Grantsburg: Creative Placemaking in Small Town Wisconsin

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University of Wisconsin - Madison
Department of Planning
Landscape **Archi**tecture

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UNIVERSITY OF WISCONSIN-MADISON
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GRANTSBURG: CREATIVE PLACEMAKING IN SMALL TOWN WISCONSIN

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A SENIOR CAPSTONE PROPOSAL

Submitted in partial fulfillment of the requirements for the degree
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Grantsburg Revitalization Operation (GRO) - the steering committee for this project consisting of all major community members in the Village of Grantsburg, Wisconsin

University of Wisconsin-Extension's Community Vitality + Placemaking Team (CVP) - provided GIS data and previous project work completed for the Village of Grantsburg in 2014

And a special thank you to **Nicki Peterson** and **Todd Johnson** as primary contacts throughout this process.

I would also like to thank the **University of Wisconsin - Madison Department of Planning and Landscape Architecture** for giving me the opportunity to work on such an amazing project and for supporting me throughout my undergraduate years.

Figure 1.00 - St. Croix National Scenic Riverway

Figure 1.01 - Grantoberfest Great Pumpkin Contest

Figure 1.02 - Sandhill Cranes in Crex Meadows Wildlife Area

ABSTRACT

The Village of Grantsburg, Wisconsin is currently facing several major obstacles as it looks towards the community's future needs and desires. These obstacles include: the lack of corridor connections between regional and local resources, the deteriorating downtown district where disinvestment has been occurring for several years, and the absence of community gateways along regional thoroughfares advertising the village's many assets and attractions.

This Capstone Project will focus on solving these challenges through the creation of a cohesive wayfinding system, a revised downtown design and management plan, and the placement of gateways that allow visitors and residents to crescendo into the community.

Figure 1.03 - Headshot

THE AUTHOR

My connection to the world of Landscape Architecture started when I was a kid doodling plans for my parents on how we should redesign our backyard. Little did I know that there was an actual profession I could work in which offered me the same creative outlet I was looking for in grade school.

Since then my passion for the field of Landscape Architecture has grown exponentially with topics like planting design, public open space design, and historic preservation further piquing my interest.

I've learned so much through this program and am incredibly excited to present this Capstone Project as a showcase of all of the skills I've learned over the past four years at the University of Wisconsin - Madison.

Saige Henkel
Department of **Land**scape **Archi**tecture

Spring 2018

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Figure 1.04 - Grantsburg From Above

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INTRODUCTION

To fulfill the requirements of the Senior Capstone Program in the Department Planning and Landscape Architecture at the University of Wisconsin - Madison, I will investigate how ideas of cultural and community revitalization may inform the design of downtown streetscapes, community gateways, and local resource connections. This investigation will be given context and focus by the concerns and goals of the Grantsburg Revitalization Operation and the University of Wisconsin - Extension's Community Vitality + Placemaking Team which include connecting the region's natural resources to other community assets and thoroughfares, creating a safe, green, and welcoming downtown district, and improving business access and patronage along the village's major highways. The township of Grantsburg, Wisconsin will be the site for this study.

Research Topic: Cultural and Community Revitalization

Cultural and community revitalization is central to the work needed in Grantsburg, Wisconsin as it studies how communities across the United States utilize local and regional assets and attractions in their attempts to reinvigorate deteriorating neighborhoods and downtown districts. With a variety of guidelines, tools, and resources readily accessible, including smart growth principles, creative-sector economic outlines, community and regional organization engagement approaches, and suggestions for the activation of local resources any small town can now promote redevelopment and reinvestment in their communities.

Type of Project: Downtown Revitalization, Community Gateways, and Corridor Connections

The Grantsburg Revitalization Operation has outlined several areas of interest for potential redevelopment including the improvement of connections between the regional highway, village, and natural resource of Crex Meadows, the reinvigoration of the downtown district through updated streetscape design and a renewed focus on the pedestrian experience, and the creation of community gateways along important thoroughfares to improve business patronage and tourist awareness.

Professional Focus: Creative Placemaking

Delving further into the Grantsburg Revitalization Operation's desired redevelopment, several goals have been highlighted including: the connection of natural resources to regional highways through increased and cohesive signage, the creation and enhancement of greenspaces throughout the town and along its thoroughfares, the improvement of business patronage along major streets through the use of frontage roads and improved pedestrian access, and the promotion of the village itself through community gateways using a mixture of plantings, wayfinding, and signage configurations to improve tourist awareness and attraction.

Capstone Products

The products of this capstone will include a set of design documents and recommendations for Grantsburg, Wisconsin, which will be submitted to the Grantsburg Revitalization Operation and the University of Wisconsin - Extension's Community Vitality + Placemaking Team, and a capstone document, which will be submitted to the Department of Planning and Landscape Architecture in partial fulfillment of the degree of Bachelor of Science in Landscape Architecture.

PROJECT WORKFLOW: PROPOSAL

This capstone project is divided into two phases structured around the University's semester schedule.

Phase I is split into four categories as noted below: selection, inventory, analysis, and development. Though this phase is focused on initial proposal development it also includes class presentation and feedback time, exploration of related research topics, literature reviews, and writing workshops.

With the bulk of research and analysis completed during this semester's time period, informed design decisions can now be made regarding Phase II.

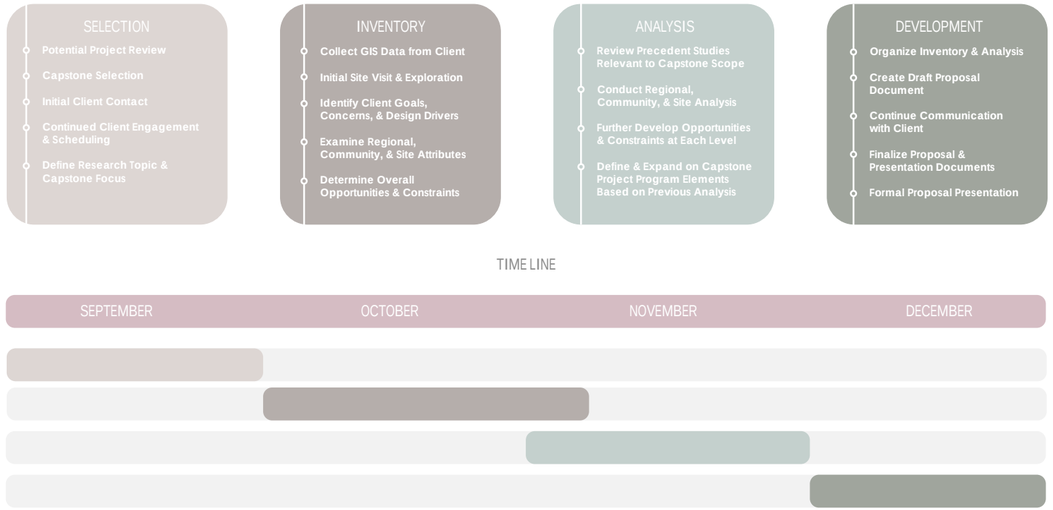


Figure 1.06 - Phase I Workflow Diagram

PROJECT WORKFLOW: EXECUTION

Phase II focuses primarily on the execution of the capstone project including the following bodies of work as outlined below: design, refine, and realize.

Although the second semester does not begin until late January, project work continues over the University's break period as time allows. While this phase focuses on production, time is given for critical feedback and revisions to ensure a complete and fully-realized capstone project.

The completion of this capstone project process aligns with the end of the University's school year in early May. Final documents, boards, and presentations are conducted in front of jury members and clients if possible and final Contour packages are created.

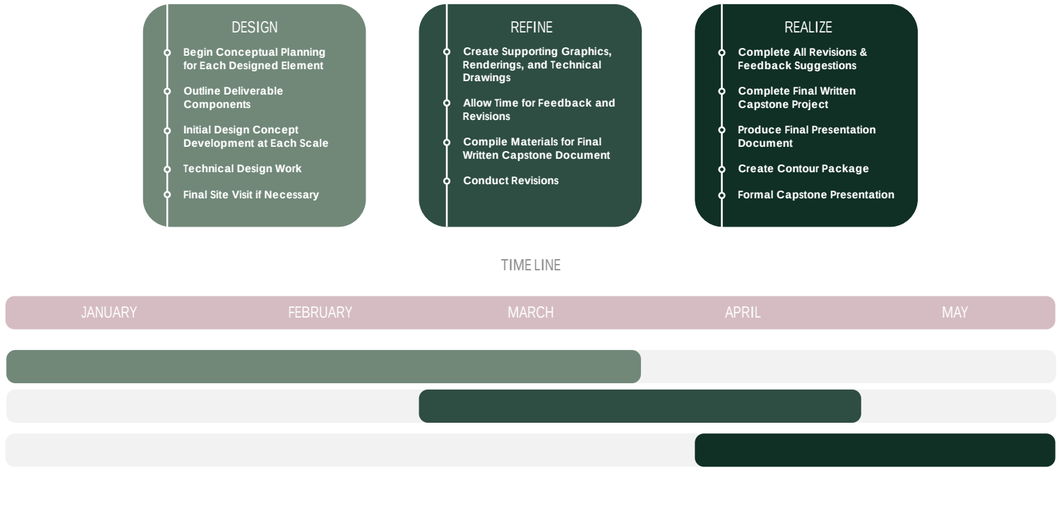


Figure 1.07 - Phase II Workflow Diagram

PART II

Analysis

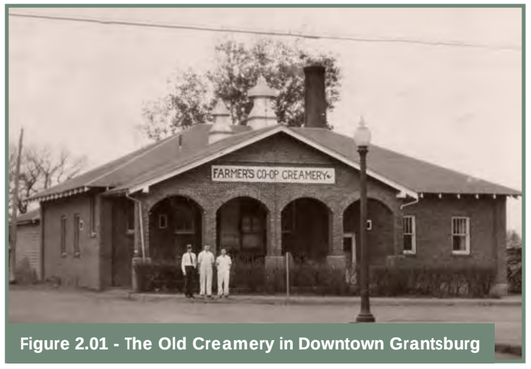


Figure 2.01 - The Old Creamery in Downtown Grantsburg

Figure 2.02 - A Parade Down Madison Avenue

PROJECT CONTEXT, BACKGROUND & HISTORY

Located in Northern Wisconsin, the Village of Grantsburg is home to a vibrant past and a dynamic present. From the presence of indigenous peoples dating back thousands of years to the early settlement by trappers, missionaries, and Scandinavian tradesman the community has seen massive transformation in terms of its population, industry, and culture.

Since its incorporation in 1886, Grantsburg has been the hub of trade and recreational activity for Burnett County. It is home to the well-loved Burnett Dairy Cooperative, the gateway to the Crex Meadows Wildlife Area, and the main access point to the St. Croix National Scenic Riverway. It also functions are the region's center for manufacturing and healthcare facilities. Located just 80 miles from downtown Minneapolis, it is also a popular summer vacation destination and boasts a seasonal population three times larger than its year-round residential base.

Tourism is at the very heart of the region and village's economic development strategy and Grantsburg features ample eco- and agritourism amenities. It boasts a variety of opportunities for outdoor recreation including camping, fishing, snowmobiling, ATVing, birdwatching, and hunting throughout the community's parks and natural areas. It also serves as a major cultural center for the county with a number of festivals and events occurring seasonally including Grantoberfest, Big Gust Days, Water Cross, and youth sporting events that draw thousands of new and recurring visitors every year.

Yet while it boasts unique natural environments and cultural amenities, the Village of Grantsburg is facing serious challenges to its future. With a steady population decline, a "graying" workforce, and a deteriorating downtown district, Grantsburg is at a critical juncture where it must strive to create a balance between protecting its rural character and natural resources, updating its physical and technological infrastructure, and attracting new business and employment opportunities to the area to ensure that a strong foundation is made on which the village can thrive for years to come.

Figure 2.03 - Crex Meadows Wildlife Area Sign

Figure 2.04 - Water Cross 2017 World Championships

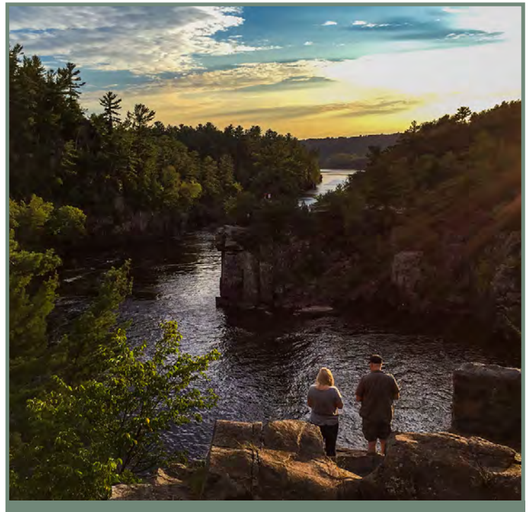


Figure 2.05 - Hikers in the St. Croix National Scenic Riverway

Figure 2.06 - Wood Lake at Sunset

PROJECT GOALS, CONCERNS & DESIGN DRIVERS

In 2014, the Village of Grantsburg was the site of the University of Wisconsin - Extension's pilot project for its Community Vitality + Placemaking Team (CVP) and Design Wisconsin Team program. During a three-day community design charrette involving volunteer planning and design professionals, a series of concepts were developed and presented as part of Grantsburg's vision for its future.

Since then the Grantsburg Revitalization Operation has been able to accomplish some of the smaller goals of the initial project and has reached out to the University of Wisconsin - Madison to obtain further planning and design work centered around creating more significant community gateways, enhancing corridor connections to Crex Meadows, and envisioning a more detailed downtown streetscape design and program development.

The following project goals, concerns, and design drivers have been separated into three categories: **ecological**, **social**, and **economic**.

Ecological

Goals & Concerns:

- **Connect** and protect natural resources to regional and local thoroughfares
- **Create** and enhance greenspace throughout the village
- **Manage** and harvest stormwater

Design Drivers:

- **Connected corridors** that enhance resident and visitor awareness and access to area's natural resources and attractions
- **Downtown and regional highway plantings** that echo the area's natural vegetative history and demonstrate a commitment to the village's future
- **Flora and fauna habitat** along important corridors that also provides an aesthetic alternative to existing conditions

Social

Goals & Concerns:

- **Enhance** village walkability and pedestrian realm
- **Create** a cohesive wayfinding system
- **Encourage** a welcoming social environment in downtown district and opportunities for community gathering spaces

Design Drivers:

- **A walkable village** for all ages
- **A navigable, cohesive wayfinding system** that directs locals and visitors towards attractions and amenities
- **An attractive downtown business and leisure district** as a catalyst for future growth and quality social opportunities

Economic

Goals & Concerns:

- **Improve** business patronage along regional highway
- **Promote** patronage and business investment in downtown district
- **Promote** tourism industry development

Design Drivers:

- **Increased patronage** to the downtown and highway businesses through gateways and community advertising
- **Local reinvestment** into the downtown business district to promote future growth
- **Tourism promotion** through aesthetic and cultural appeals

PROGRAMMATIC ELEMENTS

Realizing Grantsburg's vision requires first and foremost a reinvestment in the village's local assets that communicate with wider community and regional needs and desires. To achieve this we will incorporate several programmatic elements of differing scales.

REGIONAL PROGRAMMATIC ELEMENTS

Sustainable Resource Protection & Promotion

Burnett County is known throughout the greater region for its unique natural resources including the St. Croix Scenic Riverway, Crex Meadows Wildlife Area, and Governor Knowles State Forest among many others. In a recent survey conducted as part of the Village of Grantsburg's Year 2030 Comprehensive Plan, residents made their priorities clear concerning the county's future development and stated overwhelmingly that any and all plans should work to preserve the region's water quality, protect wildlife habitat, and conserve forested areas while providing sustainable and enjoyable access.

Year-Round Tourism Industry Development

Tourism is a significant part of the region's economic development strategy and is one of the fastest growing sectors of the new economic engine that has emerged in the last decade. Jobs created in this industry also have staying power as they cannot be relocated outside of certain geographical boundaries. As such, and with Burnett County already rich in many natural and cultural amenities, it will be important to focus on tourism promotion throughout the region and work to diversify seasonal and year-round attractions for residents and visitors alike.

Ecologically Sound Greenspace Creation & Management

While the region boasts many ecologically rich landscapes, greenspace creation and management is still important to understand and implement, particularly along regional thoroughfares that act as the main connectors to these established resources for both people and wildlife and can provide visually pleasing vistas and vibrant habitats.

COMMUNITY PROGRAMMATIC ELEMENTS

Resource & Amenity Connections

The Village of Grantsburg has a variety of natural resources and cultural amenities located in and around its borders. Unfortunately, access to these attractions can be convoluted or nonexistent, and so the Village is looking into strategies to balance their advertising needs while reconnecting them to regional and local thoroughfares in creative and meaningful ways.

Gateway Crescendos

State Highway 70 is one of the major thoroughfares in the region and runs along the southern boundary of the Village. As the main access point into the community, it is important that residents and visitors experience a sense of arrival with culturally appropriate gateways indicative of the unique area in which they are about to enter. This could include anything from simple, creative signage at intervals along State Highway 70 and the main intersection into the community as well as physical stopping points where visitors can learn more about the region they are passing through.

Signage and Wayfinding Package

Signage and wayfinding play a huge role in how people navigate a space, and while the Village of Grantsburg may be smaller in scale to other regional metropolitan cities, it is still vital to the promotion of their attractions to provide people with a comprehensive navigational system that is also easy to understand. The goal with this particular signage package will be to guide people from State Highway 70 through the village and into the downtown district as well as to the wildlife area of Crex Meadows.

SITE PROGRAMMATIC ELEMENTS

Retail and Residential Investment & Development

The main "site" for this particular proposal will focus on Downtown Grantsburg as the catalyst project for future redevelopment and revitalization. Infrastructure within this district is deteriorating as disinvestment continues to occur, however there are still a few strong local businesses that can act as driving forces for future investment and development. With updated building facades as well as the integration of mixed-use buildings and above-retail dwellings, the downtown area has the potential to increase revenue for the village and provide year-round amenities for all.

Updated Downtown Streetscape & Pedestrian Realm

As well as general building improvements, an updated pedestrian realm is vital to attracting daily use of the district. This will include the implementation of ADA accessible paths and sidewalks, the inclusion of street furniture and resting points, the installation of street trees and scaled lighting, and the reorganization of parking to allow for a safer, more welcoming environment.

Public Open Space Development

Public open space development will play a significant role in the updated downtown Grantsburg as it moves away from being a car-dominated landscape to a people-oriented one. This will include public gathering spaces along Madison Avenue as well as carefully placed greenspaces that offer views to the many resources surrounding the district such as Memory Lake and the Wood River.

Figure 2.07 - Crex Meadows in Autumn

Figure 2.08 - A Busy Day on Madison Avenue

RESEARCH TOPIC & LITERATURE REVIEW

Cultural and Community Revitalization

Cultural and community revitalization studies how communities across the United States utilize local and regional assets and attractions in order to reinvigorate deteriorating neighborhoods and failing downtown districts. It evaluates the "new urban reality" of the creative sector economy in a post-industrial society and researches how community investment in the arts can elevate distressed places to new levels of social and cultural prosperity.

This research topic is critical to the work needed in Grantsburg as the village looks towards its future needs, goals, and desires within the community.

How Small Towns and Cities Can Use Local Assets to Rebuild Their Economies: Lessons from Successful Places.
U.S. Environmental Protection Agency's Office of Sustainable Communities, 2015

Excerpt: "While most economic development strategies involve some effort to recruit major employers, such as manufacturers or large retailers, many successful small towns and cities compliment recruitment by emphasizing their existing assets and distinctive resources."

This report by the United States Environmental Protection Agency examines several case studies of small cities ranging in population from 2,900 to 98,000 people. After careful research and evaluation into what has made them successful revitalization projects, the EPA noticed a recurring pattern of successful tactics used by each city including: the identification and building upon of existing assets, the engagement of all members of the community to plan for the future, the use of outside funding, the creation of incentives for redevelopment and reinvestment, the encouragement of cooperation among community and regional partners, and the support and management of clean and healthy environments.

