

2018-2019

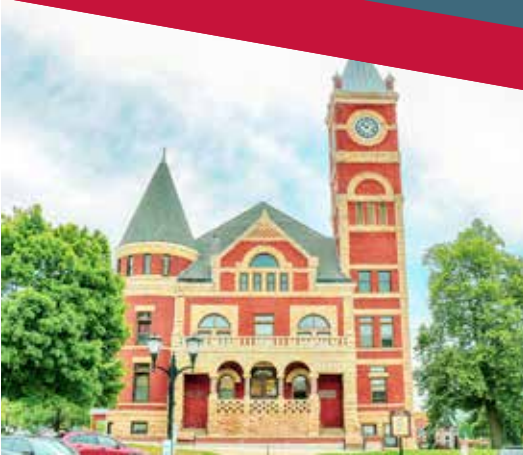
FINAL REPORT

UniverCity Year

Better • Places • Together

Downtown Revitalization: A design for the City of Brodhead

LANDSCAPE ARCHITECTURE 611: SENIOR CAPSTONE IN LANDSCAPE ARCHITECTURE





The Sugar River, Green County WI

ACKNOWLEDGEMENTS

To start things off, I would first like to thank my client and contacts at Brodhead for making all of this possible. The opportunity to make a real, positive change within a community is what drives me in Landscape Architecture, and this project has introduced me to my first professional experience in terms of landscape design.

Additionally, I would like to thank the UniverCity Year for facilitating projects like these, and especially this year, within Green County. The area is ripe for redevelopment, and this recognition made by the program will bring long lasting value to this thriving area.

I would also like to thank all of the faculty at the University of Wisconsin-Madison and the Department of Landscape Architecture. Through diligent teaching and disciplined practice, they have and will continue to mold some of the most influential Landscape Architects of the industry.

Along with the faculty, I want to thank my fellow classmates. The kind words of motivation, strong thoughts of constructive criticism, and good hearted laughs helped get me through many late nights, and will not go forgotten.



Downtown Brodhead, WI

ABSTRACT

Brodhead, WI is a historic small town in south central Wisconsin with a close knit community and strong ties to the surrounding region. With abundant recreational opportunities, and a growing local economy, the town is poised for successful development in the coming years.

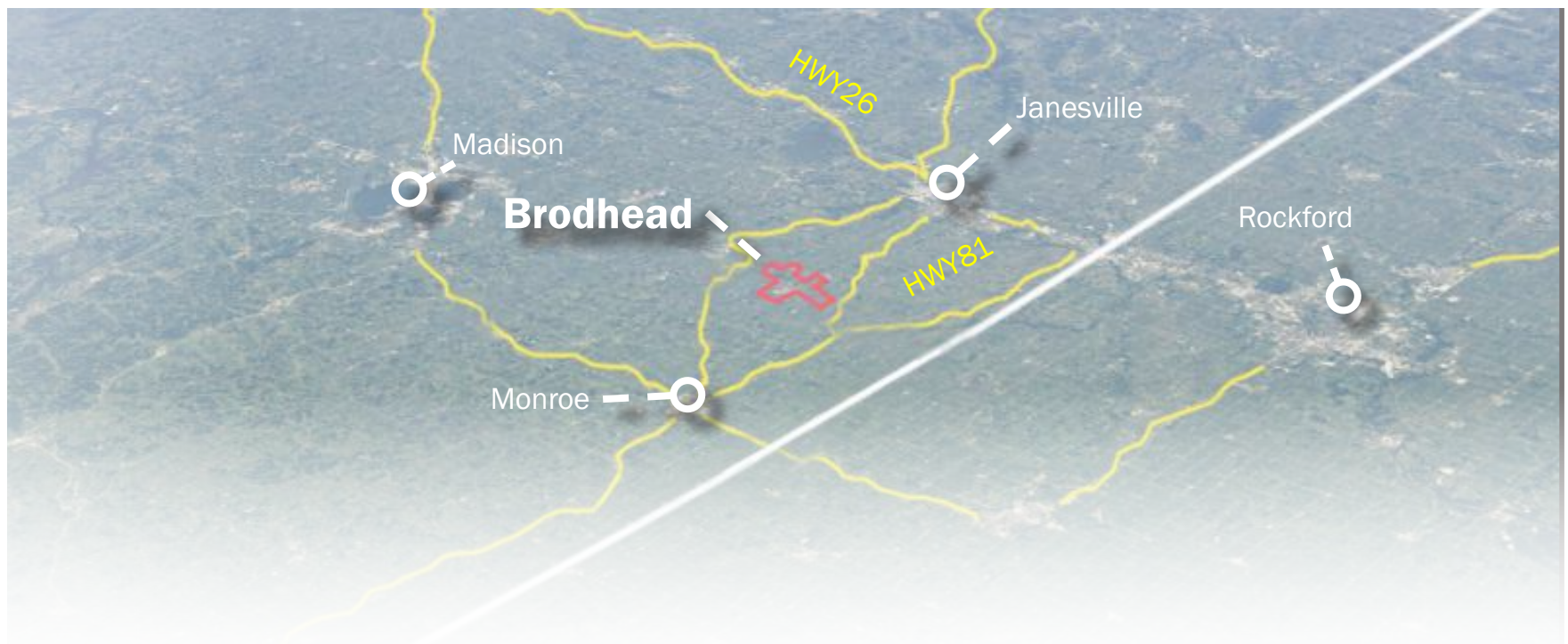
Recently, though, changes to the region's auto-traffic have given way to safety risks within the town. Along stretches of Center Avenue, Brodhead's main street as well as a State-Run Highway, pedestrians have begun to encounter unsafe conditions deterring them from roadway use.

By addressing these issues, and providing Brodhead with an updated urban framework, the area will continue to see positive growth providing direct benefits to the local and regional community.

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INTRODUCTION



INTRODUCTION

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 human perception may inform the design of streetscapes and suburban redevelopment. This investigation will be given context and focus by the concerns and goals of The City of Brodhead, which include pedestrian safety and mobility and economic development. The City of Brodhead, WI will be the site for this study.

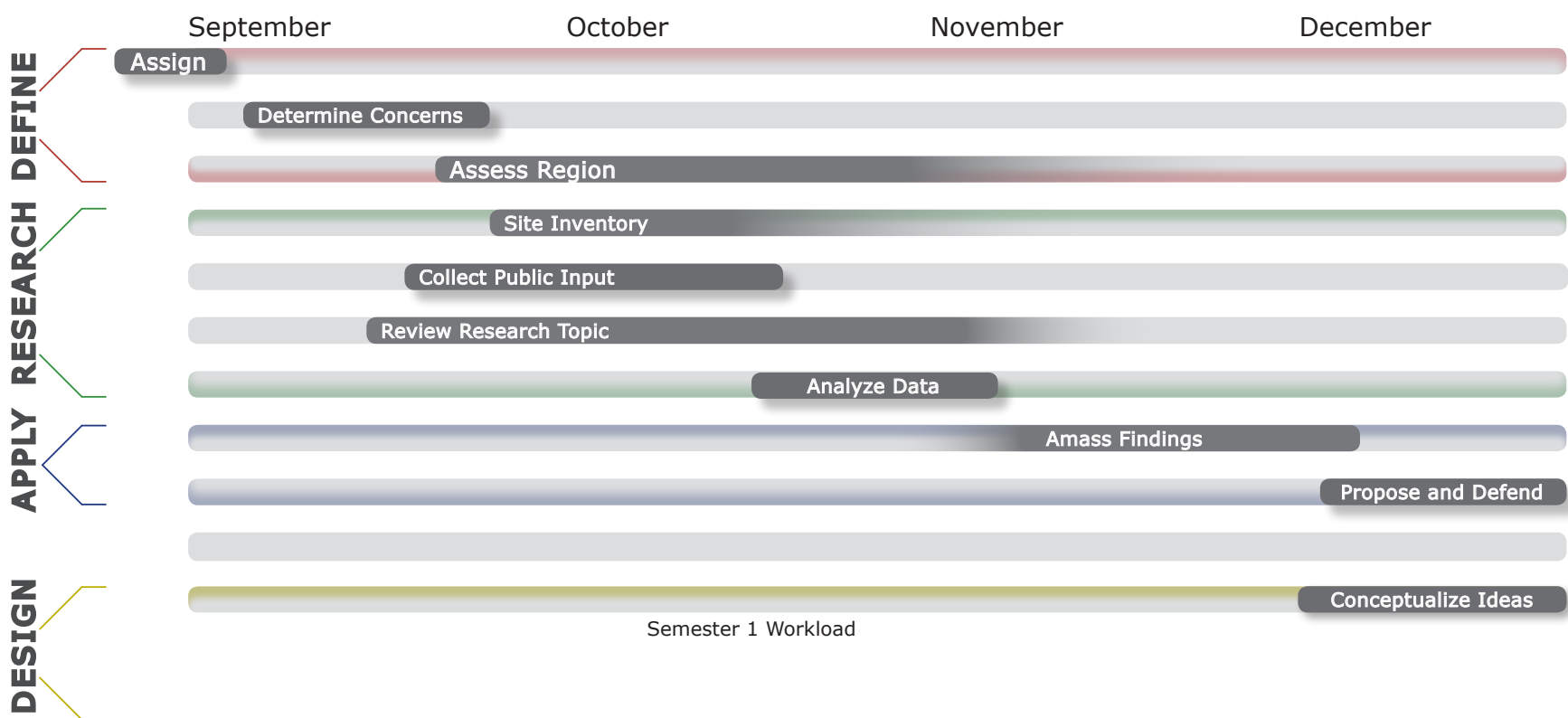
Human perception, and the resulting actions of these perceptions, are what define who we are. The doubtful safety of a steep ledge, and the immense joy of riding a roller coaster both pose similar dangers, so what makes the roller coaster so appealing? Our perception. We know, because of elements in our surroundings, that we are inherently safe on a roller coaster. Landscape elements give users internal clues about land use inferring characteristics like safety, aesthetic quality, and cleanliness.

While human perception is often addressed at a walking and driving perspective, when designing landscapes for multiple groups of users, it is also important to address those on bikes, wheelchairs, and other non-motorized forms of transportation. Eric Dumbaugh and Wenhao Li have focused their research on this very issue, and provide a critical resource for designers looking to plan more effectively.

The City of Brodhead, WI provides an important opportunity to address these issues at many angles. The downtown Business Improvement District (BID) has set out to making their land a safer, more welcoming place for not only their immediate community, but to their audience of frequent visitors. With a state highway dissecting the BID, it is imperative to draw from research done in the past to guarantee the health, safety, and welfare of the townspeople.

Through creative streetscape design, and strategic land use planning, the BID has the potential to transform the surrounding community. Open store-fronts, designated pedestrian spaces, and interactive streetscapes all tied together with safe, effective way-finding would provide flurries of economic growth and long-term financial success.

The products of this capstone will include a set of design documents and recommendations for The City of Brodhead, which will be submitted to The City Officials, and a capstone document, which will be submitted to the Department of Landscape Architecture in partial fulfillment of the degree of Bachelor of Science in Landscape Architecture.



PRESENT

PROJECT WORKFLOW

The University's Capstone program runs for two semesters, allowing students to explore a full range of project stages. Ranging from broad to small scale analysis, to conceptual images and construction details, we get the opportunity to experience some of what landscape architects see today in the industry field.

January

February

March

April

May

Conceptualize Ideas

Define Program

Create Master Plan

Develop Graphics

Compose Final

Present

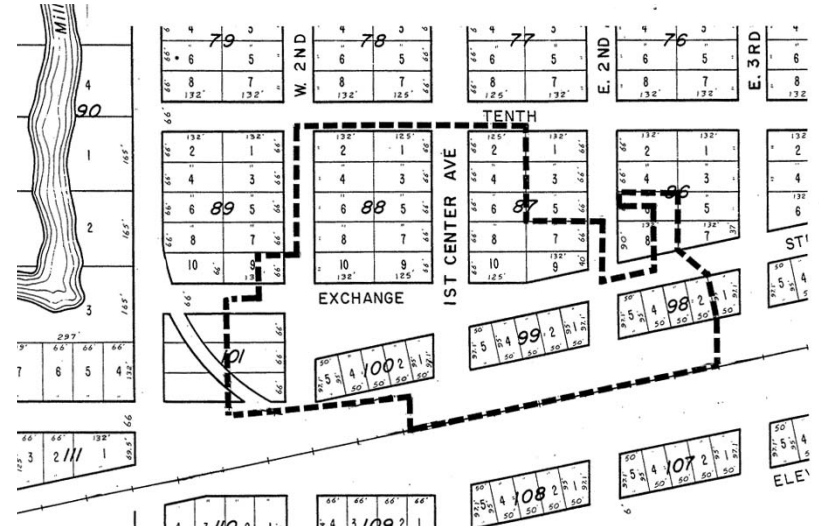
Semester 2 Workload

First semester has covered the introduction to the project, and the following site inventory and analysis to ultimately create 3 conceptual plans to move forward in design with. Informed conceptual plans will be crucial to developing the design for the future. Considering site context within the region and local community will prove beneficial to creating a sustainable design in terms of social, economic, and ecological success.

Second semester will see more focused design in terms of turning ideas into reality. With careful consideration from the community, a more focused conceptual plan will be drawn from the 3 provided previously. From here, more articulated decisions can be made impacting the outcome of the project. Planting, phasing, and storm water plans will be developed, as well as master, section, and perspective images in order to bring ideas to fruition.



Train Station, Later to Become Brodhaed



Brodhead, WI BID Plan

PROJECT CONTEXT & HISTORY

Brodhead, WI sits along the Sugar River, just one mile north of the Half Way Tree: the tree that Native Winnebago tribes used to mark the midway point between Lake Michigan and The Mississippi River. Nestled between the historic railroad tracks that sparked its creation in 1870, and the Sugar River that gave it the first electrical service in Wisconsin, Brodhead has developed into a cradle for small business and a hub for outdoor recreation and activities.

Brodhead is also home to a unique zoning classification aimed at promoting economic growth and community engagement. This classification, formally known as a “Business Improvement District,” or “BID” for short, is a geographical district where within businesses pay additional taxes to fund projects within the district. The defined area in Brodhead sits very centrally in town, meaning the projects the BID focuses on will have a direct impact on not only the businesses within the area, but the community.



The Halfway Tree, 1 mile South of Brodhead



Wisconsin State Highway Construction



Old Mill on the Race, First Electrical Service in Wisconsin

In 1988, 351 Wisconsin State Trunk Highway 11 was constructed, directing traffic through Janesville westward, ultimately driving more commuters through Brodhead's developing downtown core. This redirection has caused indirect safety risks to the community, as they have experienced an increasing amount of accidents over the past 20 years. Still today, Brodhead seeks to improve their streetscape environment in hopes to better facilitate future development.

PROJECT GOALS CONCERNS AND DESIGN DRIVERS

PEDESTRIAN SAFETY: STATE HIGHWAY 11

The City of Brodhead has long been seen by its inhabitants as a “Drive-through Town.” Lacking a true sense of place, those driving through down town on Highway 11 have no incentive to stop, or even slow down for Brodhead’s pedestrian traffic. With a previous focus on industry, the town does not currently provide cohesive accessibility and safety elements crucial to a successful small community. Through this recognition, lead members of the community are looking to change this. By broadening Brodhead’s initial application request, shifting from human safety to now human perception, a more in-depth design plan can begin to take shape. The following design goals and drivers focus on developing Brodhead’s sense of place, in addition to safety, to ultimately create a more defined community.

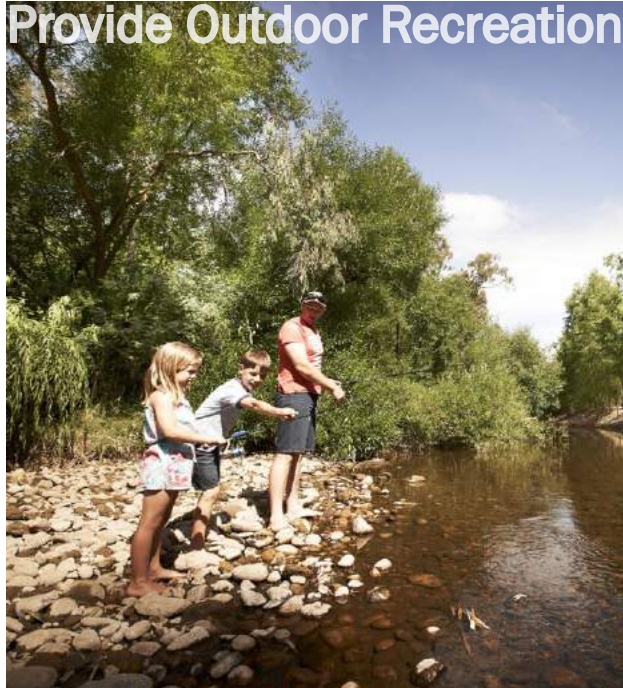
LIMITED SIDEWALK ACCESS

DETERIORATING BUFFERS

LACK OF COHESION



Develop Riverbanks



Provide Outdoor Recreation



Treat Stormwater



Plant Natives

ECOLOGIC

GOALS

Develop and Maintain an organized storm water treatment/storage system throughout to address runoff and seasonal flooding

Enhance and Preserve existing natural resources along the Sugar River

Provide natural elements within the downtown BID

Remediate petro chemicals and nutrient buildup left in soils by previous industrial uses

DESIGN DRIVERS

Application of pervious surfaces in conjunction with catch basins to collect, delay, and treat surface storm water

Use of native, remediating plants to sustainably treat soil and water on site

Increase pollinator feeding and nesting zones to increase future population growth

Provide nesting areas for native birds to enhance bio-diversity

Use of high tolerant street trees for highest change of survival in downtown BID

Implementation of sensory plants to provide more memorable user experience



Defined Crosswalks



Structured Green Space



Cohesive Recreation



Adaptive Storefronts

SOCIAL

GOALS

Create safe, accessible transportation systems through the downtown area

Provide affordances to pedestrian users in the form of open social space

Activate Sugar River Corridor as a place for high pedestrian traffic and engagement

Develop ties between BID and Sugar River Corridor

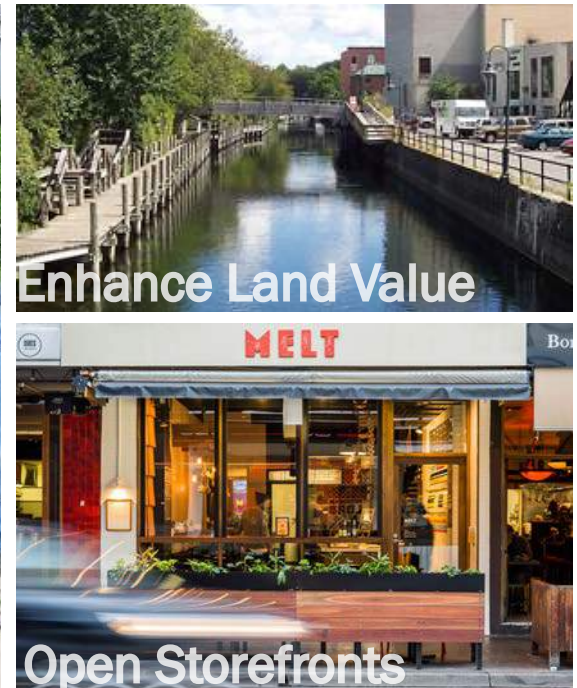
DESIGN DRIVERS

Explore Signage/Branding options and the effects on perception of the environment

Provide Formal and Informal Social spaces in close proximity to business fronts

Spark interest in Sugar River Corridor through pleasing aesthetics and ease of use

Cohesively incorporate elements from BID and Sugar River Corridor to draw subtle, social connections experienced through use



ECONOMIC

GOALS

Design elements to withstand time, ultimately reducing long-term costs

Create inviting storefronts to draw in customers

Utilize existing features for more efficient fund allocation

Develop Sugar River Corridor into recreational common-area, attracting more overall visitors to the area

DESIGN DRIVERS

With help of UniverCity Alliance, analyze surrounding market atmosphere

Investigate material cost vs durability of “green” design elements

Distinguish historically significant buildings and other existing land features for potential design use

Plan to investigate funding options based on proposed design features

PROJECT GOALS CONCERNS AND DESIGN DRIVERS

DOWNTOWN CORE

(Roughly 12 Acres)

- Efficient modes of Pedestrian and Vehicular (Car and ATV) Transportation through designated paths and signage (branding opportunity)
- Interactive streetscapes through plantings, signage, and social affordances to provide unique sense of place to inhabitants in addition to Highway 11 users (expressing historical, political, and industrial significance)
- Effective forms of way-finding to BID throughout town using varying signage and strategic planning
- Open storefronts to encourage business development and communal engagement
- Emphasize municipal buildings in conjunction with businesses to create cohesive spaces
- Designated, multi-use, outdoor space to provide affordances for social events and interactions
- Clear connection to Sugar River Corridor (N) and Veterans Memorial Park (S)



Downtown Brodhead



Sugar River Kayaking

SUGAR RIVER CORRIDOR

(2.5 Miles of Shoreline Path)

- Immediate Access to water along the Sugar River
- Use of Native, Aquatic and Shoreline Plants to restore and sustainably maintain erosion control, view sheds, and habitat diversity along the Sugar River
- Clear way-finding along pedestrian path to travel to surrounding region (campsites, boat drop ins, hikes, towns)
- Interactive walking experience through signage and designated view points along pedestrian path
- Clear connection to Brodhead BID (S)

SOCIAL

Material Changes



Bike Utilities



Interactive Signage



Green Space



Community Projects



MIXED USE

ECOLOGICAL

Riverbank Remediation



Bio-Rich Buffers



Fishing Piers



Bike Path Destination



Street-side Plantings



MIXED USE

ECONOMIC

Moveable Seating



Green Parking



Downtown Parking



Research Topic:

HUMAN PERCEPTION

How do pedestrians and automotive users interact?

