscapes are one way the Wisconsin Department of Natural Resources has analyzed Wisconsin in the past. It provides a basis of geography and



### LOCATION NATURAL / GREEN COUNTY





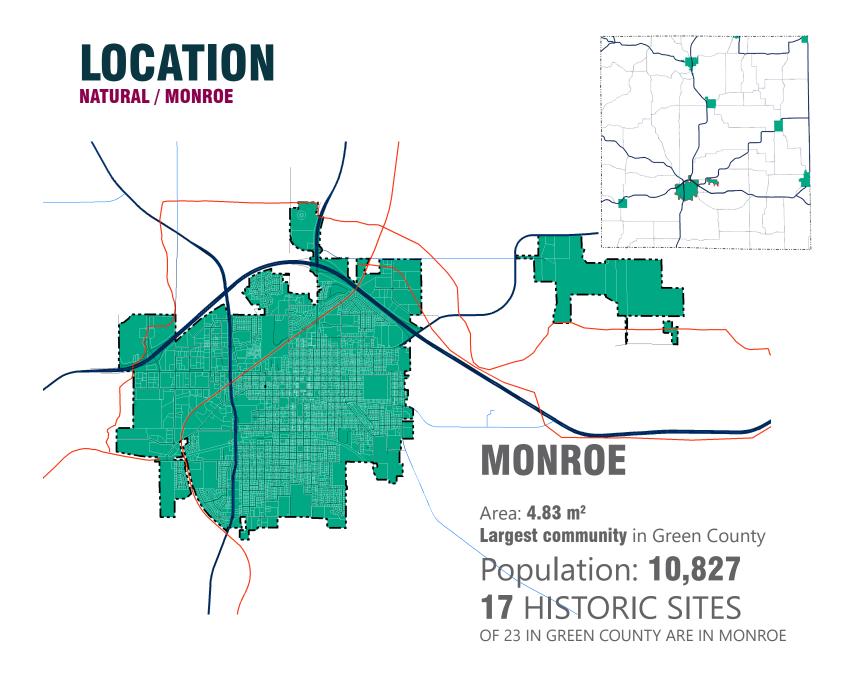
### **GREEN COUNTY**

County Seat: Monroe

Area: 584 mi<sup>2</sup>

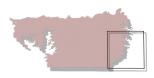
Population: **36,858**Cows out populate humans.

8 Major Communities



## **ECOLOGICAL LANDSCAPES**

**NATURAL / GREEN COUNTY** 



The Southwest Savanna is an **unglaciated** area of wisconsin characterized with rolling topography broad open ridges and steep valleys. Soils are thin on hill tops but can be very **productive deep** silt loam in other areas. Elevations range from 676' to 1,719'. Historic vegetation consisted of tallgrass prarie and oak savana. However today, **70%** of the landscape is agriculture use.

The Southeast Glacial Plains ecological landscape is situated entirely on **glacial** landforms. Soils are limerich tills overlain in most areas by a silt loam cap. Historically, vegetation consisted of **prairie**,

**savanna, and oak forest**. Agriculture and urban land use practices have

drasitcally changed the landscape. Prairies and savannas are all but gone, and only **10%** of of severely fragmented **forests** remain. **Counties are densely populated** in the SE Glacial Plains.

0% Open Water 1% Urban 17% Forested Wetland 11% Grassland

6% Open . Water **5%** Urban 20% Forested Wetland 11% Grassland **58%** Ag

Statistics from Wisconsin Land Legacy Repor

## **ECOLOGICAL LANDSCAPES**

**NATURAL / MONROE** 



0% Open Water



**74%** Urban



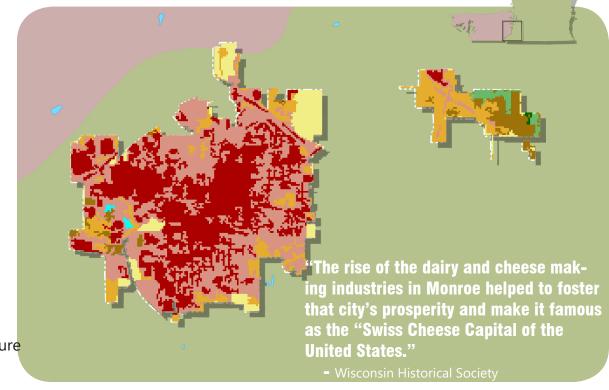
**2%**Forested
Wetland



17% Grassland



**7%**Agriculture



#### BRIEF HISTORY WISCONSIN HISTORICAL SOCIETY

"Monroe is both the county seat and largest community in Green County.

European immigrants came to populate Monroe by the 1860s, particularly those from Switzerland. Their knowledge of dairy led to the shift towards agriculture late 1800s.

Today, the community's Swiss heritage is visible in much of the local architecture and in the strength of its cheese making industry." -Wisconsin Historical Society

#### ANALYSIS LANDCOVER & ECOLOGY

Almost the entire City of Monroe is in the Southeast Glacial Plains. Soils in Monroe are lime-rich capped with silt loams, which is great for agriculture. However, the city is heavily developed as urban & suburban, which may have had a drastic impact on soil characteristics.

Outside the city boundary, Monroe is encapsulated by agriculture that the city's industries rely on. The ecological landscape's characteristics are key to the city's dairy and cheese industries, even if Monroe has low agriculture itself.

## TOPOGRAPHY & WATERSHED NATURAL / GREEN COUNTY





1040 - 1085

992 - 1039

946 - 991

899 - 945

852 - 898

805 - 851

759 - 804



### 1133' HIGH

**374**'DIFFERENCE

759' LOW

Communities in Green County are located at peaks or valleys of landscape. Their elevations vary along the spectrum of elevation Some communities borders like Monroe and Brodhead seem to the topography wrapping and edging drastic elevation changes cause standing water sources are so scare, in this landscape, it sible water sources were not a significant factor in the location development.

#### Green Allen Creek County and Middle Sugar River Little Lower E. Branch Sugar [-Pecatonica River River Lower Middle Jordan and Sugar River Skinner Creeks Lower Sugar Honey and River **Richland Creeks**

### **MAIN ISSUES:**

HABITAT IMPAIRMENT FROM NON-POINT SOURCES POLLUTION.

MAIN USES: AGRICULTURE

Watersheds above are part of the larger Sugar Pecatonica
Basin

### **Lower Sugar River**

**18.4 mi** of Sugar River Large Floodplain Wetland Complexes **High Wildlife Habitat & Water quality** 

### **Little Sugar River**

Contains **Sugar River State Bicycle Trail. 31** Camp sites **14** Primitive Sites

### Allen Greek and Middle S River

**6** Exceptional Resource Waters **2** Impoundments, Albany Lake Leota

### **4660+ acres**of Public Recreation Lands

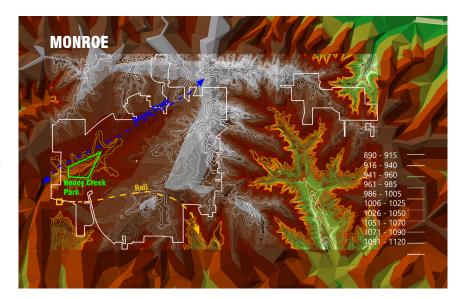
### Jordan and Skinner Cree

**723 acres** State Rec. Areas **92 acres** open waters **1.7% wetlands** 

## TOPOGRAPHY & WATERSHED NATURAL / MONROE

Monroe is located in the mid to high elevations of Green County. The county boundary follows the perimeter of a valley. Grading in Monroe is fairly consistent with only minor steep slopes.

The City is very clearly developed with the topography. Orange Contours (986 - 1005) on the west side of the city roughly encapsule Honey Creek Park. The major valley in the site from from north-east to west guides the bike path and Honey Creek. Railroads also follow the southern topography running east and west.



### **WATERSHED HONEY AND RICHLAND CREEKS**

MAIN ISSUES:
HABITAT IMPAIRMENT
FROM NON-POINT
SOURCES POLLUTION.

**EXCESS NUTRIENTS** algal and macrophyte growth

**STREAM DEGRADATION** stream bank pasturing, sedimentation

80%
Agriculture
10%
Forest

**Land Use:** 

Forest MAPLE-BASSWOOD, LOWLAND HARDWOODS, OAK



79

f the

follow

is pos-

of urban

s. Be-

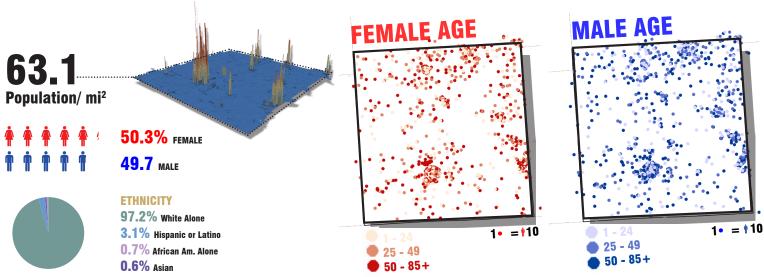
ugar

, Lake

ns.