Distressed Places and Creativity.
Jeremy Nowak, 2008

Excerpt: "It seems to me that a significant potential lies in tying together the post-industrial opportunities of what has come to be termed the creative sector with the movement to rebuild opportunity and value in some of our most distressed communities."

This article identifies several ideas that describe creative-sector economies as the future of development in cities and towns across the United States. For example, Nowak states that activities in the creative sector are content-rich to provide valuable commodities to distressed areas and notes that artists have unusual placemaking skills as they are experts at uncovering, expressing, and repurposing the assets of a place. Nowak also suggests that the impact of community-based arts and culture can be diffused throughout the architecture of a space as it provides a demand for high quality housing and commercial space, adds to the quality of public space, and shows a high correlation between indicators for neighborhood improvement and cultural participation. It has the power to redefine communities in an economically viable way.

Downtown Success Indicators.
Department of Urban and Regional Planning – University of Illinois at Urbana-Champaign, 2014

Excerpt: "Authors use a variety of indicators to define downtown success. These indicators define both traditional and contemporary perceptions of success. Traditional indicators show success in retail and finance; however, more recent indicators focus on immigration, design, housing, organization and promotion."

All of these indicators provide unique assets to struggling downtowns. With retail comes small business development; with mixed-use housing comes restoration, rehabilitation, and increased foot traffic. With collaboration comes revitalization; with multi-functionality comes economic and social resilience. Any of these qualities on their own cannot function as a catalyst for revitalization but when used together can create a cohesive design and management solution to struggling downtown districts. In essence, it is no longer simply the economic factors that show a district's success but the cultural, social, and environmental ones.

Figure 2.09 - Sandhill Cranes at Dusk

TYPE OF PROJECT

Downtown Revitalization, Community Gateways, and Corridor Connections

From Introduction: The Grantsburg Revitalization Operation has outlined several areas of interest for potential redevelopment including the improvement of connections between the regional highway, village downtown, and natural resource of Crex Meadows Wildlife Area, the reinvigoration of the downtown district through updated streetscape design and a renewed focus on the pedestrian experience, and the creation of community gateways along important thoroughfares to improve business patronage and tourist awareness.

These redevelopment projects are vital to the community's future goals and desires, especially when looking at sustainable job creation and the reinvigoration of the community's natural and cultural assets.

Figure 2.10 - Grantoberfest Bouncy Castle

PROFESSIONAL FOCUS

Creative Placemaking

In creative placemaking, shareholders from around the community come together to solve the multitude of problems facing small towns and villages in the United States that have been hit hard by economic restructuring through the strategic use local art and cultural activities. It can animate public spaces and streetscapes, improve and create local business ventures, and bring community members together in ways that may never have happened before.

As stated by the National Endowment for the Arts recent publication on creative placemaking in America, "these creative locales foster entrepreneurs and cultural industries that generate jobs and income, spin off new products and services, and attract and retain unrelated businesses and skilled workers. Together, creative placemaking's livability and economic development outcomes have the potential to radically change the future of American towns and cities."

This will be incredibly important to consider as Grantsburg looks towards its future as a viable, sustainable community with a strong sense of place as well as a competitive job market.

PRECEDENT REVIEW

Figure 2.11 - Momence, Portland, Adelaide Snapshots

PRECEDENT ONE

City: Momence
State: Illinois
Population: 3,177 (2016)
Project Type: Downtown Master Plan

Overview

In August of 2011, the City of Momence, Illinois began the master planning process for their historic downtown district. Located near the Kankakee River, the downtown area saw massive economic decline as population shifts occurred and small businesses faced competition from larger national retailers during the late 20th century. Fortunately the historic character of the buildings and their facades remained in relatively good condition, effectively providing a strong building stock on which to facilitate future revitalization projects.

Project Goals

- **Maintain** and preserve the architectural integrity of the downtown district by encouraging appropriate building and facade improvements and infill development
- **Improve** the downtown's urban design and physical environment through streetscape enhancements, landscape updates, and wayfinding signage
- **Develop** a sustainable land use strategy that stresses building reuse and diversifies the downtown's economic base with a mix of commercial, residential, and institutional uses
- **Identify** adaptive use opportunities that will serve as catalytic projects to spur additional economic development
- **Balance** pedestrian and vehicular traffic needs
- **Create** a framework for changes to downtown zoning regulations that promote an appropriate land use mix, high quality building improvements, and sustainable site design

LEGEND

- A NEW PARKWAY TREES
- B 2-3 STORY INFILL DEVELOPMENT (12,500-18,000 S.F.)
- C LANDSCAPE IMPROVEMENTS AT THE HISTORIC HOME
- D STREETSCAPE IMPROVEMENTS ALONG DIXIE HIGHWAY INCLUDING LIGHTING, STREET TREES IN PLANTERS, BRICK PAVER BANDING, BENCHES, TRASH RECEPTACLES AND MOVEABLE PLANTERS
- E BRICK PAVING ALONG WASHINGTON STREET
- F STREETSCAPE IMPROVEMENTS ALONG WASHINGTON INCLUDING: LIGHTING, STREET TREES IN GRATES, BENCHES, BRICK PAVER BANDING, TRASH RECEPTACLES, MOVEABLE PLANTERS, DECORATIVE PAVING AT CORNERS AND BUMP-OUTS
- G BRICK ALLEY CONNECTING WASHINGTON AND RIVER STREET
- H BUMP-OUTS AT CORNERS PROVIDE OPPORTUNITIES FOR ADDITIONAL LANDSCAPING
- I 2-3 STORY INFILL DEVELOPMENT (12,500-18,000 S.F.)
- J 2-3 STORY REDEVELOPMENT (12,500-18,500 S.F.)
- K GATEWAY OPPORTUNITIES AT CORNER
- L 2-3 STORY COMMERCIAL/MIXED-USE REDEVELOPMENT (17,500-25,500 S.F.)

LEGEND

- A RIVER OVERLOOK AT DAM
- B RIVERFRONT REDEVELOPMENT: EXPANDED RIVERWALK AREA, RAILING/LIGHT PIERS, SEATING AREAS
- C 2-3 STORY INFILL DEVELOPMENT (12,500-18,000 S.F.)
- D GATEWAY OPPORTUNITIES
- E 2-3 STORY REDEVELOPMENT (12,500-18,500 S.F.)
- F PARKING ENHANCEMENT: LANDSCAPE AND SCREENING 8 SPACES
- G RIVERFRONT DEVELOPMENT: 2-3 STORY RESTAURANT/ BANQUET OPPORTUNITY (17,500-25,500 S.F.)
- H 2-3 STORY COMMERCIAL/MIXED-USE REDEVELOPMENT (17,500-25,500 S.F.)
- I EXPANDED PARKING LOT (65 SPACES)
- J NEW RIVERFRONT WALK, OVERLOOK, RAILING/LIGHT PIERS, SEATING AREAS
- K INTERPRETIVE HISTORICAL RIVERFRONT GATEWAY
- L NEW PARKING AREA, (64 SPACES)
- M PUBLIC RESTROOM/CONCESSIONS
- N NEW 2-3 STORY COMMUNITY CENTER (25,500-35,000 S.F.)
- O OPEN SPACE/ICE RINK
- P AMPHITHEATRE
- Q RIVER TRAIL AND OVERLOOK CONNECTS ISLAND PARK TO DOWNTOWN
- R RECREATIONAL/ACTIVITY FACILITY
- S NEW PARKING AREA (45 SPACES)
- T PLAYGROUND AREA
- U EXISTING PEDESTRIAN BRIDGE CONNECTING TO ISLAND PARK
- V REORGANIZED PARKING WITH LANDSCAPE IMPROVEMENTS AND OVERLOOK (13 SPACES)

PROJECT OUTCOMES

- Downtown will retain "critical mass" of restored and rehabilitated architecture
- Improved and enhanced infrastructure and streetscape design
- Safer and more attractive pedestrian realm
- New investment and business opportunities
- Reclaimed and transformed riverfront
- Effective business development to offer a wide variety of products and services

DIXIE HIGHWAY STREETSCAPE ENHANCEMENT CONCEPT

WASHINGTON STREET STREETSCAPE ENHANCEMENT CONCEPT I

WASHINGTON STREET STREETSCAPE ENHANCEMENT CONCEPT II

PARKING LOT ENHANCEMENT

Figure 2.12 - Momence, Illinois Precedent Study

PRECEDENT TWO

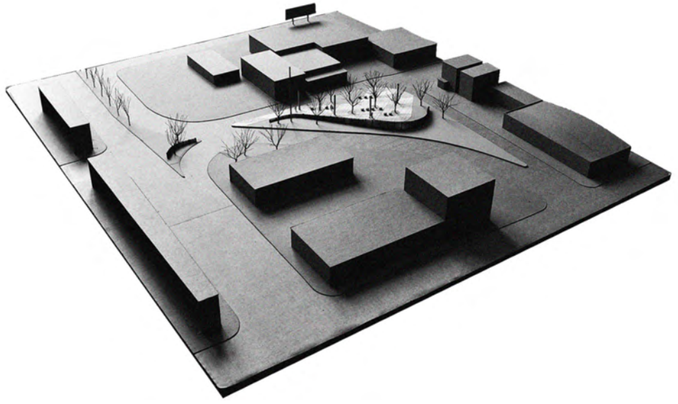
Neighborhood: North Portland Neighborhood + Northeast Coalition of Neighborhoods
City: Portland
State: Oregon
Population: 120,021 (2009)
Project Type: Community Gateway

Overview

In 2012, The City of Portland, Oregon worked with 2.ink studio to create a culturally significant gateway to the North and Northeast Portland neighborhoods and to provide a commemorative space to Martin Luther King, Jr. along Martin Luther King, Jr. Boulevard. The materials used in this project, namely the steel screen wall and vertical markers, symbolize both the strength and endurance of the community and the neighborhood's connection to the old railroad and ship building industry that drew early residents to the area. Themes represented throughout the project include: **community**, **civil rights**, **immigration** and **migration**, and **commerce** and **culture**.

Project Goals

- **Build** on the civic pride of residents
- **Integrate** the identity of adjacent neighborhoods
- **Celebrate** local heroes, history, and every-day citizens
- **Support** the ongoing development of the neighborhood's vibrant business districts
- **Enhance** the pedestrian experience throughout the intersection



PROJECT OUTCOMES

- Promotion of neighborhood livability and economic vitality
- Creation of a unique urban space and a clear threshold announcing the arrival into a distinct district
- Celebration of the diverse cultural character of the North and Northeast neighborhoods
- A renewed focus on local neighborhood stories with the use of Heritage Markers

Figure 2.13 - Portland, Oregon Precedent Study

PRECEDENT THREE

City: Adelaide
Country: Australia
Population: 22,063 (2016)
Project Type: Wayfinding Strategy

Overview

In 2012, Adelaide embarked on a mission to create a master plan for the entire city which included a comprehensive wayfinding system that incorporates pedestrian, bicycle, public transit, and vehicular users. The plan was initiated in order to provide for a people-friendly city that also strives to achieve a balance between these priority users and the needs of vehicular transport and parking.

Project Goals

- **Create** a comprehensive wayfinding strategy that helps unify and improve the sense of place by reinforcing linkages to the city's many amenities
- **Strengthen** the case for sustainable "active" modes of transit like walking, cycling, and public transit to circumvent increasing traffic congestion
- **Provide** a holistic and integrated user-focused approach to city-wide planning and design
- **Design** a flexible and resilient information system that can accommodate future city projects and developments
- **Configure** an accessible city and connect Adelaide's many communities

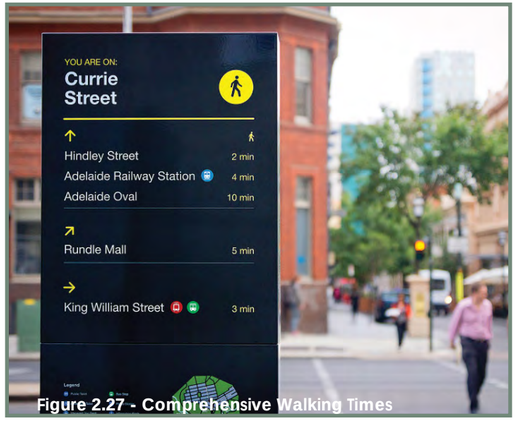


Figure 2.27 - Comprehensive Walking Times

PROJECT OUTCOMES

- Safe and easy walking
- Safe and convenient cycling
- Quality public transit
- Green and sustainable travel
- Smart parking
- Calm traffic patterns
- Inviting and connected streets

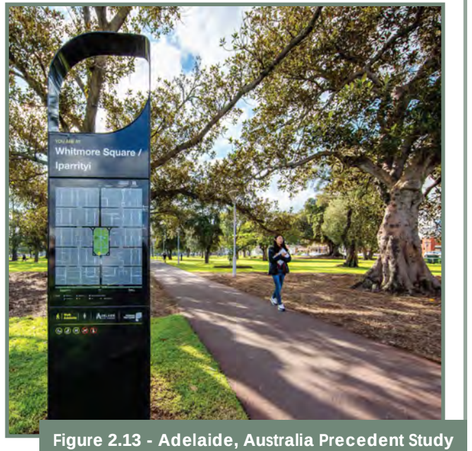


Figure 2.13 - Adelaide, Australia Precedent Study

THE REGION

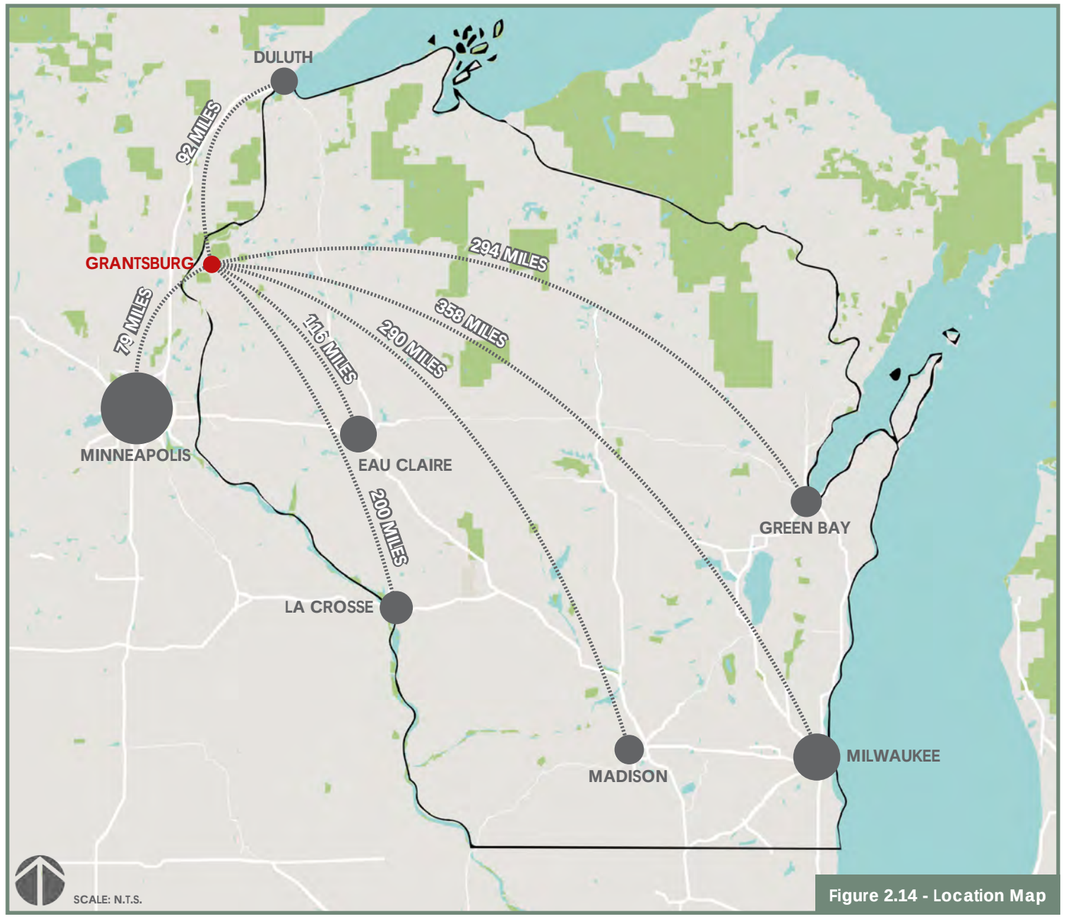


Figure 2.14 - Location Map

Metropolitan Analysis

NORTHWESTERN WISCONSIN & EAST - CENTRAL MINNESOTA

Burnett County is located along the St. Croix River which act as the border between the State of Wisconsin and the State of Minnesota. The proximity of Burnett County as well as the Village of Grantsburg, Wisconsin to the Greater Minneapolis - St. Paul Metropolitan Area makes it a prime destination for summer residences as well as local tourism attractions.

The major regional connections between Burnett County and the rest of the Northwestern Wisconsin / East - Central Minnesota are State Highways 70 and 35 which provide fast and reliable access to most of the region's hubs as well as other large thoroughfares.

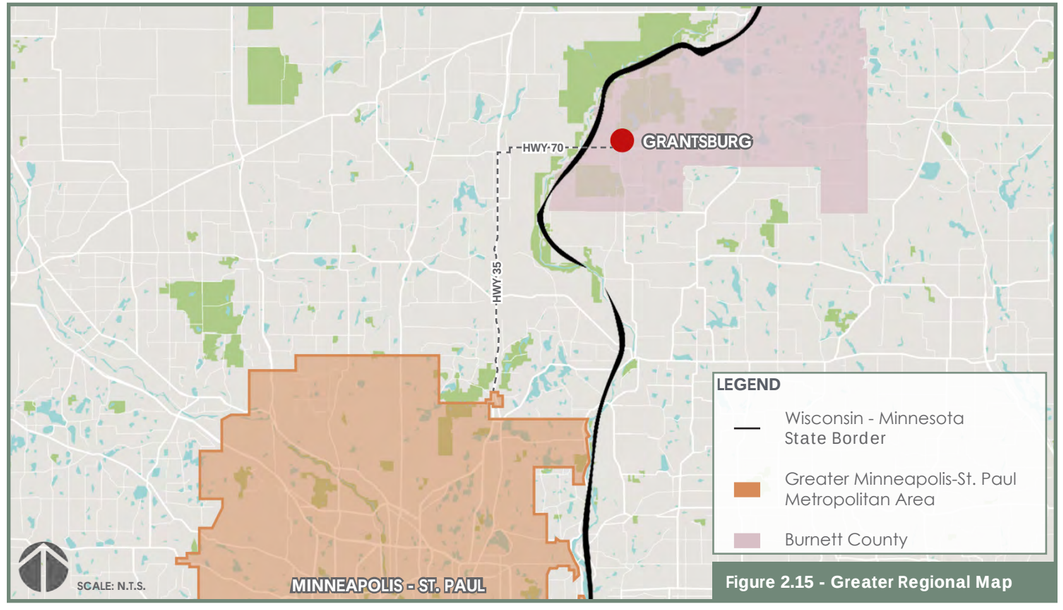


Figure 2.15 - Greater Regional Map

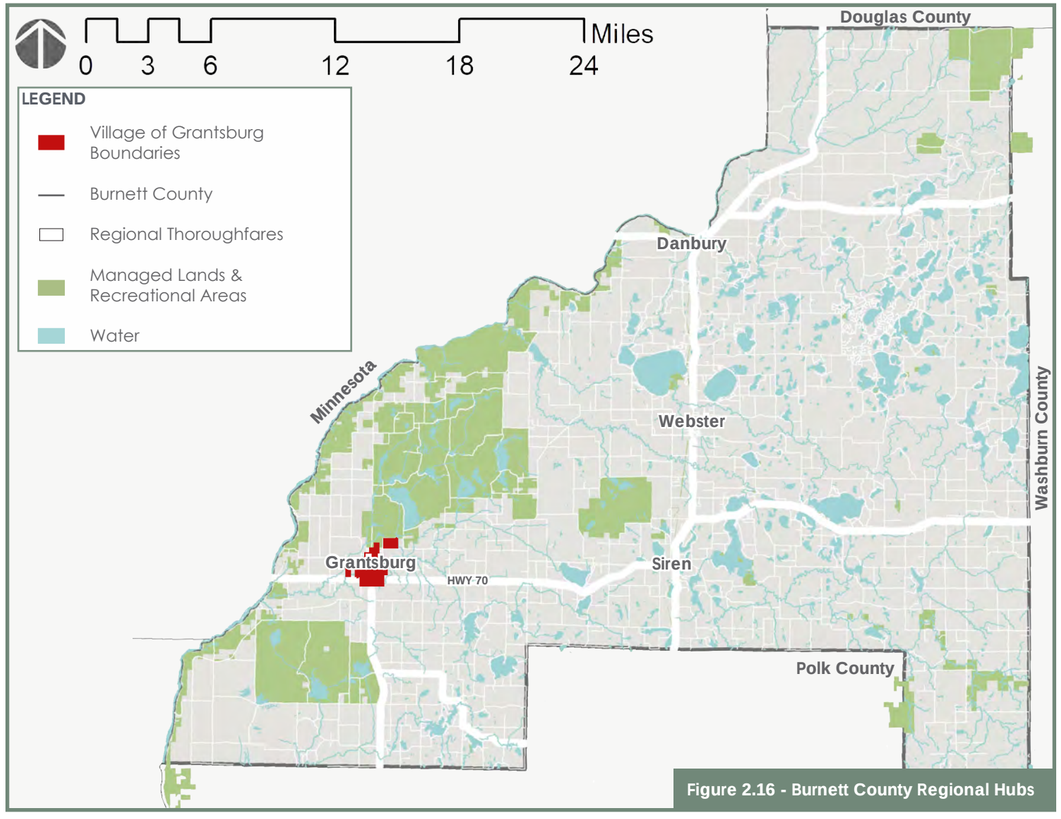


Figure 2.16 - Burnett County Regional Hubs

Watershed Analysis

BURNETT COUNTY REGIONAL WATERSHEDS

Burnett County is a part of eleven watersheds throughout the region that feed its lakes, streams, and wetland. Grantsburg is located squarely within the Wood River Watershed which will be important to remember as we develop design strategies to manage and harvest stormwater while preserving the quality of nearby water resources.