PROFESSIONAL FOCUS:

STREETScape DESIGN

How can we, as designers, create unifying spaces that facilitate and promote the use of both?



Urban Greenway: River Walk

THE HUMAN DIMENSIONS OF URBAN GREENWAYS: PLANNING FOR RECREATION AND RELATED EXPERIENCES

by Paul Gobster

This reading focuses on exploring urban greenways and the relationships they exhibit between their users and landscape elements provided through multiple perspectives, stakeholder viewpoints, and methodological techniques. Gobster goes on to define 6, interdependent “Human Dimensions” that characterize greenway elements and their levels of success. Pertaining to Brodhead, it is important to consider these dimensions when developing a unique sense of place. Users will rely on landscape elements that communicate intended behaviors ultimately displaying a sense of site character and experience.



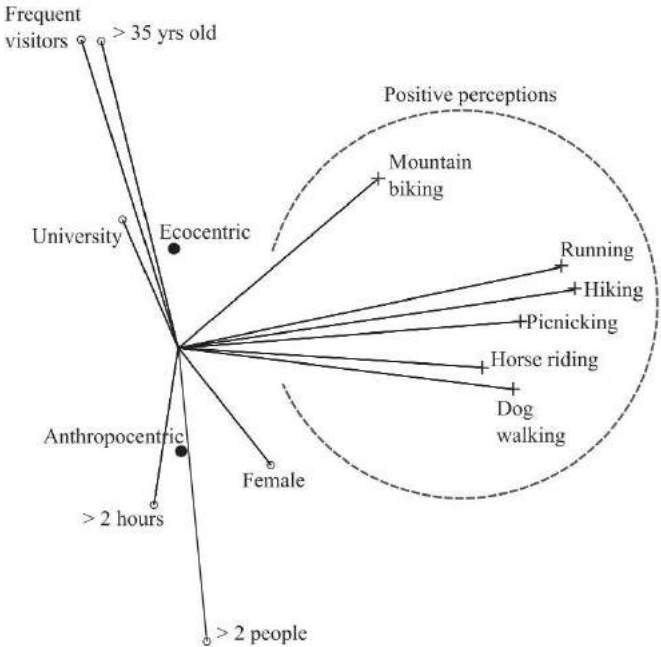
Urban Greenway: River Walk



Highway Biking Conditions

by **Bruce Landis**

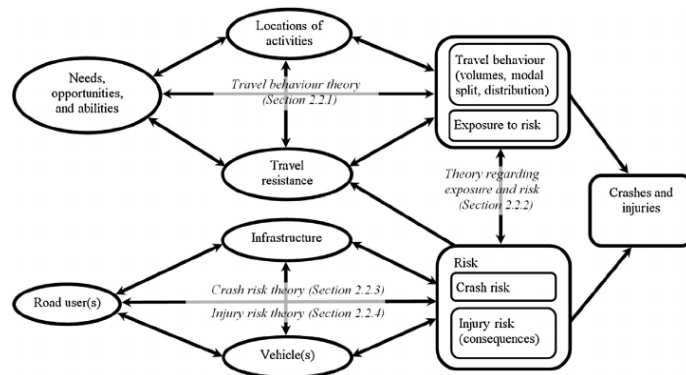
With the publication of this article, Bruce Landis (and company) were the first to statistically analyze urban bikers landscape perception. With participants from every age, gender, experience level, and geographic origin, the study focuses on the effects of lane width, pavement condition, and ease of use as bikers travel through different areas. Broadhead, like many other mid to large sized towns, has a city bike path running through down town. Down-trodden and unkempt, it lacks design elements crucial to a functioning pedestrian transport. Through the information provided in this article, a framework for successful bike design can be laid.



Characteristics and Activities Identified



Streetscape Zoning



Characteristics and Activities Identified

DESIGNING FOR THE SAFETY OF PEDESTRIANS, CYCLISTS, AND MOTORISTS IN URBAN ENVIRONMENTS

by Eric Dumbaugh & Wenhao Li

Exploring the relationship between motorists and the landscape is done to very high quality in Eric and Wenhao's Journal. The paper not only digs into concepts, but intricate details in the development of urban spaces.

Today, more and more design includes spaces shared by both pedestrians and motorists and it is imperative that the safety of both parties is accounted for. In their application, Brodhead's primary concern with their BID Redevelopment was pedestrian safety. Highway 11 runs directly through the downtown area and has the potential to cause safety concerns in and around the city's largest pedestrian corridor. By utilizing ideas and technique communicated in the journal, land planners can minimize potential safety issues while still providing effective transport through the area.

PRECEDENTS

HOW HAVE DESIGNERS ADDRESSED SIMILAR ISSUES IN THE PAST?

Chinatown Green Street



Location: Chinatown, Washington D.C.

Area: 1 City Block Length

Functions: Mitigates Stormwater, Reduces Energy Footprint, Boosts Economic Value, Increases Safety, Enhances Community Vitality

Applicability: By combining concepts from “green,” “complete,” and “smart” streets, Design Workshop has created a potential model for successful streets in urban communities. Although still in the construction phase, ideas and theories practiced on this project apply directly to downtown Brodhead. Enhanced planting, open storefronts, and large street trees promote pedestrian use, while design strategies found subgrade manage stormwater and provide essential structural stability.



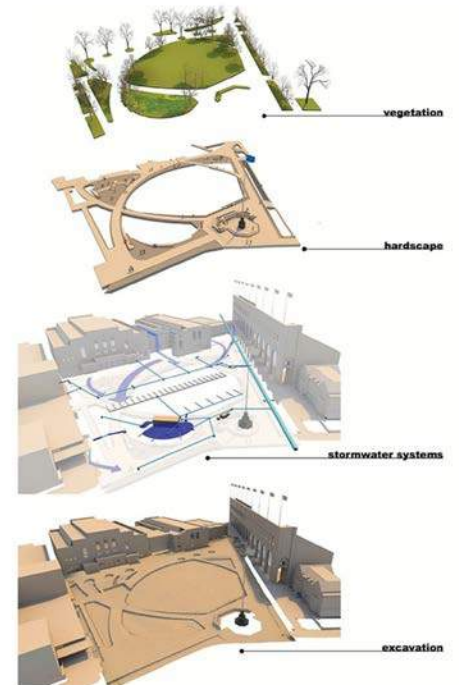
Shoemaker Green

Location: Philadelphia, PA

Area: 2.75 Acres

Functions: Resilient Open Space, Historical Context, Stormwater Management, Biophilic Focus, Architectural Expression

Applicability: Through the use of creative design techniques, Andropogon Associates has created a successful transitional space between busy downtown districts and communal amenities. Detailed walls, pavings, and open spaces draw users into the site, but evoke active movement throughout to function as an intermediary space between the University and the surrounding area. Artistic features relay historical meaning and draw significance to the region while intensive stormwater practices ensure sustainable development and use of the site in entirety.



Beaver Dam, WI



Location: Beaver Dam, Wisconsin, USA

Area: 3 Acres

Functions: Improve Public Access, Strengthen Transportation Connections, Clearly Define Active vs Passive Urban Space

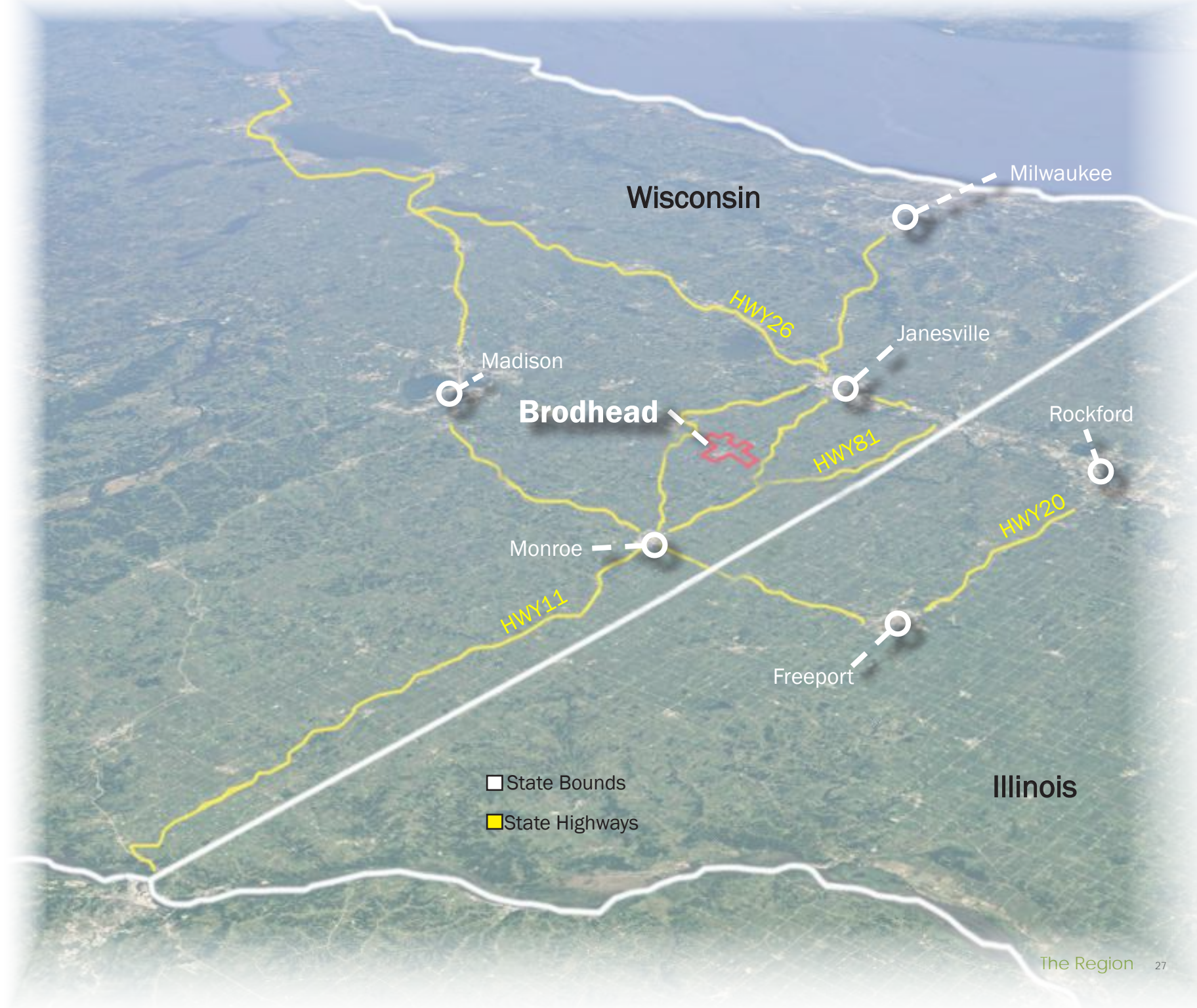
Applicability: In 2017, the city of Beaver Dam, WI enacted a plan to redevelop their downtown core. Using a multi-pronged approach to handle social, ecologic, and economic goals, they were able to analyze the town under a light to successfully develop a plan to revitalize the area. Consideration of their analysis process as well as their design strategies in conceptual planning will prove useful when looking to Brodhead. By developing the approach into a multi-facet conglomerate, designers can more successfully develop a cohesive plan that will not only compliment the heart of the community, but grow and develop alongside them.



THE REGION

LOCATION

Brodhead sits about 35 miles south of Madison, bisected by the Rock and Green County Border. State highways through Brodhead connect the community to both Monroe and Janesville, pictured in the map. 120 miles southeast sits Chicago, making the Brodhead area and Green County a major hub for commuters between these bustling cities.



Wisconsin

Milwaukee



Janesville



Rockford



Brodhead



Madison



Monroe



Freeport

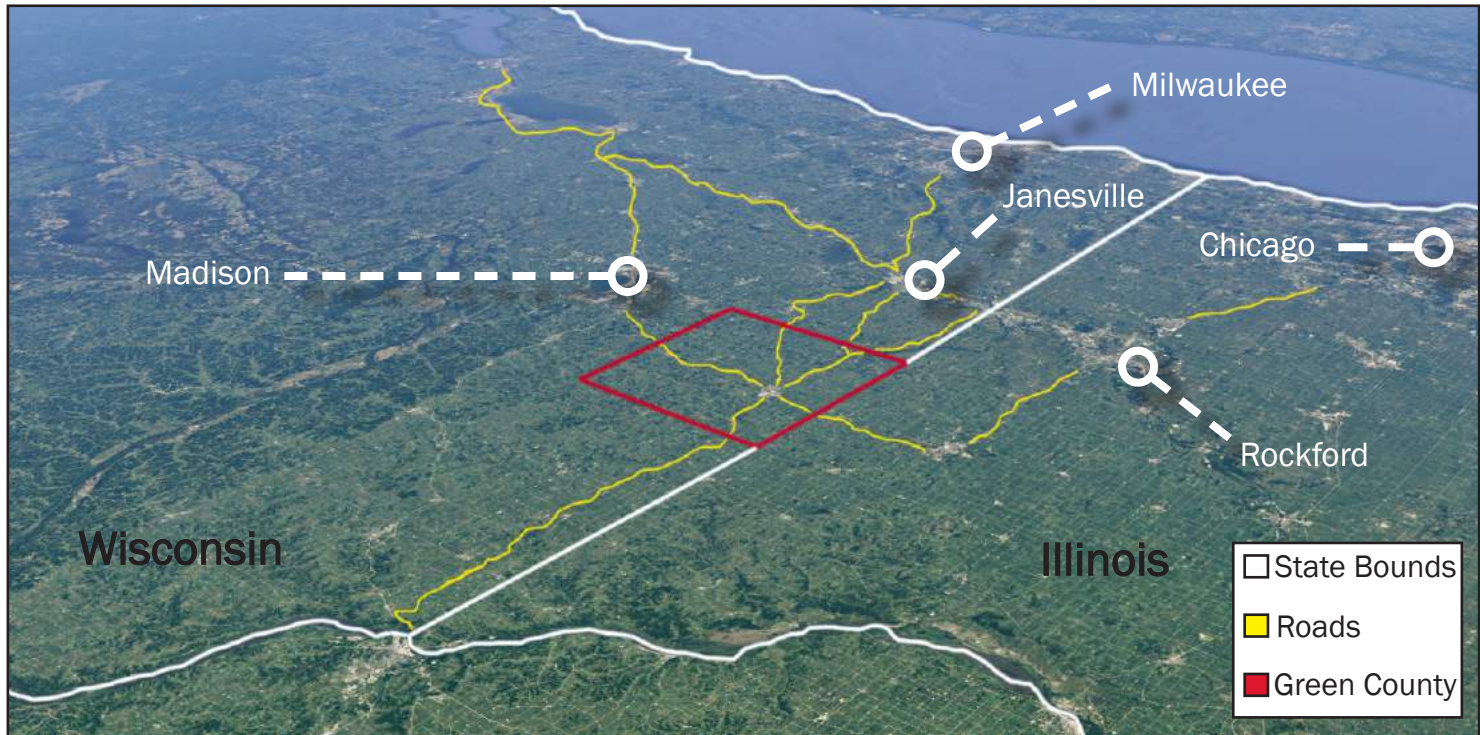


Illinois

State Bounds

State Highways

DEMOGRAPHICS



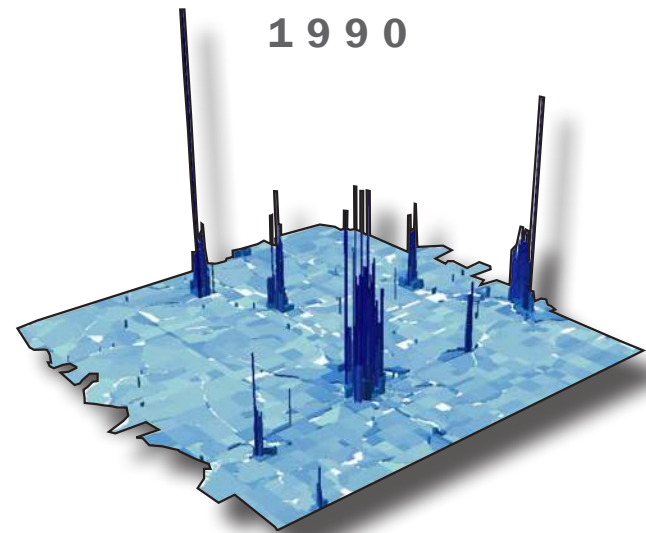
Green County Context

90% of Brodhead lies within Green County, as well as the Sugar River and its supported communities. For this reason, demographics of the area will be taken from Green County and applied to statistics when comparing.

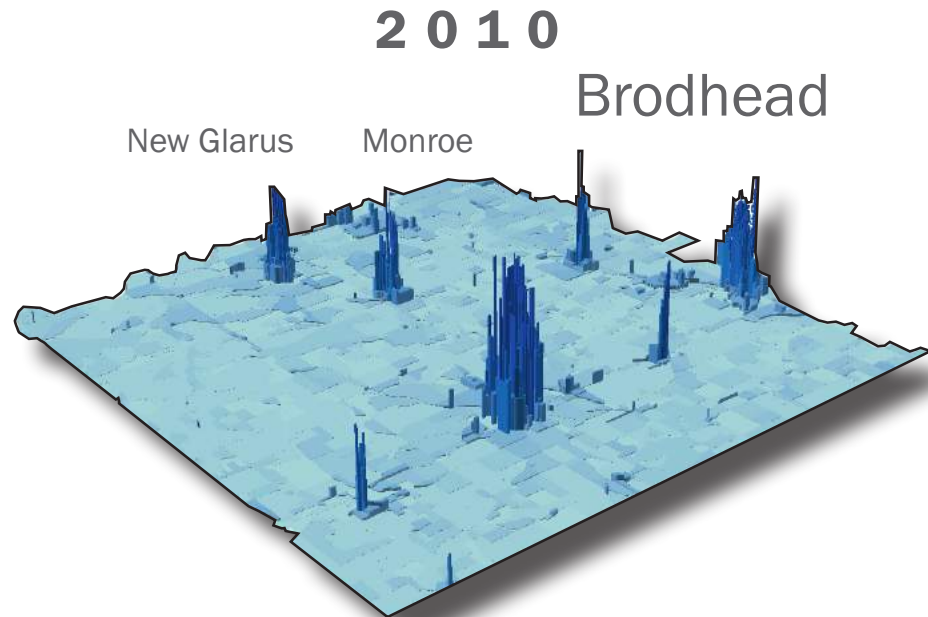
Green County holds a population of around 36,000 people, and this is on the rise as more of the population from Madison and the Dane County area come south. The largest city, Monroe, holds a third on its own at 10,000. This brings population density in at roughly 58 people per sq mi.

Referencing the maps (right), the population density has shifted from urban centered tendencies to those of more sprawl like nature. Between 1990 and 2010, agriculture has also shifted, from centralized corporation farming to patch like private farming, allowing residents of rural counties, like Green County, to live in more spread-out areas.

This shift from suburban to rural living has caused a disconnect between urban frameworks and their communities, leaving developed, but under-utilized urban centers. Posing safety risks, environmental harm, and lacking regional connectivity, these towns fall trap to vacating property owners and eventual bankruptcy. Although the potential for downfall is present, the framework to support a thriving environment is present.



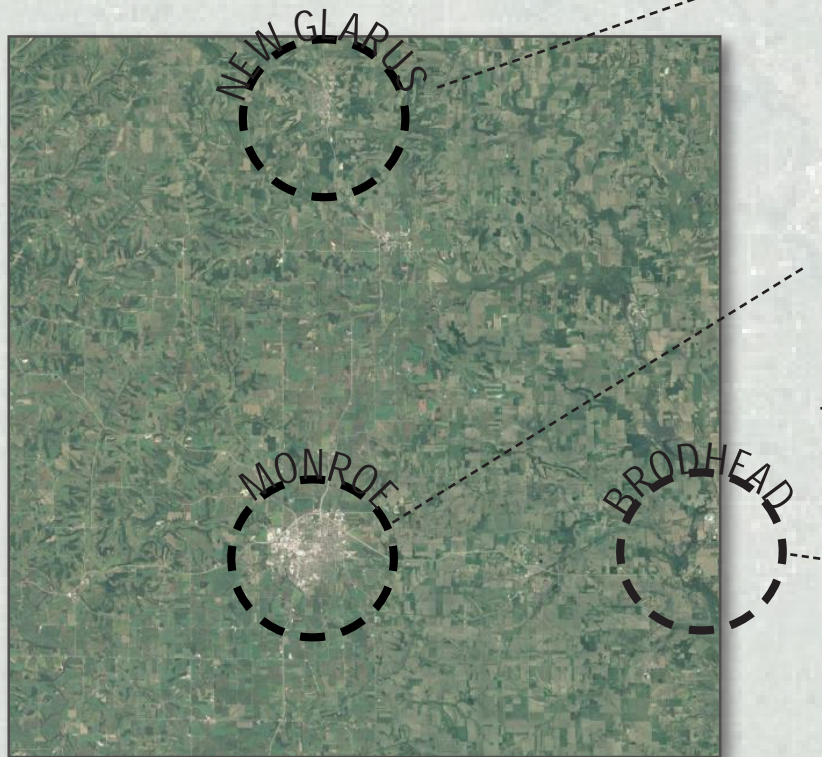
Population Density



Population Density

SMALL BUSINESS

Green County's median age of 42.7 is part of an age bracket that not only earns the most but spends the most. Small business within Green County is booming, with companies in craft beer and cheese seeing the most profits in the past 20 years.