### **DEMOGRAPHICS**

**CULTURAL / GREEN COUNTY** 



### Average commute time 21.7

MINUTES

1.27% SUPER COMMUTES excess of 90 minutes

35% COMMUTERS commute for less than 14 mins

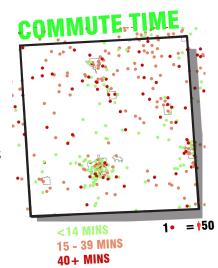
3.4%

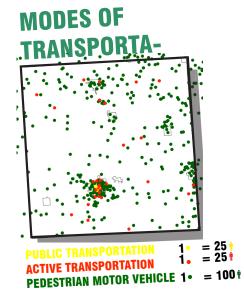
### **Use active transportation**

### **Summary**

Green County is dense in its small communities and a significant majority of Caucasian residents.

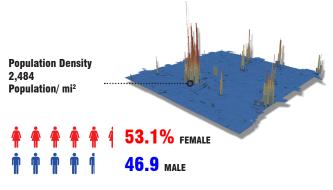
The single motor vehicle dominates commutes in the county, but with relatively short commute times, there is a small percent of active transportation.





### **DEMOGRAPHICS**

### **CULTURAL/ MONROE**





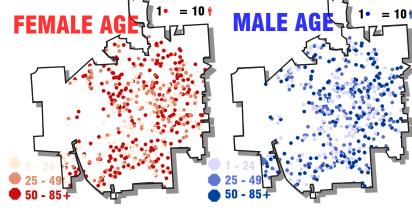
#### **ETHNICITY**

91.1% White Alone

5.0% Hispanic or Latino

0.6% African Am. Alone

0.9% Asian



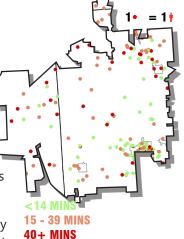
### Average commute time 14.8

**Use active** transportation

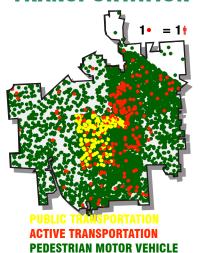
#### **Summary**

Compared to the region, Monroe has a smaller commute time, more active transportation use, and significantly more residents commuting for less time.

This is significant when planning for connectivity and walkability because short commute distances are key to desired walkability.

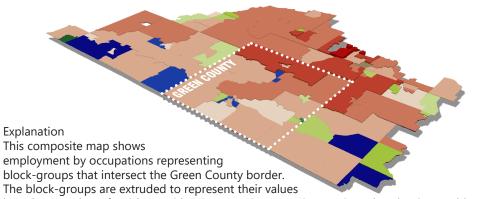


### **MODES OF TRANSPORTATION**



### **OCCUPATION & INDUSTRY**

**CULTURAL / GREEN COUNTY** 



based on number of residents with "x" occupation type. Occupations that dominate a block group will extrude higher showing the color of the occupation type.

TABLE TO STATE OF THE PRINCE TO STATE OF THE

13.7%
HEALTHCARE &
SOCIAL ASSISTANCE

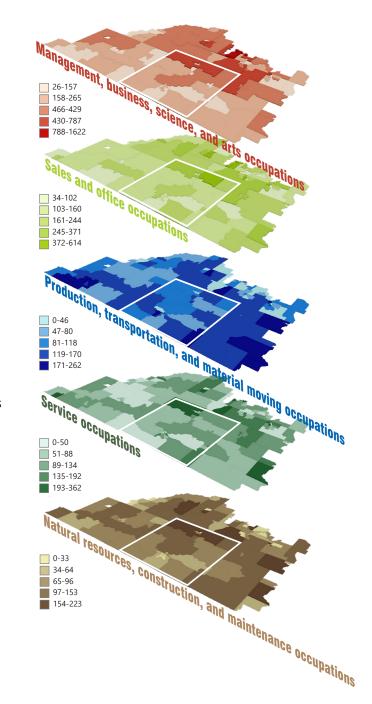
2016 DATAUSAJO

Management, business, science and arts occupations dominate Green County.

Northern Green County around New Glarus has the highest of occupations in Management, business, science, and arts occupations.

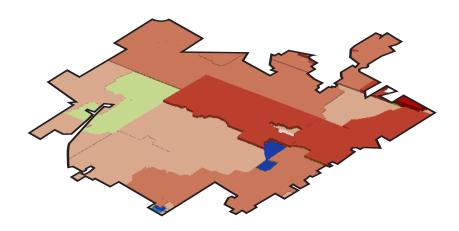
Just south-west of the center is the City of Monroe. Production, transportation, and material moving occupations are more apparent in this area with large contribution to the city's cheese production.

On the east border, Brodhead thrives in service and sales and office occupations denoted in green. Just north is Albany which thrives in sales and office occupations as well.



### **OCCUPATION & INDUSTRY**

**CULTURAL / MONROE** 



EMPLOYMENT BY INDUSTRY

23.3% MANUFACTURING

18.6
RETAIL TRADE

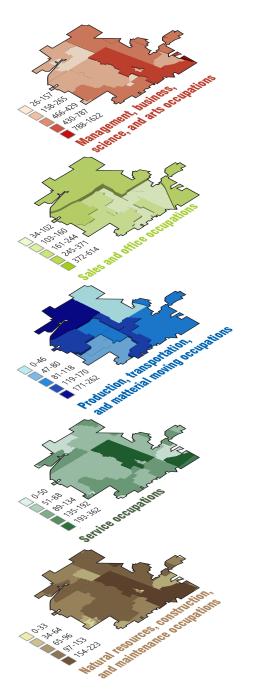
13.8%
HEALTHCARE &
SOCIAL ASSISTANCE

2016 DATAUSA.IO

Compared to the region, Monroe itself is more colorful meaning its quantities of occupations are more dispersed. However, like the region, management, business, science, and arts occupations have the highest quantities as well as dispersion in the city.

The map also provides insight to income and house value. Occupations in red typically have higher salaries so one might expect nice homes and more landscape maintenance.

Although income will not be analyzed, it is an important factor to take in because those communities with higher income may be able to provide more funds to community amenities in their area.



### **AREAS OF INTEREST**

### **CULTURAL / GREEN COUNTY**



ALBANY - Sugar River Tubing this community gathers on the river, enjoying the Sugar River and each other.



BELLEVILLE - Belleville Community Park a pennisula on Lake Belle View and provides amzing scenery, trails, and community space.



BRODHEAD - Veterans Memorial Park/Brodhead Depot the park and depot are historical and are downtown spaces that have many community use affordances.



BROOKLYN - Brooklyn Community Building the community building is a hub for recreation and community activities in a small area.



BROWNTOWN - Cadiz Springs State Rec Area Cadiz Springs provide a multitude of outdoor activities for browntown.



MONROE - Monroe Historic Downtown Square the historic downtown surrounds the court house, a building that centers all community activities.



MONTECELLO - Monticello Community Park this park provides a plethora of community ammenities like gardens, a pool, scenic green spaces, and trails.



NEW GLARUS - New Glarus Brewing Company not only providing spectacular beer, but also amazing community spaces that really define place.



Each of these communities revolve around their landscape. Those with rivers, lakes, and other water features define their sense of place through those water sources.

In other communities, Industry is more of a defining factor for sense of place. For example, cheese for Monroe, and beer for New Glarus. They celebrate their industries with events such as Cheese Days and providing spaces for the community to enjoy.

### **AREAS OF INTEREST**

**CULTURAL / MONROE** 





the largest park in Monroe, it contains historical pieces, a Stage, a creek running through, but unfortunately poor walkability.



#### **Badger State Trail**

The longest trail in Green County. It crosses both state highways causing safety concerns and runs through Twining Park.



#### Rec Park and Pool

his park provides the community with a pool, jaw-dropping playground, and a basefall field.



The City of Monroe has over a

on this page represent a

festivals, fairs, and other

that have affordances for

dozen historical places within its borders, however the sites chozen

different kind of significant area, where people come together for

community events. These areas are

these landscapes are fragment and

key components in the landscape

congression. However, most of

structure



#### Monroe Arts Center

is a non-profit center of Swiss heritage and community activities.