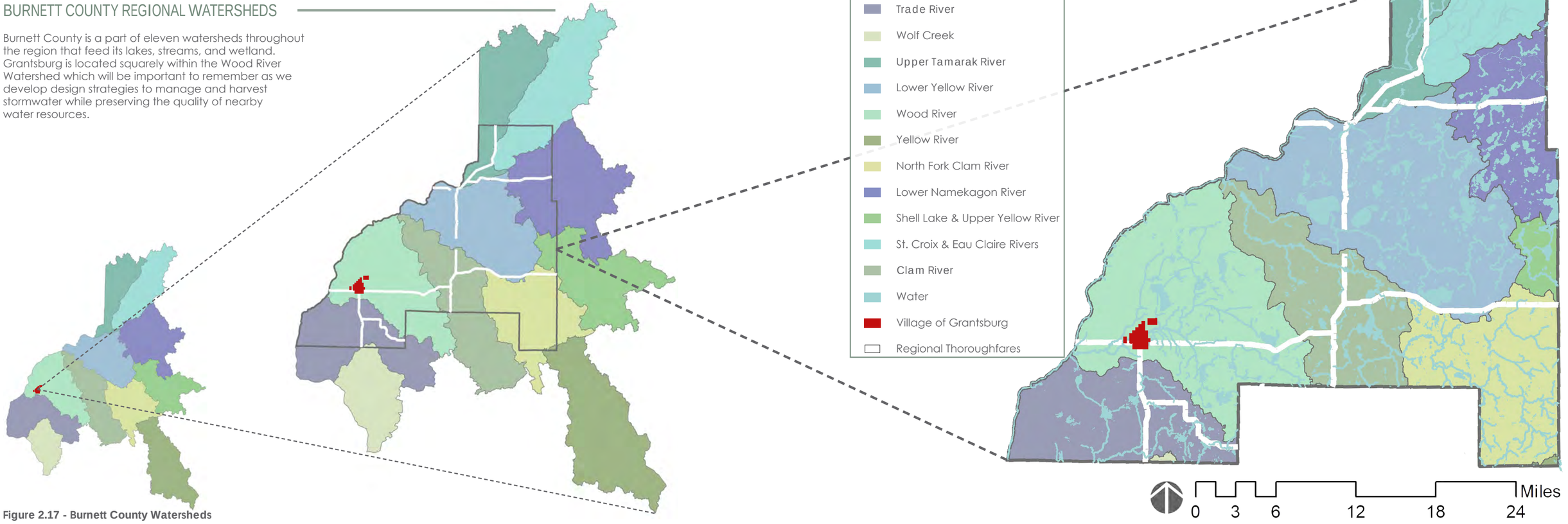


Figure 2.17 - Burnett County Watersheds

Land Typology Analysis

BURNETT COUNTY LANDSCAPES & NATURAL RESOURCES

Burnett County covers 889 square miles of Northwestern Wisconsin territory and is home to a variety of unique ecosystems and quality wildlife habitat. 89% of the county is land designated to forestry, agriculture, wetland, and residential uses. 11% is water and includes lakes, rivers, and marshland.

The county also features a multitude of Wisconsin Department of Natural Resources managed lands and open recreational areas including Crex Meadows State Wildlife Area, Kholer-Peet Barrens State Natural Area, and Fish Lake Meadow State Natural Area among others. The county is also bordered by the St. Croix National Scenic Riverway and State Park which acts as the dividing line between the State of Wisconsin and the State of Illinois.

As noted in previous sections, residents concerns about the area's natural resources include the preservation the region's water quality, protection of its wildlife habitat, and conservation of its forested areas while providing sustainable and enjoyable access. With so much of the county's land in such prime natural condition, sincere consideration of these desires will be important in any and all regional design strategies.

PRESERVE WATER QUALITY

PROTECT WILDLIFE HABITAT

CONSERVE FORESTED AREAS

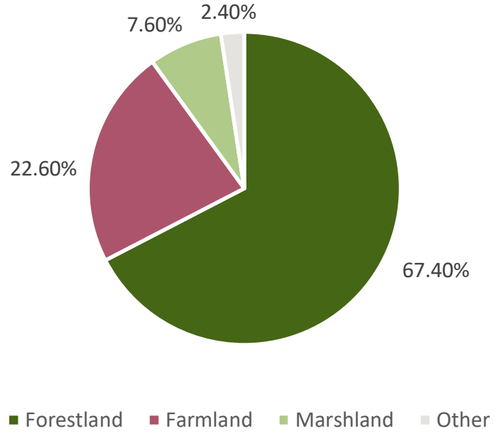


Figure 2.18 - Burnett County Land Typology Infographics

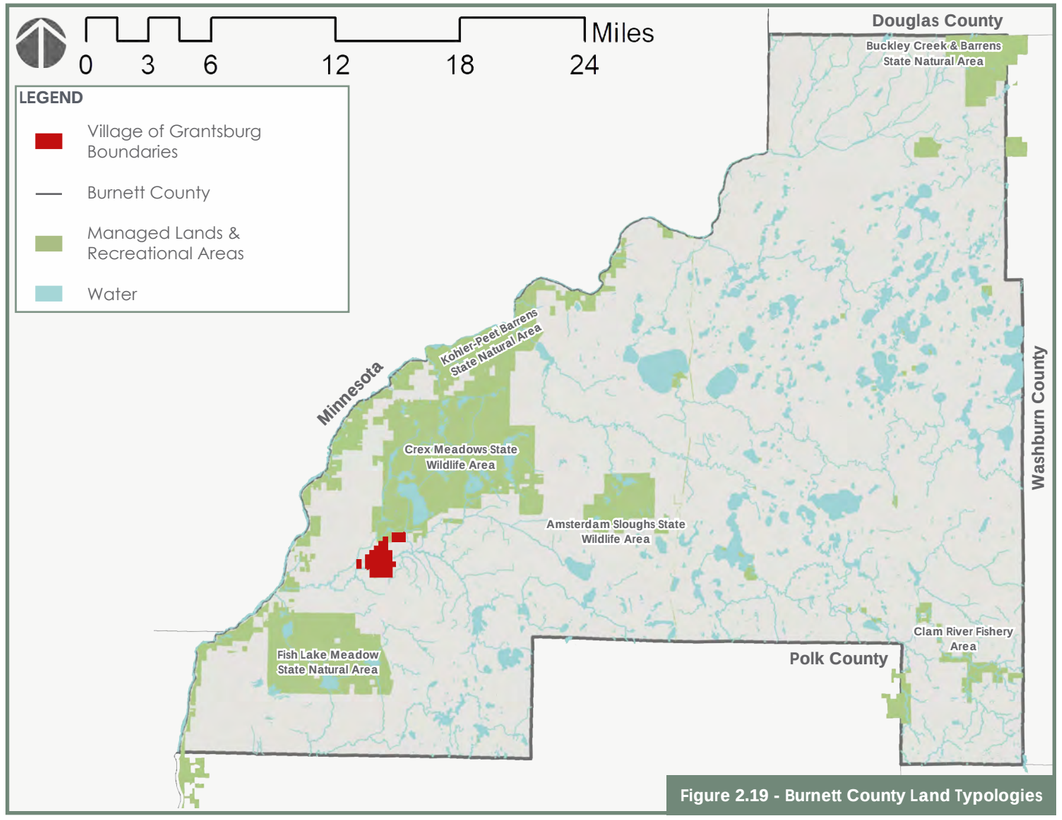


Figure 2.19 - Burnett County Land Typologies

Transportation Analysis

BURNETT COUNTY REGIONAL THOROUGHFARES

Burnett County is serviced by five Wisconsin State Highways that carry over 16,000 vehicles per day. Larger population centers like the Village of Grantsburg are at some point bisected by these state highways as they act as the main arteries by which people commute in and around the region. There is currently no major alternative transportation network for services like public transit, and most residents drive a personal vehicle or carpool.

Bike paths and walking trails are present throughout the county but are neither directly located along regional thoroughfares nor are they provided safe conditions along county roadways. It will be important as design strategies are formulated to consider providing access to these recreational trails and create safe connection opportunities for them as well.

SANDROCK CLIFF TRAIL

GOVERNOR KNOWLES STATE FOREST TRAILS

BIG BEAR LAKE NATURE TRAIL

GANDY DANCER TRAIL

WEB LAKE & TIMBERLAND HILLS SKI TRAILS

ICE AGE TRAIL

Car Ownership — 2 Cars / Household

Average Commute Time — 25.1 Minutes

Commuter Transportation — 79.6% Drive Alone

Figure 2.20 - Burnett County Transportation Infographics

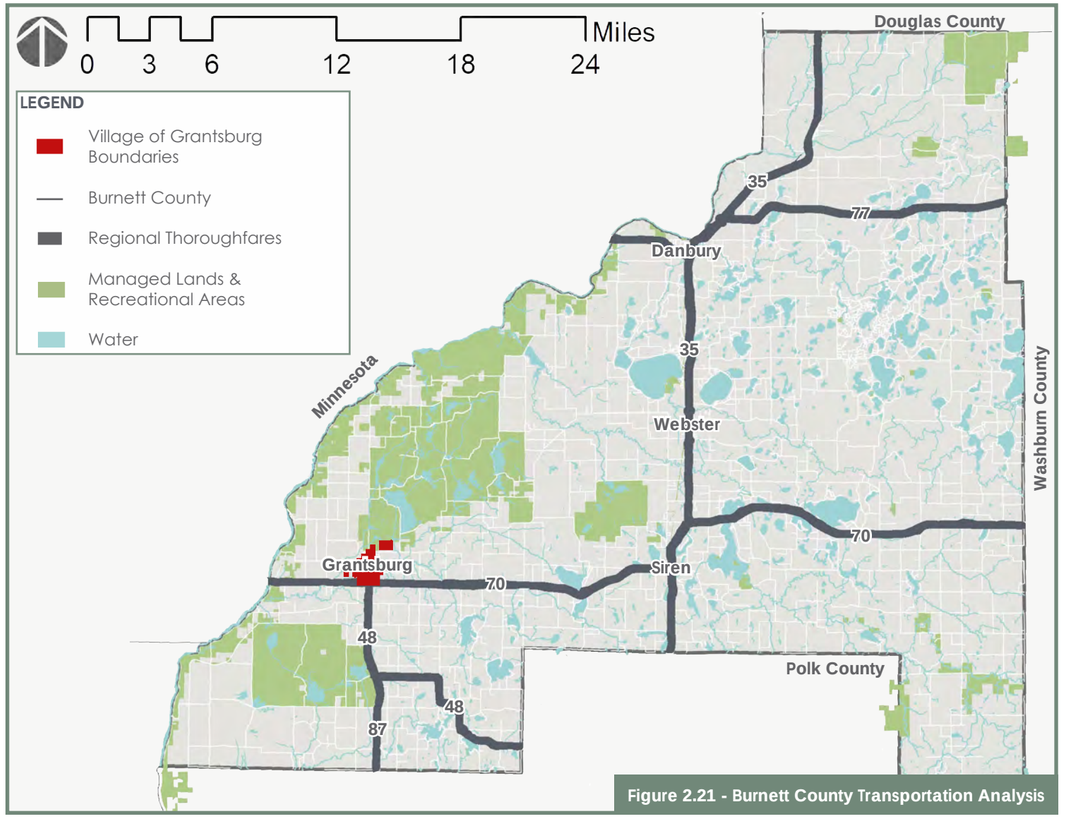


Figure 2.21 - Burnett County Transportation Analysis

Demographic Analysis

BURNETT COUNTY POPULATION DENSITY

Burnett County has a population of 15,334, of which 92% are white, and many of the region's residents live within the boundaries of the local villages as highlighted by the following population density graphic. The largest population cluster is located in and around the Village of Grantsburg followed by the Village of Siren and the Village of Webster. Other significant population clusters reside around the county's larger water bodies not located within protected areas.

Population in Burnett County also shifts throughout the season, especially in the summer months when outdoor recreation amenities receive their highest usage. Throughout the county, population can fluctuate from 15,334 up to almost 42,000 during the months of June, July, and August.

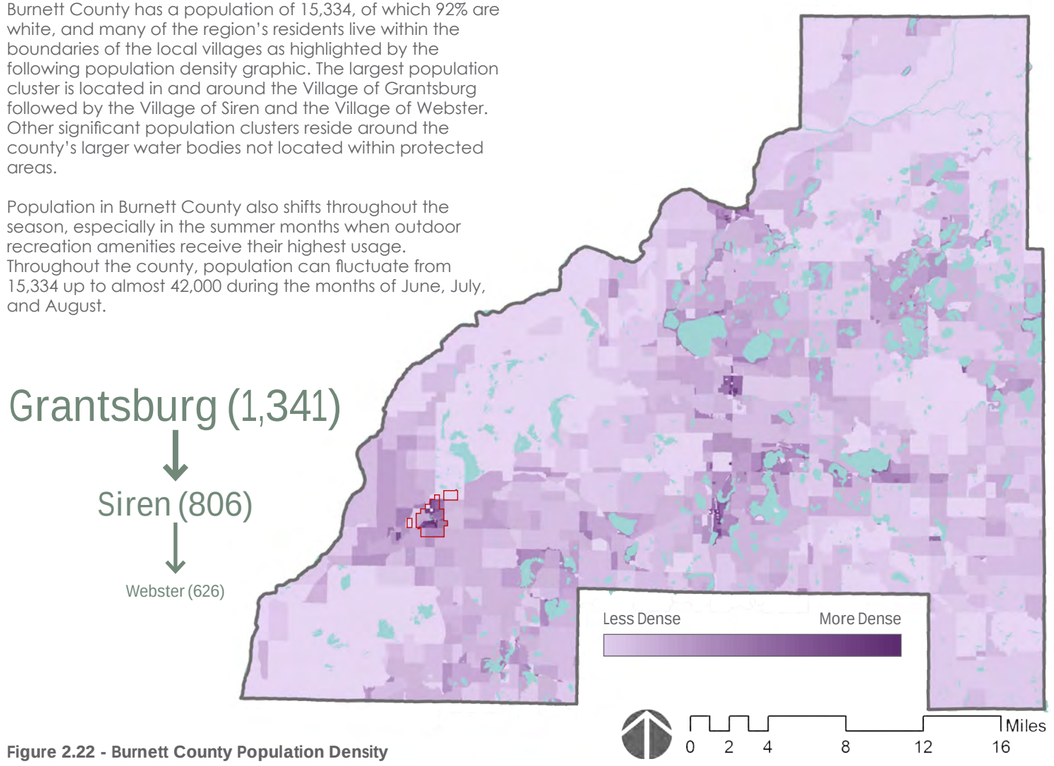


Figure 2.22 - Burnett County Population Density

BURNETT COUNTY VS. THE STATE OF WISCONSIN

BURNETT COUNTY		WISCONSIN	
Median Age	50.9	39.4	Median Age
Poverty Rate	15.6%	12.1%	Poverty Rate
Median Household Income	$41,135	$55,638	Median Household Income
Homeownership	80.4%	63.9%	Homeownership
Employment	42.2%	49.1%	Employment

Figure 2.23 - Burnett County to the State of Wisconsin

THE COMMUNITY

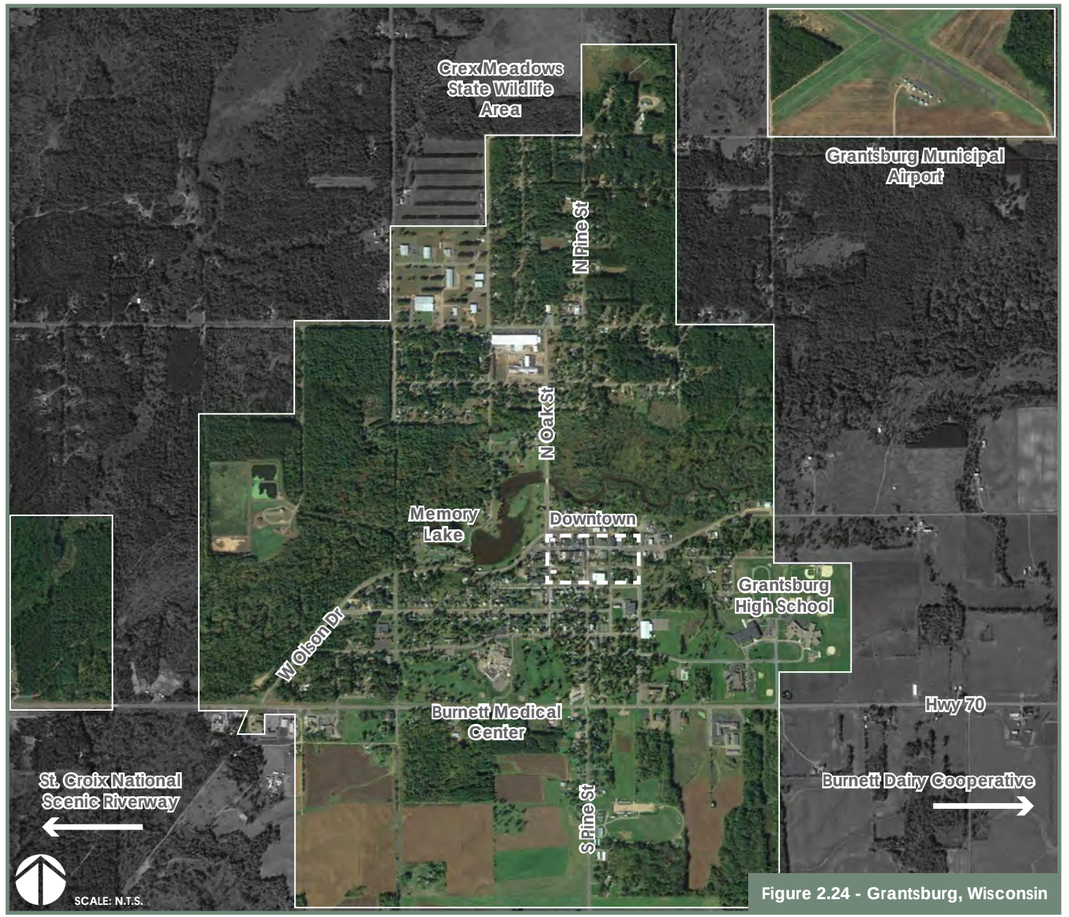


Figure 2.24 - Grantsburg, Wisconsin

Land Use & Wayfinding Analysis

GRANTSBURG, WISCONSIN

The Village of Grantsburg has a variety of land uses within its limits, with a couple of significant commercial, manufacturing, and residential districts throughout. In terms of commercial land use, there are two major retail areas including the strip along State Highway 70 to the south and the central downtown district near Memory Lake Park.