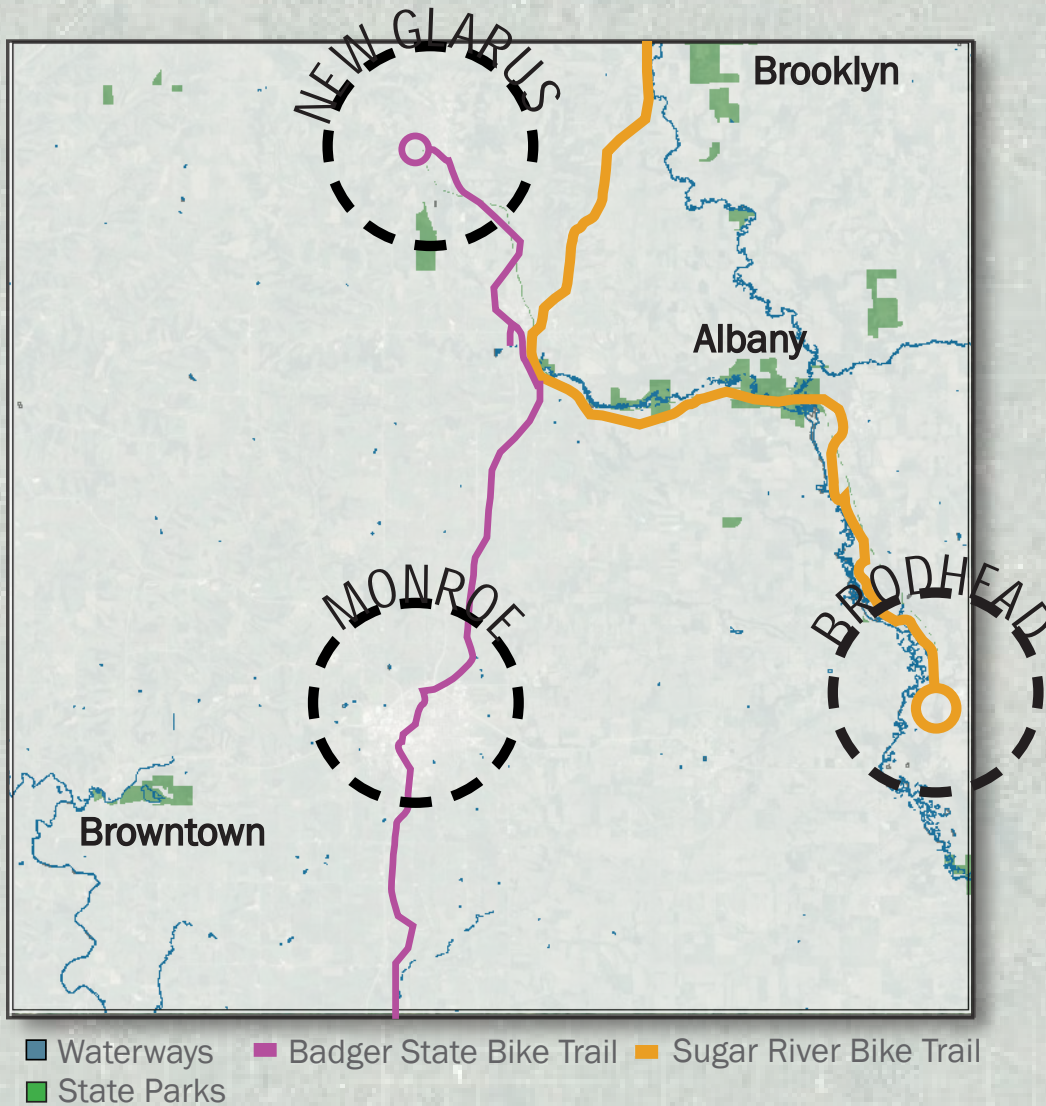
Cheese Tasting at Edelweiss Cheese in Monroe, WI

Areas like New Glarus, in the northern region of the county, support recognizable businesses like New Glarus Brewing as well as Edelweiss and Emmi Roth Cheese. Moving southward, Monroe also supports numerous companies of substantial value. Deppeler's Cheese and Minhas Brewing are two of the largest, with over 20 cheese and brewing companies seeing meaningful monetary gains in recent past. Additionally, near the Green and Rock County border, Brodhead harbors several valued private firms. Kuhn Construction's North American office resides within Brodhead, as well as Tucker Family Construction and Bramble's Furnishing.



New Glarus Brewing Co. Beer Gardens

TOURISM AND RECREATION



In addition to the profitable businesses in the region, Brodhead also resides in an area known for its outdoor recreation. The Sugar River and its coinciding state parks and bike trails create a corridor of activity unique to the surrounding region.

On the northern border of Green County lies the Brooklyn Wildlife area, public access land with a hiking trail and Class 2 Trout Stream and prime habitat for hunting. Prairie lands mix with oak savannahs to create a native habitat rarely seen in agriculturally focused area.

Moving southward along The Sugar River Bike Trail, visitors will find themselves along The Sugar River. Albany, a small town north east of Brodhead, resides along the river and butts up against another state-owned land, The Albany Wildlife Area. Like its Brooklyn counterpart, the lands offer much in terms of hunting and fishing land, but additionally provide over 300 acres of natively planted grasslands. These patches are crucial in developing a regionally sustainable ecological system that will support human development.

Southward yet, but westward and disconnected within the county, lies the Browntown Oak Forest. Like much of the surrounding state lands, the area is open to all recreational activities but camping. The area consists of undisturbed oak forests, thick sugar maple swaths and patches of grassland throughout. The area is unique to the region as the highlands provide unique landscapes for a variation of native plantings to take place. Birdwatches flock to this area as the rare variety provides a likewise rare variety of habitats for potential winged inhabitants.





Connecting the more easterly recreational amenities is The Sugar River Bike Trail. Originating in New Glarus, and terminating in Brodhead, the trail follows The Sugar River and provides a maintained trail for pedestrian use. The corridor varies in width, traversing open farmlands and dense forests alike, even meandering over the river at some points.

The trail is Brodhead's most prominent regional connection. Frequency along the trail varies, with most pedestrians only utilizing the first half, from New Glarus to Albany. This route allows the user to experience much of the wildlife and ecosystems present along the trail, as very little in terms of a destination lie beyond this point. When redeveloping Brodhead's urban core, it will be imperative to keep this in mind when improving regional connectivity.



The Sugar River Bike Trail

Tunnel on Badger State Bike Trail



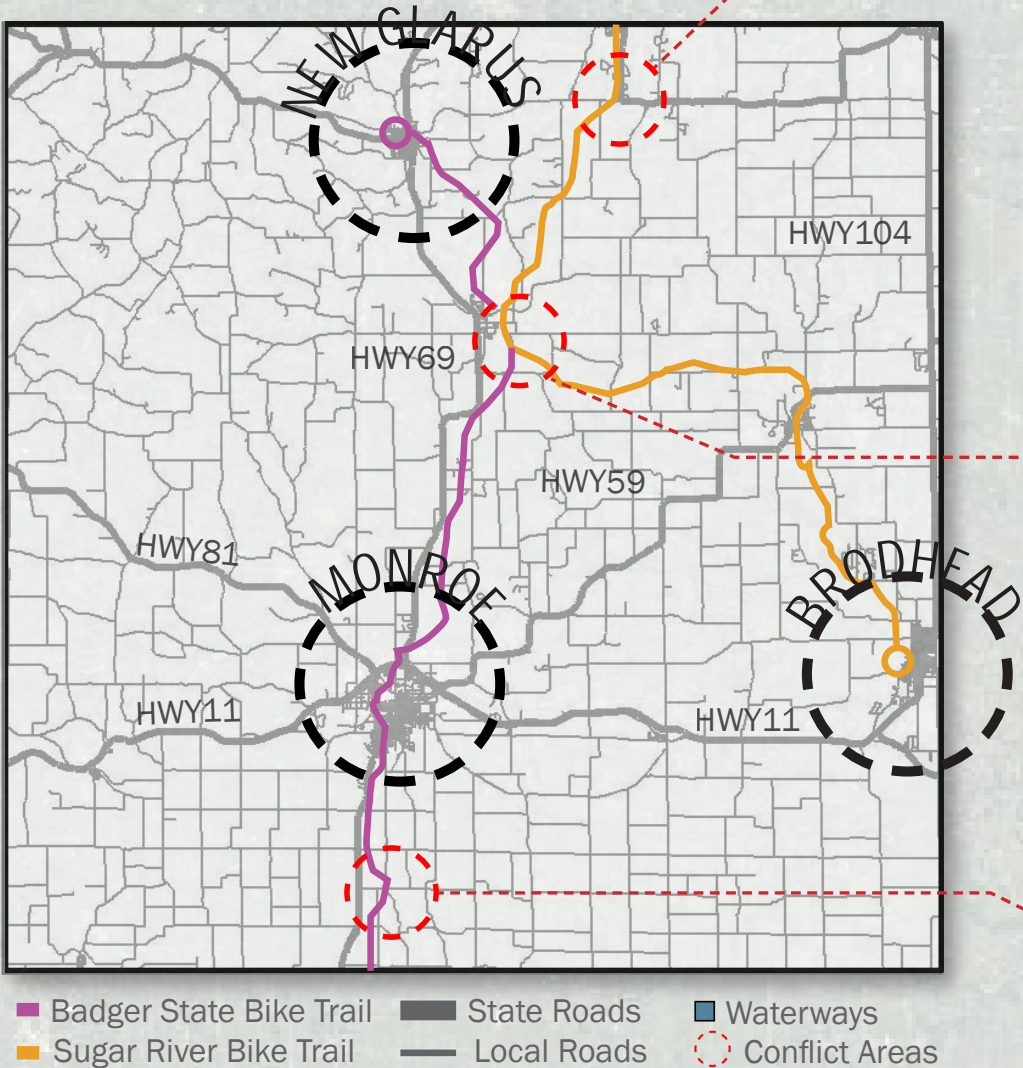
In addition to the Sugar River Bike Trail, The Badger State Trail also runs through Green County. Originating in Madison, and running southward into Illinois, the trail bisects Green County running through New Glarus, Monroe, and Monticello. The trail offers opportunities for sightseeing as well as fishing and hunting within the state-owned lands in the surrounding area. Just out of reach of the Browntown Oak Forest, the trail also has the darkest trail tunnel, running through the old Stewart Railroad Tunnel. Generally, this trail sees more use than the Sugar River Trail but offers more in terms of amenities. Improving sightseeing opportunities as well as improving design strategies along the Sugar River Trail could lead to more balanced use throughout the area.



Badger State Bike Trail Riverview

TRANSPORTATION

Like much of rural south-central Wisconsin, Green County is dominated by automotive travel. Five major state highways run into Monroe, with an additional one bordering the eastern edge. The roads of Green County see 30,000 users daily, with an average traffic commute time of 23 minutes. Primary destinations of those using the roadways include Madison, Janesville, Rockford, and Monroe. 90% of the population within Green County uses a car as many other modes of transportation are either inaccessible or impractical.





The three areas circled in red on the map and pictured here show some areas of concern within the lens of transportation. Where bike paths and roadways intersect, dangerous risks have developed due to a few troublesome characteristics. Little to know indication of intersecting uses, unmaintained crossings, and a lack of trail delineation all come together to create potentially disastrous pedestrian and automotive collisions.

THE SUGAR RIVER

- Parks
- Waterways
- Decatur Lake
- Sugar River Bike Trail
- LSRW Bounds

Lower Sugar River Watershed



Sugar River Watershed



Connecting Brodhead on an ecological level is The Sugar River Watershed. Transitioning from Green County, The Sugar River watershed begins at the river's origin, Oregon, and reaches south beyond Brodhead into Illinois.



Brodhead lies within the lowest of the three subsections, the Lower Sugar River Watershed. Within the watershed lies a myriad of cultural, recreational, and ecological resources. In close vicinity, parks along the river offer residents of Brodhead the opportunity to explore their surroundings. Trout streams, campgrounds, hiking and biking trails offer users a broad range of activities to enjoy.

With the Sugar River Bike Trail Ending in Brodhead, users of the trail might have more incentive to continue if the bike path was extended. Following The Sugar River southward, the bike path could continue into Rockford, connecting southern Wisconsin to northern Illinois. This connection could ultimately connect the Madison area to the greater Chicago area via bike trails.

THE COMMUNITY

BRODHEAD, WISCONSIN



Welcome to
Brodhead

Fall Arts & Crafts Fair

1st Sat. in Nov. New location: Brodhead High School

BRODHEAD CHAMBER OF COMMERCE 608-897-8411

DEMOGRAPHICS

Population

3,319 Total Population

Area

1.84 mi² Total Area

1,803 People/mi² (Population Density)

Age

42.7 Median Age of Green County

42.3 Median Age of Brodhead

39.4 Median Age of Wisconsin

Median Income: \$41,418

SUGAR RIVER

Downtown
Core

Highway 11



Downtown Mural, Brodhead

Brodhead has a population of 3,319 people with a density of roughly 1,803 people per sq mi. Their median age is just below the average of Green County's at 42.3 years old with a median income of \$41,418. This, along with the inclusion of their Business Improvement District (BID) has seen Brodhead transform into a quickly developing area. High traffic automotive corridors have shows the true potential the community has to become a hub for activity in southern Wisconsin.



Historic Downtown Train Depot, Brodhead



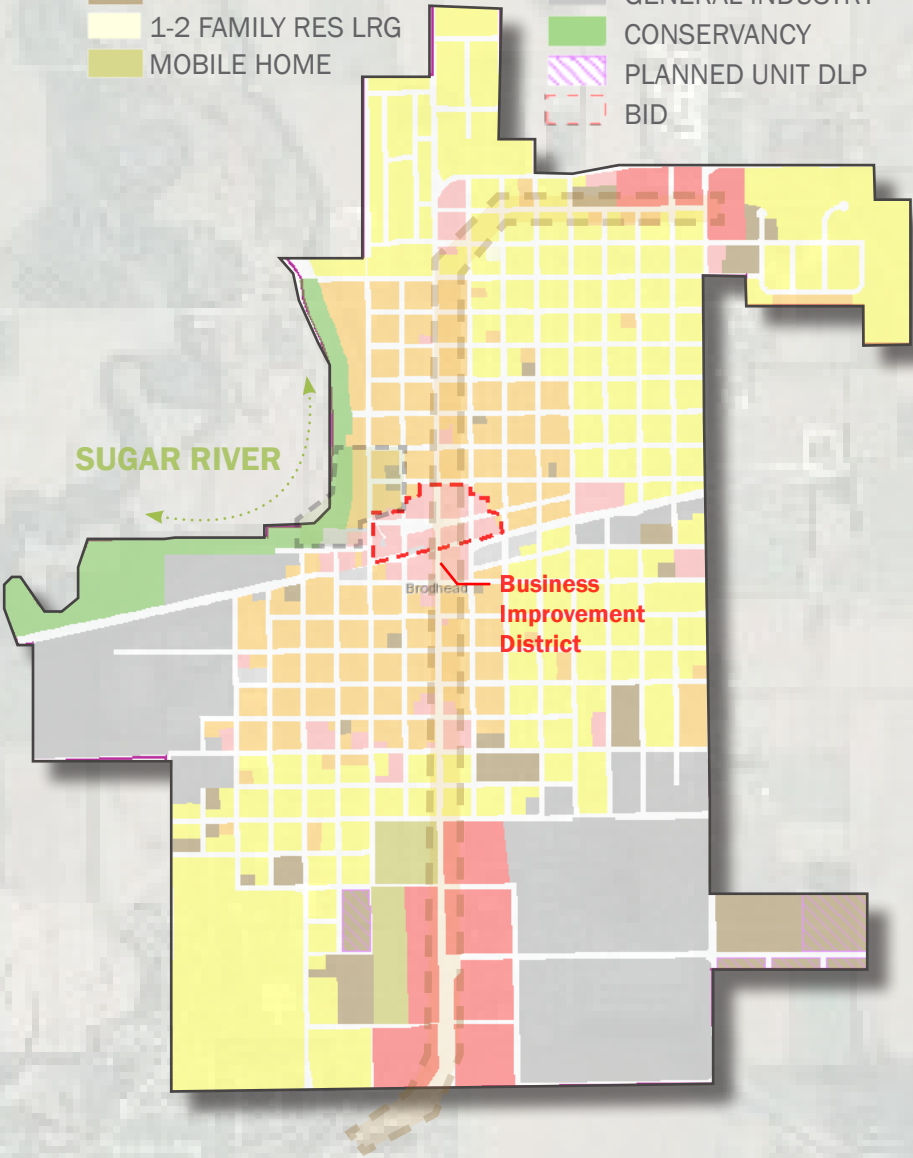
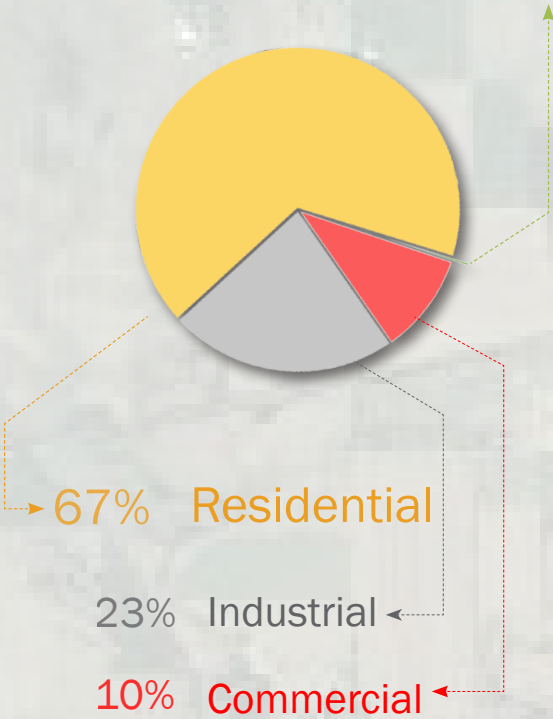
Historic Downtown Corner, Brodhead

LAND USE

Coming into Brodhead from the north, users of Highway 11 experience residential use, varying from single to double family living. Centrally located is the BID, consisting of 97% commercial use. The railroad crosses here, depicted by the white bisecting line running west-to-east. South of the BID more residential areas transitions into sprawling industrial spaces. The town's <1% green space sits west of the town where The Sugar River Bike Trail comes to an end.

- AGRICULTURE
- SINGLE RESIDENTIAL
- 1-2 FAMILY RES
- 3+ FAMILY RES
- 1-2 FAMILY RES LRG
- MOBILE HOME
- GENERAL COMMERCIAL
- HIGHWAY COMMERCIAL
- LIGHT INDUSTRY
- GENERAL INDUSTRY
- CONSERVANCY
- PLANNED UNIT DLP
- BID

<1% Greenspace



BRODHEAD CHARACTER



Residential



BID



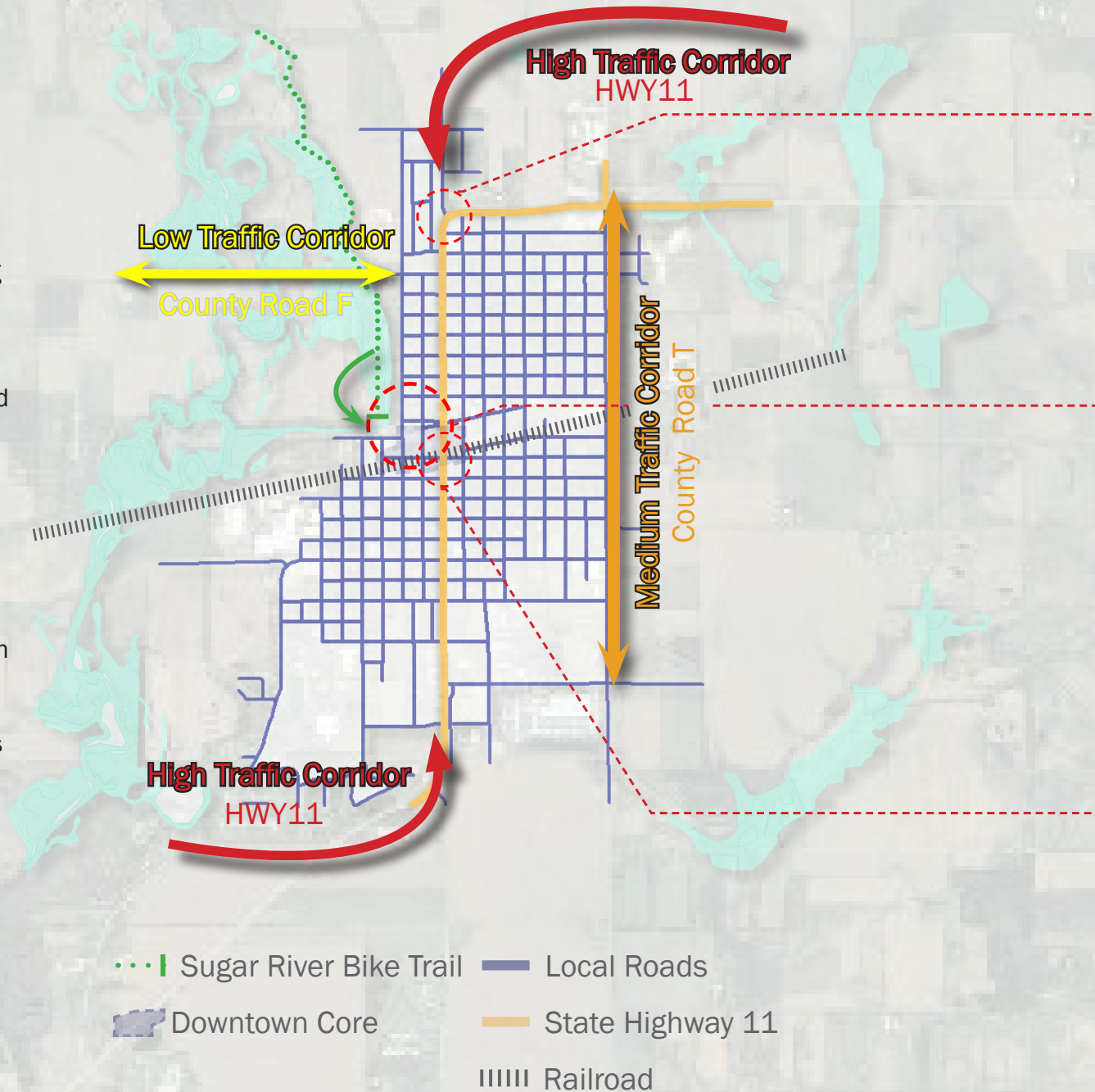
**Commercial
Industry**



The town expresses a character fitting for south-central Wisconsin. Variations of craftsman style architectural elements can be seen within 90% of the houses in Brodhead, north and south of the downtown core. Downtown commercial buildings don't exceed 3 stories, and are made of cream and rich, brown colored brick. This space, in addition to the detailed lighting fixtures, has the potential to develop into a unique area. The "cozy feel" coming into downtown quickly dissipates though, as structure is loosened and corridors extended as users travel further south into Brodhead.