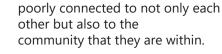
#### Turner Hall of Monroe

is a non-profit center of Swiss heritage and community activities.

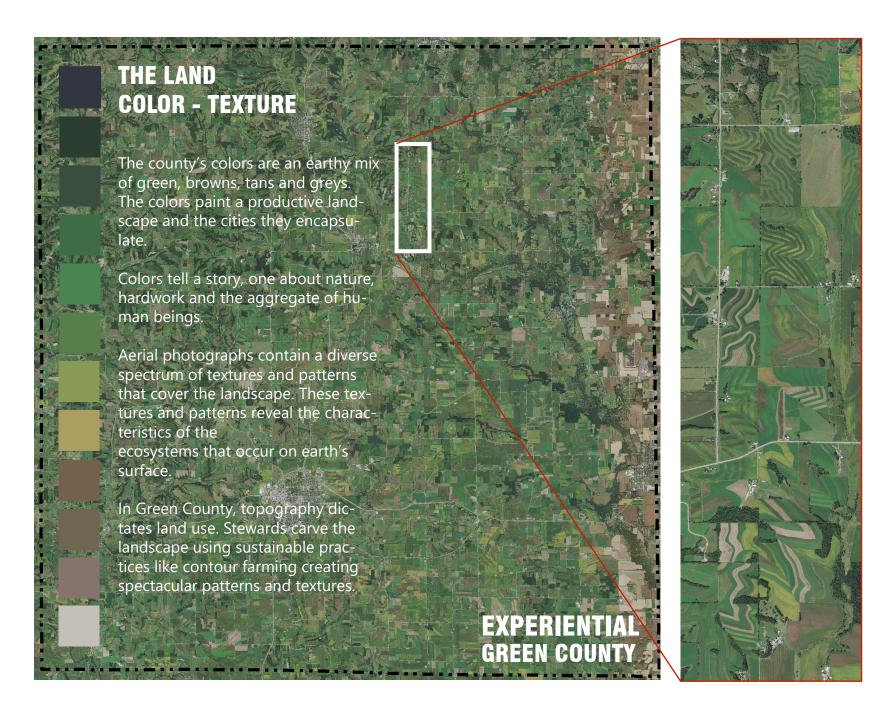


#### Monroe Historic Downtown

is a non-profit center of Swiss heritage and community activities.

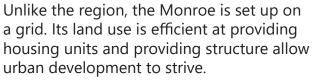






### THE LAND





Colors have less variety and tend to be dull, muted, and analogous. Greys and greens inter-mix, and



## **CONNECTIVITY EXPERIENTIAL / GREEN COUNTY**





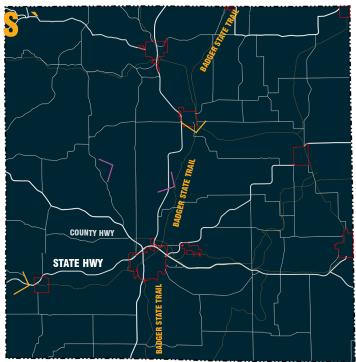




Green County's communities are all interconnected by state highways and county highways making traveling fairly quick and painless. Driving in the southwest savanna allows for a scenic drive with picturesque rolling hills and small water bodies. Trails also interconnect all the communities.

The Sugar River State Trail, Tri-Country Trail, and Badger State Trails are all multi-use and expand large majority of Green County, the longest being the **Badger State Trail** with a length of **27.3 miles** running north to south.

### 145 MILES OF TRAIL snow mobile & multi-use



## **CONNECTIVITY**

**EXPERIENTIAL / MONROE** 









The City of Monroe is well connected compared to some of the other communities in Green County. There are entry points from every direction into the city via state highways. Several county highways merge into Monroe's city streets, slowing vehicle speeds, narrowing and transitioning into Monroe's residential neighborhoods.

Unlike the county highways that transition into Monroe's city streets, state highways continue through the city. The same goes for the Badger State Trail; it never merges with a road or any other trail but stays distinct in its pathing.



## **CA** community analysis

OBJECTIVES OF THE PLAN When the Monroe Comprehensive Planning process started in 2014, there were six objectives desired from the plan. These were:

- Bring together diverse people from our city and develop a vision for our shared future.
- Create strategies for a competitive edge in a demanding economy.
- Support the implementation of innovative ideas.
- Foster a healthy community.
- Give Monroe residents access to the best possible education and lifelong learning.
- Make the City of Monroe the best place that it can be for our grandchildren.



## VEHICLE TRANSPORTATION

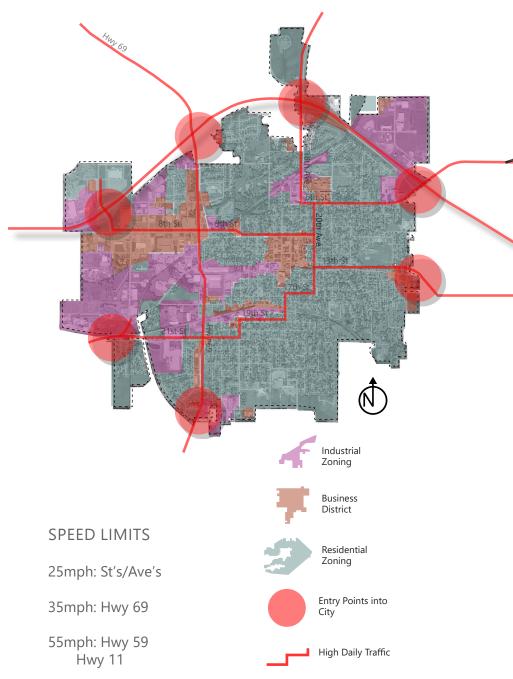
Transportation infrastructure inside and around Monroe consists of state and county highways, smaller local roads.

State and county highways see heavy traffic with the most heavy seen at on/off highway ramps and through freight routes around the city.

There are several entrance points that have been identified through traffic counts, these being State Hwy 69 (north and south), 18th avenue (north), 6th street (east), 13th street (east), and 8th street (west).

Highway 69 is the only straight shot route through to the city's main business and industrial districts while other entrance points like 13th St must zig-zag through local roads to reach those same districts.

Located at the heart of residential districts is the central business district. Its location makes freight transportation difficult and a safety concern on smaller local roads.



#### **OPPORTUNITIES**

- 1. Arterial roads in and around Monroe.
- 2. One ways provide faster movement.
- 3. Medians are desolate or non-existent.
- 4. Intermixed Zoning.
- 5. Diverse entrances.



#### **CONSTRAINTS**

- 1. Dead ends and Cul-de-sacs.
- 2. Public and freight realms overlapping cause safety concerns.
- 3. Highway 69 dissecting Monroe
- 4. Limited routes East to West



#### **RECOMMENDATIONS**

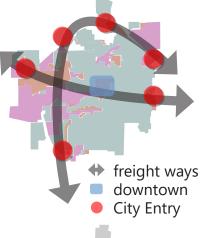
Development of limited stop **primary freight routes.** 

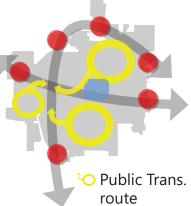
**Entry development** increasing boundary legibility, and promoting cultural identity.

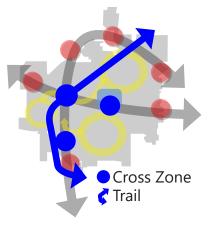
## Create a **public transit system.**

Bus's run three primary routes, crossing where freight transportation occurs, reducing additional stopping of main traffic.









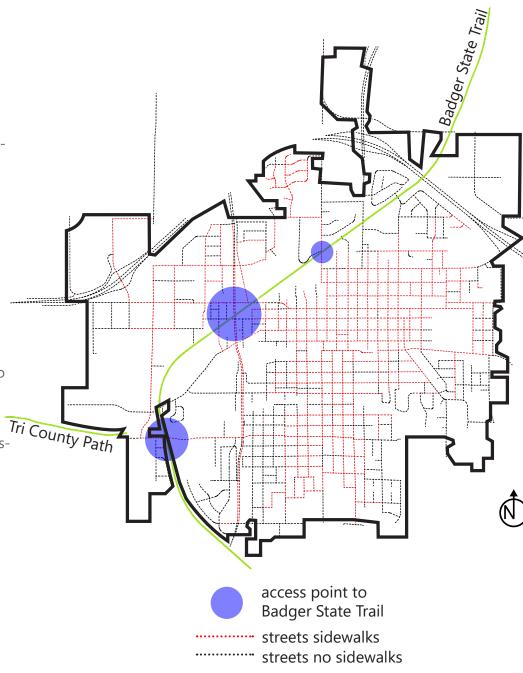
# PEDESTRIAN TRANSPORTATION

Transportation infrastructure inside and around Monroe consists of state and county highways, smaller local roads, and two multi-use trails.