Most of the manufacturing in the village is relegated to the northwestern portion of the community and is located along the major thoroughfare to Crex Meadows Wildlife Area, North Oak Street. The residential districts within the area are predominantly single-family housing with street parking and garages, with the property values averaging around $148,000.

There are municipal areas interspersed throughout the community, with school campuses to the east and healthcare centers and government buildings in the more centralized areas.

In terms of wayfinding and transit, the village has one main axis which occurs at the intersection of South Pine Street and State Highway 70 and is the epicenter of much of the commercial properties along that corridor. A secondary avenue into the community occurs at the intersection of State Highway 70 and West Olson Drive which takes residents and visitors along a more natural corridor which ends at Memory Lake and the downtown area.

Even with such a strong axis into the community, the fact that there is only one major entrance means that if visitors miss it, they have effectively missed the Village of Grantsburg all together. There is also a distinct lack of advertising and signage along State Highway 70 that could help to drive people into the community which adds to the visitor bypass issue.

There are also ill-defined routes from State Highway 70 to the Crex Meadows Wildlife Area, thus providing confusing conditions for visitors who have never been to the community before. Thus, an effective signage and wayfinding package will be necessary to solve these concerns for the Village of Grantsburg, Wisconsin.

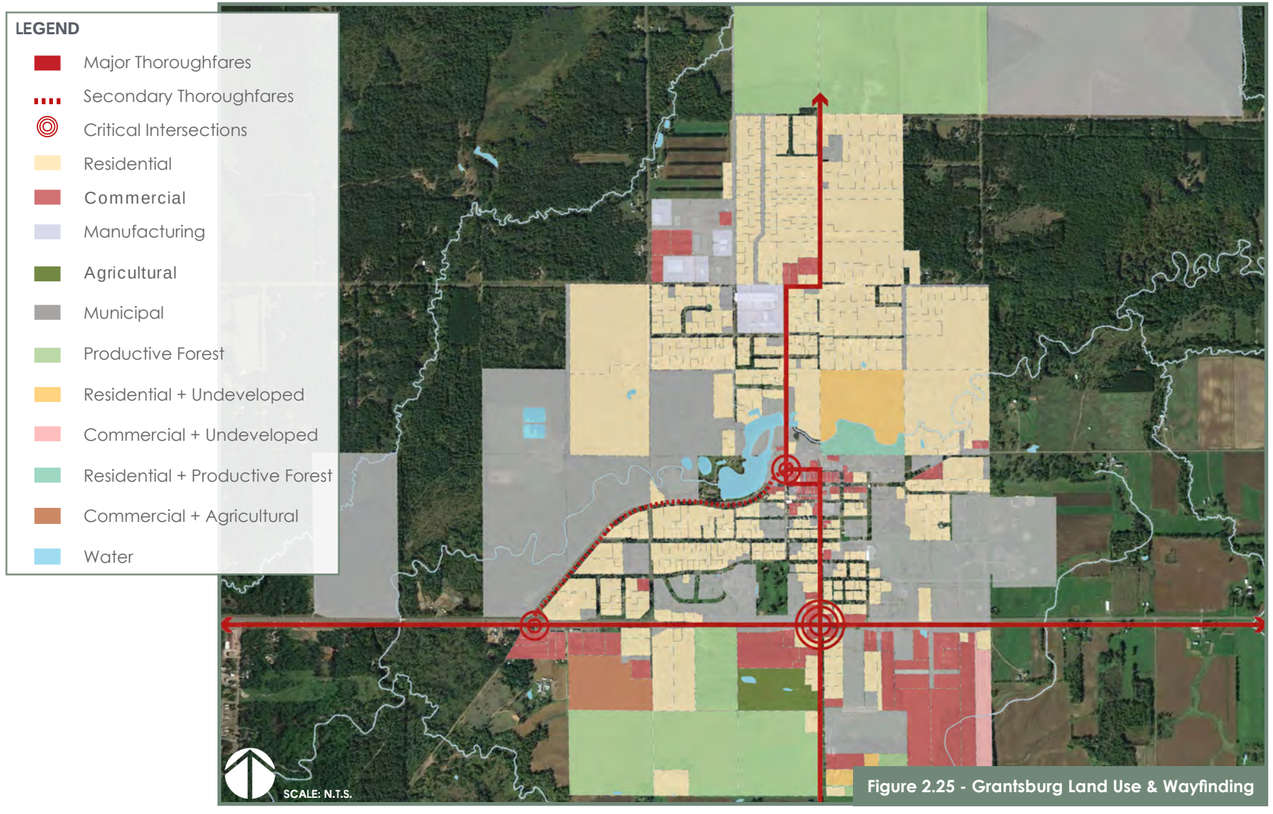


Figure 2.25 - Grantsburg Land Use & Wayfinding

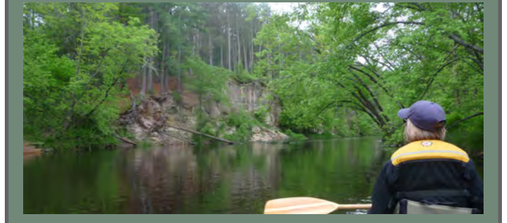
Historic & Cultural Amenity Inventory

Burnett County Abstract Company

The Burnett County Abstract Company is listed on the National Registry of Historic Places. It was constructed in 1908 and has maintained its facade since then. It now houses a local architecture firm.

Emma's House

Emma's House belonged to a local blacksmith back in the early 1900s and is still furnished as such, providing a unique view into the Village of Grantsburg's past. The house is named after his daughter, Emma.



Sandrock Cliffs

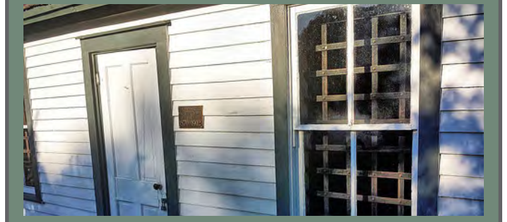
Sandrock Cliffs are listed on the National Registry of Historic Places and is located to the north of Grantsburg, near the border with Minnesota. It rises to 50 feet high and is the only canyon-like feature in the area.

Reed School

The Reed School was moved to the Grantsburg High School Campus in 2006 and was used for years as the Marshland Town Hall. It was recently refurbished and gives visitors a unique view of an 1800s classroom.

Norwegian Methodist Church

The Norwegian Methodist Church was built in 1897 and was home to the Grantsburg Tabernacle Church and American Legion Post #185. Today it houses the Grantsburg Area Historical Society .



Original Burnett County Jail

The old jail was originally constructed in 1870 and only had three windowless cells for prisoners. The building itself only measures 16' x 24'.

Big Gust Statue

Big Gust was Grantsburg's tallest citizen at 7'-6''. He became the Village Marshal in 1902 and also performed duties as assessor, street commissioner, and lamp lighter for 25 years. His statue was dedicated in 1980.

Jacobson House & Mill Site

The Jacobson House is located just outside the Village of Grantsburg and is listed on the National Registry of Historic Places. It is indicative of 19th-century rural life and was originally built by John Jacobson.

Figure 2.26 - Grantsburg Historic & Cultural Inventory

Community Open Space Analysis

Figure 2.27 - Memory Lake at Sunset

COMMUNITY RESOURCES

The community of Grantsburg has quite a few open space and natural resource areas within its limits. One of the largest, of course, is the Crex Meadows Wildlife Area. With 30,000 acres of marshland and pine barrens, it provides unique habitat for migratory birds and fish populations and draws over 100,000 new visitors annually.

Another natural resource is Memory Lake Park, which features a veteran's memorial and public camping ground that is booked solid through the summer months. The Watercross International Championship also takes place in the winter.

Figure 2.28 - Car Show At Burnett County Fairgrounds

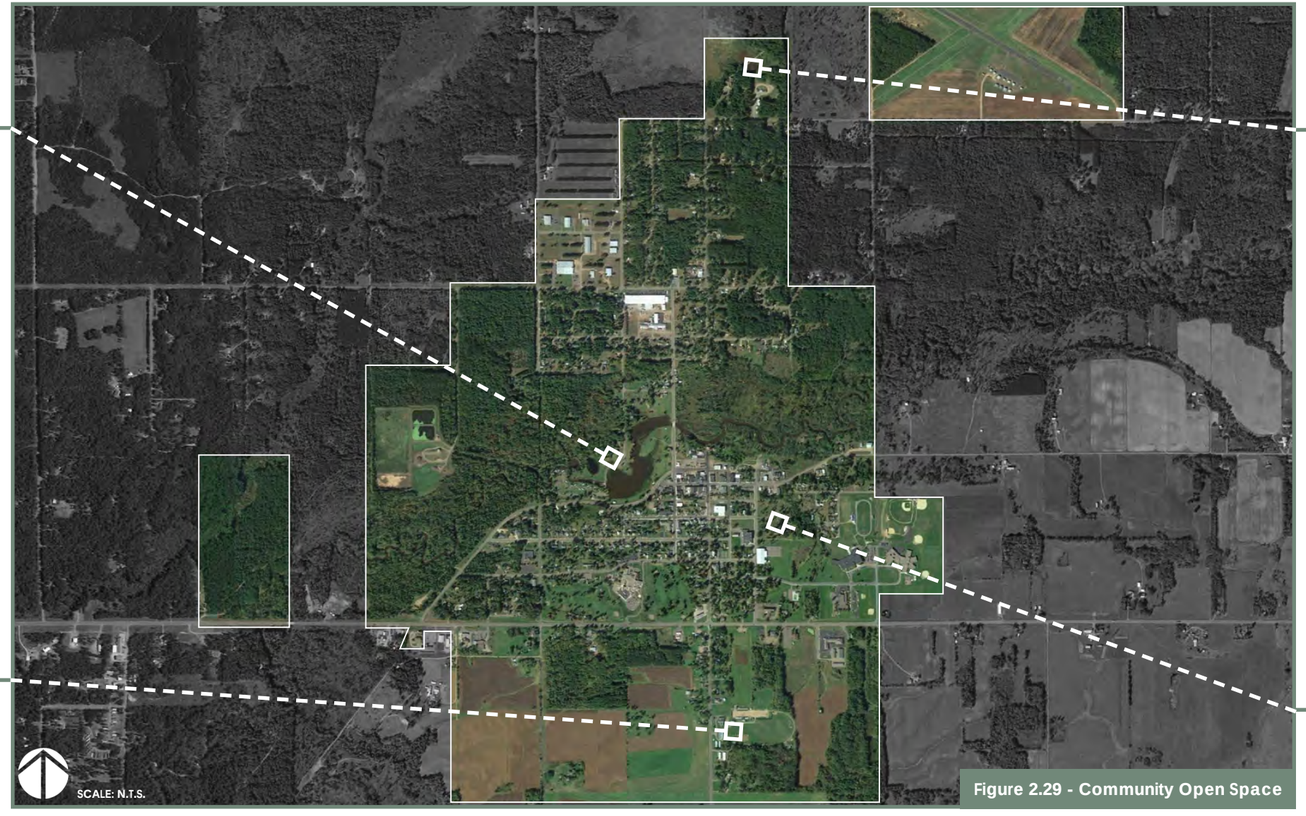


Figure 2.29 - Community Open Space

Figure 2.30 - Crex Meadows Marsh

Just south of State Highway 70 lies the Burnett County Fairgrounds which plays host to several events throughout the year including Grantoberfest and other county fairs. It includes both indoor and outdoor event space.

Finally, the Riverside Cemetery located in the eastern portion of the community, is one of the largest greenspaces in the village and provides an area of rest and contemplation and has many prominent community members entombed there including the legendary Big Gust.

Figure 2.31 - Riverside Cemetery

Community Opportunities

Opportunities

1. Grantsburg already considered as the **'Gateway to Crex Meadows'**

2. Located along **State Highway 70** - a major regional thoroughfare

3. **Historic structures and character** provide a strong foundation for community revitalization

4. Involved Community Board **(Grantsburg Revitalization Operation)**

5. Significant seasonal **tourist & second-homeowner population**

6. Strong **local business** presence

7. **Strong community axis** with State Highway 70 and State Highway 48 (S Pine St)

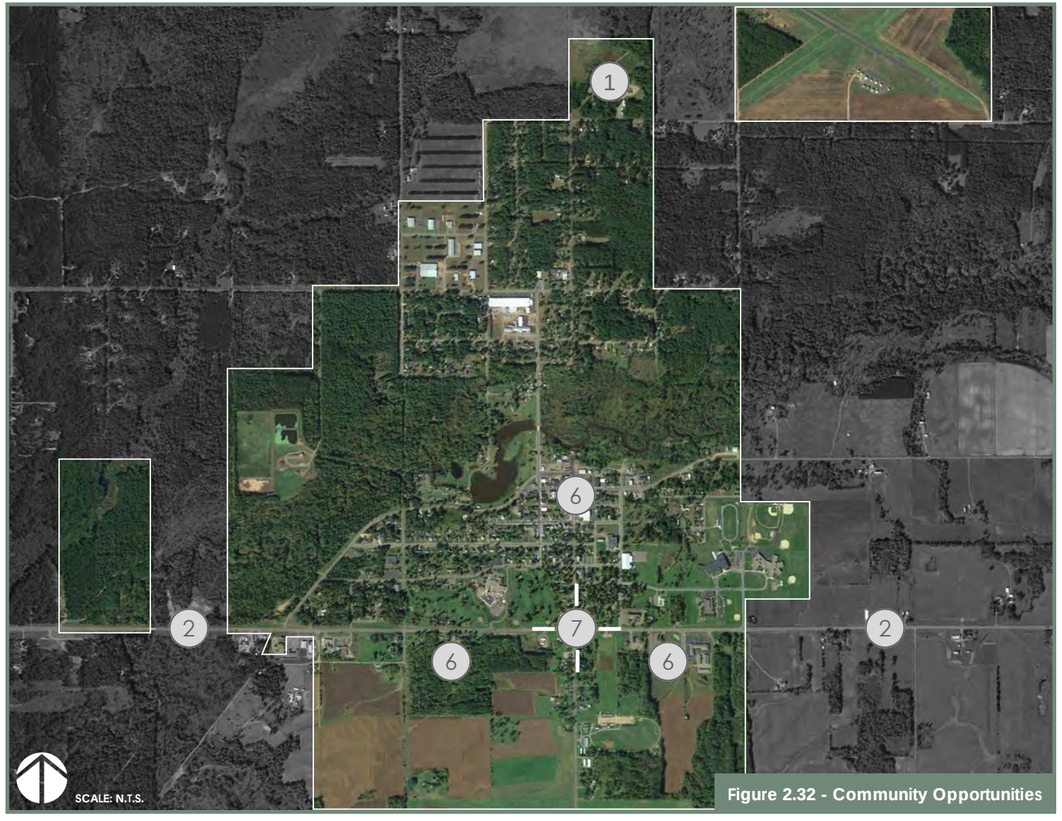


Figure 2.32 - Community Opportunities

Community Challenges & Constraints

Challenges & Constraints

1. **One major intersection** into community at South Pine Street and Hwy 70

2. **Unsafe access** to local businesses along State Highway 70

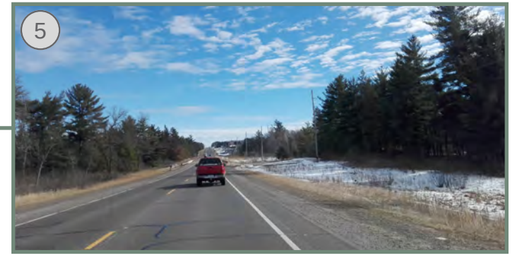
3. Lack of cohesive **signage**, **wayfinding**, and community **advertisement**

4. **High speed limit** entering the community

5. No sense of **"community arrival"**

6. **Imbalance of tourism attraction** between community amenities

7. **Weakly defined routes** from State Highway 70 to Crex Meadows



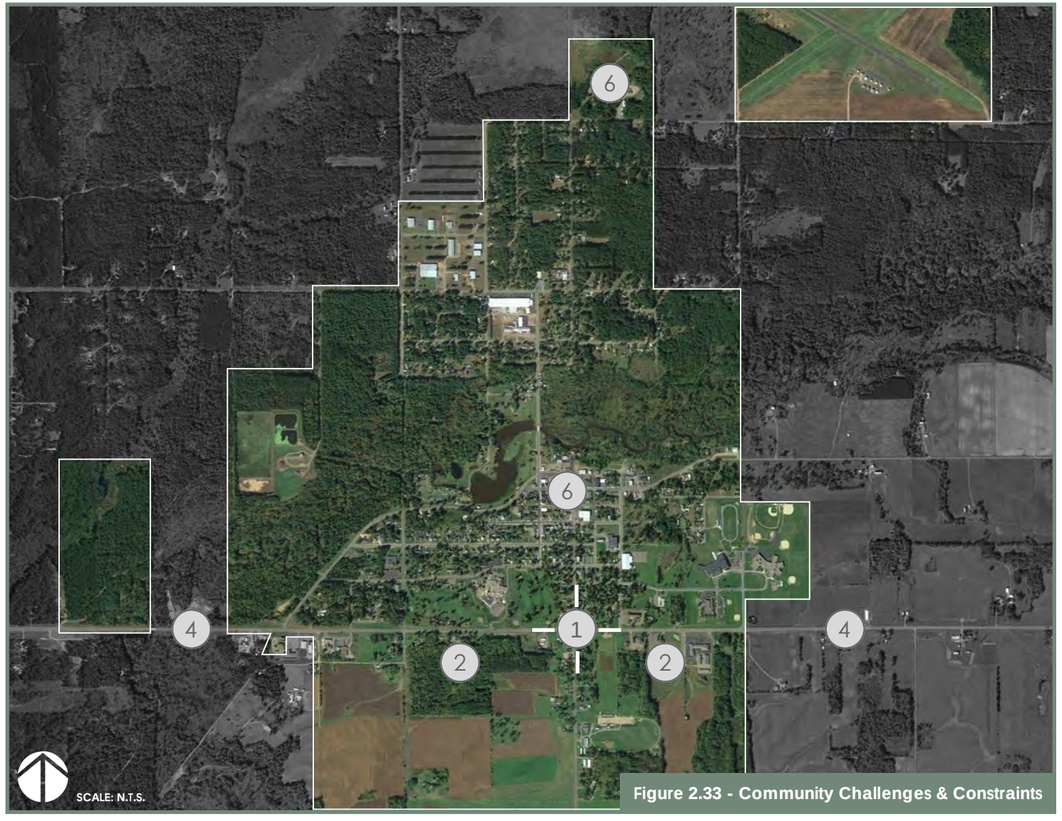


Figure 2.33 - Community Challenges & Constraints

THE SITE

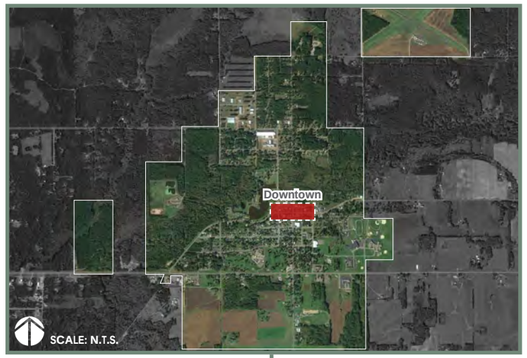


Figure 2.34 - Downtown Grantsburg

Land Use & Wayfinding Analysis

DOWNTOWN GRANTSBURG

The downtown district of Grantsburg, Wisconsin is primarily commercial with some single-family residential surrounding. Currently, there are few opportunities for mixed-use development and rental housing which could prove beneficial to the area.