TRANSPORTATION: FREQUENCY

Brodhead sees three major automotive roadways bringing users through the town. Running north to south, State Highway 11 sees the largest amount of traffic. County Road T on the eastern side of the town sees more of a bypass like use, with medium levels of traffic flowing through daily. Lower than the previous two, but still a major outlet to Brodhead is County Road F, bringing users southward from Albany. Red circles indicate areas of interest for future proposed changes or features to note.

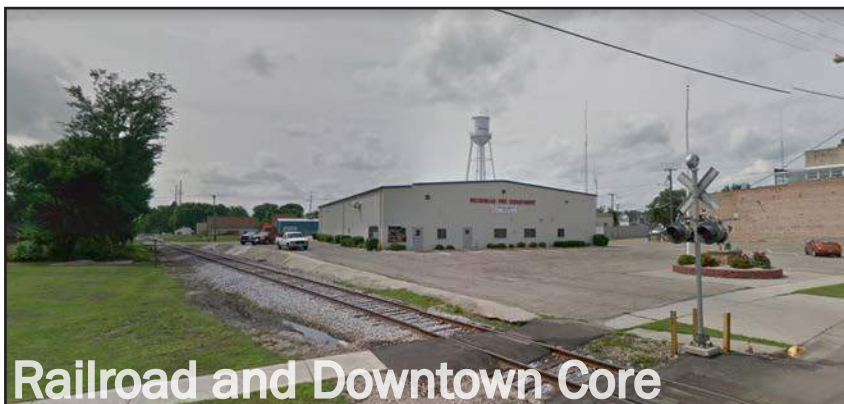




At the northern end of Brodhead, the road veers at a seemingly 90° angle with little indication. Looking to improve this area by adding signage on and off the road, more structure along the street's outward edge and even instilling stormwater strategies on the inner edge could see this become a safer, more efficient use of space



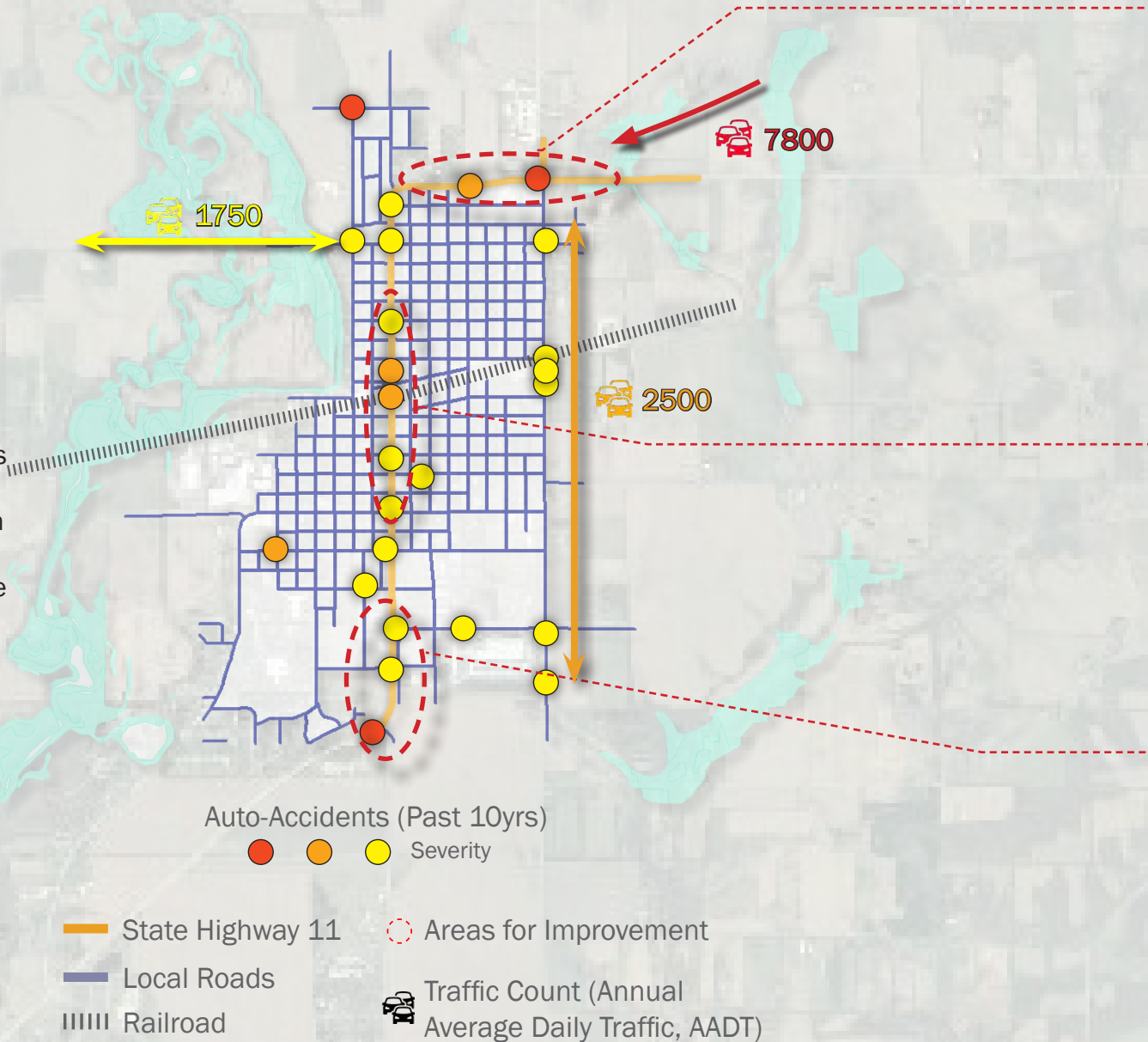
Centrally located, where The Sugar River meets the downtown core, HWY 11 brings users through Brodhead. Here, sprawling parking lots dominate the landscape, broken up by the businesses developing within the town. There is no view and little signage to indicate the Sugar River, leaving visitors oblivious to Brodhead's rich regional recreation. Developing this area into something greener, with more access to the water and more focus on the area's culture will transform this town into a unique destination.



Where Highway 11 crosses the historic railroad tracks, there is large potential for improvement. The remanence of a once more complex natural corridor provide patchy seperation from the surrounding community, where otherwise open lawns and undefined parking meet the tracks. Over-grown and unmaintained, this area will see safety improvement made while tying in the sites history and engaging the community in their town's past.

TRANSPORTATION: SAFETY

Here we can see the location and frequency of car crashes within the past 10 years in addition to traffic counts along the major corridors. At 7800 Annual Average Daily Traffic Users, HWY11 sees one car every 12 seconds. This has lead to the pattern of accidents you see today, with 65% of all accidents occuring on or within one block of HWY 11. Users of HWY 11 are less likely to notice pedestrians in an environment where the automobile holds primary focus. Reflectively, County Road T (in orange) sees just over 25% of the accidents in Brodhead with County Road T seeing just under 10%.





Coming into Brodhead from the north, users of Highway 11 have little indication they are entering a town. In season, small market areas are set up here, where open lawns make way to distant agriculture crops patched along side the road. Streetscapes include minimal pedestrian access with no spatial structure.



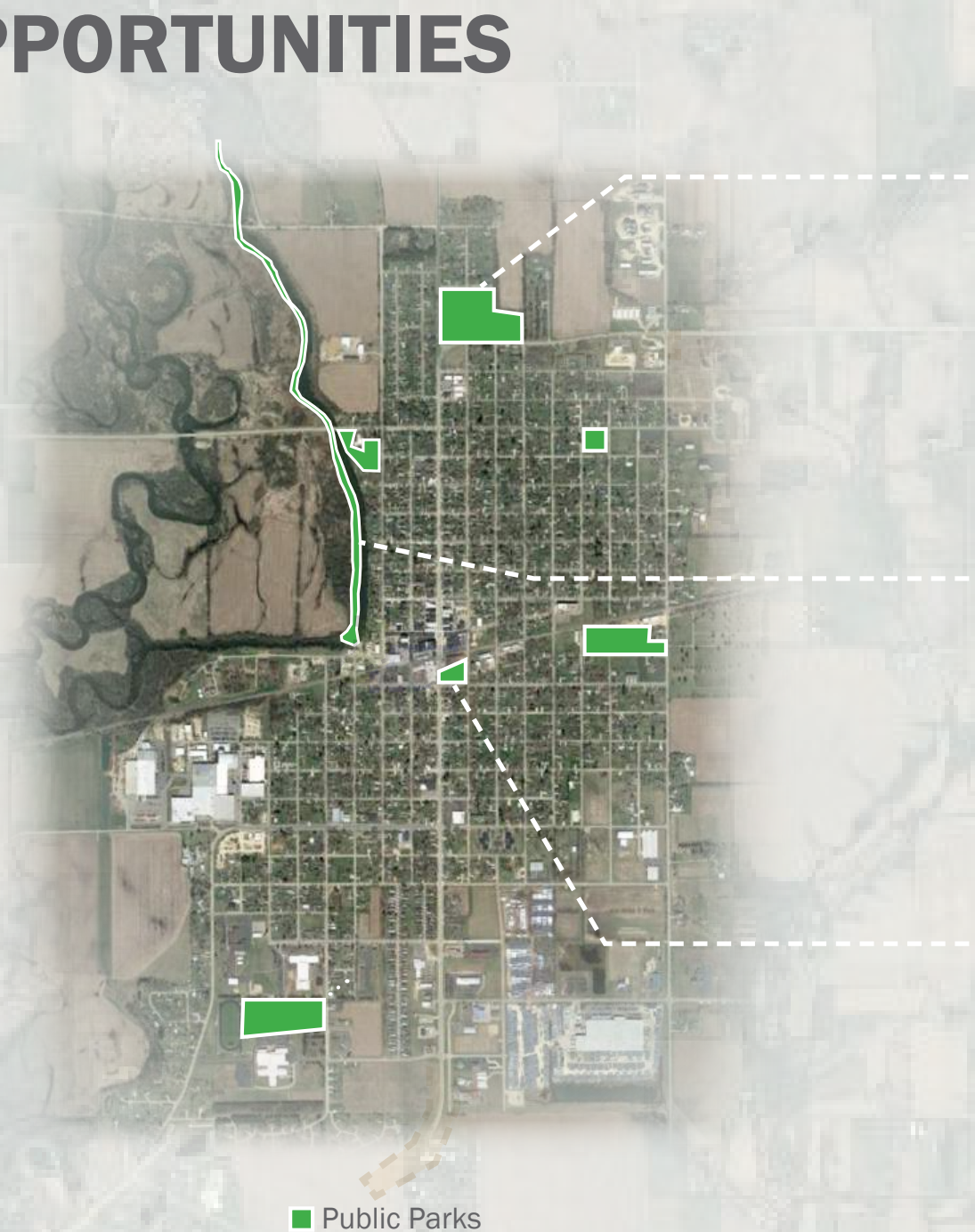
Along HWY11 downtown, Brodhead offers more inviting spaces. Street corridors have now widened, allowing for immediate pedestrian use, as well as the inclusion of 2 parking lanes and streetside buffers. Though structure is better, areas looking to be improved here will include overhead features, to create a small focused space, and to draw automotive users out of their car.

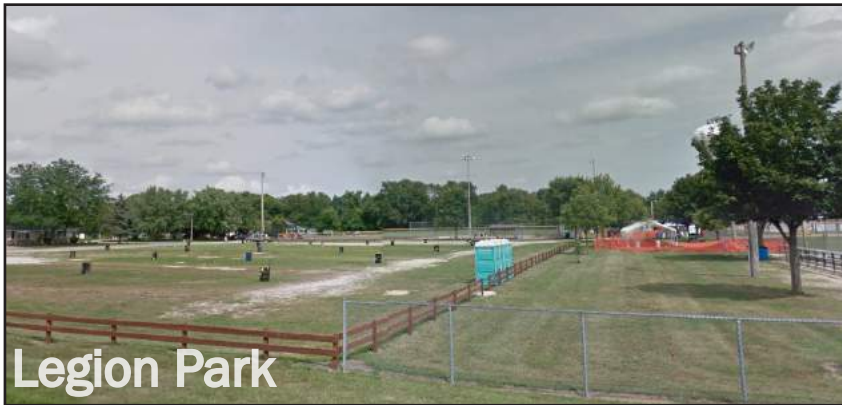


Almost fully south of town, HWY11 once again opens up into what becomes a typical Wisconsin State Highway: open horizon, no pedestrian access, and minimal planting. This would be effective, but southern Brodhead already expresses this character, meaning users coming into and out of Brodhead speed through these areas. Making this boundary more defined, and slowing those drivers down will be crucial in improving the safety of this area.

RECREATION OPPORTUNITIES

Brodhead offers 7 major parks to its residents. Events like family reunions, birthday parties, and graduation parties can all be seen taking place in these area. Additionally, The Brodhead Parks and Recreation Office offers annual sports for elementary through highschool sports. 5 parks are within walking distance of one another, with The Sugar River Trail connecting Brodhead to the greater Sugar River Region.





Encompassing 3 of the city's 6 municipal baseball fields, Legion Park sits on the north side of Brodhead and provides the community with numerous social affordances. Leisure areas, sports fields, and covered seating allows for the daily use of the park, rain or shine. Both youth and adult leagues take advantage of Legion Park daily in season, and provides an accessible opportunity for all members of the community to meet and socialize.



Leading into the site from the north, and ultimately terminating in Brodhead, the Sugar River Trail is the most recognizable recreational connection to the site. Through the trail, users can access parks and other natural areas in the surrounding area like Headgates Park and Decatur Park. Along the trail, users can ski, camp, and even hunt in designated areas. Increasing information about the park.



Constructed in 2011, this small park located near the center of Brodhead offers community members a number of opportunities for recreational use. A covered pavilion, small amphitheater, playground, and memorial space all sit within the park's bounds. Large areas of canopied green space surround the features, and provide opportunities for field games or leisure space. Activities occurring here include children's play, concerts, parties, and memorial services.

THE SITE

DOWNTOWN BRODHEAD



AREAS OF FOCUS

N↑



Wisconsin State Highway 11



Sugar River Trail Terminus



Downtown Core

Wisconsin State Highway 11

Bisecting the city of Brodhead, Highway 11 poses many design challenges. Safety, wayfinding, and functionality are key characteristics looking to be improved in this area.



Sugar River Trail Terminus

Coming to an end in Brodhead, the Sugar River Bike Trail sprawls for 24 miles, transversing users from New Glarus to Brodhead. The trail is scattered with historical and ecological landmarks, but the terminus near the center of Brodhead leaves much to be desired. Regional context, ecological connections, and unique placemaking are prioritized goals when looking to redevelop this area.



Downtown Core

At the heart of Brodhead, Brodhead's BID has defined the city. Through historical preservation, green space creation, and economic development, the BID has provided Brodhead with a unique facility to manage their urban core. Connecting this zone to the fragmented city scape poses the greatest challenge, therefore safety, wayfinding, and unique placemaking are all of utmost importance.



WISCONSIN HWY11

Downtown Streetscape



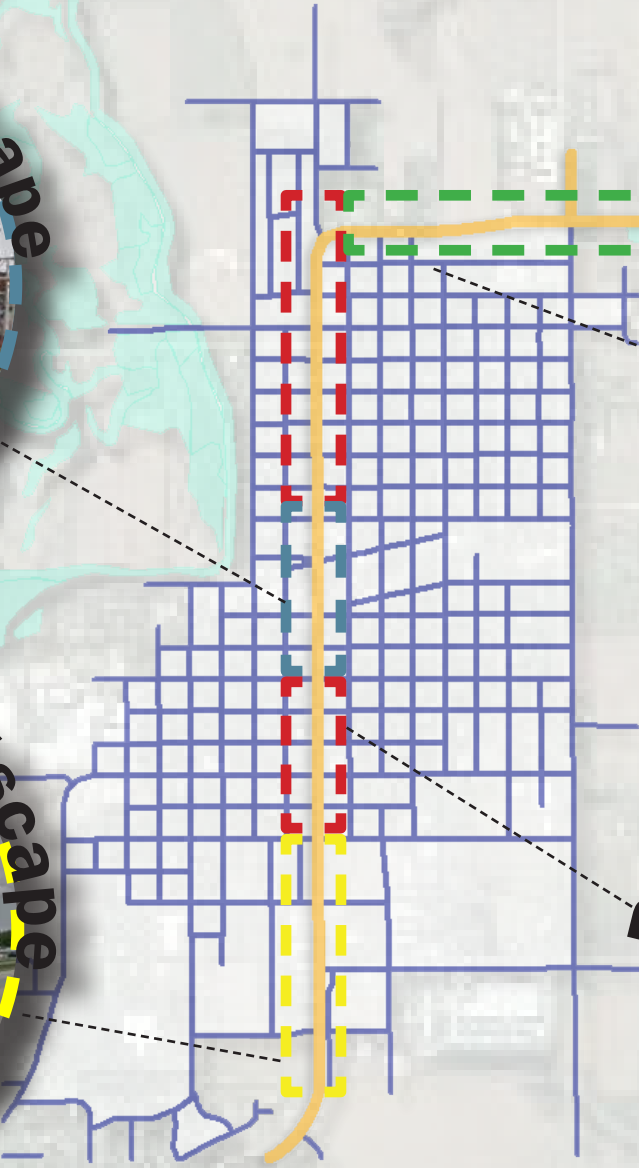
Opening Streetscape



Commercial Streetscape

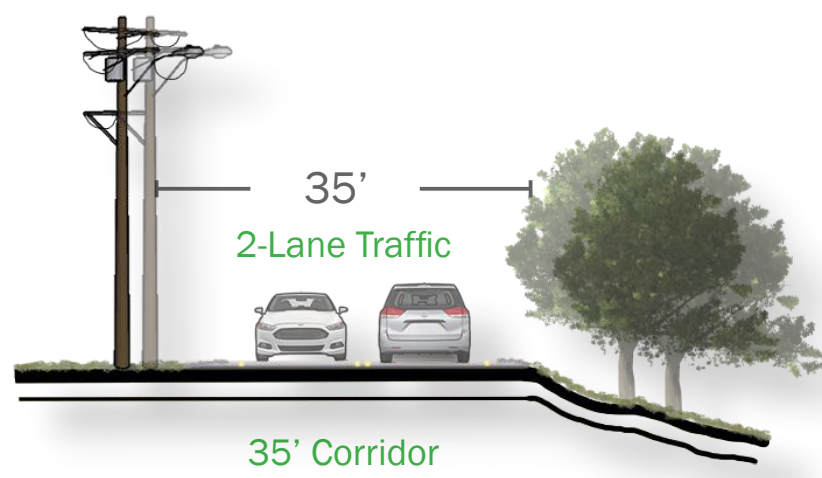


Residential Streetscape



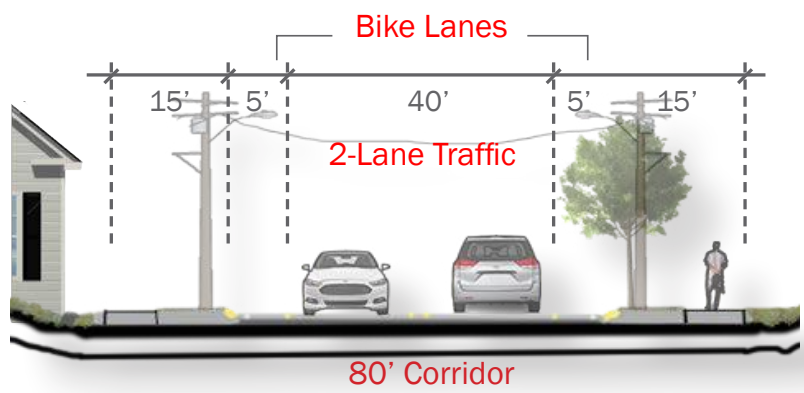
Streetscape Sections

Opening



Coming into town, the streetscape of Highway 11 displays both positive and detrimental street side practices. **Street trees** provide great canopy cover, while the **exclusion of sidewalk** prohibits streetside mobility. **Streetlights** illuminate the surroundings, but **no bike path** is in place to utilize the 24/7 limited biking access.