State and county highways see heavy traffic with the most heavy seen at on/off highway ramps and through main freight routes around the city.

There are several entrance points that have been identified through traffic counts these being State Hwy 69 (north and south), 18th avenue (north), 6th street (east), 13th street (east), and 8th street (west).

Highway 69 is the only straight shot route through to the city's main business and industrial districts while other entrance points must zig-zag through local roads to reach those same districts. Located at the heart of residential districts is the central business district, making freight tough on smaller local roads.



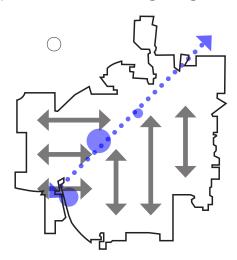
#### **OPPORTUNITIES**

High density streets east side. Grid System creates predicatbility. Badger State Trail runs entire Community Badger Trail residential and commercial Badger Trail breaks the grid system High sidewalk construction.



#### **CONSTRAINTS**

- 1. Arterial roads dissect community.
- 2. Few connections to Badger Trail.
- 3. Diagonal versus Grid (people can move up or down, no need to go diagonal)



#### Recommendations

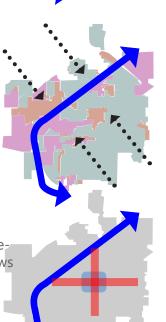
Select and invest in infrastructure supporting active transportation.



Create main corridors for pedestrian realm. Framing views and landmarks.

Increase wayfinding and signage to motivate and inform people who choose active transportation.

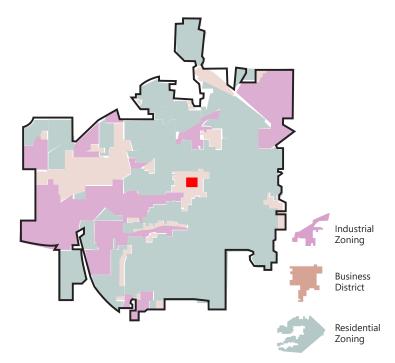


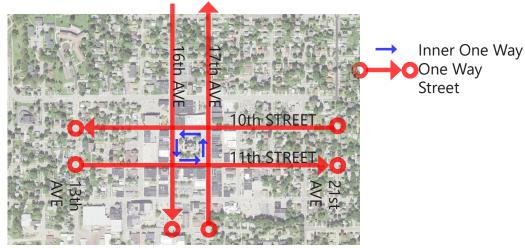


#### MONROE HISTORIC DOWNTOWN

BELOW THE SURFACE, THE WATER TABLE SITS GREATER THAN FIVE FEET. DODGEVILLE - ED-MUND SOILS DOMINATE THIS AREA WITH CHARACTERISTICS OF A SILT AND CLAY MIX. THE SITE IS PRIMARILY IMPERMEABLE PAVING WITH ONLY A SMALL BUFFER OF LAWN AND TREES AROUND GREEN COUNTY'S HISTORICAL COURTHOUSE. THE DOWNTOWN IS ZONED AS "CENTRAL BUSINESS DISTRICT": HIGH QUANTITY OF COMMERCIAL BUSINESS, LOW QUANTITY OF HOUSING UNITS, AND SIGNIFICANT PEDESTRIAN AND VEHICLE TRAFFIC.

THE SQUARE IS WRAPPED BY A DOUBLE-LAY-ERED PERIMETER OF FOUR ONE WAY STREETS RUNNING COUNTER-CLOCKWISE WITH PARK-ING ON EITHER SIDES. THE PRIMARY SLOPE RUNS NORTH TO SOUTH. YOUNG TREES FILL THE OUTERMOST PERIMETER OF THE SITE, WHILE OLDER TREES STAND ADJACENT TO THE COURTHOUSE.





#### Opportunities

- 1. Historic courthouse as center piece.
- 2. Soils are suitable for diverse ideas. 3. Multiple access points allow for accessibility from all directions.
- 4. Contains infrastructure for high-density development.
- 5. Small shops dominate this area, providing more culture and community.
- 6. In the center of city, close to everything.
- 7. Inefficient land use calls for new ideas.

#### Constraints

- 1. High car psycological dependency.
- 2. Road dominated.
- 3. "Percieved" parking shortage makes removing parking difficult.
- 4. Resistance to change.
- 5. Enclosed from all directions.
- 6. Poor navigability.
- 7. No interest.
- 8. Lack of public ammenities.

#### RECOMMENDATIONS

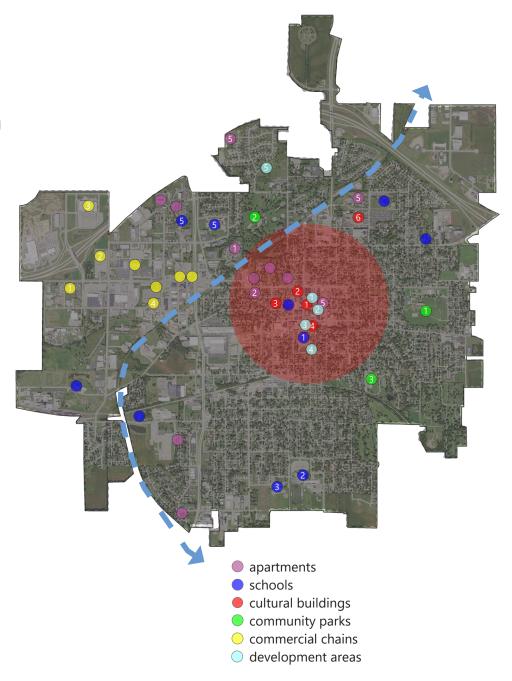
- 1. Redevelop parking into green space.
- 2. Increase multi-use development
- 3. Develop small parcel east
- 4. Increase permanant public art.



### Community

Below the surface, the water table sits greater than five feet. Dodgeville - Edmund soils dominate this area with characteristics of a silt and clay mix. The site is primarily impermeable paving with only a small buffer of lawn and trees around Green County's Historical Courthouse. The downtown is zoned as "Central business district": high quantity of commercial business, low quantity of housing units, and significant pedestrian and vehicle traffic.

The square is wrapped by a double-layered perimeter of four one way streets running counterclockwise with parking on either sides. the primary slope runs North to South. Young trees fill the outermost perimeter of the site, while older trees stand adjacent to the courthouse.



#### STREETSCAPE

MANY STREETSCAPES CONTAIN ELEMENTS THAT COULD USE MAINTENANCE AND REPLACEMENT, SUCH AS THE FENCES AND FACADES OF BUILD-INGS BOTH HOMES AND COMMERCIAL. RESIDENTS ALSO LEAVE LAWNS SCATTERED WITH MISCELLANEOUS ITEMS, TOYS FOR EXAMPLE. STREETS ALSO BECOME VERY BARREN APPROACHING DOWNTOWN. TALL DECIDUOUS TREES DISAPPEAR AND VAST AMOUNTS OF CONCRETE DOMINATE THE PUBLIC REALM.

#### **OPPORTUNITIES**

WIDE SIDEWALK TERRACES
MANY SMALL SCATTERED BUSINESSES
DISPERSION OF SCHOOLS INCREASE WALKING
FREQUENCY.

#### RECOMMENDATIONS

PLANT AND MAINTAIN SIDEWALK LANDSCAPES TO INCREASE MORAL AND UPKEEP

CURB AND PAVEMENT PAINTING TO ADD COLOR AND IDENTIFY TO STREETS.

RESIDENT APPLICATION FOR VOLUNTEERED UPKEEP FOR THOSE ELDERLY AND UNABLE.

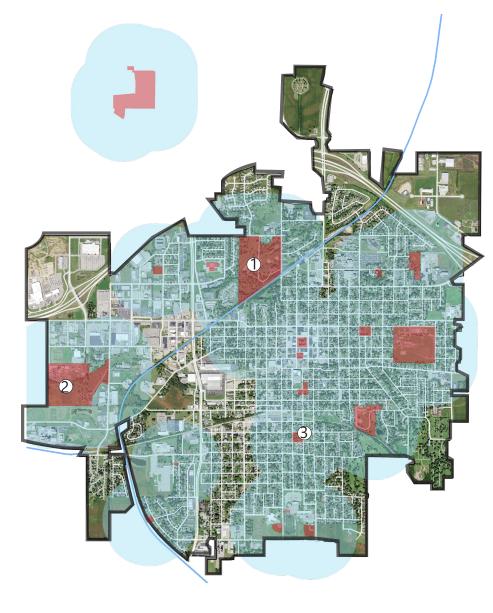
**EDUCATE CHILDREN ABOUT STEWARDSHIP** 



## **PARKS**

Parks are diverse in size, use, and projected demographic. Maintenance occurs regularly and there are no major issues to quality of parks. There are several small basic play parks in residential neighborhoods. Although most of the city is within a five minute walk of a park, the closest park's amenities may not suit the user.