Disinvestment has been occurring in the district for years leading to deteriorating structures and a lack of visitation by residents and visitors. There are, however, a few strong local businesses in the area including Fiedler Ford and Country Cafe as well as the presence of a senior center and the Burnett County Sentinel. These organizations could become primary stakeholders in the revitalization of the district and should be considered when creating design strategies.

Transportation and wayfinding in the district shows how the disinvestment has been compounded by the rerouted traffic around it - without anything to draw people into the area they are more likely to divert traffic away from Madison Avenue as they make their way to other areas in the community.

Critical intersections in the district are located along South Pine Street and North Oak Street as they are the primary thoroughfares in the village and lack pedestrian amenities and safety precautions. Rectifying this would lead to increased pedestrian access and increase foot traffic in the area.

In essence, the downtown district of Grantsburg is looking to reinvest in itself as a catalyst for revitalization within the larger community. Updating streetscapes and providing a diversified commercial focus will help jump-start the process and help the downtown area compete with other cultural and natural resources for visitor and resident patronage.

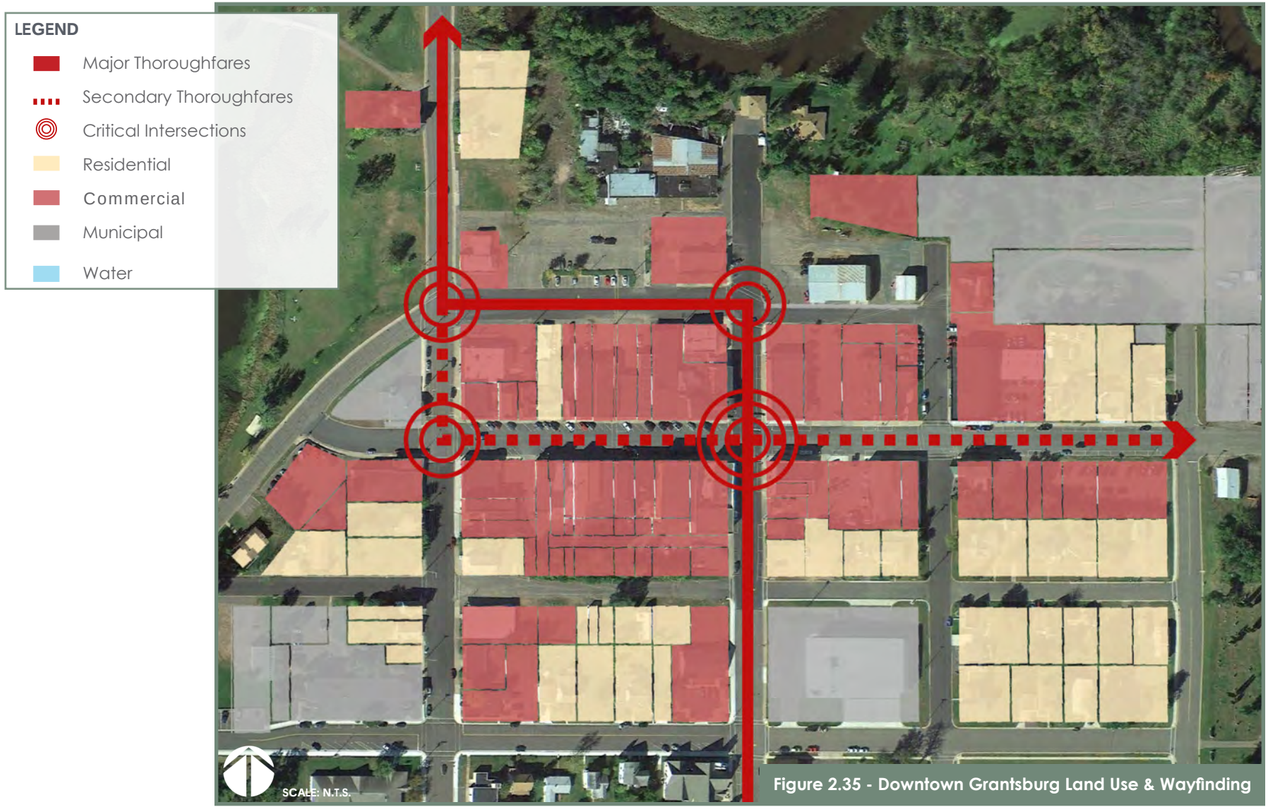


Figure 2.35 - Downtown Grantsburg Land Use & Wayfinding

Flood Data Analysis

DOWNTOWN GRANTSBURG FLOODING RISK

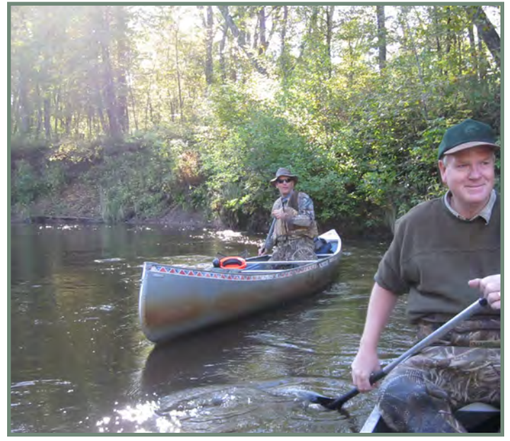
Grantsburg's downtown district is situated between Memory Lake and the Wood River, two very valuable water resources for the community. The risk of flooding to the district is quite minimal as the topography slopes downwards the water bodies.

The area of most risk within the downtown district is along the Wood River, so any future development in that portion of the site should accommodate the possibility of a 100-year flood incident as well as regulatory floodway restrictions.

Figure 2.36 - Downtown Grantsburg Flood Data

LEGEND

- Regulatory Floodway
- 100-Year Flood Plain



Site Drainage Analysis

WATERFLOW IN THE DOWNTOWN DISTRICT

As noted in the previous section, the downtown district of Grantsburg is situated near Memory Lake and the Wood River providing unique recreational opportunities and viewsheds for the area.

The site's topography slopes towards these two water bodies which means that any and all precipitation drains from the southern portion of the site to the northern portion bringing pollutants and suspended solids with it. Therefore, any future design recommendations should include provisions for effective stormwater management and potential harvesting without increasing or decreasing the established water flow into these resources.

Figure 2.37 - Downtown Grantsburg Drainage

LEGEND

Drainage Patterns

Site Opportunities

Opportunities

1. Downtown district **located along major community street** - South Pine Street

2. Traditional **main street structure** to act as strong foundation for revitalization

3. **Historic and strong organizations** including the Lions Club and Fiedler Ford, Inc.

4. Multiple intersections as possible **nodes of introduction** to the district

5. **Situated** along the **major corridor** to Crex Meadows State Wildlife Area

Figure 2.38 - Site Opportunities

Site Challenges & Constraints

Challenges & Constraints

1. **Lack of investment appeal** - deteriorating structures, run down buildings, and lack of infrastructure maintenance

2. **No tourist incentive to stop** - many rerouted around the downtown district on the way to Crex Meadows State Wildlife Area

3. **Lack of "Third Realm" atmosphere** - few green spaces or gathering spaces, limited pedestrian and street amenities

4. **Weak visual anchors** on Madison Avenue and South Pine Street

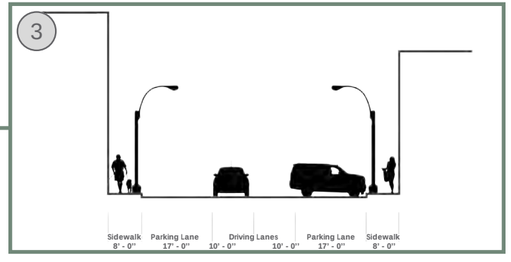


Figure 2.39 - Site Challenges & Constraints

DESIGN STRATEGIES

Figure 2.40 - Design Strategy Character Imagery

The Classic Main Street

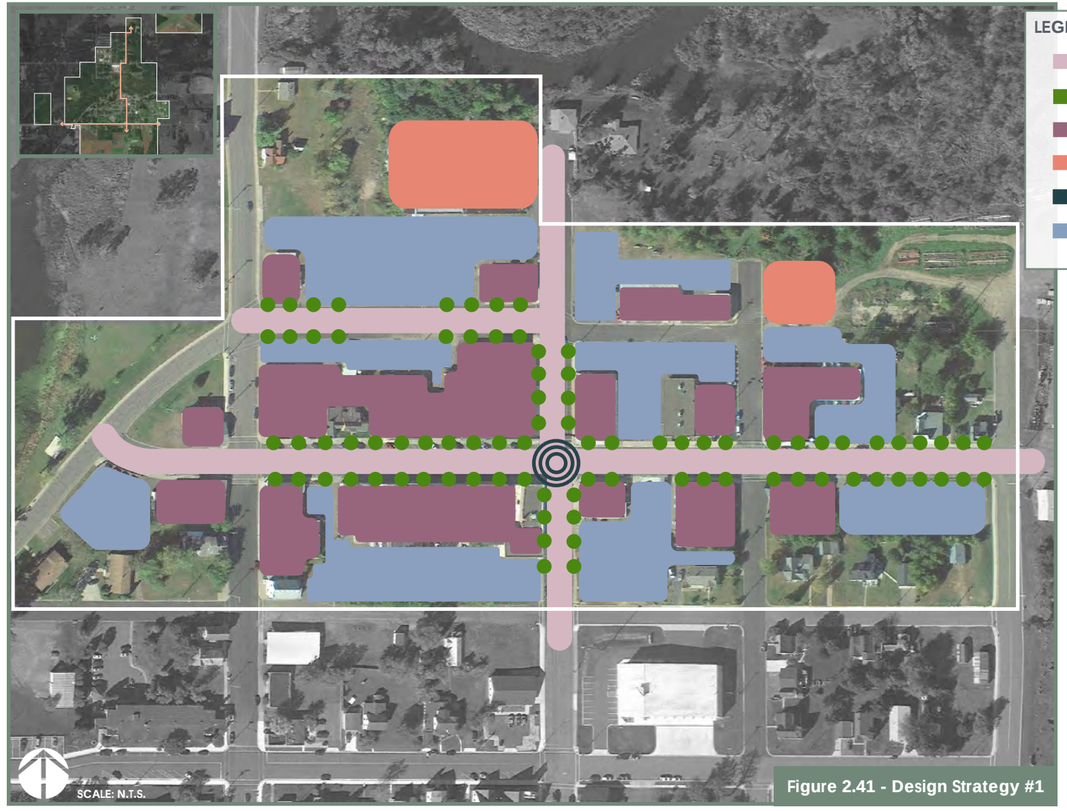
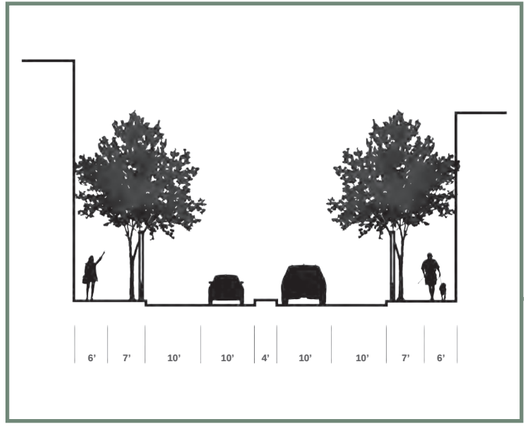


Figure 2.41 - Design Strategy #1

Economic Focus

- **Improve & Update** Building Facades
- **Retain Parking Capacity** for Commercial Access
- **Upgrade Sidewalk & Streetscape Amenities** to Encourage Pedestrian Visitation
- **Diversify Business Types** to Attract a Variety of Customers



The Public Main Street

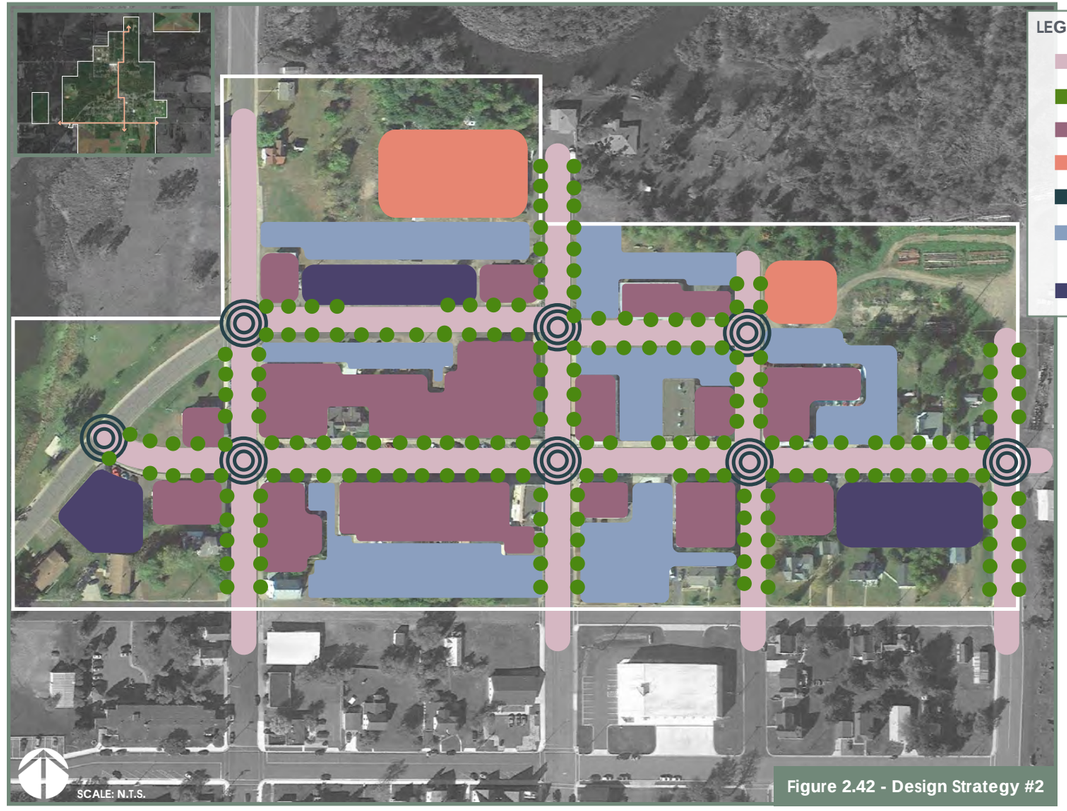
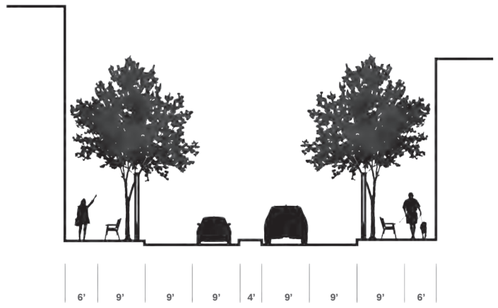


Figure 2.42 - Design Strategy #2

Social Focus

- **Install Quality Street Amenities** to Improve the "Third Realm" Atmosphere
- **Provide Public Gathering Spaces** to Strengthen Community Connections
- **Upgrade Sidewalk & Streetscape Amenities** to Encourage Pedestrian Lingering
- **Reorganize Parking** to Allow for More Store Frontage & Increased Pedestrian Safety



The Green Main Street

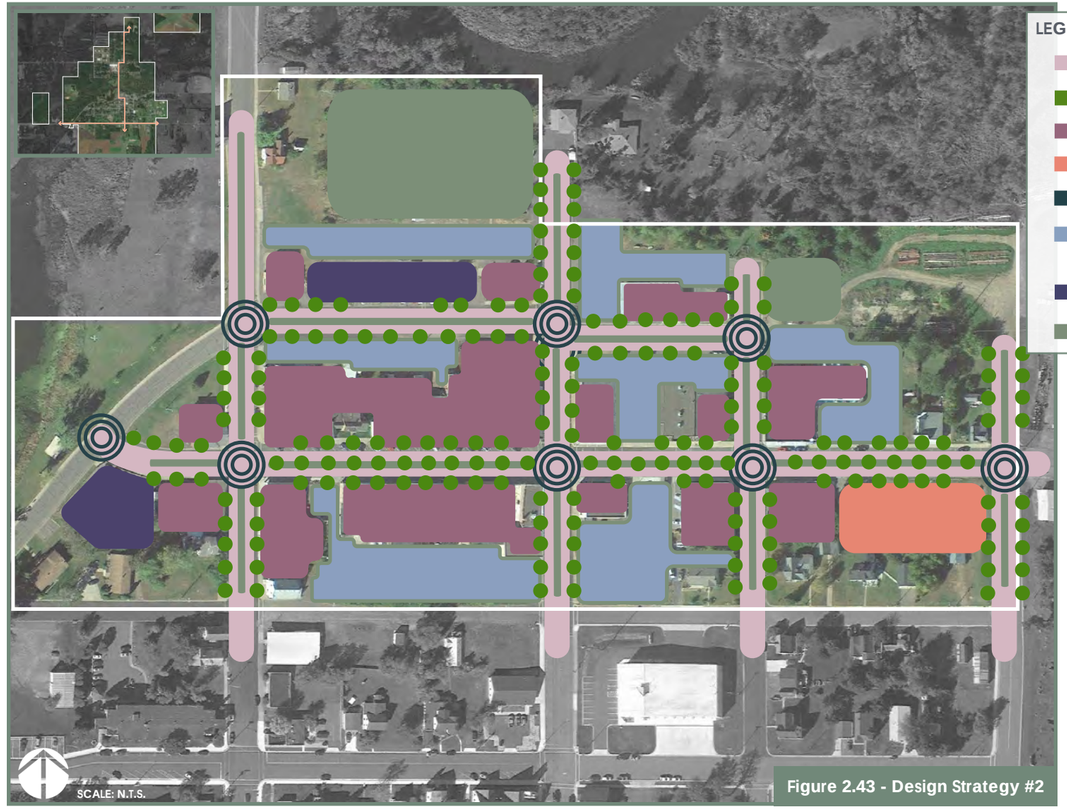
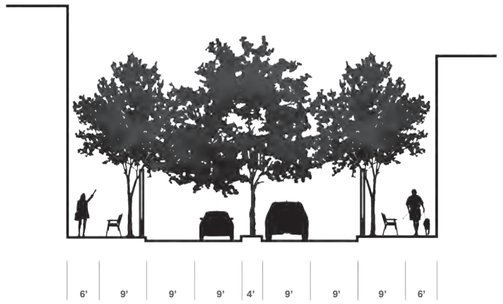


Figure 2.43 - Design Strategy #2

Environmental Focus

- **Increase** public green space throughout the site
- **Manage** stormwater through use of quality materials and planning
- **Emphasize & Install** quality vegetation
- **Provide** wildlife habitat



PART III

Development & Design

Master Plan

COMMUNITY SOLUTIONS

The community master plan highlights the major thoroughfares through the Village of Grantsburg, illustrating my major focus on community connectivity which will guide residents and visitors through the village from Highway 70 to the Crex Meadows State Wildlife Area.

As you will note on this map, all major roads and passages through the community intersect in the downtown district, which opens up a significant opportunity for increased traffic and therefore potential revenue for the area.

With this in mind we will move into design solutions for the Village of Grantsburg which deal with community revitalization, resource connection, and rebranding.