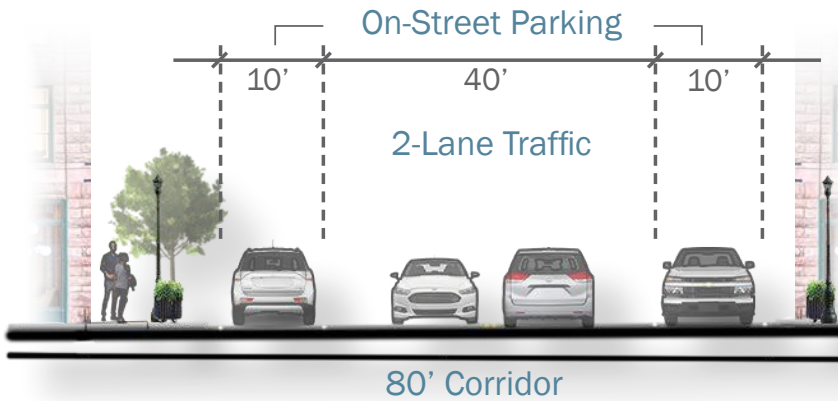
Residential



Once within city limits, Highway 11 starts to express more positive streetside practices. Large **grass buffers** between the now **existing sidewalk** provide quasi-safe mobility, while **streetlights** now shed light onto both streetscape and sidewalks. Occasional **street trees** allee the road, but no real canopy is developed.

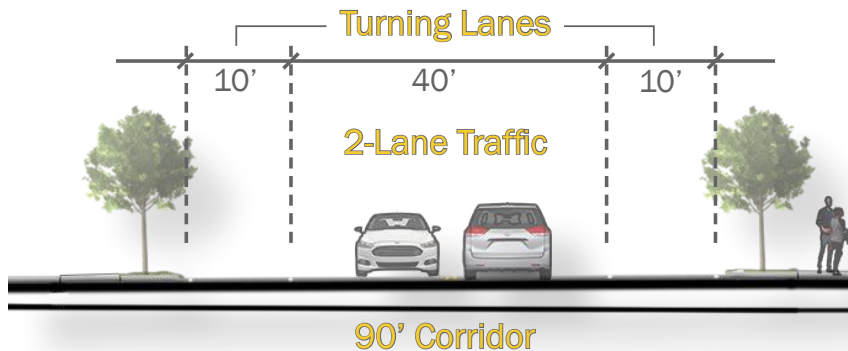
Streetscape Sections

Downtown



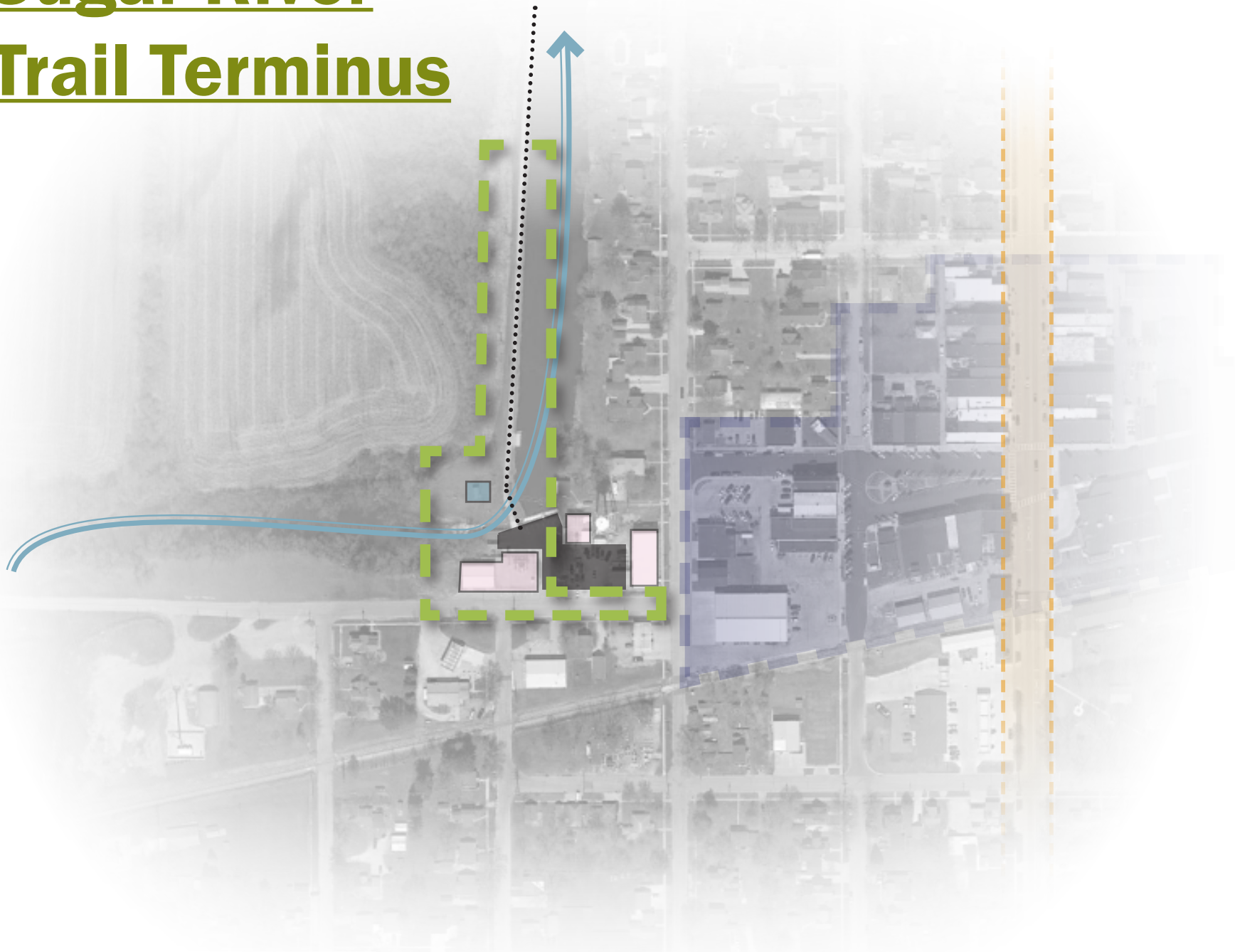
The BID sees the highest pedestrian activity in town, and current streetside reflects various positive design strategies. **Large street trees, antique lighting, covered buildings, and native plant buffers** are all present, and combine to create a unique sense of place and organization to the surrounding city.

Commercial



Moving through to the south side of town, focus is very much drawn away from pedestrian mobility. Withholding the occasional **street tree**, there is no structure to the road side. Open expanses **lacking structure** like a **bike path** or **planted buffer**, draw focus back to the automobile and away from the pedestrian.

Sugar River Trail Terminus



The Sugar River

Bringing ecologic life and value to the site, the river flows into Brodhead and veers before departing westward. With the river comes natural habitat for native creatures, as well as recreational opportunities to enjoy these features.

Bike Path Signage

Here, at the final leg of the 23 mile Sugar River Bike Trail, is a small sign. The sign informs users of the trail and gives some distances of waypoints along the way. There is little to no lead-up signage for a location so tucked away from the town.

Utility Housing Unit & Baitshop

There are 2 structures in this area hiding the biketrail from the surrounding town. One, an old utility housing unit, poses some potential safety risks, but has no exterior plantings and offers no wayfinding routes or navigation points for pedestrians. Fences border the property, but little is done around these edges to make the area seem desirable for human use.

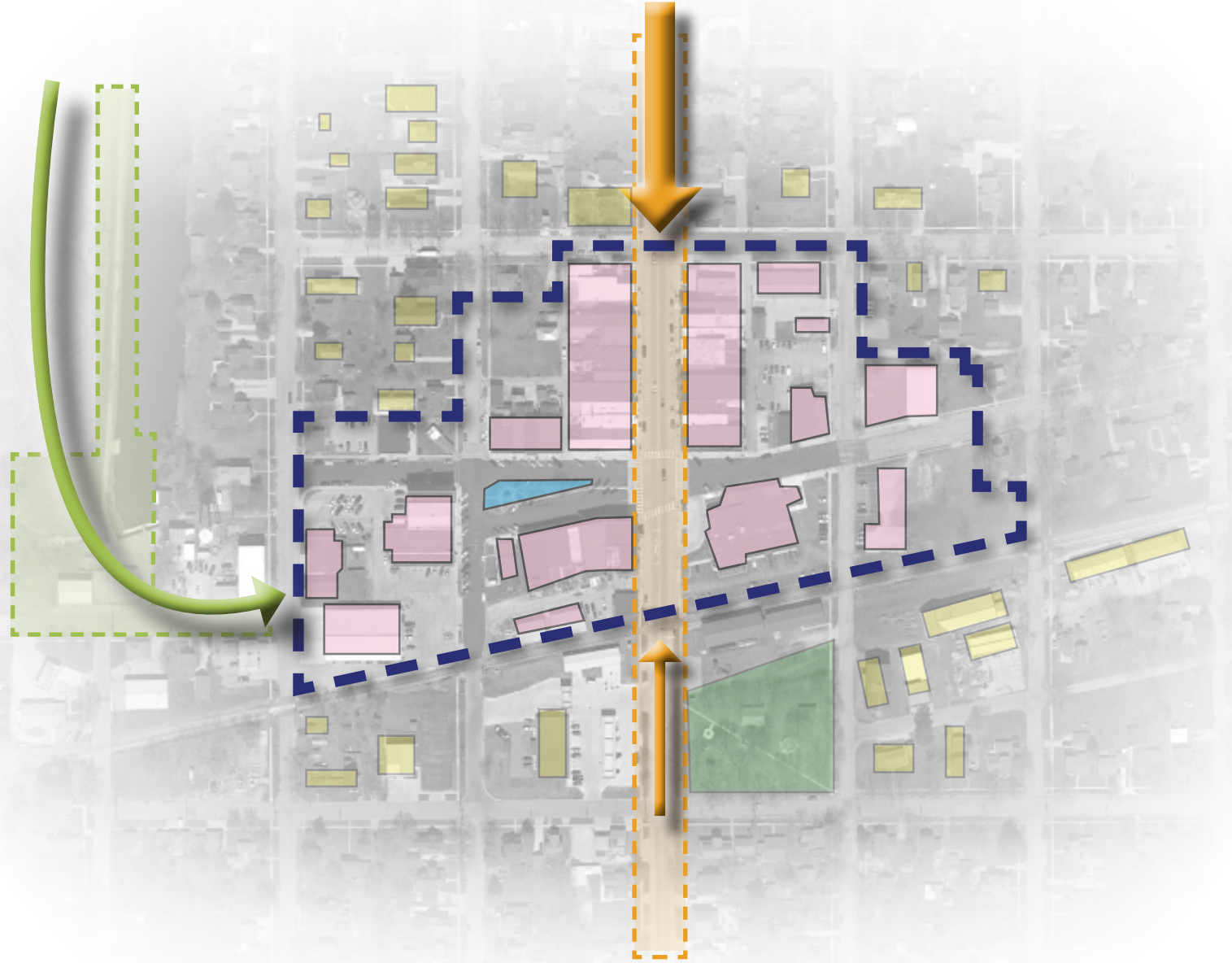
The Old Powerhouse Bait Shop sits adjacent to the utility unit. The older building sees seasonal use, and the eastern streetside is well kept, but the western rear of the building seems underwhelming. By utilizing this back space, a transitional area can be created between downtown and this natural eco-corridor.

Sprawling Parking Lot

Connecting the the two structures is a deteriorating parking lot. Composed of gravel and asphalt, the lot sprawls through and amidst the green space surrounding the river. Used by primarily customers of the bait shop, the lot is an inefficient use of valueable river front property.



Downtown Core



Sugar River Bicycle Traffic

The Sugar River bike path is the sole recreational connection Brodhead has to the surrounding region. Very few users reside in Brodhead, but much of the visiting traffic is due to the terminus of this trail near the Brodhead city center. Users looking to eat and relax will often take advantage of on-site amenities.

Tinkers Park on W. Exchange

Organized and constructed by the BID in 1994, this green space lies at the heart of Brodhead. Cut between the split of two roads, the unique shape provides users with moveable seating as well as a covered pavilion for multi-purpose use. After shopping and eating at the surrounding businesses, users can often be found enjoying a nap or socializing in or around this peaceful green space

Small Businesses of Brodhead, WI

Brodhead supports over 200 local businesses, and much of this would not be possible without the BID. Established in 1987, the organization incentivizes businesses to make communal donations to better their physical environment. Over the past 10 years alone, the BID has installed street trees and lighting, facilitated the creation of 3 murals, as well as construction of Tinkers Garden in 1994.

Top donors to the BID include Brodhead Town Bank, Tucker Family Construction North Kuhn, and Stoughton Trailers. With their help, as well as countless others, efforts to keep city wide development have remained overall positive.



PROGRAMMATIC STUDIES

PRECEDENTS

How have previous designers addressed these challenges?

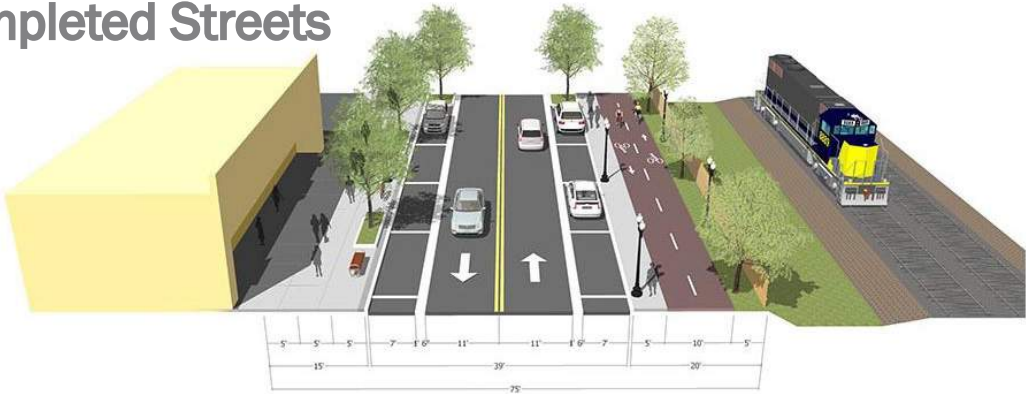


Sense of Place



Cohesive Connections

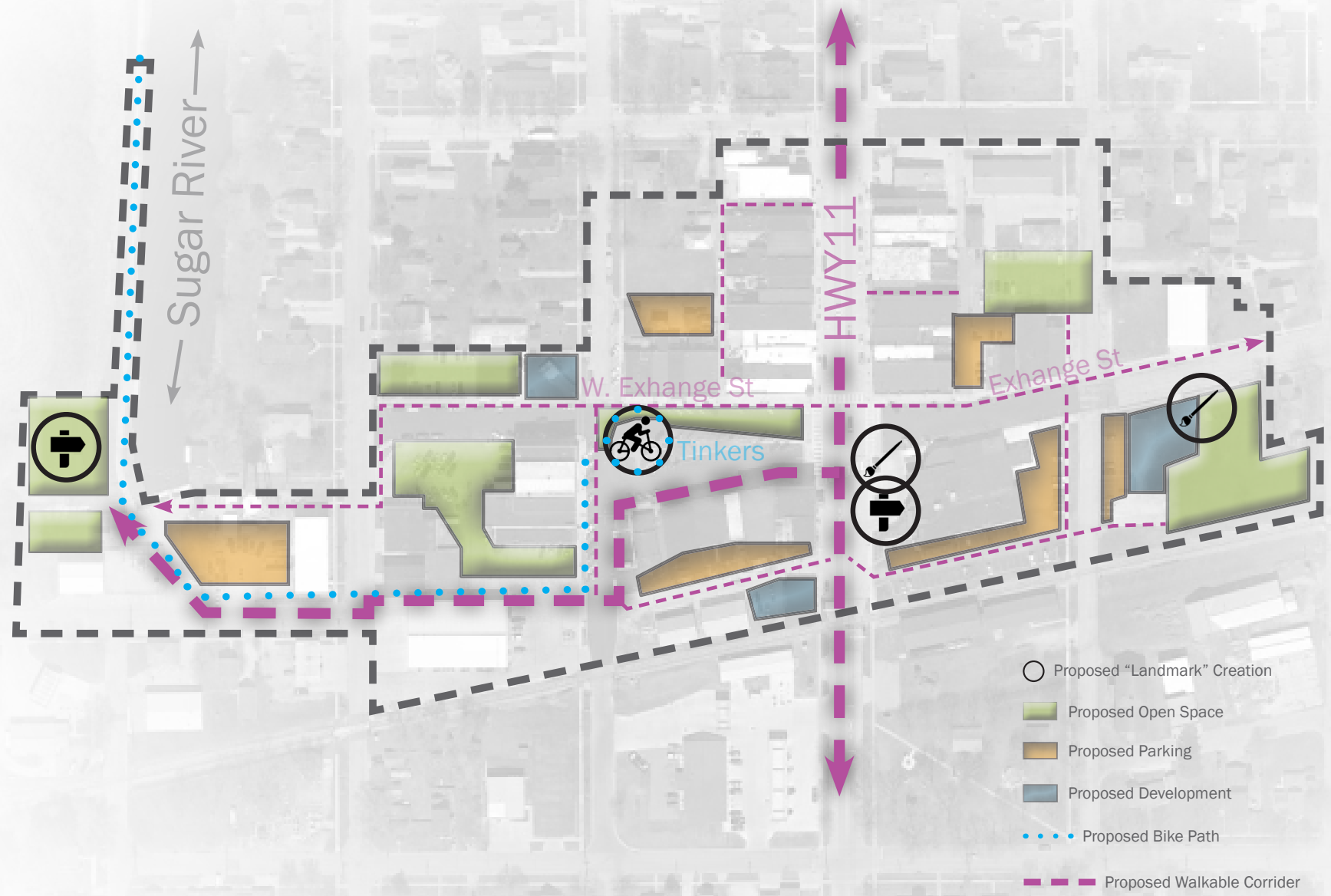
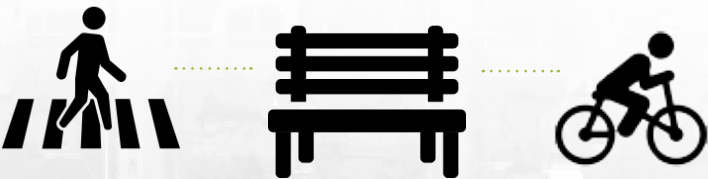
Completed Streets



Pedestrian Focus

CONCEPT 1

Pedestrian Engagement





The first proposal focused solely on pedestrian engagement. Attributes of focus here include walkable street design, bike path enhancements, and the creation of connected open spaces. With these strategies in mind, Brodhead could see a shift from automotive to more pedestrian focused spaces, resulting in better lasting conditions for residents.



Walkable street designing would allow users to more effectively use the space during activities or events throughout the season. This notion of “walkable streets” will incorporate more developed street side planting, as well as permanent and moveable seating. Utilizing existing building features, an overhead plane could additionally be developed. Offering opportunities for advertisements, welcoming stoops will also be created to engage pedestrians with local business. By creating these ties to the landscape, pedestrians will become safely, actively engaged in the use of the sidewalk, and will further be seen as a corridor rather than an occasion crossing point between stores.



The bike path will also be another key element to incorporate within downtown. By extending the path terminus into the center of town, users now have a destination along the path to stop at. With open green spaces around the former trail end, users will be encouraged to participate in local activities while they take advantage of the new, proposed amenities.