#### **OPPORTUNITIES**

- 1. Number of parks
- 2. Grid system allows for connectivity
- 3. Soils allow diverse opportunities
- 4. Vacant lands -> pocket parks

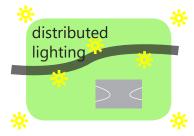


#### **RECOMMENDATIONS**

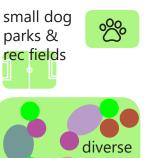
Increase sidewalks and signage to parks.



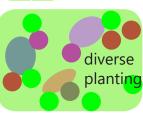
Increase lighting in and around parks for safety.



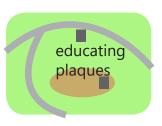
Develop open play or recreation pocket parks.



Increase and diversify plantings.



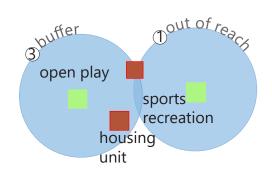
Implement education opportunities and nature play.



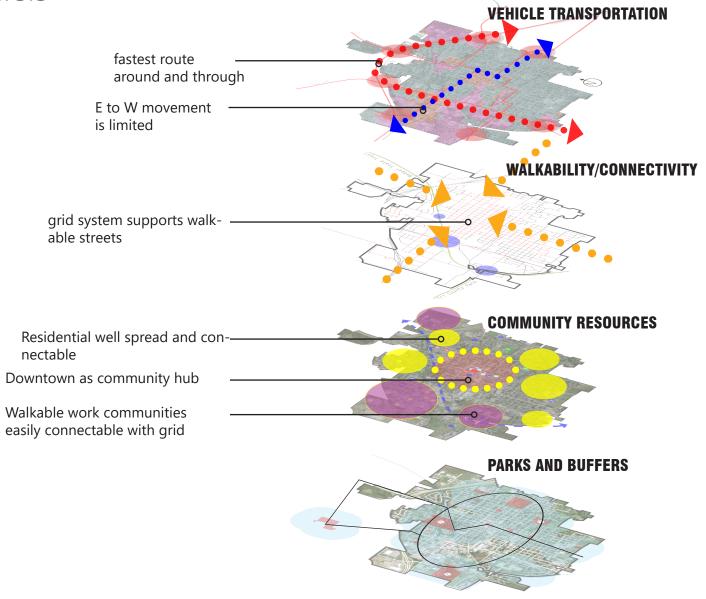
#### **CONSTRAINTS**

- 1. Natural parks are far away
- 2. Accessibility to different types
- 3. No dog parks
- 4. Walkability and lack of sidewalk





## **ANALYSIS**

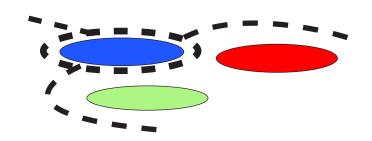


## Design strategy

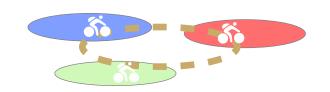
LEAD WITH LAND USE, LOCATE WHERE, WHEN AND HOW PEOPLE MOVE THROUGH THE CITY.

## WORK HOME PLAY

ASSIGN PRIMARY ROLES TO TRANSPORTATION INFRASTRUCTURES BASED ON LOCATION TO DECREASE CONGESTION, AND INCREASE EFFICIENCY AND SAFETY.



APPLY ACTIVE INFRASTRUCTURE AND BEAU-TIFICATION TO HUMAN REALMS TO IMPROVE QUALITY OF LIFE.



EDUCATE AND PROVIDE RESOURCES INCREASING STEWARDSHIP AND IMAGE OF TOWN.





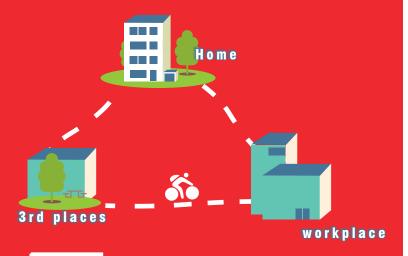
#### PLACE MAKING

Providing desirable 3rd Places



#### STREETSCAPE DESIGN

Walkable & Bikable Communities



#### INTRODUCTION

Design Flexible spaces that enable the community to interact and build relationships with one another and with the landscape. Design to ensure environmental responsibility and to create a livable climate and habitat for both humans and wildlife. Use art and other forms of expression to engage the community and allow for investment in the built environment. Create landscapes that detach person from theiir dependencies, things like technology, automobile, and drugs. Design colorful spaces that encourage interaction and curiousity.

#### **BENEFITS:**

Reduce Vehicle Dependency

Health Benefits (Physical & Mental)

**Experiential transportation** 

Lessen impact on environment

#### PHASING

Looking at the master plan, I believe although a lot of emphasis revolves around the downtown square, I believe that the first plan of action would be the bike path. I think the addition of a bike path physically connects the communities and is a smaller investment but a large step in shaping the idea of change in the community.

The nature trail would be phase two, creating a new and interesting space for the community. Because their aren't really opportunities for nature learning opportunities currently, I believe the

Parking garages would need to built prior to changing the downtown, to ensure that relocation of parking was assured to those who need it.

The downtown would be the last phase of the design to be implemented. I think because of attachment to parking and the perceived use of space currently it may be difficult to make a large investment changes. I think as the previously mentioned improvements occur, the community will begin to understand the importance of the proposed changes and the possible improvements to the community's public health.

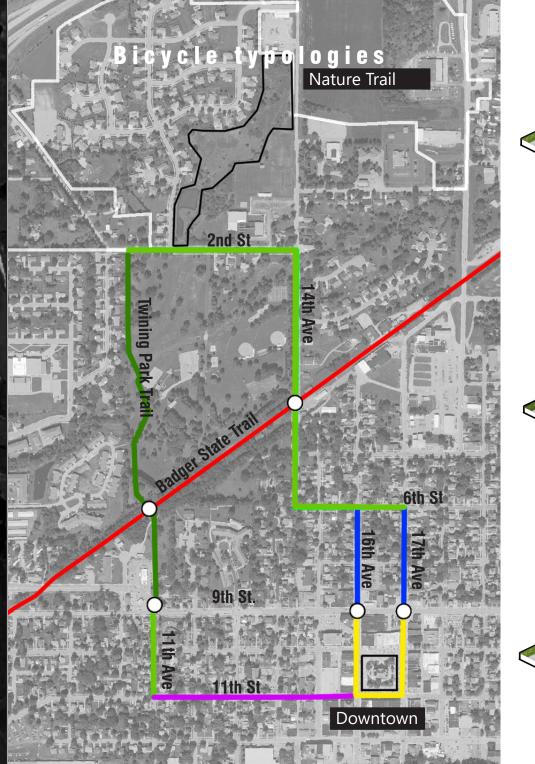
#### FUTURE DESIGN AND PLANNING

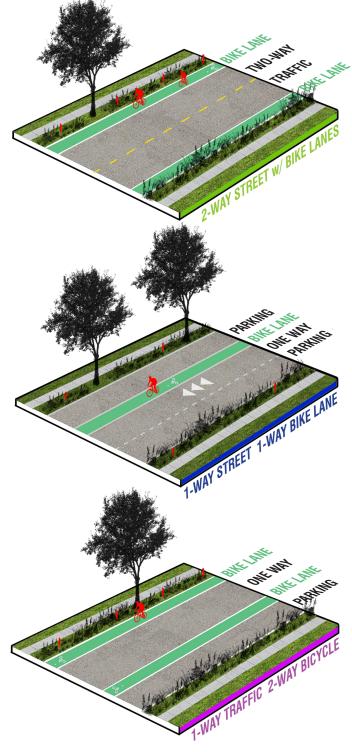
There are many large changes in the masterplan particularly the downtown area, but I believe the most feasible tasks are the nature trail and bike path. They both have great grant opportunities and can do a lot to express the community's values as well as are a physical sign of a healthier community.

I believe that the proposed route and bike path typologies are a solid foundation to creating a bike system that connects many community resources and would be an attractive way to beautify the city and promote public health. All of which increase the values of real estate as well as moral and sense of community.

With the downtown area, the canvas is literally blank, and I would hope something could be done to provide the community and its events with a more environmentally friendly design and a change in climate to support human activity and not automotive vehicles.