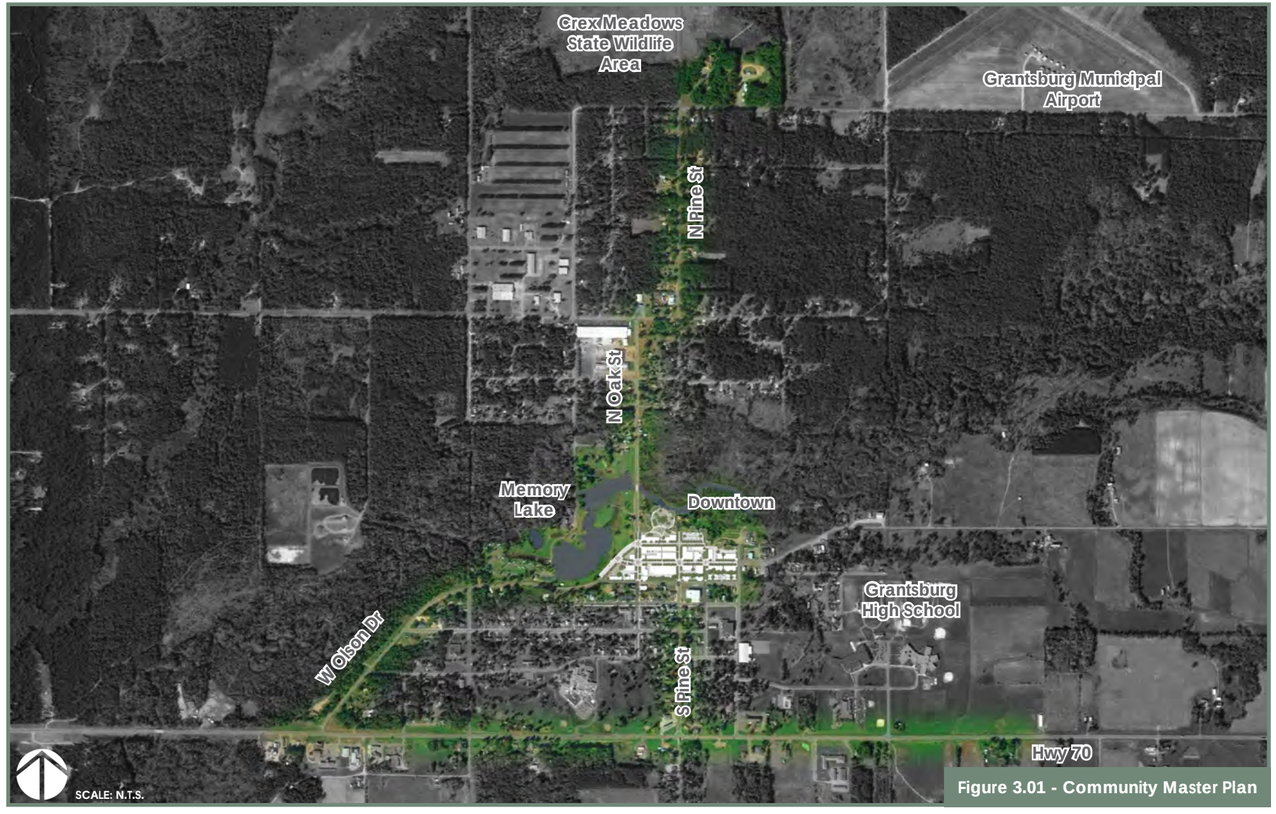


Figure 3.01 - Community Master Plan

Master Plan

COMMUNITY CONNECTIONS

The first portion of the community master plan focuses on the thoroughfare connections through the village. My solution seeks to provide cohesive wayfinding for residents and visitors with the use of the native vegetative typologies of the region in order to create a connected "vegetative story".

The first typology includes plant communities from the northern prairie plant palette, offering visitors a glimpse of what the landscape looked like when the village was first settled in the 19th century.

The second typology is focused around the parkway aesthetic, which blends native woodland species with ornamental plants to create a unique yet cohesively articulated landscape which will take residents and visitors from a more traditional residential setting into a densely forested natural area.

The third typology follows closely with the parkway aesthetic as we move along strictly residential roadways. Here residents will have more variety in ornamental plantings to create a more visually appealing drive through the community.

The fourth and final typology brings us full circle to the upland pine barrens vegetative typology which is reflective of the northern prairie typology, thus tying the northern and southern portions of the village together.

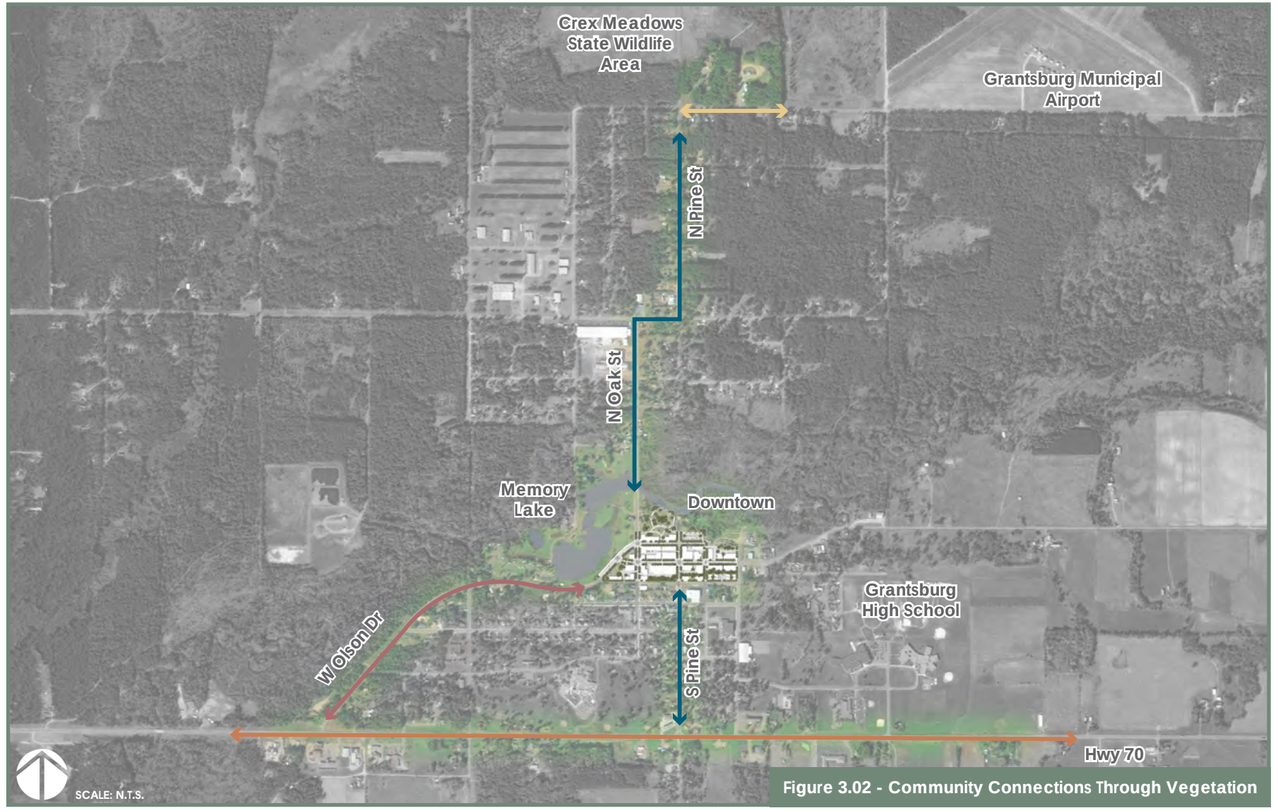


Figure 3.02 - Community Connections Through Vegetation

1. Northern Prairie Typology
2. Residential Parkway Typology
3. Residential Thoroughfare Typology
4. Upland Pine Barrens Typology

Master Plan

NORTHERN PRAIRIE TYPOLOGY

As mentioned along with the master plan of Grantsburg's vegetative typology connections, the northern prairie typology guides people back to the native plant communities which existed in the area before major settlement occurred.

The landscape as it stands now is a heavily mown shoulder of low diversity, with only a handful of grass species occupying huge swaths of land which could be created into a more inviting community gateway.

The proposed conditions include upwards of ten species and involves a four-season planting plan that provides visual interest all year round. The main colors of the seasons move from pink, blue, and lavender in the spring to yellow and orange in the summer to yellow and deep blue in the fall, beautifully reflecting the Wisconsin plant palette.

The following master plant schedule provides the scientific names and seed mix quantities for the overall planting scheme.

MASTER PLANT SCHEDULE

Grasses — 35%

Bouteloua gracilis (8%)
Schizachyrium scoparium (10%)
Koeleria macrantha (6%)
Stipa spartea (10%)

Herbaceous Perennials

Spring — 15%

Anemone patens
Lupinus perennis
Phlox pilosa
Geum triflorum

Summer — 20%

Rudbeckia hirta
Monarda fistulosa
Verbena stricta
Asclepias tuberosa

Autumn — 20%

Solidago speciosa
Liatris aspera
Aster laevis
Aster oolentangiensis

Cross-Seasonal — 10%

Dalea purpurea
Dalea candida

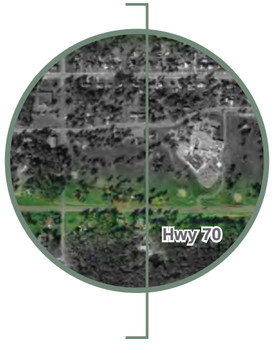
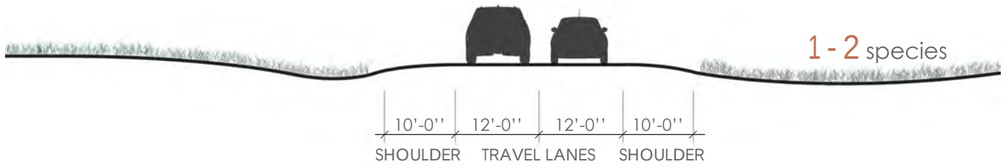
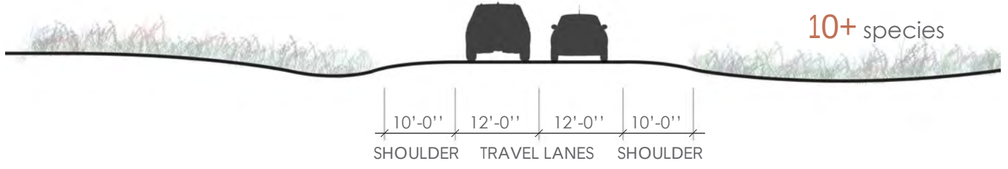


Figure 3.03 - Northern Prairie Typology Diagrams

Highway 70: Current Conditions



Highway 70: Proposed Conditions




Prairie Junegrass


Black-Eyed Susan


Lupine


Butterfly Weed


Sky Blue Aster

Master Plan

RESIDENTIAL PARKWAY TYPOLOGY

The residential parkway typology deals primarily with the western portion of the village along West Olson Drive which connects Highway 70 to Memory Lake Park.

Here, one side of the thoroughfare is along residential properties while the other transitions from park and grassland into more wooded areas and trails.

The goal of this typology is to create a more aesthetically pleasing drive as well as a more seamless transition from residential property to natural and recreation areas with a more mature treescape.

The following master plant schedule provides the scientific names, quantities and plant mixes for the overall schematic palette.

MASTER TREE SCHEDULE

Tree Species Selection

Acer saccharum
Celtis occidentalis
Gleditsia triacanthos var. inermis
Quercus alba
Quercus rubra
Platanus x acerifolia

MASTER PLANT SCHEDULE

Grasses & Groundcover

Carex stipata (10%)
Calamagrostis canadensis (20%)
Carex vulpinoidea (10%)
Carex stricta (10%)

50%

Herbaceous Perennials and Woody Shrubs

Shrubs

Myrica pennsylvanica
Aronia melanocarpa
Ilex verticillata
Amelanchier x grandiflora

10%

Spring

Zizia aurea
Phlox glaberrima
Geranium maculatum

5%

Summer

Pycnanthemum virginianum
Rudbeckia subtomentosa
Lobelia siphilitica

20%

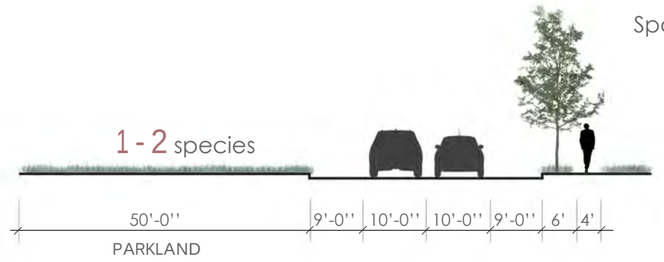
Fall

Aster novae-angliae
Helenium autumnale
Chelone glabra

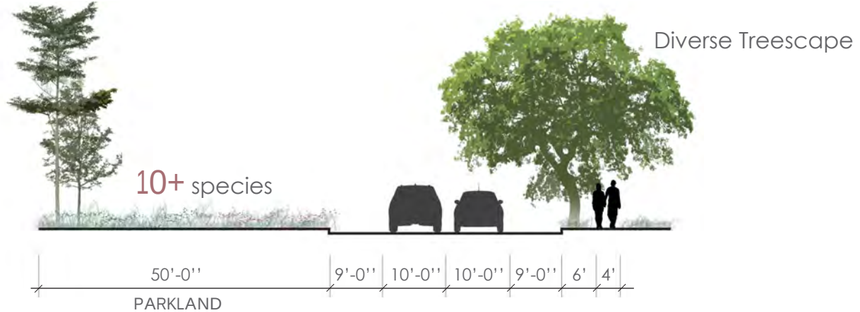
15%

Figure 3.04 - Residential Parkway Typology Diagram

West Olson Drive: Current Conditions



West Olson Drive: Proposed Conditions




Blue Joint Grass


Golden Alexander


Serviceberry


Blue Cardinal Flower


Turtlehead

Master Plan

RESIDENTIAL THOROUGHFARE TYPOLOGY

This typology occurs along all major thoroughfares that feature residential properties on either side. Current conditions demonstrate a lack of plant diversity and treescape strength which provide no significant sense of place for the village roads.

Proposed conditions include a diverse selection of species that can tolerate heavy traffic conditions and severe weather as well as a stabilized treescape with a larger selection of species.

The following master plant schedule provides the scientific names, proportional quantities, and plant mixes for the overall schematic palette.

MASTER TREE SCHEDULE

Tree Species Selection

Acer saccharum
Celtis occidentalis
Gleditsia triacanthos var. inermis
Quercus alba
Quercus rubra
Platanus x acerifolia

MASTER PLANT SCHEDULE

Grasses & Groundcover

Sporobolus heterolepis 'Tara' (10%)
Carex stricta (5%)
Calamagrostis brachytricha (15%)
Boutelous gracilis 'Blonde Ambition' (10%)

40%

Herbaceous Perennials & Woody Shrubs

Spring

Baptisia australis
Amsonia 'Blue Ice'
Allium atropurpureum

10%

Summer

Allium 'Summer Beauty'
Nepeta racemosa 'Walker's Low'
Echinacea purpurea
Asclepias incarnata

20%

Autumn

Symphyotrichum oblongifolium 'October Skies'
Perovskia atriplicifolia
Chelone glabra

20%

Other Options

Hosta
Stonecrop Sedum
Achillea

10%

Figure 3.05 - Residential Thoroughfare Typology Diagram

North Pine Street: Current Conditions

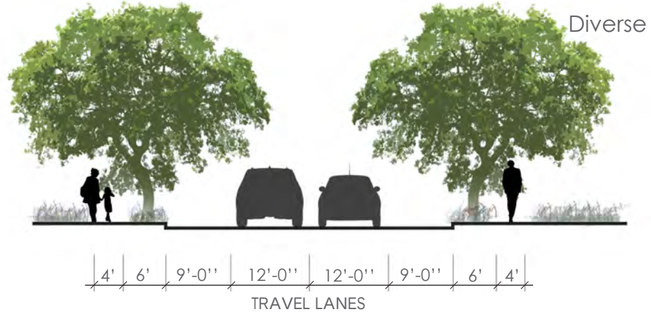
1 - 2 species

Sparse Treescape

North Pine Street: Proposed Conditions

5 - 10 species

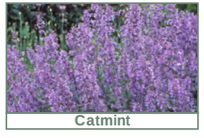
Diverse Treescape




Tussock Sedge


Allium


Swamp Milkweed


Catmint


Hosta

Master Plan

UPLAND PINE BARRENS TYPOLOGY

The Upland Pine Barrens typology deals primarily with the roadway connection to the Crex Meadows State Wildlife Area. Here, the vegetation is currently a mix of worn out grasses which are mowed for maintenance purposes.

The proposed selection provides a larger mix of species which communicate with the Crex Meadows area and ties the northern portion of the village to the southern portion as the plant palettes speak to one another. This will create a subtle conclusion to the vegetative connections between the village resources and attractions

The following master plant schedule provides the scientific names, relative quantities, and plant mixes for the overall schematic palette.

MASTER PLANT SCHEDULE

Grasses — 40%

Bouteloua curtipendula (10%)
Sporobolus heterolepsis (10%)
Schizachyrium scoparium (10%)
Sorghastrum nutans (10%)

Herbaceous Perennials and Woody Shrubs

Spring — 15%

Ceanothus americanus
Zizia aptera
Viola pedatifida

Summer — 20%

Agastache foeniculum
Epilobium angustifolium
Heliopsis helianthoides

Autumn — 15%

Aster pilosus
Solidago rigida
Liatris aspera

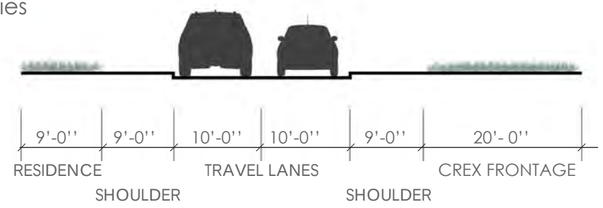
Cross-Seasonal — 10%

Dalea purpurea
Dalea candida

Figure 3.06 - Upland Pine Barrens Typology Diagram

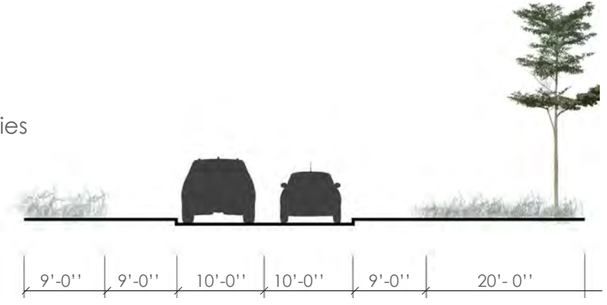
East Crex Avenue: Current Conditions

1 - 2 species



East Crex Avenue: Proposed Conditions

10+ species




Purple Prairie Clover


Indiangrass


Frost Aster


Anise Hyssop


New Jersey Tea

Master Plan

COMMUNITY GATEWAYS

Figure 3.07 - Community Gateways

As it stands, the entry roadways into the community of Grantsburg highlight little or no distinct features of the area, leading visitors to unknowingly pass by the few entrance opportunities into the village.

My solution provides a more visually dominant signage feature which showcases some of the distinct features of the region and provides visitors with a sense of place along the state highway.

Current

Proposed

Figure 3.08 - Signage Opportunities

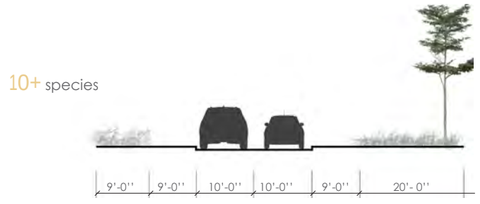
Master Plan Phasing Strategy

PHASE I : SIGNAGE & NORTHERN PRAIRIE TYPOLOGY

As part of Phase I, Highway 70 will become the main focus as it is the primary access point into the village. The signage opportunities should be installed to begin the process of greater community "advertising" and seed mix planting will need to begin as it will take a few years to fully establish itself.

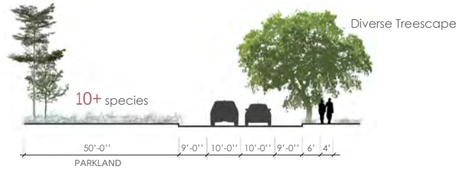
PHASE II : UPLAND PINE BARRENS TYPOLOGY

Phase II includes the planting mix installation near the Crex Meadows State Wildlife Area as it is the primary natural resource attraction for the community and will also require a few seasons to fully establish itself and provide a greater entrance transition into the DNR managed property.