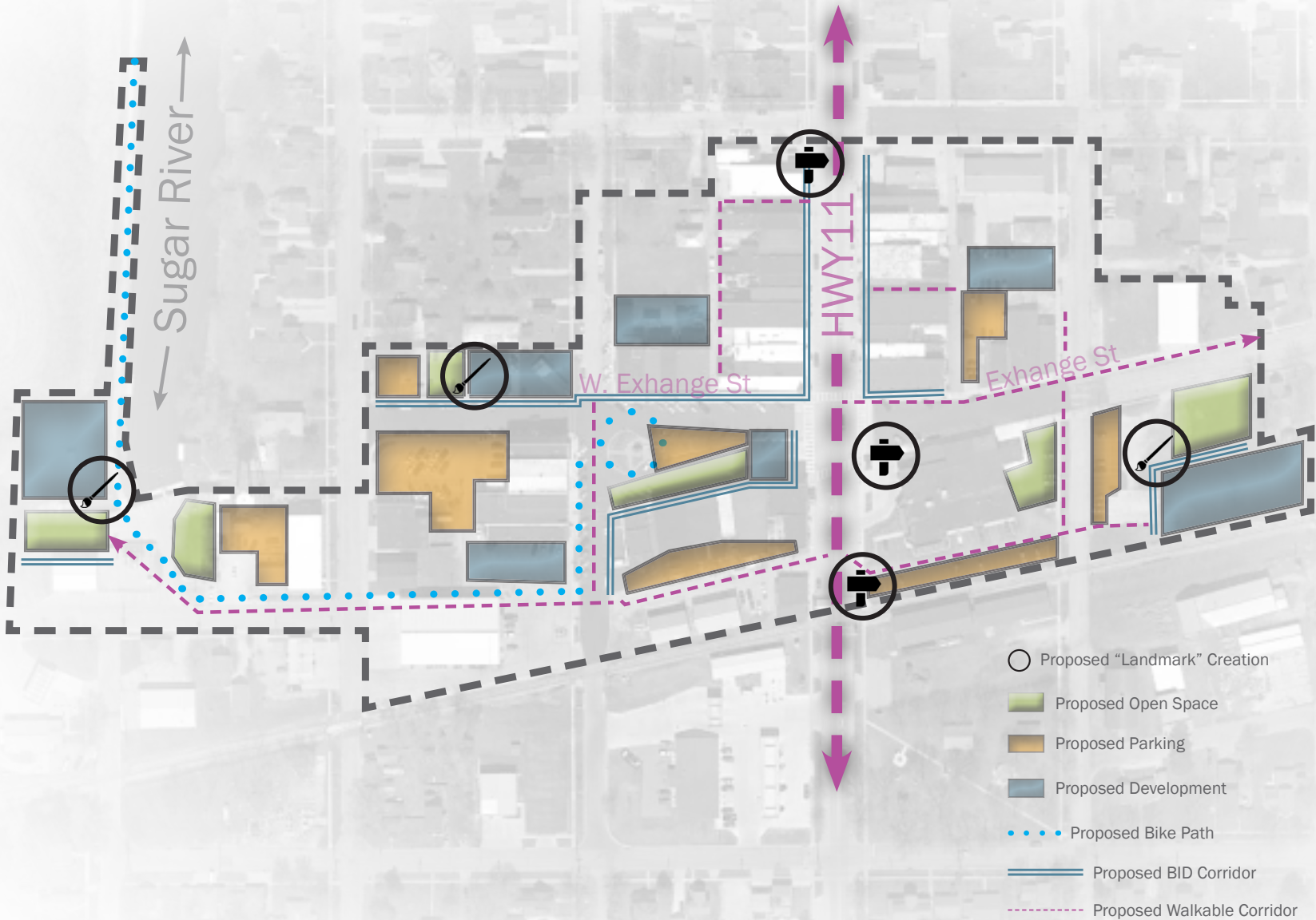
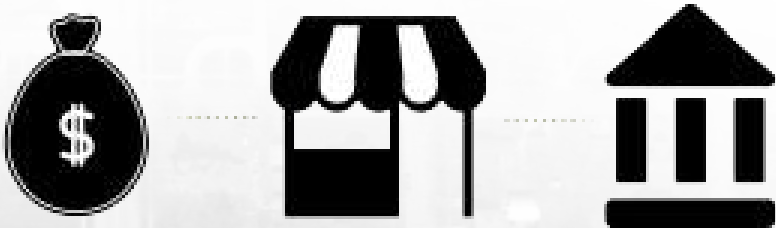


By creating a network of connected green spaces, residents and visitors to Brodhead will be more inclined to travel through the downtown as a whole, rather than to one destination in particular. By providing multiple, easy-to-reach stops, pedestrians can bunny hop their way across town, experiencing more of the town cultures and ultimately participating in more small business.

“Landmarks” within this frame of design will include improved signage for way finding purposes, as well as opportunities for public art within the BID and a bike utility station near the proposed trail end at Tinkers Garden.

CONCEPT 2

BID Development





Historic Markers



Open Lawns



Street-side Parking



Moveable Seating Space

The second site plan looks more at small business development, and how we as designers can promote the use of small business through landscape. Key concepts here will be active store fronts, the development of a community identity through culture, and enhancing the existing affordances to more efficiently allocate funding to selected projects.

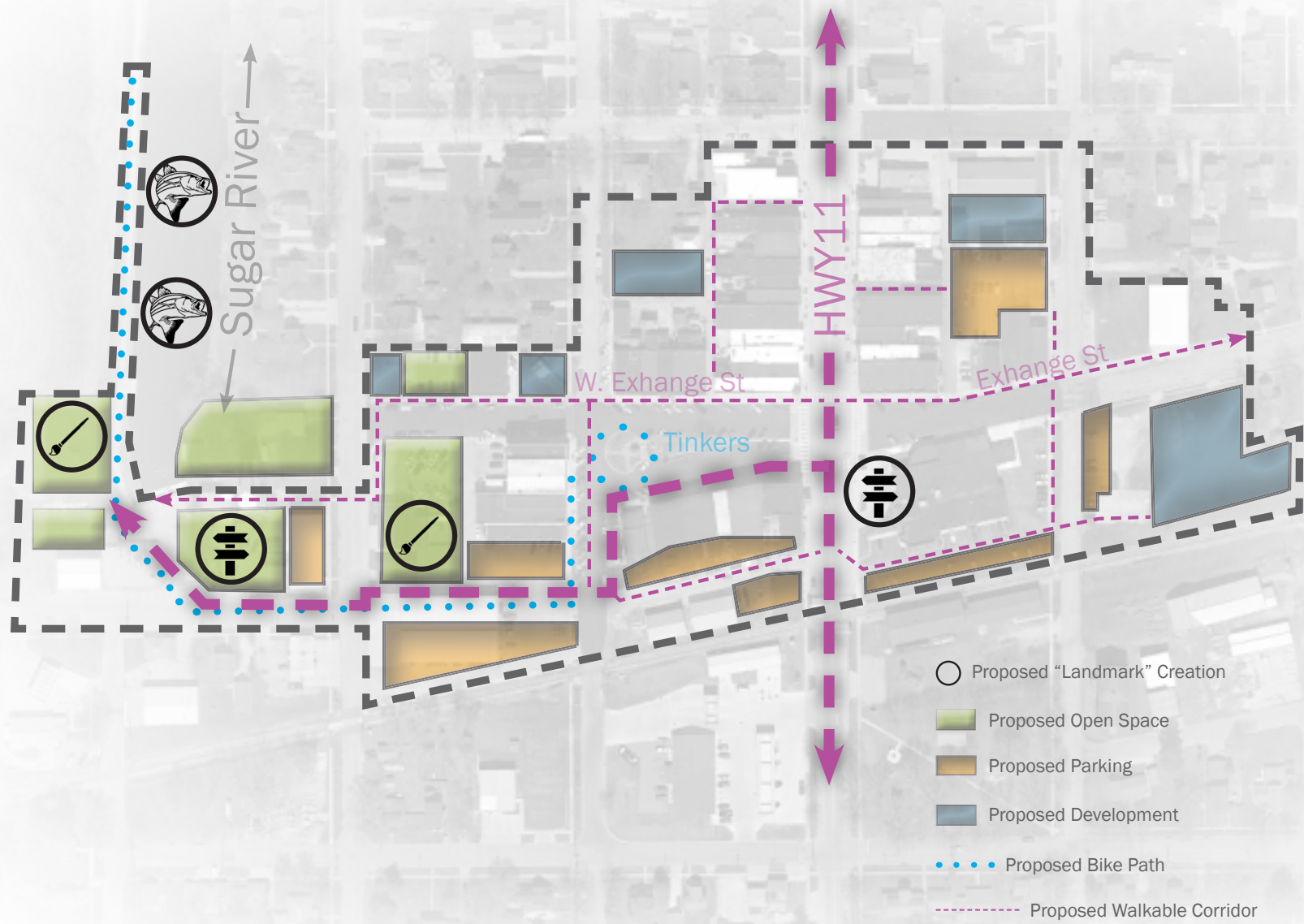
Mentioned briefly in Site Plan 1, activating storefront is key when trying to generate small business with landscape. Engaging pedestrians in unique business ideas and practices generates thought, and this thought ultimately drives someone to ask the question, “Is this worth my money?” By providing these users with positive experiences along these pedestrian corridors, they will feel much more secure when making purchases. Including programmatic elements such as moveable seating near restaurants, outdoor clothing racks for outlet stores, and open windows for other boutiques will incorporate this idea of small business within the landscape.

Additionally, developing a community identity will help distinguish Brodhead among the other towns in the region. Signage offering facts about Brodhead’s history as well as the depiction of the BID could have positive impacts on the Brodhead area. By defining Brodhead, and its unique elements it has to offer, it can be more effectively advertised to the public.

“Landmarks” here would include more public art pieces, placed in front of companies with strong ties to the area and the art subject. Additionally, green spaces with these art pieces can be found near the developed zones, providing these open lawns for outdoor use.

CONCEPT 3

Sugar River Recreation





The final site plan sees more organized spatial development, with a focus on the Sugar River. Here, within this plan, you can see more green space surrounding the river, bringing site focus and community attention to the valuable ecologic resource.



One strategy within the Sugar River focus would be enhancing the riverbank quality coming into Brodhead. Currently, the river leaves much to be desired with very little in terms of native plants near the shoreline and bike path. By developing this shoreline, native species can once again return to the area and provide a more defined character to the space, further enhancing local recreational opportunities. Additionally, this will build sustainable microclimates around the river, ultimately enhancing the quality of habitat and water alike.



With this ecological development, more spaces for designated recreation would be needed. Fishing piers along the bank, open green spaces, and defined public access routes to utilize these affordances will be necessary to create a long-lasting recreational corridor within Brodhead.

Storm water management in this area will be crucial in developing a design that will last. Level spreaders in addition to remediating plants will be used to create areas of water storage to delay flooding before running into The Sugar River.



Here, again you can see the bike path has been continued to the center of town, ending in Tinkers Park. The extension will again go to bring users into the downtown core, and additionally engage the community in the use of the trail. Many users of the Sugar River Trail originate northward, but if there can be more use coming from Brodhead, it would incentivize more creation for affordances along the southern edge of the trail.

MASTER PLAN

Semester 2 kicked things off with an 8 week period of design development, where project goals were addressed through landscape design, with the end result consisting of a final plan for development moving forward. The remainder of Semester 2 followed these designs into graphic development, with the goal being clear communication of the developed design ideas by the end of the semester.

The plan seen in the following pages serve as a guideline for the Brodhead Community moving forward, and propose a multi-faceted outlook on what the city could one day become. Features on the Master Plan (1-9) as well as Site Selections (A-C) appear based on how crucial they are to the ultimate design idea. (ie Site A should be addressed prior to Site C) Phasing is addressed from pg106-7, but knowing this moving forward will allow for more realistic expectations when applying the design to a development strategy.

Master Plan

Key

1. Powerhouse Rec. Gateway

2. Recreation-Downtown Corridor

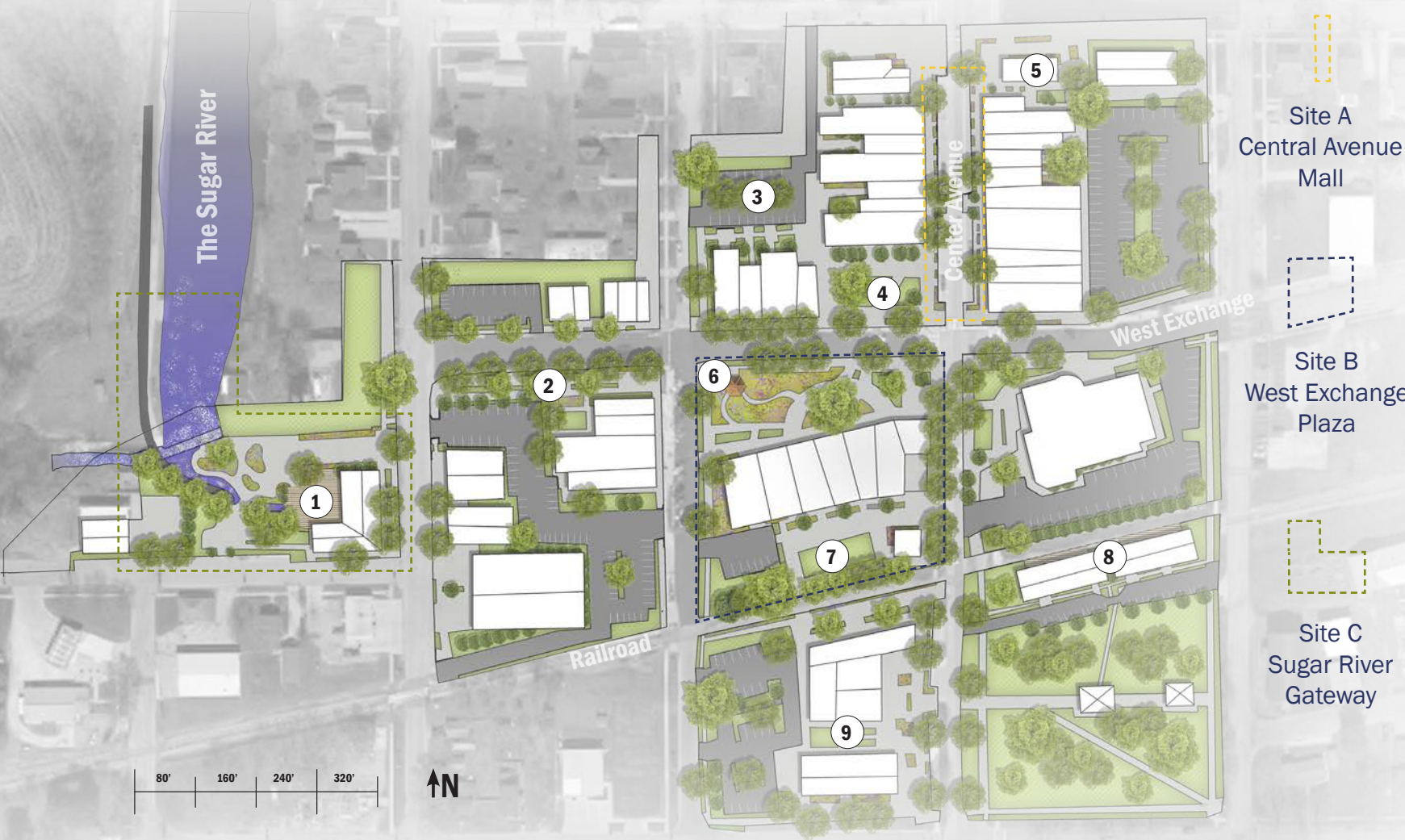
3. Acquired Neighboring Lot
4. Center Exchange Plaza

5. Relocation of VFW Post

6. Tinkers Park
7. Shared Service Access

8. Railroad Viewing Deck

9. Proposed Mixed Use



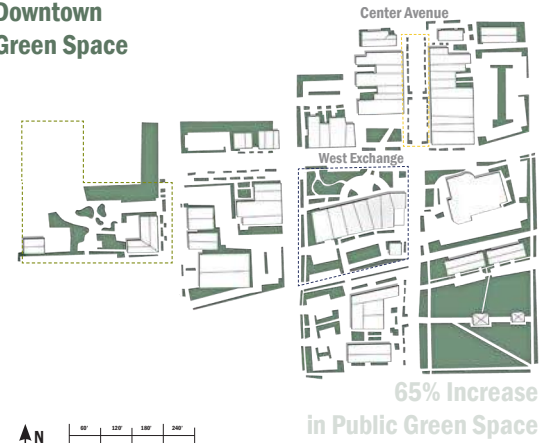
The Master Plan, featured left, lays out a plan for downtown Brodhead. Three focus areas are included, Site A (Central Avenue Mall), Site B (West Exchange Plaza) and Site C (Sugar River Gateway). These areas, selected based off their own unique connections to the Brodhead Region and Downtown Core, address design goals directly, and will be discussed in further depth in the coming pages. Stepping back, the plan then focuses on facilitating safe, pedestrian movement between the three sites. By increasing pedestrian mobility and wayfinding, visitors to the downtown area will be more apt to explore, and experience all the site has to offer.

Three metrics were used to determine the success of the downtown plan: green space, parking and additional development opportunities. These branch directly from the goals developed in Semester 1, as each plays a pivotal role in creating a successful downtown experience. Greenspace, the first of the three, has increased a considerable amount, with 65% more being present within the downtown area. Connective plazas as well as adjustments made to parking have given the opportunity for a greener, more pedestrian friendly area.

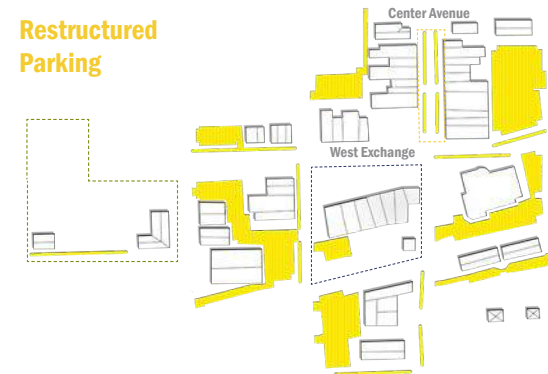
Parking, the characteristic altered most within the downtown plan, has been completely decentralized, with a complete reorganization of the neighboring lots to accommodate the removal of spaces at Tinkers Park. Primarily hidden by buildings, the restructure would allow for cleaner views while in the downtown area and shift focus back to the pedestrian in the communal realm. Walking into downtown now becomes an experience, with more priority placed on person-to-person interactions rather than person-to-automobile.

Additionally, 4 outlets for BID development have been proposed. With each being in areas already occupied by a previous structure, these would primarily be phased near the tail end of the project. With the BID already consisting of such a strong presence, these areas would be the most suitable for development if desired.

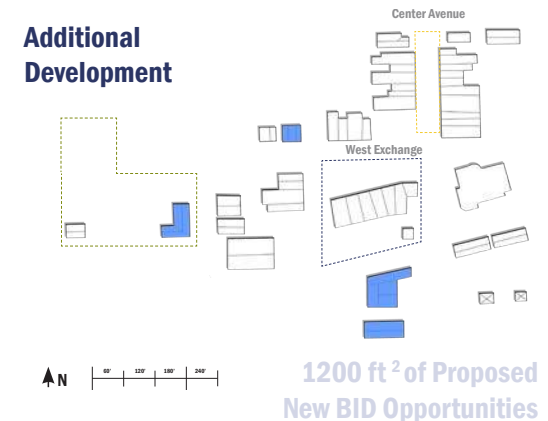
Downtown Green Space



Restructured Parking

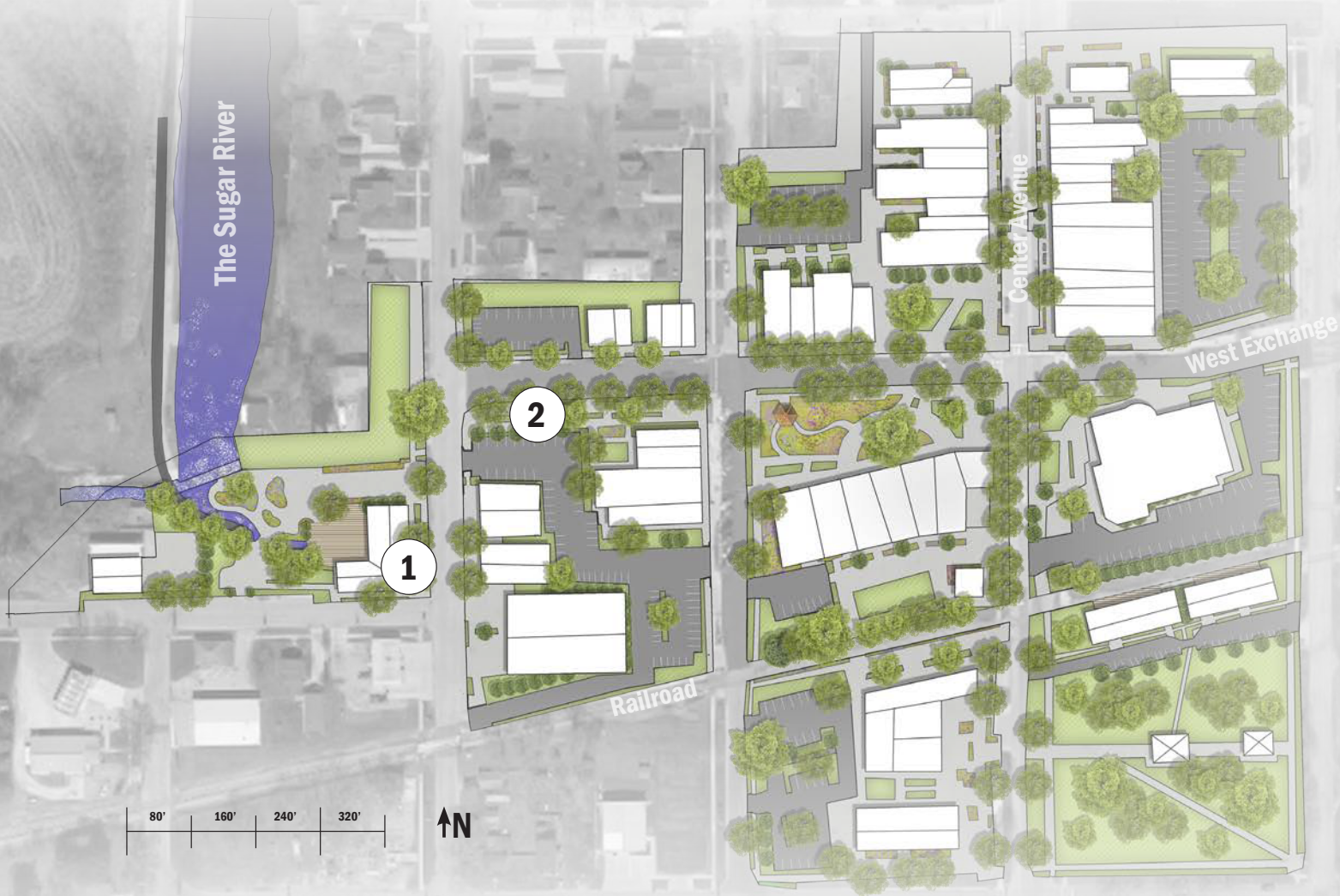


Additional Development



Master Plan

- Key**
- 1. Powerhouse Rec. Gateway**
 - 2. Recreation-Downtown Corridor**

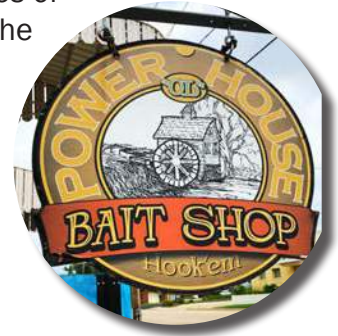


1

Powerhouse Recreation Gateway

The first feature on the master plan takes a look at the recreational gateway within Brodhead. Being such an integral connection to the surrounding recreational activity along the Sugar River, developing this area first would help attend to creating a more unique sense of place in the Brodhead community. With the development of this area, comes hopes of increased recreation traffic and ultimately more pedestrian traffic in the Brodhead BID.