The nature trail allows the entry and exploration of the community to interact and learn about the already existing habitat. Because the parcel is already rich in plant diversity and biodiversity it is imperitive that minimal disturbance occur. Therefore, only a small foot path and small open space areas in the center of lowlands will be created to minimze distruction of those habitats. The footpath and open spaces allow for interaction with nature while being a low impact and maintenance way to add accessibility to a previously inaccessible area. The foot path would be three to four feet in width and expand naturaly with ussage. Bike racks are placed at the entry as to help increase the experience on foot.



The design intent of the downtown square was to relocate the parking and give the "park" land back to people. I think it would be incredibly useful in developing a greater relationship with the site when we slow down the lives of our community to appreciate one another and the spaces designed for the community. Slowing traffic will add to pedestrian safety and promote physical activity. The program includes welcome signage, several shaded plaza spaces, diverse planting areas, community gardens, a water feature, and opportunities for art creation to be displayed on top of custom bollards. By not programming the space too heavily, we allow the space to be flexible and multi use, which ie especially valuable during large, dense downtown events like Cheese Days.

I believe the design is significant because such a significant area of land should be designed to connect and provide for the community everyday needs and not just the large events. There are denser urban environments with less parking and so I believe that although many parking spaces have been relocated, they add value to the experience and is an investment into the future of Green County and the City of Monroe.

# Gr

## grading plan

It doesn't take an in-depth analysis of the downtown to see that the existing environment is extremely poor at naturally infiltrating and capturing storm water on site.

88% of the site (inside of the four facades) can be summed up as impermeable surface.

Not only does this have a negative effect on the environment, but it also cost money to treat water that needs to return to the watershed. This particular area has fertile soils and opportunity to provide more to the community than just parking.

Surfacing also effects the microclimate of the downtown area. Heat island effect can become a problem, especially during summer which is the highest use period of the site.

The Rational Method is used to calculate the peak rate of runoff for a particular storm event.

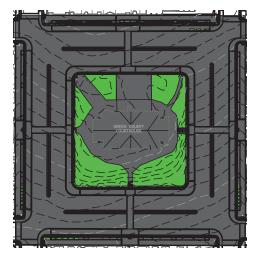
Q=CiA

Q=ft3/sec

C= runoff coefficient

i= rainfall intensity (2.063, 500 year storm, 3 hrs)

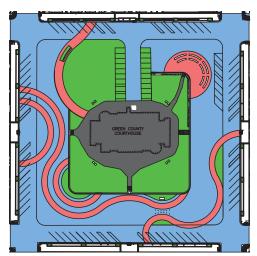
A=area(acres)



12% - Grass (0.30)

88% - Impermiable (0.90)

Q= 7.32 FT<sup>3</sup>/sec



21% - Grass (0.30)

24% - Impermiable (0.90)

45% - Pavers (0.60)

**10% - Red Pavers (0.5)** 

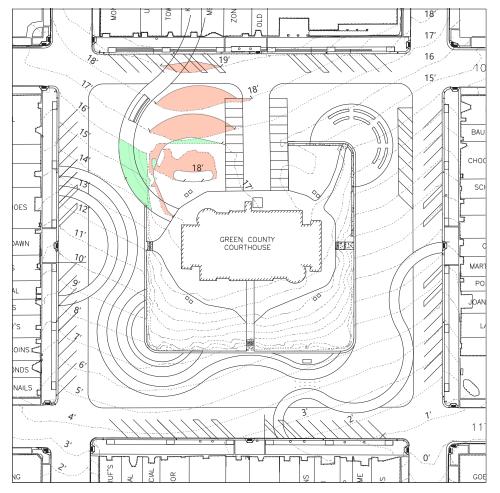
Q = 5.01 FT<sup>3</sup>/sec

DELTAQ =

-2.31 FT<sup>3</sup>/sec



## grading plan



The intent of grading was to keep the site as cohesive and accessible as possible.

Grading was changed to add the lawn space in the top right corner as well as to add a more legible path to the Green County Historic Courthouse.

Total CUT: 195 yd<sup>3</sup>

Total FILL: 80 yd<sup>3</sup>

Excess SOIL: 115 yd<sup>3</sup>

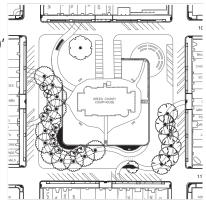
# PI planting design

As previously stated, the flexibility of the down-town square is key, so vulerable plantings should be kept to a minimum. With the plant species chosen, they not only are aethetically pleasing, but are low maintenance and add to storm water benefits, which also add to grant and funding opportunities.

Plantings are oriented based on height, this way, plants aren't shaded out by their neighbors and there are nice gradient slopes and mixture of colors in each planting bed.

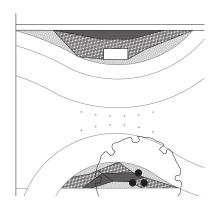
#### **TREES**

thornless honeylocust 60-80' american hornbeam 20-35' Kentucky coffeetree 60-80' burr oak 60-80' paper birch 25-50'



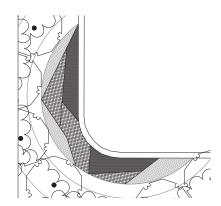
#### **RAIN GARDENS**

shooting tar 1'
columbine 2-3'
pale purple coneflower 2-3'
turtlehead 2-3'
prairie dropseed 2-3'
blue cardinal flower 2-3'
switchgrass 3-6'
indian grass 3-5'
New England Aster 3-6'



#### SHADED GARDEN

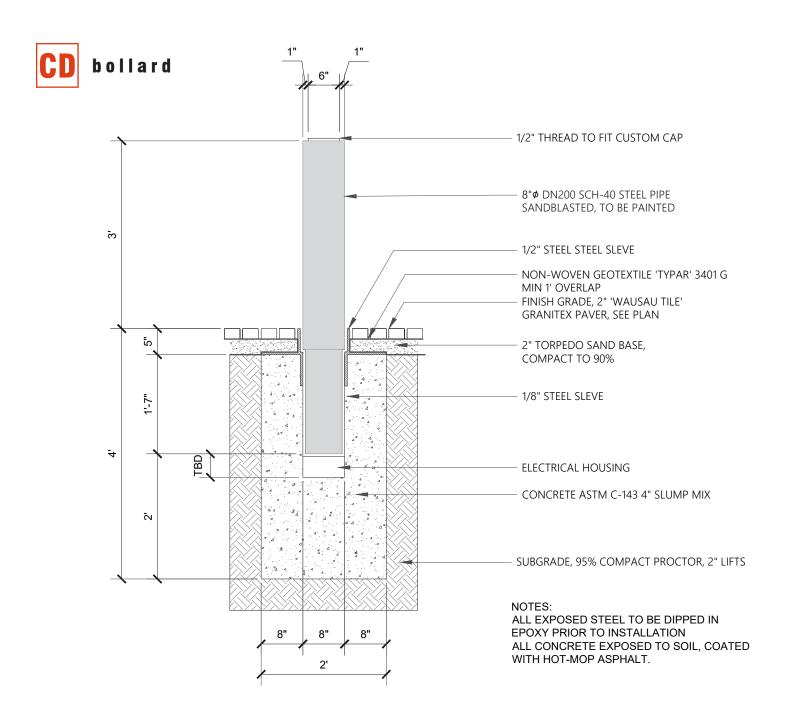
creeping willow 1/2' shooting star 1' columbine 2-3' palepurple coneflower 2-3' blue cardinal flower 2-3' japanese painted fern 1-2' rue anemone 1' autumn fern 2'