PHASE III : RESIDENTIAL PARKWAY TYPOLOGY

Phase III will focus on West Olson Drive as it leads to another main attraction for the community - Memory Lake Park. After this phase is completed, all major thoroughfares that connect to the area's main attractions will be vegetatively enhanced.



PHASE IV : RESIDENTIAL THOROUGHFARE TYPOLOGY

Phase IV includes the main residential thoroughfares of South Pine, North Oak, and North Pine streets as they lead residents and visitors along the main community axes. This will provide the final connection to the area's resources and provide a strong foundation on which the community can further enhance adjacent streetscapes if desired.

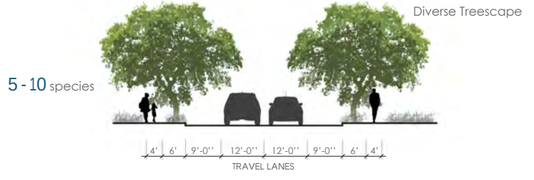


Figure 3.09 - Master Plan Phasing Diagrams

Site Plan

CURRENT CONDITIONS

Current site conditions see a landscape that is covered in impervious surfaces that increase the amount of stormwater that makes its way into the surrounding water resources and decreases the overall water quality of the district.

The downtown also has an abundance of widely dispersed parking opportunities which takes land away from potential community gathering spaces and breaks up downtown blocks which could provide greater structure along the main avenue.

The large tract of land along the northern portion of the site is located next to the Wood River yet provides no real opportunity for residents and visitors to interact with the waterfront. It is also the site of an old industrial operation which now sits as a brownfield area and attracts dangerous wildlife to a populated district.

In terms of infrastructure quality, many of the buildings are in need of updating to increase the curb-appeal for the local businesses in the district. The sidewalks are also quite narrow and the downtown is dominated by vehicular traffic.

The vegetative quality is also quite low as trees are absent from the streetscape, however there is opportunity along the outlying blocks for increased tree structure and quality along the hillsides and waterfront areas.

Figure 3.10 - Current Site Conditions

Site Plan

PROPOSED CONDITIONS

Proposed conditions see the densification of the district to accommodate mixed-use buildings as well as a variety of new housing opportunities. In order to offset this new narrative, greenspaces and public gathering spaces have been added in strategic locations that take full advantage of the resources and attractions that are a part of the downtown area.

The pedestrian is prioritized in this new plan, with sidewalks widened, curb bumpouts added at major intersections, and separated walkways provided to new community assets including the community and stormwater park to the north of the site.

Parking capacity has been retained with the reorganization of street parking as well as the addition of parking in building backlots and the new parking feature located next to the community park.

The treescape has been updated with the addition of street trees along all major corridors and along the steep southern slopes of the site.

In terms of cultural and community revitalization efforts, the current art corridor has been expanded and extended to connect Madison Avenue to the Community & Stormwater Park, plazas have been added at currently underused locations, and pocket parks have been installed to break up larger building blocks and provide areas of respite along the busy streetscape.

Illustrations detailing the exact functions of each new feature are included in the next few sections of this document and will help visualize the full potential of this redeveloped district.

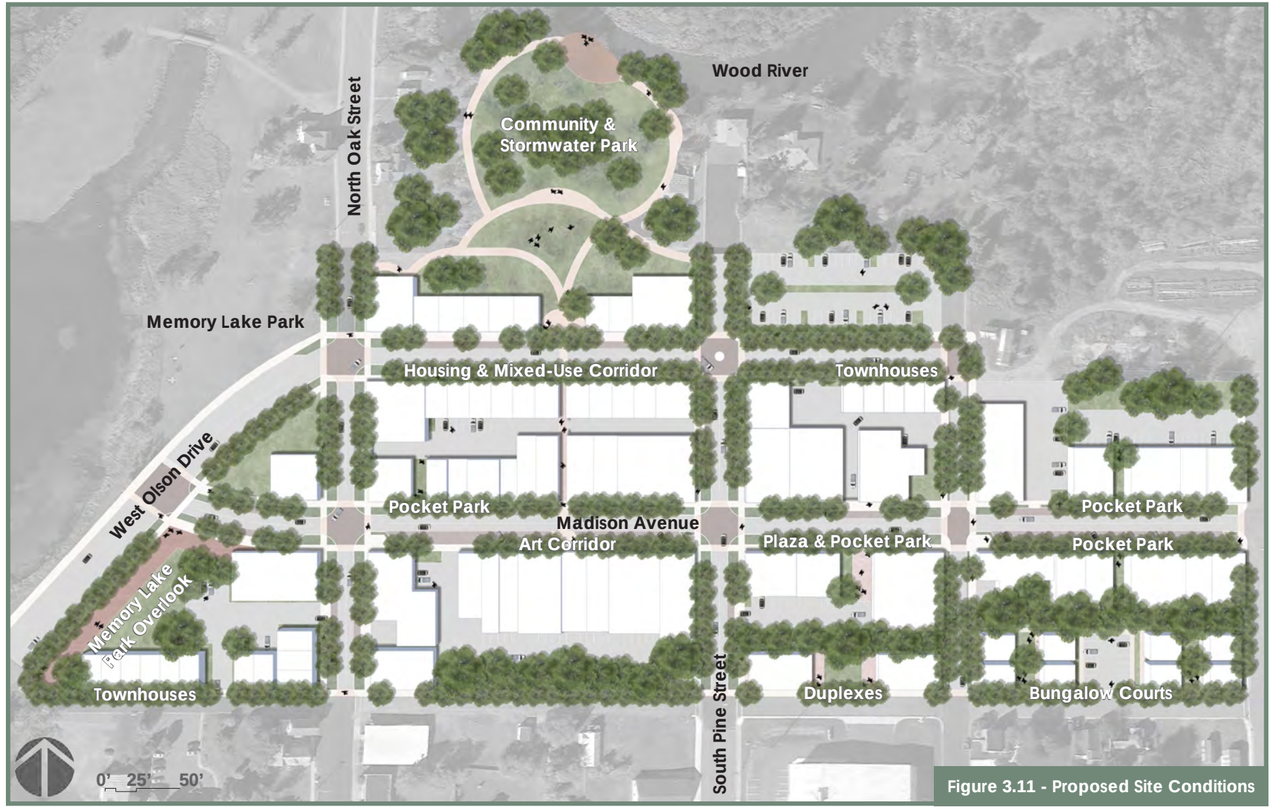


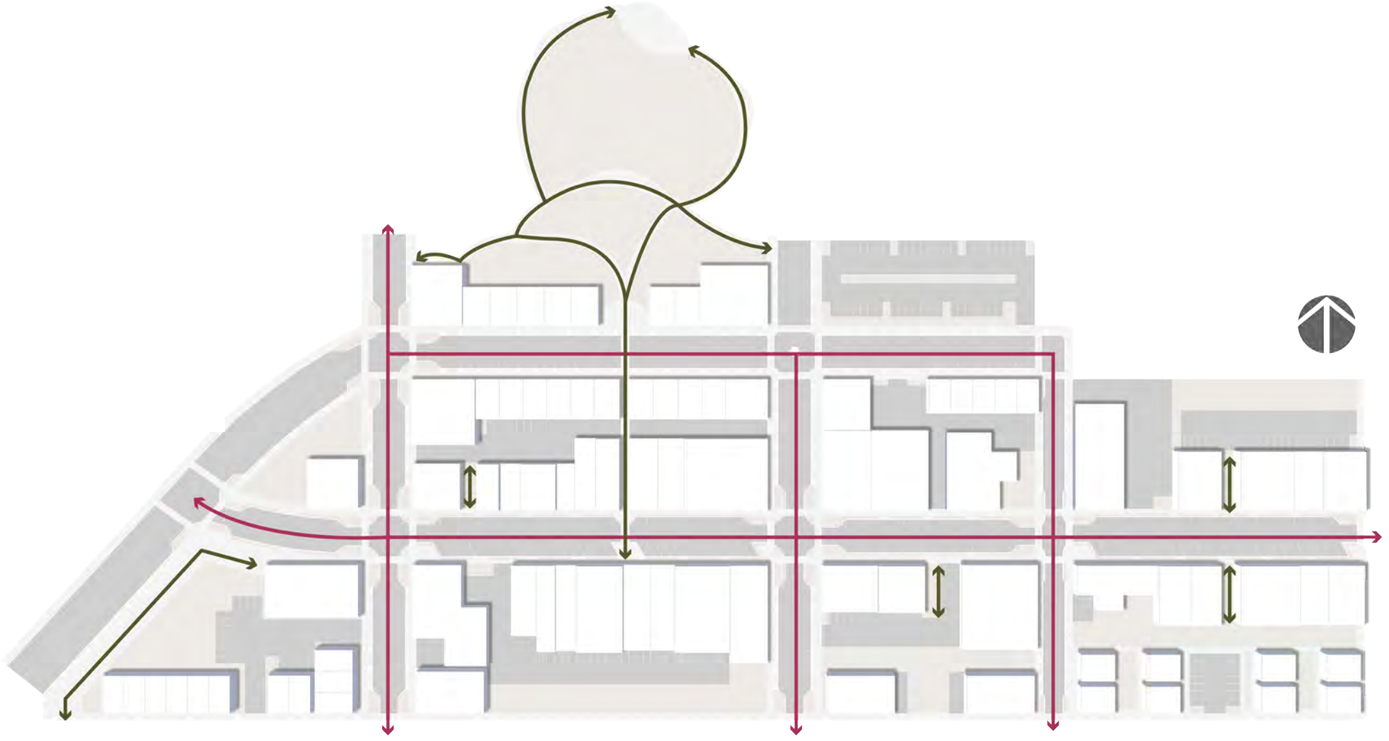
Figure 3.11 - Proposed Site Conditions

Site Plan

PROPOSED CIRCULATION PATTERNS

Circulation patterns in the downtown district prioritize the vehicle over the pedestrian. In this proposal, pedestrian opportunities are increased with the addition of separated walkways, pocket parks, as well as a new connection from Madison Avenue to the new community park along the Wood River.

Overall, the traffic patterns remain the same, with small additions made along the northern potion of West Olson Drive to connect the roadway back to Madison Avenue in several new intersections.



PROPOSED CONDITIONS

Vehicular Circulation

Pedestrian Circulation

Figure 3.12 - Proposed Circulation Patterns

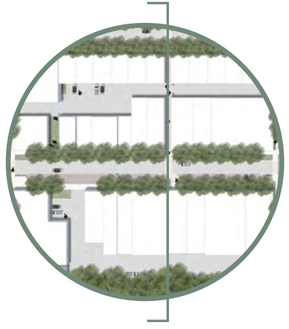
Site Plan

MADISON AVENUE STREETSCAPE UPDATES

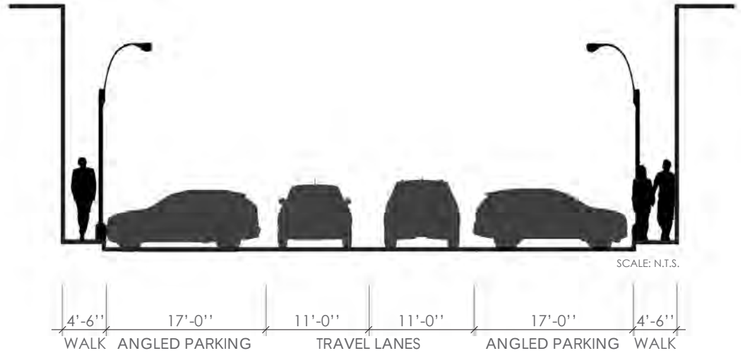
One of the major concerns in the downtown district is the lack of pedestrian amenities and the focus on the vehicular realm. With this redesign, the pedestrian becomes more of the focus to provide a stronger balance between the needs of both users.

As seen in the following illustrations and diagrams, the current conditions feature utilitarian lighting and narrow sidewalks which do not facilitate pedestrian lingering in the district. The roadway is very wide as well with parking on either side, thus disconnecting one side of the street with the other.

My proposal accentuates the pedestrian realm with a vegetative edge which provides greenery to the area while also creating a natural safety buffer between the sidewalk and the streetscape. Human-scale lighting features are added and parking is restructured to shorten the distance between both sides of the street. Travel lanes are also diminished to slow traffic and create an overall safer and more inviting space.



Madison Avenue: Current Conditions



Madison Avenue: Proposed Conditions

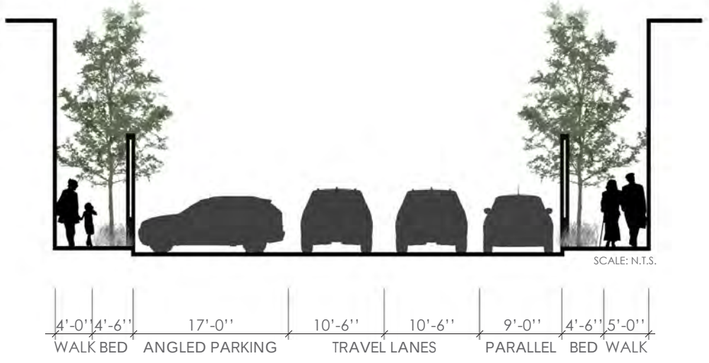


Figure 3.13 - Madison Avenue Updates Diagrams

Site Plan

MADISON AVENUE STREETSCAPE UPDATES

This illustration visualizes the updated character of Madison Avenue. The street verges provide increased vegetative quality in the area, allow for safer separation of the pedestrian from the vehicular realm, and provide space for an improved treescape.

Angled parking has been retained in several sections of Madison Avenue to maintain parking capacity for the business located here, and intersections have been reorganized to favor the pedestrian over the car and increase overall safety in the district.

Paving materials also change to visually separate the pedestrian realm, the parking areas, and the travel lanes of Madison Avenue.

Space is also allotted between the planting verges to allow for potential seating and lighting nodes.

Figure 3.14 - Madison Avenue Looking West

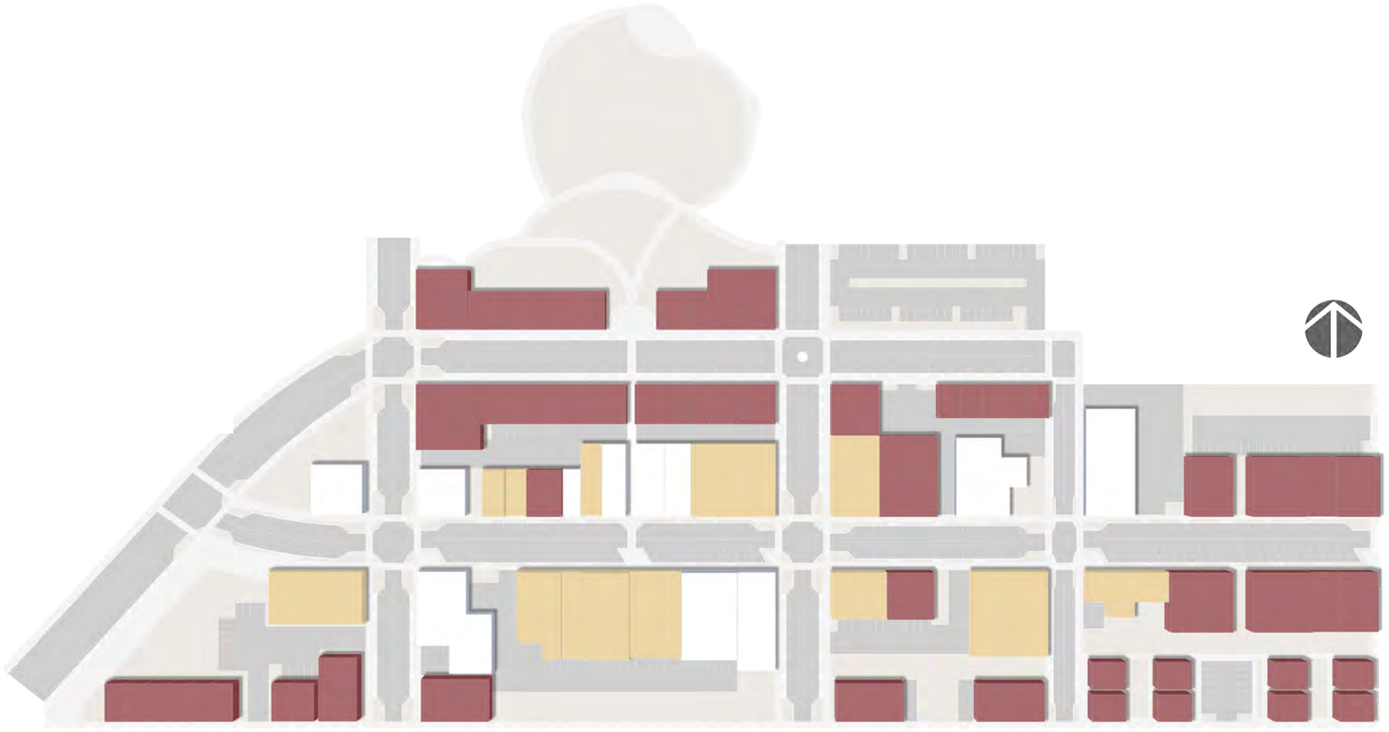
Site Plan

PROPOSED BUILDING & DEVELOPMENT

My proposal for the district includes quite a bit of infill development which will provide multiple opportunities for new commercial and living space as well as increase the usability of previously underutilized landholdings.

The proposal also allows for the revitalization and updating of several already-existing buildings which currently provide needed structure to the downtown district but have deteriorated somewhat over the last few decades.

Potential revitalization of these existing building facades includes opening up the storefronts with larger windows and refurbishing the architectural detail of these frontages to provide a more visually appealing facade and encourage pedestrian lingering and visitor attraction. Creating facade guidelines will be essential to ensuring organized uniformity of the downtown character while allowing for some level of creative expression.



PROPOSED CONDITIONS

Existing Buildings

Updated Buildings

Proposed Buildings

Figure 3.15 - Proposed Building & Development

Site Plan

MADISON AVENUE CHARACTER UPDATES

Madison Avenue is one of the oldest roadways in the community and was at one time a great example of the traditional downtown structure. Today, after years of construction and redevelopment, many of the older buildings have lost some of their unique characteristics that defined downtown main streets at the turn of the century.

My proposal looks to those historic characteristics as a way to revitalize the Madison Avenue streetscape and restore the character of this rural downtown district. One thing to note, however, it that the goal of this proposal is not to mimic historic character for the sake of returning to that time period but rather to look to it as an inspiration for future revitalization.

New buildings are not to be built in the 20th century style but rather they should thoughtfully incorporate their unique features into their design in order to demonstrate the community's commitment to its future while honoring its past.

One great example of this building revitalization is noted with the Northwestern Wisconsin Electric Company. The past structure of the building allowed for open windows and unique architectural detailing. Today, it is a blocky building which provides an uninviting exterior for pedestrians to admire. In our efforts to reinvigorate the downtown district, the building's previous aesthetic could inform its future revitalization and become the catalyst for further storefront redevelopment along Madison Avenue.