Use for the current Power House Bait Shop would expand, to now incorporate more opportunities for dining and leisure at the terminus of the Decatur River Trail. Built as an addition, a deck would allow for an overview of the river, and server as a destination for those visiting the Brodhead area.



2

Recreation to Downtown Corridor

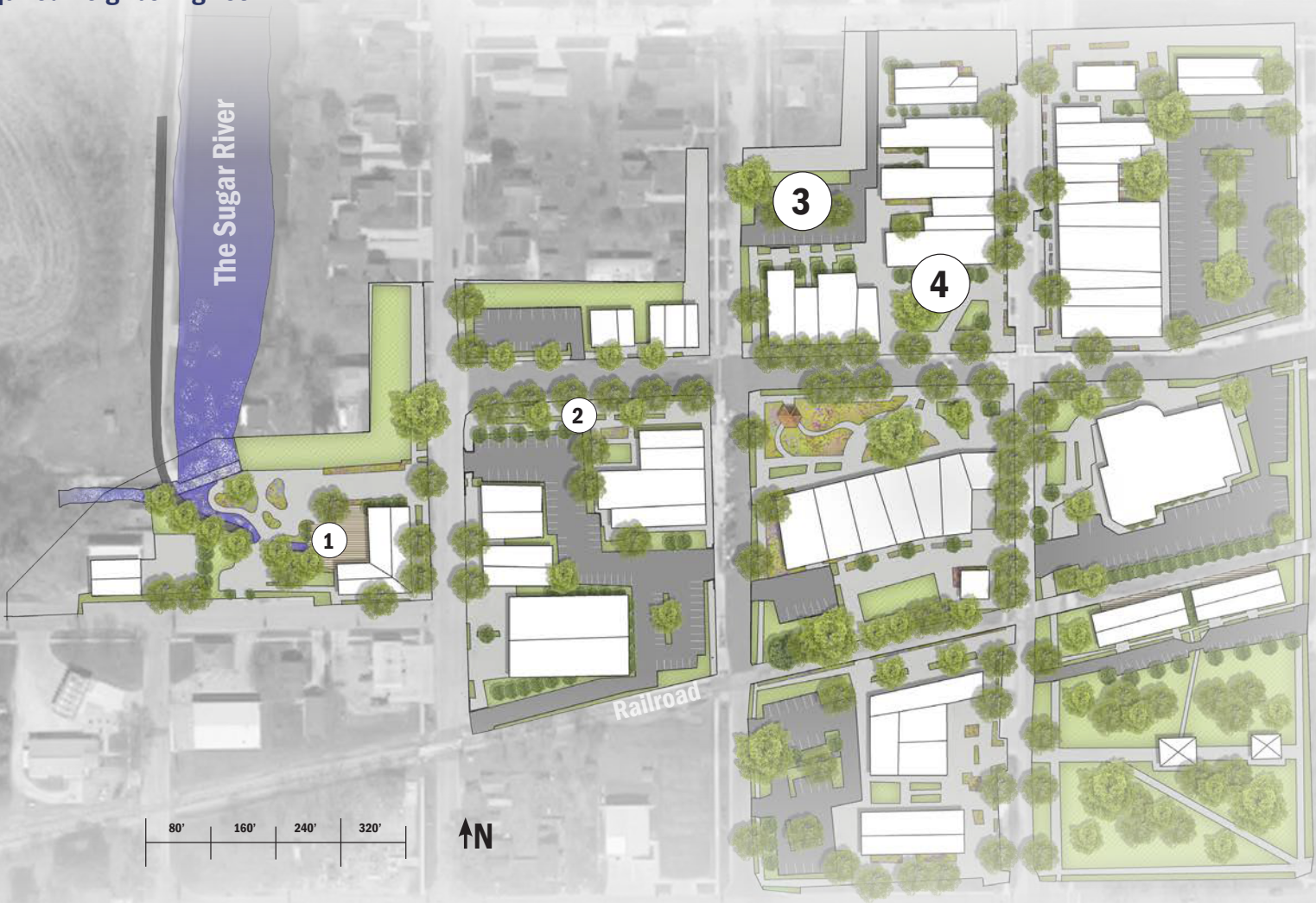
Following pedestrian movement into the downtown core, the second space noted focuses on movement for the aforementioned recreation users, and serves as a clear transfer point from downtown into the Sugar River Corridor. The expansion of the sidewalk, and consequential shrinkage of the adjacent parking lot, means pedestrians again get the right -of-way moving forward, and the physical design reflects this.

Planted heavily with trees on both co-insiding edges, the path is clearly defined by natural elements in the landscape to create a safe, enjoyable space. In addition to the trees' fence-like planting pattern, and roof-like canopy covering, a central grass planting serves to split the two lanes of walking traffic, and offers opportunity for daily use during outdoor leisure time.



Master Plan

- Key
- 1. Powerhouse Rec. Gateway
 - 2. Recreation-Downtown Corridor
 - 3. Acquired Neighboring Lot
 - 4. Center Exchange Plaza



3

Acquired Neighboring Lot

Previously owned by a private citizen, this lot is home to much of the parking being replaced by The West Exchange Plaza. Again blocked by storefronts, the parking present would accommodate enough stalls for employees of the immediate area, and downtown users. Additionally, an access point on the north side of the block would allow for servicing of the downtown storefronts to happen on the backside of Central Avenue.

Promenades surrounding the lot will offer clean access to the buildings within the area, while still providing opportunities for planting and other green features in the downtown space. The removal of Huntington Bank then allows for open pedestrian traffic through both the streetscape and plaza routes.

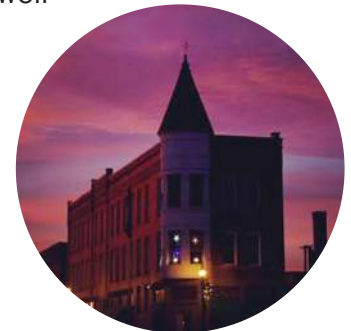


4

Center Exchange Plaza

One of the more drastic changes made to the downtown landscape is the removal of Huntington Bank, and the creation of the 4th Master Plan feature, the Center Exchange Plaza. With the lease on the building soon running out, the removal of this building (mainly the drive through area) would allow for more pedestrian access to the site, as well as an additional transition space for outdoor leisure.

The building that Huntington resides in is one of the most historically significant, and does have the most detailed architectural work. Because of this, the spire on the building could be incorporated in the design of this plaza, either through a sculpture piece or mural on the now open, adjacent building faces.



Master Plan

Key

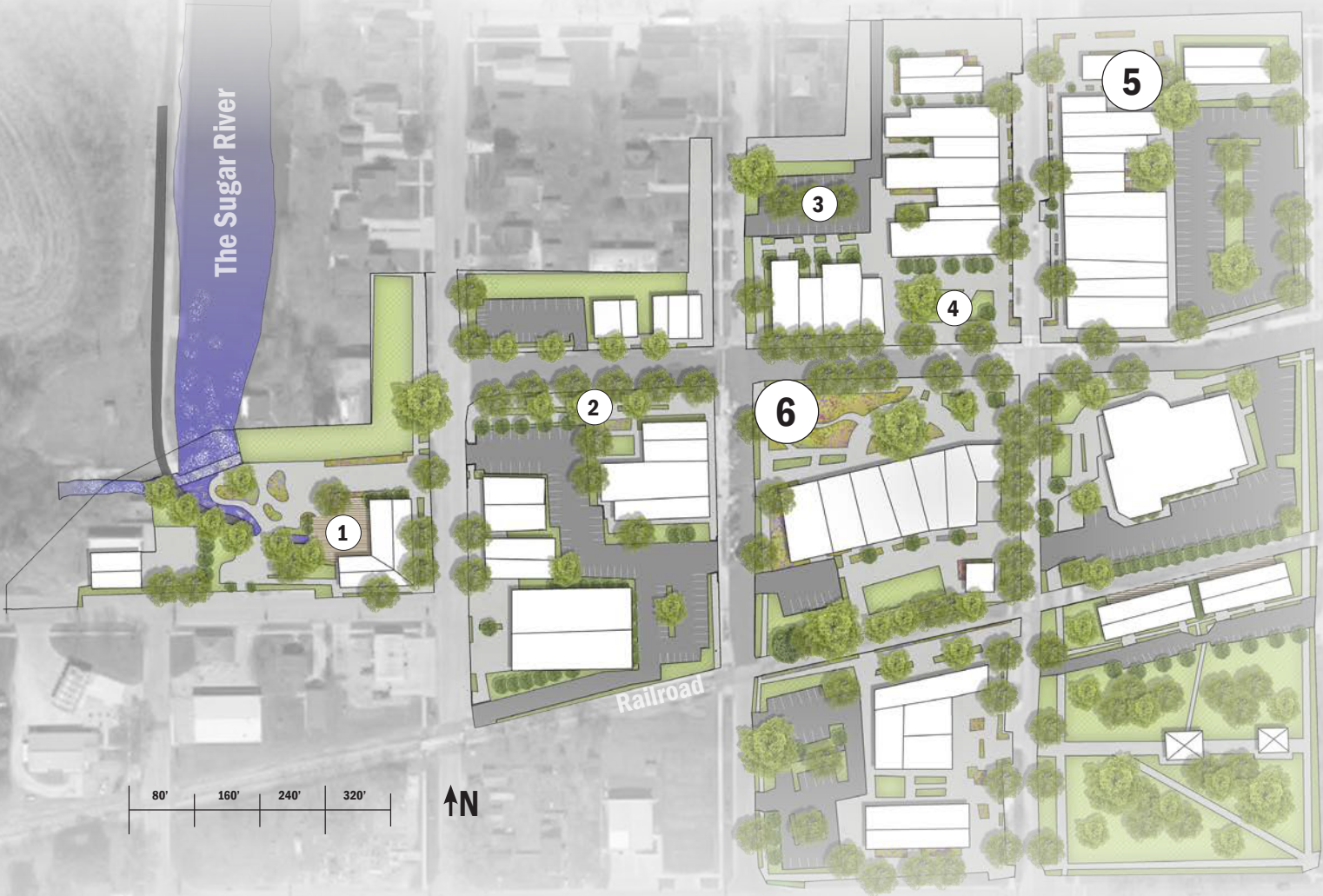
1. Powerhouse Rec. Gateway

2. Recreation-Downtown Corridor

3. Acquired Neighboring Lot
4. Center Exchange Plaza

5. Relocation of VFW Post

6. Tinkers Park



5

Relocation of VFW Post

With restructured parking taking place on the South-Eastern side of this block, the buildings previously seen here have since been demolished. Included within the stretch of buildings were primarily vacant properties, with the exception being the VFW Post lying amidst the cluster.

Providing a space for the VFW's Post will still allow for appreciation of their service, while at the same time providing them with a vista outside of the building. The previously planted area would remain untouched, and through time, connections to the Veteran's Park will develop.



6

Tinkers Park

In addition to the Site Plan Addressed in the following pages, other changes to the Tinkers Park Area can occur to create a more connective, engaging space. As users from the recreational gateway enter the town, they are now greeted by a central plaza-park, affording opportunities for walking paths, outdoor leisure, and active storefront viewing. Now, with the removal of the parking seen previously, pedestrians both inside and outside local businesses have a more personable experience, viewing native flower beds and other pedestrians, rather than parked cars.

Adjacent to the planted areas, outdoor seating is available for steakhouse and cafe users. Again, with the focus on pedestrians, users will encounter a friendlier landscape, and be more apt to spend time in the urban environment.



Master Plan

Key

1. Powerhouse Rec. Gateway

2. Recreation-Downtown Corridor

3. Acquired Neighboring Lot
4. Center Exchange Plaza

5. Relocation of VFW Post

6. Tinkers Park
7. Shared Service Access

8. Railroad Viewing Deck



7

Shared Service Access

The backside of West Exchange Plaza sees a unique opportunity for a multi-use space. The area, proposed for primary use by employees and other pedestrians, would also act as a shared service entrance. The parking lot seen on the western edge would lie sloped into the adjacent walk, rather than curbed. This would allow for service providers to use the space for quick when open to do so.

Additionally, a repaired railroad buffer would act as a screen for any unwanted views from neighboring areas. The increased canopy coverage, in addition to the surrounding building faces would make this area cooler during the day, and with an open lawn present, the connective green space would make a great spot to enjoy the sun, or eat your lunch.



8

Railroad Viewing Deck

This new addition to the Brodhead Historical Museum provides another outlet for visitors to become more acquainted with Brodhead's rich history. This outdoor space would allow for safe viewing of trains as they travel through Brodhead, and would allow users of all age to come together and identify locomotives in their area.

With a thick, natural screening of plants set as a backdrop, views on the deck would consist of the museum, foliage, and the train, creating a unique experience only regionally available in Brodhead. The connection developed here, in close relation to Veteran's Memorial Park, would blend the recreational with the developmental as users traverse the site from or into downtown.



Master Plan

Key

1. Powerhouse Rec. Gateway

2. Recreation-Downtown Corridor

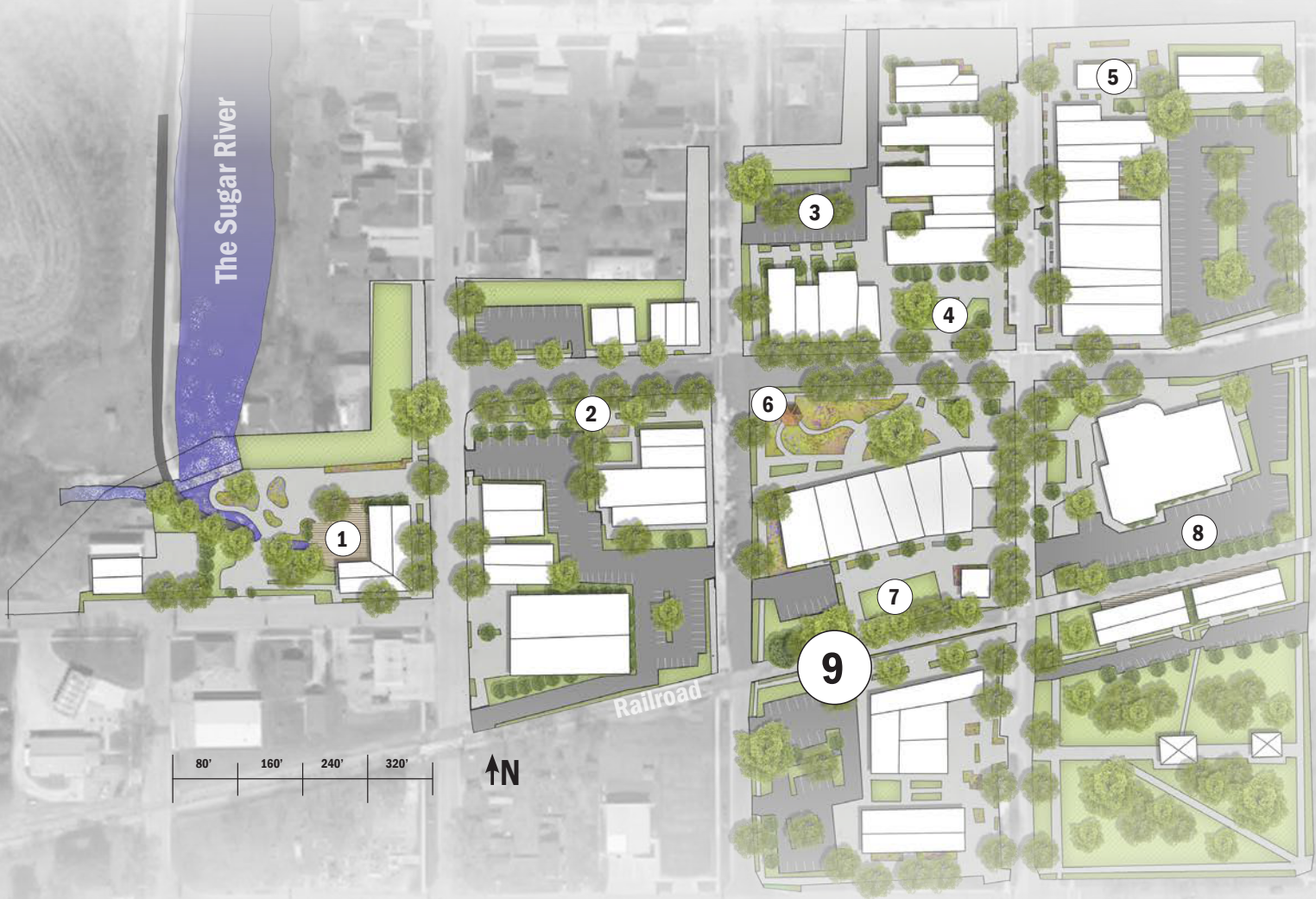
3. Acquired Neighboring Lot
4. Center Exchange Plaza

5. Relocation of VFW Post

6. Tinkers Park
7. Shared Service Access

8. Railroad Viewing Deck

9. Proposed Mixed Use



9

Multi-Use Redevelopment

By far the most ambitious portion of the master, Feature 9 consists of an entire block redesign focused on transforming the current residence (gas station) into a more pedestrian-focused, mixed-use zone. Parking on the western side of the block would be hidden from park users, while green corridors direct traffic inwards towards planted central plazas and leisure space.

Included are 6 prospective BID opportunities, to ultimately be determined by immediate need or BID preference. From here, second and possibly third floors would consist of living spaces. These living spaces, overlooking Veteran's Memorial Park and westward towards the Sugar River, would allow for more efficient living conditions in an urban setting. Decreased yard size as well as overall square footage would provide affordable opportunities to potential renters looking for apartment spaces rather than a permanent home.

This would again come last in the phasing of the overall project, but would serve as a stepping stone as Brodhead continues to develop. Looking inward when developing, rather than outward, will generally create a more successful long term developmental strategy for small town communities. This inward development, while up front more costly than typically expected, lies framework proven crucial to successfully developed areas.

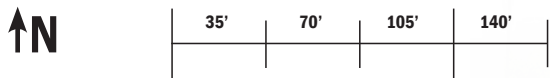


FOCUS AREAS

Site A: Center Avenue



Coming into the the downtown core, this welcoming streetscape will greet both residents and visotors into the Brodhead Community. Lush plantings on either side of the street define the pedestrian realm against the historic downtown facade, while streetside parking offer aple opportunity to visitors looking to stop for a stroll.



Selected for its prominence in the downtown area, and the high potential for design impact on safety, the central avenue to Brodhead has been completely revamped. With alterations made to planting styles, pedestrian and automotive corridors, and stormwater management, the area is now better equipped to handle the pressures of a downtown environment.

The removal and re-organization of parking brings more focus to the pedestrian, with a defined crosswalk near the middle of the street length. 16 parking stalls remain, with gated access to business fronts appearing every 5 feet in the grass beds. The main road width, now 13' per lane, narrows the State Highway, but still allows commercial trucks and other large vehicles access. Including the addition of the adjacent parking stalls, this leaves a 15' pedestrian lane to be developed with pedestrian goals in mind.

Decorated with existing antique lighting, moveable planters, and custom paver pattern, the most detail of this site comes into play at the pedestrian level. Rewarding pedestrian users with scenic downtown views, rich textures, and pleasant aromas, the mix of downtown amenities creates an experience not currently seen in Brodhead. Clear site lines near all crossings ensure the safe passage of users, while maintaining open, customizable storefronts encourage pedestrian movement throughout the downtown area.

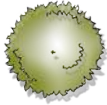
The removal of buildings on the streetscape is meant to open lanes to the rear parking additions seen within the master. Touched up building facades, in addition to these changes would make for a more complete downtown, and will ultimately bring the community up-to-date in terms of downtown quality of life.