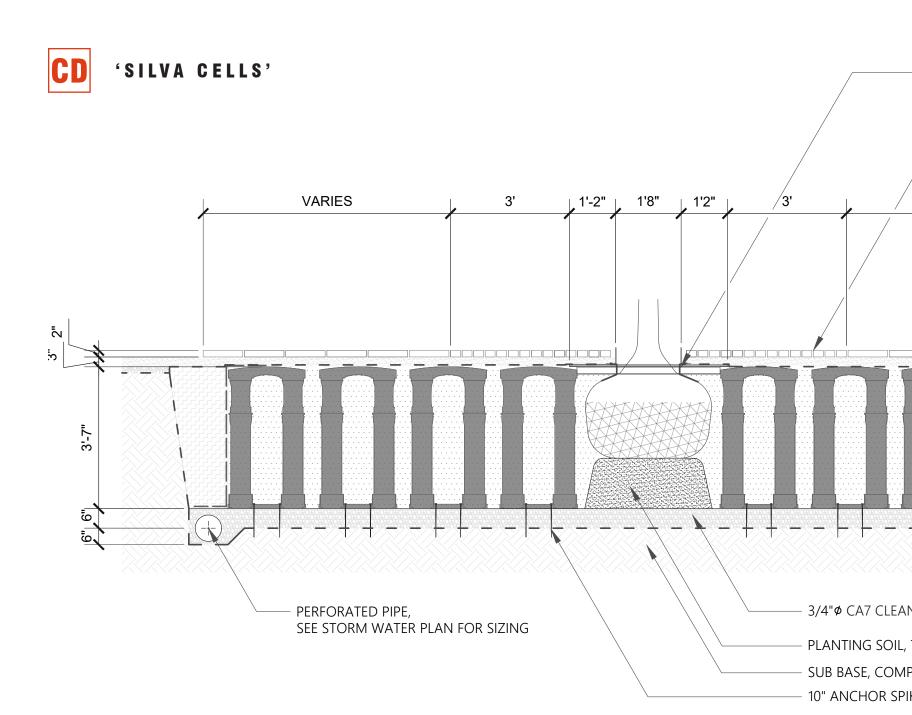


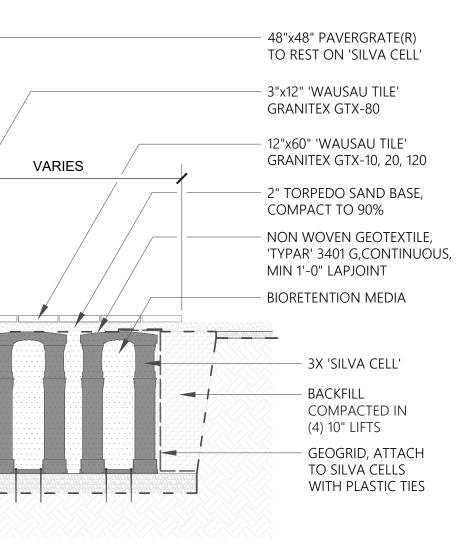


# CD contruction details

Construction details provide us insight to how things will be built. These details are crutial to play a role in shaping the community. Each has more than one use and additionally adds an aethetic way of interactin, as well as a utilitarian use. The bollard is an essential reoccuring motif that is to be implented city wide, as markers of different significan places in Monroe, but also add public art works thoughout the city as well. Because they are plain in color and form, the idea is to allow the community to customize and design them. Leaving a small piece of oneself to the public to see and interact with. And I think this reoccuring freshness and indirect interaction with others is truly something that connect people with the community and environment.







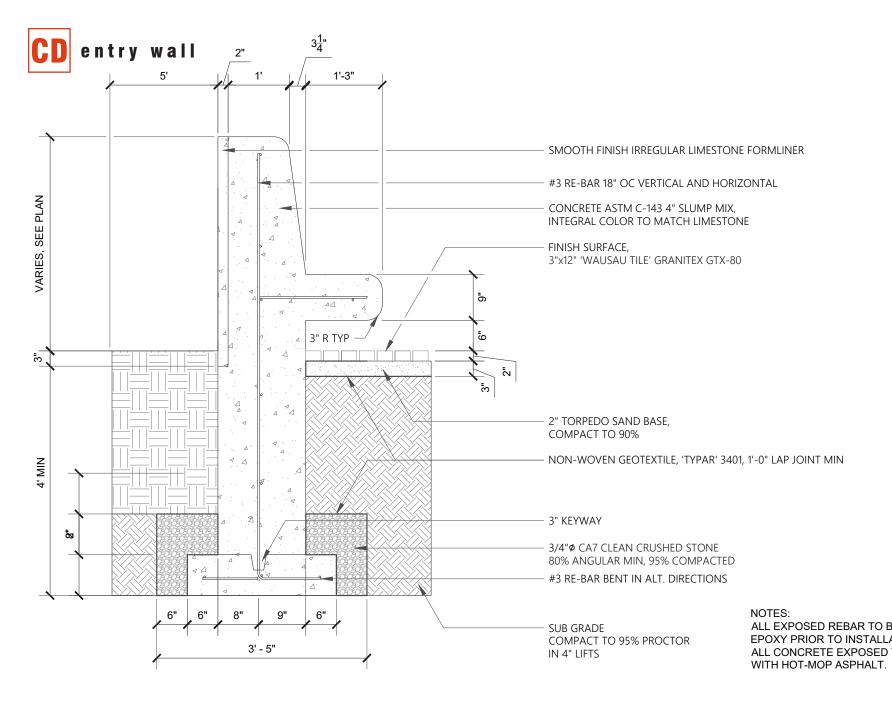
In an effort to reduce the amounf of storm water leaving the site and brainstorming ideas about how to capture and reuse water on site I looked below grade to not only provide enough soil volume for root growth, but also act as a unseen storm water system that has a significantly higher infiltration rate than what was previously there.

N CRUSHED STONE, 80% ANGULAR MIN, COMPACTED TO 95%

TAMPED TO MAX, COMPACTED TO 85%

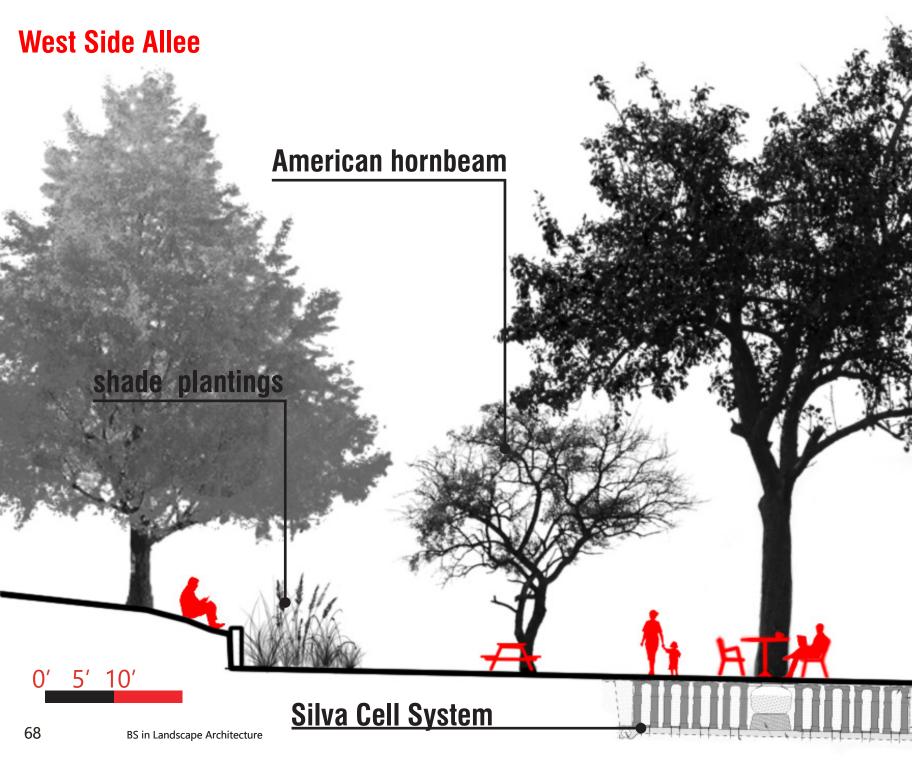
ACTED TO 95%, 5% SLOPE TO DRAIN

(E, (4) PER SILVA CELL, SEE CELL BASE FOR SPIKE HOLE



This concrete wall will be a cornerstone both physically and perceptually in welcoming people to the downtown. Its length and curve follow the outside the lawn area and provide signage on the flat end with a planting bed and possibly lit. On the otherside is a smooth concrete finished bench that provides additional seating above the lawn. The lawn and wall circulate around an open space that could be used to set up stages, and so having a radius centers the attention of the community naturally.

E DIPPED IN ATION TO SOIL, COATED



# Kentucky coffeetree sharrows **Community Art Bollards** 69

# GO grant opportunities

These grant opportunities are a part of several different federal programs that aim to fund communities trying to address environmental, housing, and transportation issues. Although there is a lot of aethetic design in the project, because much of it is also utilitarian and adds to the public health and wellbeing of the public and environment, they allow the city to be eligible based on the way they aim to address some of the issues.

## FHWA Transportation Alternatives Program (TAP)

The Transportation Alternatives Program (TAP) is administered by the U.S. Federal Highway Administration (FHWA) and helps states fund a variety of activities related to improving transportation assets, including on- and off-road pedestrian and bicycle facilities, environmental mitigation, and creating or improving recreational trails projects.