Center Avenue

Planting Details



Little Leaf Linden (2x)



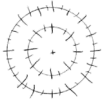
'Summit' Green Ash (2x)



Chinkapin Oak (2x)



Japanese Lilac (3x)



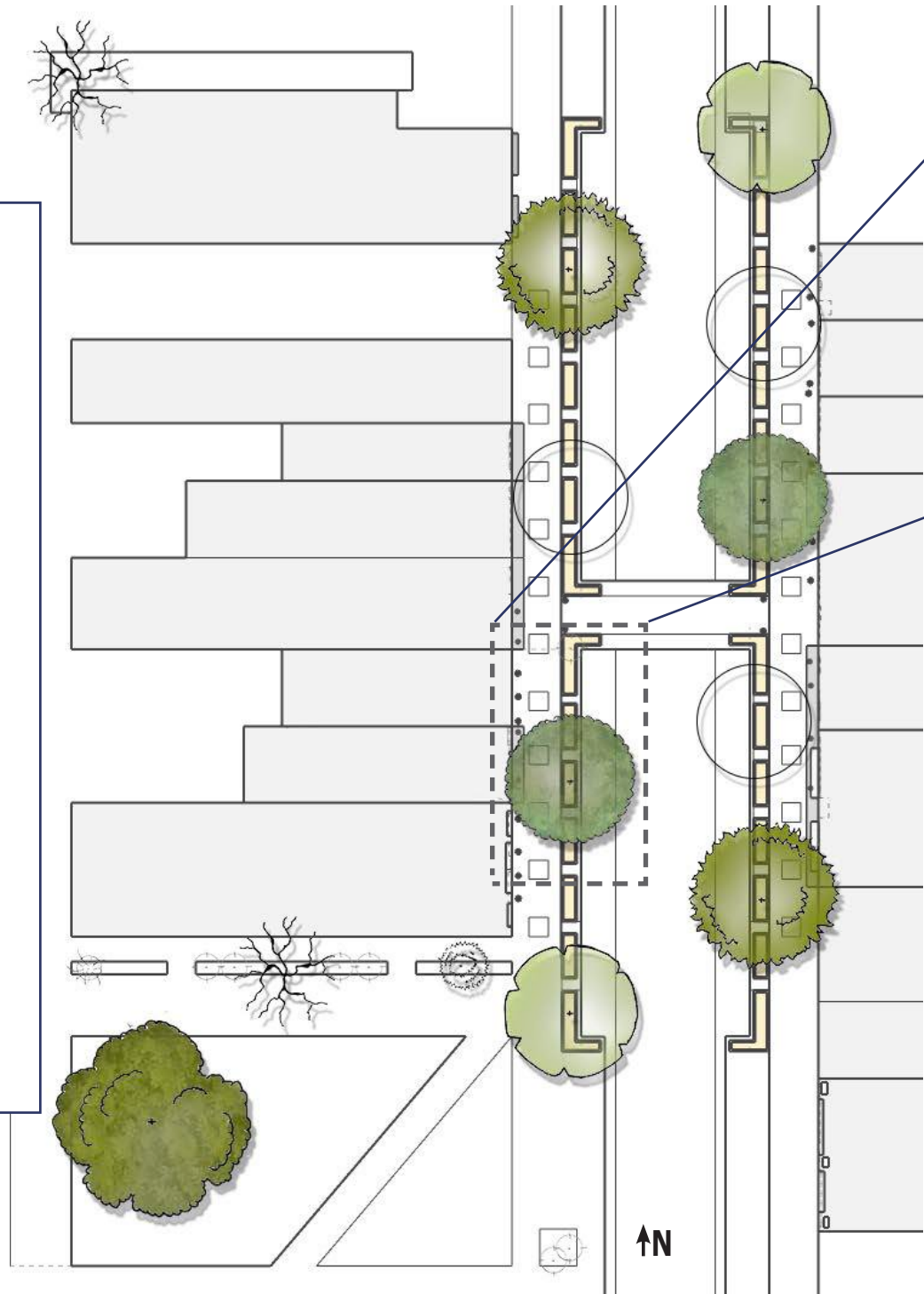
Dwarf Swiss Stone Pine (4x)



Muscle Wood (2x)



Juniper (10x)





● Grass Mix 1 (590 sq ft of Coverage)

Golden Rod (Canada) 20%
 Drop Seed 30%
 Indian Grass 30%
 Naked Sunflower 10%
 Sideoats Gramas Grass 10%

● Grass Mix 2 (620 sq ft of Coverage)

Eastern Woodland Sedge 25%
 Switch Grass 25%
 Little Blue Stem 20%
 Sky Blue Aster 10%
 Purple Sunflower 10%
 Milkweek 5%
 Purple Spike 5%

● Grass Mix 3 (120 sq ft Coverage)

Kalm St. Johnswort 25%
 Grow-Lo Fragrant Sumac 25%
 Purple Prairie Clover 25%
 Lead Plant 15%
 Virginia Mountain Mint 10%

Here, we take a closer look at planting strategies within the downtown area. Goals here included encouraging movement through dynamic plantings, creating a defined edge for both pedestrians and auto-users, and creating an ecologically sustainable design.

Creating movement through planting can be done in a couple of different ways, through altering colors, textures, and forms, or even varying the pattern in which these features are placed. Touching on human perception, while keeping human perception in mind, I have instilled a combination of the two strategies. Grass Mix 1, warmer in color and finer in texture, provide the spark of movement to the space, while the cooler colors and thicker textures of Grass Mix 2 accentuate the long, curvilinear planting pattern. Grass Mix 3 features lower growing, broader leaved plants, all primarily dark colors. This mix, seen at all intersections will allow for a smooth transition in plantings, while at the same time subtly alerting users of the crossings.

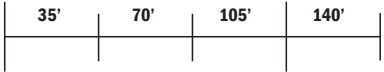
Trees selected in the planting plan are based off native landscapes, and reflect the rolling hill savannah scenes often seen within Green County. This, in combination with the planted edge, provide a clear delineation of corridors for pedestrian and auto users.

With trees, shrubs, and grasses all being natively selected, the plantings on site will see long term success, and with a wide palette, the site is more resistant to disease and species-specific bugs and parasites. Given moderate salt in winter months, and allotted ample growing seasons, the planting plan presented will hold true through time.

Center Avenue

Grading and Stormwater Management

Building	Finished Floor Elevation	Top of Curb
A	797'	796.8725'
B	797.4'	797.2725'
C	797.55'	797.4225'
D	798'	797.8725'
E	798'	797.7825'
F	798'	797.7825'
G	798'	797.8725'
H	798'	797.8725'
I	797.32'	796.93'
J	797.07'	796.9425'
K	797.0825'	796.9535'
L	797.0825'	796.955'
M	798'	797.7825'
N	798'	797.8725'
O	798'	797.8725'
P	798'	797.8725'
Q	798'	797.8725'
R	798'	797.7825'





Grading and stormwater management was addressed in a number of ways within the downtown realm. Looking at existing contours, the presence of a crown was seen, but looked to have been done in years past. In the Cut/Fill Diagram seen left, a recrowning of the central drive occurs, as well as a slight slope along the sidewalk. With this 2% crowning road, and the 1% sloping sidewalk, a major opportunity for storm water capture can be seen.

Curbside, where the altered parking stalls meet the pedestrian realm, slopes collide. The collection of stormwater in these areas calls for important attention. By instilling subgrade water management in these areas, stormwater on site is now mitigated more quickly over time. This prevents flooding, and additionally provides filtering mechanisms that treat the water before ultimately recharging back into the ground.

The graphic seen above illustrates how this could be done, and touches on some of the materials thought about during this process. A darker colored paver would reinforce the idea of separated uses to automobiles in and not in use, while the inclusion of a non-woven geotextile would ensure the ease of maintenance and, in turn, will lower costs over time.

Center Avenue

Prospectus



Permeable

Center Avenue



Pictured left is what Central Avenue could potentially be with these plans installed. The streetscape offers an expansive pedestrian experience, unique to downtown Brodhead, that shifts focus back to the community that calls this area home. These installations are all aimed at defining this space, and creating a sense of place that fits within Brodhead. The existing amenities paired with the proposed facilitate movement between storefronts, create outlets for leisure, but most importantly, protect users from what is now a dangerous environment.

In addition to the aforementioned pedestrian crossing and Green County planting styles, the addition of Barn Quilt Paver patterns is also seen here. With over 100 Barn quilts in the immediate Green County area, this addition will ground individuals in their region, while honoring patterns selected by the city.

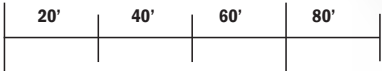
With Center Avenue being the first of the three sites selected, priority for installation and phasing here is highest. The importance of installing these safety measures, in addition to the great potential impact on the BID, jump out as obvious reasonings, but looking deeper on the impact this could play is also important. This model, as adaptable as it is, will be expensive, but will be a way to help kickstart more economic growth within the city without fully committing to the entire master plan. Installing similar strategies on neighboring blocks, or even adopting these strategies in adjacent areas could ultimately show desired improvement. As it stands, this model is an example of the culmination of these strategies, and holds highest priority when looking at downtown reconstruction.

Site B: West Exchange Block



Master Location

Greeting users as they enter downtown, the West Exchange Block has seen a number of changes. What once was dominated by asphalt and cars, has now transitioned into a space for pedestrian use. Through densely planted gardens, open plaza space, and shared access points, the area is a new bustling hub or activity.



The northern portion of the block sees the most major reconstruction, with the removal of all downtown parking spaces. Street parking on this block is removed as well, allowing for clear site lines traversing away from or into the area. The northwestern portion is now heavily planted with flowering natives, providing more of an overgrown-sanctuary type experience at Tinker's Park. Trails through the flower bed lead to a central plaza, directing movement to and from Center Avenue and the more centrally located businesses. Moving easterly yet, the design features open space for cafe or steak house users in an outdoor environment. This mix of uses, and the transitional spaces between provide store users with more scenic views outward, all while experiencing the maintained open front concept. The block now serves as a community gathering point, with more developed pedestrian opportunities, and limiting options for automobiles.

The backside of the block sees a shared service access point, in addition to a new parking lot and resurfaced building facades. The removal of 2 garages here will open the space, and allow for a more varied set of uses to take place. Additionally, an open lawn on the eastern edge of the building outcrop allows for more outdoor seating, as well as potential community garden space within the BID.



West Exchange Block

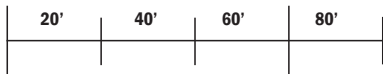
Lying centrally within the downtown space, the block has seen major changes to both the physical form and intended uses. By pulling parking out of the city center, users now feel prioritized while experiencing the site. With open storefronts maintained, green space increased, and utilities provided for, the site now offers both new views, and new experiences.

Site C: The Sugar River Corridor



Master Location

This new recreational gateway offer a plethora of active spaces, as well as opportunities for bike trail users and Brodhead residents to enjoy views of the beautiful Sugar River. Features include planted swaths, open deck, and direct water access through a developed stream bisecting the site.



Decatur Trail Terminus Blowup

With the proposed additions to the structure, previously seen as Feature 1 in the Master Plan, along with the additional plantings, bike amenities, and pedestrian access, this site will serve as the recreational destination that downtown Brodhead currently lacks. Bikers along the Sugar River and Decatur Lake Trail now have incentive to continue southward through the Sugar River Corridor.

With this in mind, the trail terminus now features a wider, more open area for bikes along with the appropriate utilities for public use. A bike repair station, water fountain, and bike parking will be included as the trail winds into the site, with access over the proposed stream to integrate users into the site.



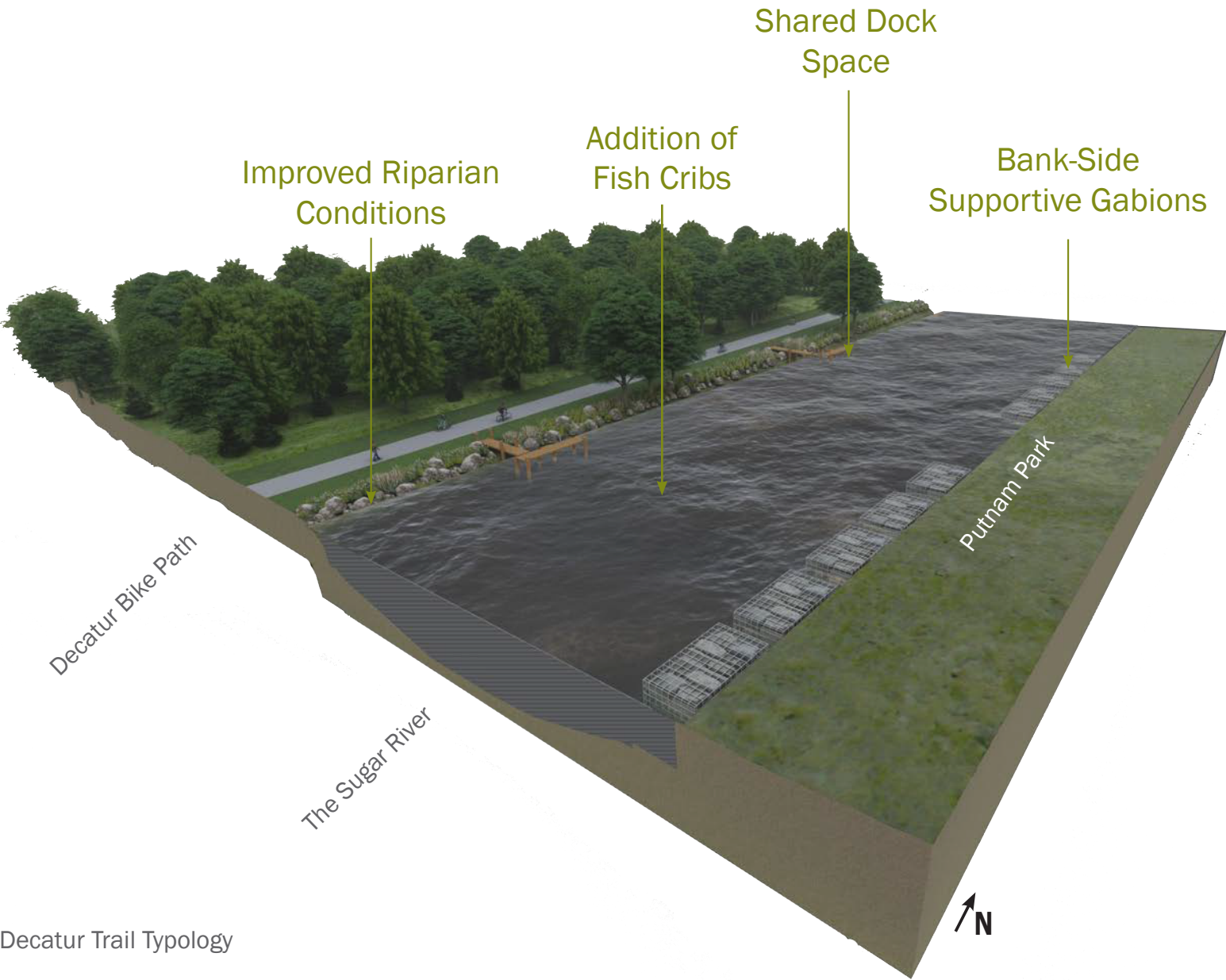
With this in mind, planting strategies have been carefully thought about when planning this site. A strong allee of trees follows the bike path inward, helping to frame views of the river and distant wetland. Additionally smaller screening plants border the fenced area, providing more cover to help hide the utility areas.

Surrounding the deck, larger shrubs and flowing plants would enclose users while accentuating the natural, localized experience. On the southern end of the site, the street's edge cuts in, offering the opportunity for streetside parking access to the cafe or bike path.



The Sugar River Corridor

Decatur Lake Bike Trail



Decatur Trail Typology

Extruding out from the gateway site, improvements for the Decatur Trail Bike Path have also been included. Focusing on animal habitat, additional planting and rock outcrops have been installed, offering a more dynamic, bio diverse edge along the shoreline. This will not only affect terranean animals, but marine animals as well. Given opportunities to nest and seek, this addition will increase bait fish numbers in this area, ultimately leading to larger predatory fish (more sought after by fishers) coming into the area in the future. Because of this, the installation of more docks would be necessary. Altering the shape of these docks, whether it be a T-dock, L-dock, or I-dock, the selection would vary, offering different uses and perspectives on each.

To accommodate this concentration of fish, a dredging of the mill race could prove to be beneficial. Deeper, cooler water will harbor healthier fish populations, and the addition of fish cribs would allow larger fish to nest in this narrow stretch of water. In turn, bank side gabion on the outer edge of the curb would be installed, ensuring structural stability over time. This costumed model would mimic the dynamic edge seen adjacent to the bike path, and would help define Putnam Park in the surrounding area.

PHASING AND FUNDING

Project Phasing

The three phases laid out (right) have taken the order of Master Plan Features and Site Locations and broken them down. Phase 1 focuses on Brodhead's areas needing most attention. These areas have the most potential for growth given the proposed amendments, and should be prioritized first. Phase 2 dives into the BID and taking a look at how landscape amendments can generate economic growth. Last, Phase 3, looks to future development, and how Brodhead can lay a sturdy foundation for successful long-term growth.



1

SITE A: Central Avenue

- 1. Powerhouse Rec. Gateway**
- 2. Recreation-Downtown Corridor**
- 3. Acquired Neighboring Lot**



2

SITE B: West Exchange

- 1. Center Exchange Plaza**
- 2. Relocation of VFW Post**
- 3. Tinkers Park**



3

SITE C: Sugar River Gateway

- 1. Shared Service Access**
- 2. Railroad Viewing Deck**
- 3. Proposed Mixed Use**

Grant Opportunities

Grants listed below offer guidance for funding with Site and Master Plans moving forward. Being constrained by time and money, these grants would help to alleviate pressure not only within Brodhead's Business Improvement District, but the larger community as well. Applications are required for each individual grant, but this brief overview is done in hopes to raise awareness for additional 3rd-party funding.

Community Facilities Grants

Aimed at assisting the development of essential community facilities, this grant helps municipalities, counties, and special purpose districts (BID) in towns of less than 20,000 residents. This grant can cover the construction, enlargement or improvement to facilities focused on health care, public safety, and public or community services.

Recreational Trails Program (RTP)

Initiated through the Department of Transportation, this program offers funding for maintenance and construction of new recreational trails, trail head and trail side amenities, as well as the acquisition of easements and other fees associated with purchasing land.

Community Development Block Grants (CDBG)

These annual grants provide assistance to communities looking to develop economic opportunities for adjacent residents within town boundaries. This grant would be focused on funding for Feature 9 on the Master Plan. The mixed use of the new block means it fits qualifications, and would be available for assistant funding through this grant.

CONCLUSION

Closing Remarks

This past year has taught me more than I ever could've imagined. Being the first project that I have taken on over a full academic year, my eyes were opened to things I had never even considered in my prior 3 years of school at UW-Madison.

Research wise, it was great to dive into a focused topic, and examine the impacts on the environment through design. Human perception, being such a broad topic, gave great insight to how and why people experience spaces in their environment. In turn, being able to tailor a design with these new perspectives made me feel more sound as a designer and ultimately leads to a stronger sense of confidence when presenting ideas or final plans.

The area where I think I learned the most pertained around process-focused thinking. With the lack of any true "site boundaries," we were left to define them based on our own research and analysis of the area. Being able to pick apart the research, and focus in on areas that have the highest potential for impact was something I had never done before. These findings are what helped lay the foundation for the master and site plan, and helped to shape the regional recommendations seen throughout. As hard as this process was, I am finding that this may be one of the most crucial steps in developing a successful design.

Regarding the premise of the project, I feel personally content after completing this project. Each aspect looked at played a role in developing Brodhead's downtown safety, and by looking at additional features like economic development and recreational activities, I was able to explore some outlets that I had personal interest in. With this interest comes passion, and a feeling to do what is right, and I feel that both in the design and throughout the year I have stayed true to the underlying mission presented by Brodhead.

Being the first project taken on with a full year's time, I came into the project I would come through a better designer by the end of the process. I was excited to engage with a community to create a design that could one day have a positive impact in the lives of its residents. Looking back, committing a full semester to research and analysis provided a strong foundation to the final design. The influence of the research topic throughout the process helped create a design that fully addressed the existing issues at all scales addressed, and provides strategies within the design to take away and adapt where applicable.

Having taken the time to build this defense, I now realize time devoted to research is crucial in creating a truly successful design. This is a lesson I will take with me to the Landscape Architecture professional realm and continue to develop through design experience. By identifying key steps in my own personal design process, I will be able to continuously grow as a landscape architect through my career.

Thank you to everyone in the UW Landscape Architecture Department, as well as Mike Olson and The City of Brodhead and Gavin Luter at The UniverCity Alliance for facilitating the project, and for all the feedback along the way.

APPENDIX

Center Avenue: Stormwater Calculations

Q=Storm Water Runoff

Post-Q = 7.796 cubic feet per second

-MINUS-

Pre-Q = 13.21 cubic feet per second

Δ Q = -5.414 cubic feet per second

Center Avenue: Cut/Fill Calculations

**Proposed Cut = 3121.82 cubic
yards of Cut**

-MINUS-

**Proposed Fill = 83.27 cubic
yards of Fill**

3005.242 cubic yards of Extra Cut

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**.



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