Construction, planning, and design of on-road and off-road trails for pedestrians and bicycles Construction, planning, and design of infrastructure-related projects and systems providing safe routes for non-drivers

Conversion and use of abandoned railroad corridors for trails

Construction of turnouts, overlooks, and viewing areas

Vegetation management practices in transportation rights-of-way to improve roadway safety, prevent invasive species and provide erosion control

Environmental mitigation activities, including pollution prevention and abatement activities to address stormwater management

Recreational trails program

Transportation Alternatives funds cannot be used for general recreation and park facilities, and they also cannot be used for routine operations or maintenance.

## EPA Urban Waters Small Grants Program

Healthy and accessible urban waters can help grow local businesses and enhance educational, recreational, social and employment opportunities in nearby communities. The Urban Waters Small Grants are expanding the ability of communities to engage in activities that improve water quality in a way that also advances community priorities.

Improving urban waters requires various levels of government and local stakeholders (e.g., community residents, local businesses, etc.) to work together in developing effective and long-term solutions with multiple benefits. EPA supports and empowers communities, especially in underserved areas, who are working on solutions to address multiple community needs and fostering successful collaborative parnterships.

In October, 2016, EPA awarded approximately \$1.3 million to 22 organizations in 18 states to help protect and restore urban waters, improve water quality, and support community revitalization and other local priorities. Projects awarded this year address local water quality issues related to urban runoff pollution, provide additional community benefits, actively engage underserved communities, and foster partnership.

## HUD CHOICE NEIGHBORHOODS PLANNING GRANTS PROGRAM

Housing: Replace distressed public and assisted housing with high-quality mixedincome housing that is well-managed and responsive to the needs of the surrounding neighborhood; People: Improve outcomes of households living in the target housing related to employment and income, health, and children's education; and Neighborhood: Create the conditions necessary for public and private reinvestment in distressed neighborhoods to offer the kinds of amenities and assets, including safety, good schools, and commercial activity, that are important to families' choices about their community.

# Conclusion

#### CONTENT

Overall I believe the content I've produced in this document lay a strong foundation to possible changes.

I do feel I lacked in graphical content and comparisons between existing and proposed.

There are many ideas that are fragmented throughout the document and believe this may be downfall of the content and communication of the project.

#### **PROCESS**

I found the process to rather straightforward. I think time management and design cohesiveness is a tough issue for myself. In the future, I think I need plan the project from start to finish, instead of in small parts. When dealing with smaller parts of work, I begin to drift off the purpose of the project and found myself looking back at the work I've done and was lost.

#### SELF REFLECTION

The project has taught me a lot about myself as a designer and person. I am quite indecisive and quick to move to new ideas. This made the design process longer and led to many wasted hours. In the future I know I have to take more time to evaluate the work I'm doing and be more concise about what I am trying to communicate. I think the "why" often gets lost in my process and thus I lost grasp of the goal or focus at such a grand scale like this project. I have a bad habit for adding more and more details that may not necessarily be important or add more problems to address, because of the need to solve every issue that the community had, instead of solve some core issues related to the project. The project was a large learning process about my workflow and thought-process. I think I am more of a idealist and not a doer which is bad when I have so many ideas about how to do even one particular task. This leads to a slower workflow and potentially being off task. This is something I need to work on in the future.

#### CROSS-CULTURAL LEARNING

Working with the city of Monroe has been a great opportunity. The community is kind and open and I believe they will solve their issues and are passionate about their heritage as well as their youth. I think with a little compromise and a vision of a better future.



#### TIME

A total of 480 hours were spent on the senior capstone project.

216 hours were spent in the first semester

264 hours were spent in the second semester

#### LITERATURE REFERENCES

- 1. BETHANY B.CUTTSA. "CITY STRUCTURE, OBESITY, AND ENVIRONMENTAL JUSTICE: AN INTEGRATED ANALYSIS OF PHYSICAL AND SOCIAL BARRIERS TO WALK-ABLE STREETS AND PARK ACCESS." WWW-SCIENCEDIRECT-COM.EZPROXY.LIBRARY. WISC.EDU. 12 SEPT. 2009. WEB. 8 OCT. 2018. <a href="https://www-sciencedirect-com.ezproxy.library.wisc.edu/science/article/pii/s0277953609005395">https://www-sciencedirect-com.ezproxy.library.wisc.edu/science/article/pii/s0277953609005395</a>
- 2. CASSIDY, ROBERT. "DESIGNING CITIES THAT MEET ELDERLY WOMEN'S NEEDS." BUILDING DESIGN & CONSTRUCTION 49.8 (2008): 7. PROQUEST. WEB. 8 OCT. 2018
- 3. VAN CAUWENBERG, JELLE, ET AL. "PHYSICAL ENVIRONMENTAL FACTORS RELATED TO WALKING AND CYCLING IN OLDER ADULTS: THE BELGIAN AGING STUDIES." BMC PUBLIC HEALTH 12 (2012): 142. PROQUEST. WEB. 8 OCT. 2018.
- 4. WYATT A.JENSENA. "WALKABILITY, COMPLETE STREETS, AND GENDER: WHO BENEFITS MOST?." WWW-SCIENCEDIRECT-COM.EZPROXY.LIBRARY.WISC.EDU. 12 NOV. 2017. WEB. 8 OCT. 2018. <a href="https://www-sciencedirect-com.ezproxy.library.">https://www-sciencedirect-com.ezproxy.library.</a> WISC.EDU/SCIENCE/ARTICLE/PII/51353829216304944>
- 5. JONATHAN M.GALLIMOREA. "WALKING ROUTES TO SCHOOL IN NEW UR-BAN AND SUBURBAN NEIGHBORHOODS: AN ENVIRONMENTAL WALKABILITY ANALY-SIS OF BLOCKS AND ROUTES." WWW-SCIENCEDIRECT-COM.EZPROXY.LIBRARY.WISC. EDU. 13 JAN. 2011. WEB. 8 OCT. 2018. <a href="https://www-sciencedirect-com.ezproxy">https://www-sciencedirect-com.ezproxy</a>. LIBRARY.WISC.EDU/SCIENCE/ARTICLE/PII/S027249441100003X>
- 6. MICHELE G.SCHASBERGERMAA. "PROMOTING AND DEVELOPING A TRAIL NETWORK ACROSS SUBURBAN, RURAL, AND URBAN COMMUNITIES." WWW-SCIENCE-DIRECT-COM.EZPROXY.LIBRARY.WISC.EDU. 25 NOV. 2009. WEB. 8 OCT. 2018. HTTPS:// WWW-SCIENCEDIRECT-COM.EZPROXY.LIBRARY.WISC.EDU/SCIENCE/ARTICLE/PII/ S0749379709005777
- 7. HANSEN, DE CHAPMAN. "DESIGN CODES FOR HEALTHY COMMUNITIES: THE POTENTIAL OF FORM -BASED CODES TO CREATE WALKABLE URBAN STREETS." ORDER NO. 3416445 UNIVERSITY OF FLORIDA, 2008. ANN ARBOR: PROQUEST. WEB. 7 OCT. 2018.
- PAUL TAKAHAUSHI. "WHAT HOUSTON MUST DO TO BECOME A WALKABLE UTOPIA AND WHY IT SHOULD" HOUSTON BUSINESS JOURNAL ONLINE, 24 OCT. 2014. WEB. 9 OCT. 2018.
- 9. SOLTANI, ALI, ET AL. "DESIGN FOR MOVEMENT: LINKING NON-WORK TRAVEL AND ACTIVITY LEVEL TO LOCAL URBAN DESIGN DIMENSIONS." URBAN DESIGN INTERNATIONAL 11.3-4 (2006): 173-86. PROQUEST. WEB. 8 OCT. 2018.
- 10. FREDERICK LAW OLMSTEDFRED'K, LAW OLMSTED. "TREES IN STREETS AND IN PARKS." THE SANITARIAN (1873-1904) 10.114 (1882): 513. PROQUEST. WEB. 8 OCT. 2018.
- 11. LINDQVIST AK, RUTBERG S. "ONE STEP FORWARD: DEVELOPMENT OF A PROGRAM PROMOTING ACTIVE SCHOOL TRANSPORTATION" JMIR RES PROTOC 2018:7(5):E123



# About UniverCity Year

UniverCity Year is a three-phase partnership between UW-Madison and one community in Wisconsin. The concept is simple. The community partner identifies projects that would benefit from UW-Madison expertise. Faculty from across the university incorporate these projects into their courses, and UniverCity Year staff provide administrative support to ensure the collaboration's success. The results are powerful. Partners receive big ideas and feasible recommendations that spark momentum towards a more sustainable, livable, and resilient future. Join us as we create better places together.





univercityalliance@wisc.edu 608-890-0330 univercity.wisc.edu