Figure 3.16 - Madison Avenue Building Character Images

Updated Building Examples : Northwestern Wisconsin Electric Company

Current Conditions

Potential Revitalization - Look to History

General Building Character

Site Plan

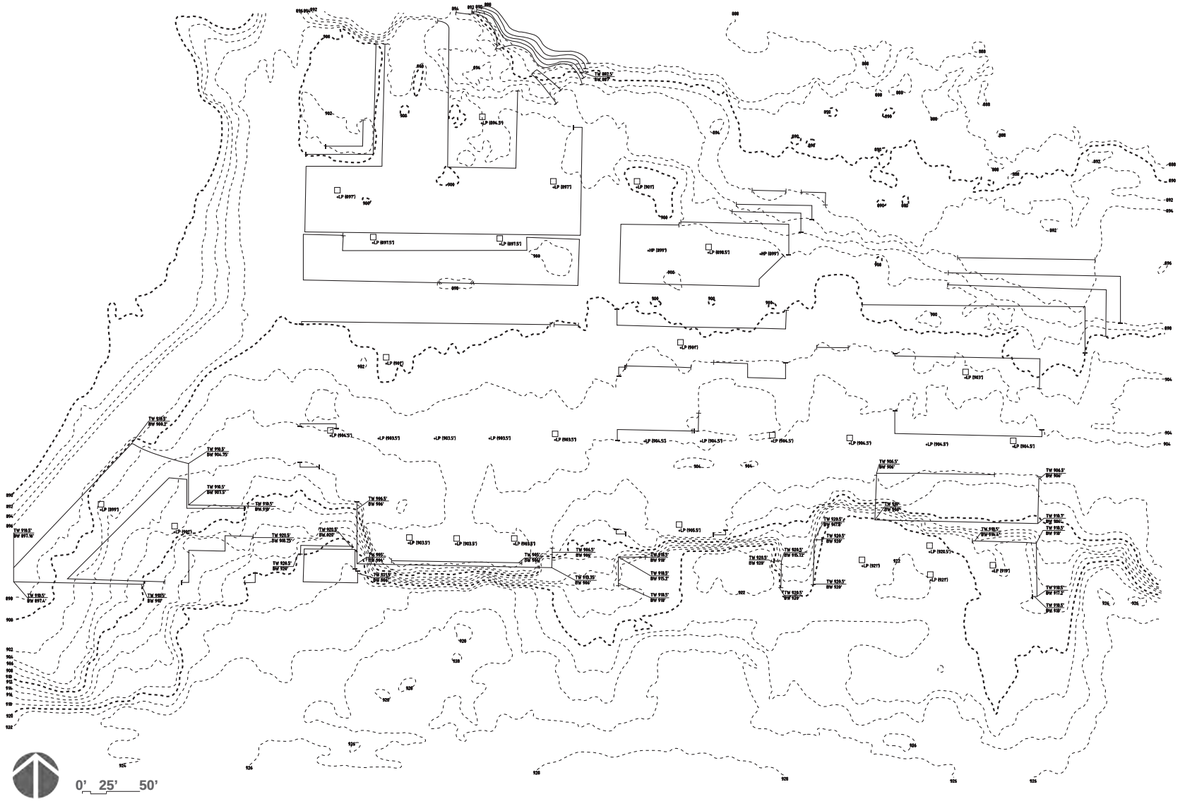
GRADING PLAN

In order to accommodate infill development in the downtown district, a new grading plan will need to be accounted for. This particular plan sees the leveling of Madison Avenue to provide a more even grade of about 3%, which will also increase accessibility for less able-bodied users.

Also of note is the massive grading plan envisioned for the Memory Lake Park Overlook to the southwest of the site, which elevates the new gathering space above West Olson Drive by about ten feet.

The new community and stormwater park also sees the grade leveled to about 2% to increase accessibility and slow potential erosion into the Wood River.

One final note includes the addition of several retaining walls along the steeper slopes on the southern portion of the site to stabilize those wooded lots and provide a more even landscape for the new housing opportunities located there.



PROPOSED CONDITIONS

Proposed Contours

Existing Contours

Figure 3.17 - Downtown Grading Plan

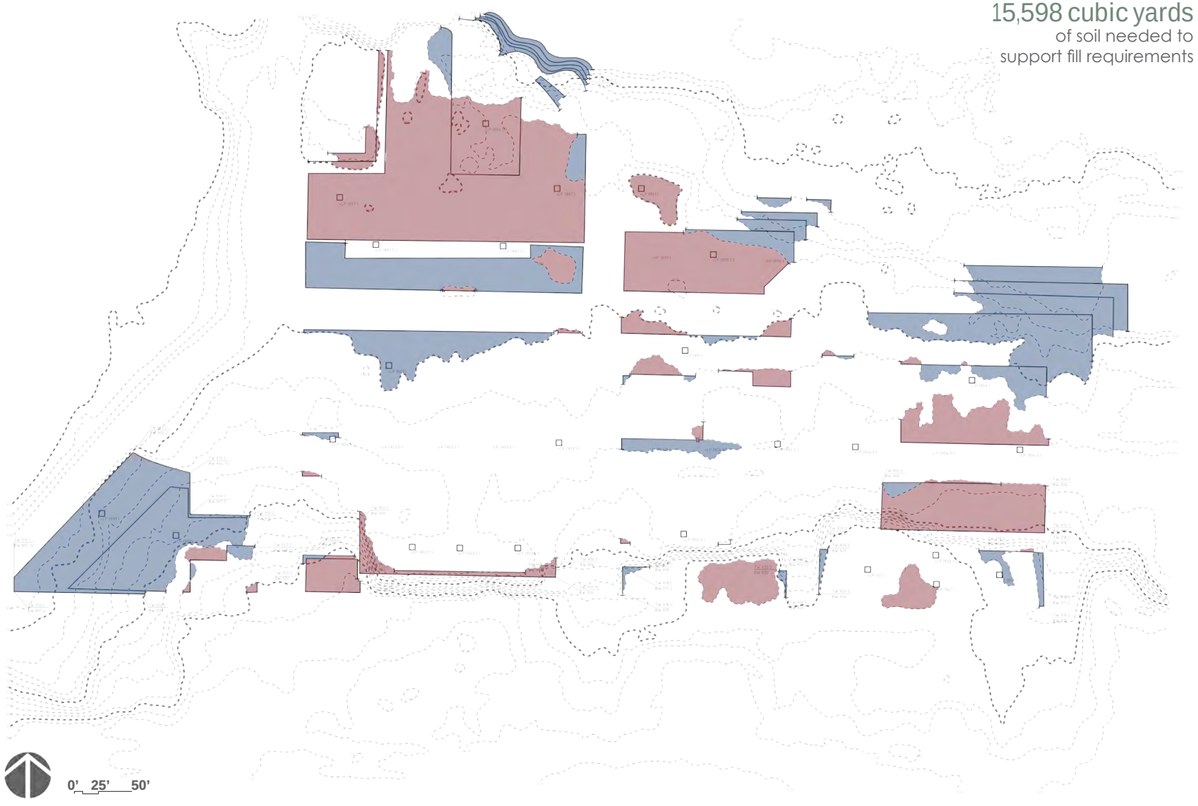
Site Plan

CUT & FILL PLAN

The cut and fill requirements are illustrated here to provide a better idea of what the previous grading plan entails. For instance, in order to provide an even, elevated site for the new Memory Lake Park Overlook, soil will need to be brought in and compacted in this area. The new community park will also need soil to be cut in order to provide a more even grade down to the waterfront, and grades will need to be leveled for new building developments across the site.

Due to the excess of cut needed to support the compacted fill requirements, 15,598 cubic yards will need to be imported on to the site. This will then provide balance to the grading plan.

A potential for these import requirements could be fulfilled with excavation material from any and all new building foundations.



PROPOSED CONDITIONS

Cut Soil

Fill Soil

Proposed Contours

Existing Contours

Figure 3.18 - Downtown Cut & Fill Plan

Site Plan

PROPOSED BUILDING USES

The current downtown conditions provide for primarily commercial opportunities, with many of the potential upper-level apartments in need of refurbishment. There are some housing opportunities that surround the district, however they are primarily single-family homes and a selection of deteriorating duplexes which block views to Memory Lake Park.

My solution allows for the diversification of building uses and creates a more even balance between mixed-use, commercial, and rental housing opportunities. The combination of these elements will help promote downtown lingering as well as attract a younger population to the area with a more affordable, flexible housing selection.

22 Mixed-use developments and retrofits

21 Commercial developments and retrofits

44 Housing opportunities

- 33 Townhomes
- 8 Bungalows
- 6 Duplex Units

PROPOSED CONDITIONS

Mixed-Use

Commercial

Residential

Figure 3.19 - Proposed Building Uses

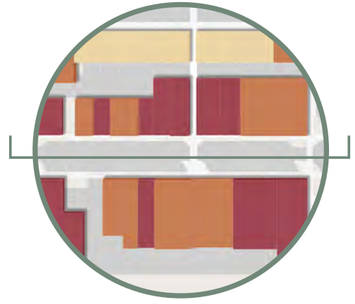
Site Plan

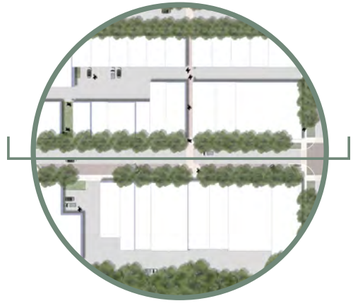
EXTERNAL BUILDING USES & SPACES

Oftentimes when we think of building use and development, we restrict ourselves to the internal utilities. My solution, however, also focuses on the exterior potential of a building which further contributes to the sense of place within a community.

This art alley is an expansion of the current conditions which are maintained by the area's high school art students. This more permanent installation provides the downtown district with a distinct cultural feature and allows for another space of community intermingling and connects Madison Avenue to the new community park on the northern part of the site.

Figure 3.20 - Local Art Alley Looking North





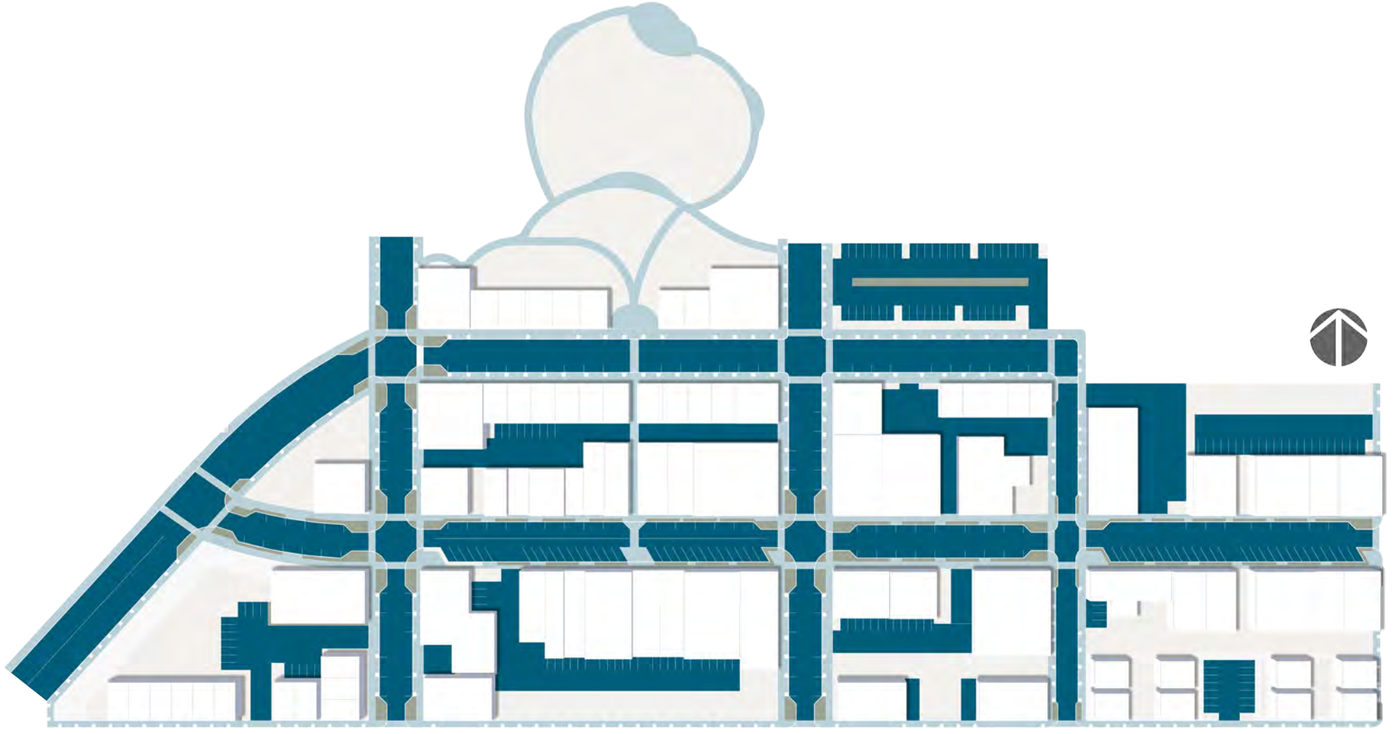
Site Plan

PROPOSED STORMWATER MANAGEMENT SYSTEMS

Current site conditions allow for almost no stormwater capture and filtration before running off into the surrounding water resources in the district. My solution calls for a total redesign of this situation, with all hardscapes and planting verges contributing to both filtration and infiltration during heavy storm events.

The following pages provide construction details that feature level spreaders to slow water as it moves through these new subsurface systems.

Final stormwater calculations for the district are located in the Appendix of this document.



PROPOSED CONDITIONS

Pathway Subsurface System

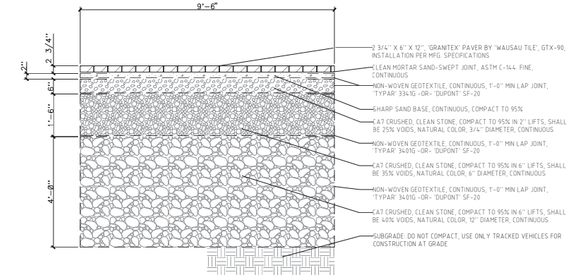
Road Subsurface System

Greenscape Capture

Figure 3.21 - Proposed Stormwater Management Systems

Site Plan

PROPOSED STORMWATER MANAGEMENT CONSTRUCTION DETAILS

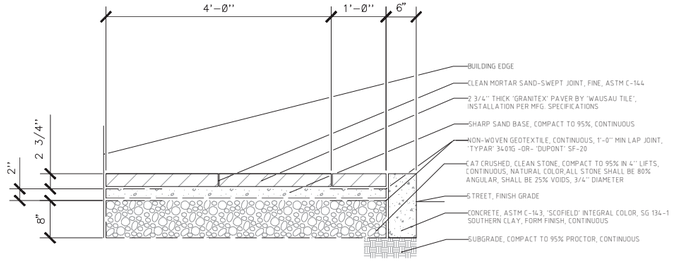


A PARKING LANE W/LEVEL SPREADERS
1/2" = 1'-0"

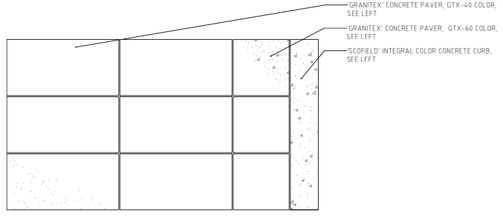
Each detail visualized here includes elements of stormwater management with level spreaders placed beneath both the hardscape surfaces of the parking lanes and sidewalks as well as the planting trenches along Madison Avenue.

Other elements of note include the use of concrete pavers on the hardscapes to provide a more inviting, sensible, and economically feasible solution to the current road and sidewalk conditions.

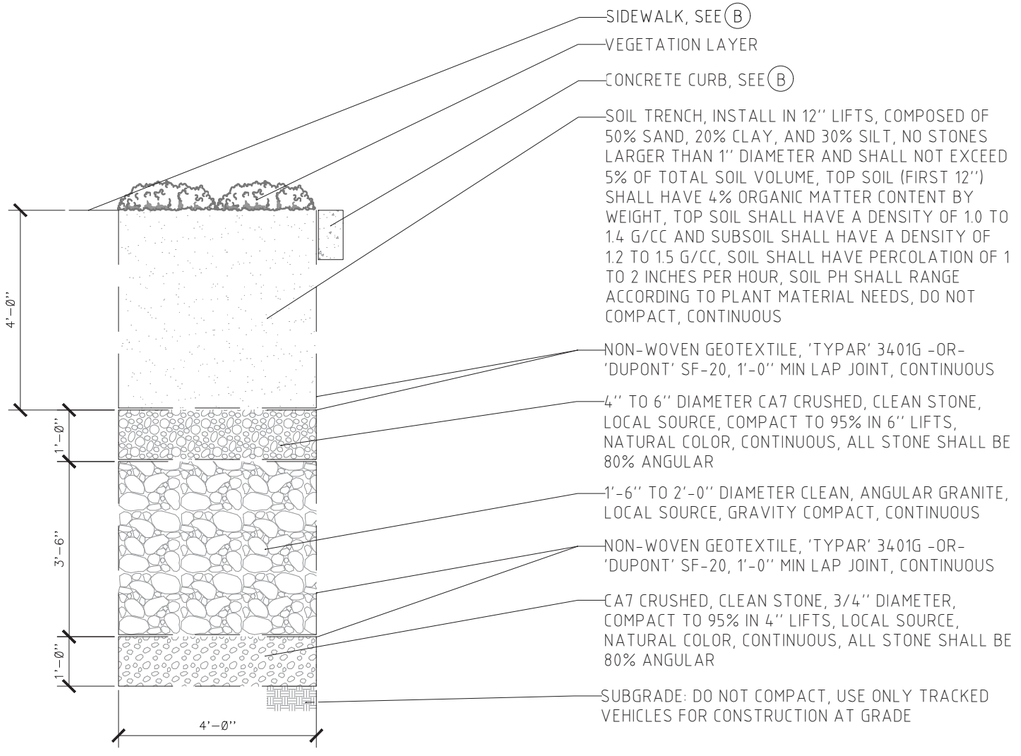
Note as well the ample root space provided with the planting trench for adequate tree and herbaceous root development.



B CONCRETE PAVER WALK - MADISON AVENUE
1 1/2" = 1'-0"



B PLAN VIEW PAVING PATTERN
1 1/2" = 1'-0"



C PLANTING TRENCH
3/4" = 1'-0"

Figure 3.22 - Stormwater Construction Details A - C

Site Plan

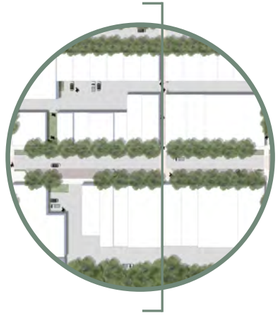
PROPOSED STORMWATER MANAGEMENT CONSTRUCTION DETAILS

This illustration details the three subsurface systems working together to provide maximum stormwater filtration during a heavy storm event.

The stormwater pre-construction total amounted to 91.69 cubic feet of water running off site in one second. This is mainly due to the high levels of impervious surfaces located on site. I was able to reduce this number to 57.13 cubic feet per second by incorporating pervious materials and enhancing greenspace structure, thus reducing the overall runnoff from the downtown district by 34.58 cubic feet per second.

Final calculations determined that during a 100-year storm event, which can drop upwards of 6'' of water over the course of twenty-four hours, my subsurface systems would be able to capture and filter about 11 million gallons of water over a twelve hour period.

This solution will vastly increase water quality in and around the downtown area and contribute to the overall health of water resources in the community.



Stormwater PreQ: 91.69 cfs

Stormwater PostQ: 57.13 cfs

- 34.56 cfs

Total Stormwater Captured:
11,255,609 gallons / 12 hours

Figure 3.23 - Proposed Stormwater System Results

Site Plan

TREESCAPE IMPROVEMENTS

The current downtown treescape conditions include large clumps of trees along both the waterfront as well as near the residential properties to the south. My proposal completely changes this narrative with the addition of over 300 trees which includes complete streetscape coverage as well as the diversification of species in the new community park and along the southern hillsides and residential areas.

As you'll note, the dominant tree species all have distinct features which complement each other and provide visual interest all year round.

The planting plan featured here details exact species placement, with Hackberry and London Planetree dominating Madison Avenue and mixes of Miyabe Maple and Honeylocust along the adjacent streets. The new waterfront park features Northern Red Oak, Amur Cork Tree and River Birch among other species.

A more detailed plant schedule of the downtown treescape is located in the Appendix of this document and provides exact quantities of species.

Figure 3.24 - Treescape Improvements

Dominant Tree Species


Hackberry


Honeylocust


Northern Red Oak


London Planetree


Miyabe Maple


Amur Cork Tree 'Longenecker'


River Birch

311 trees planted

7 families

8 genus

13 species

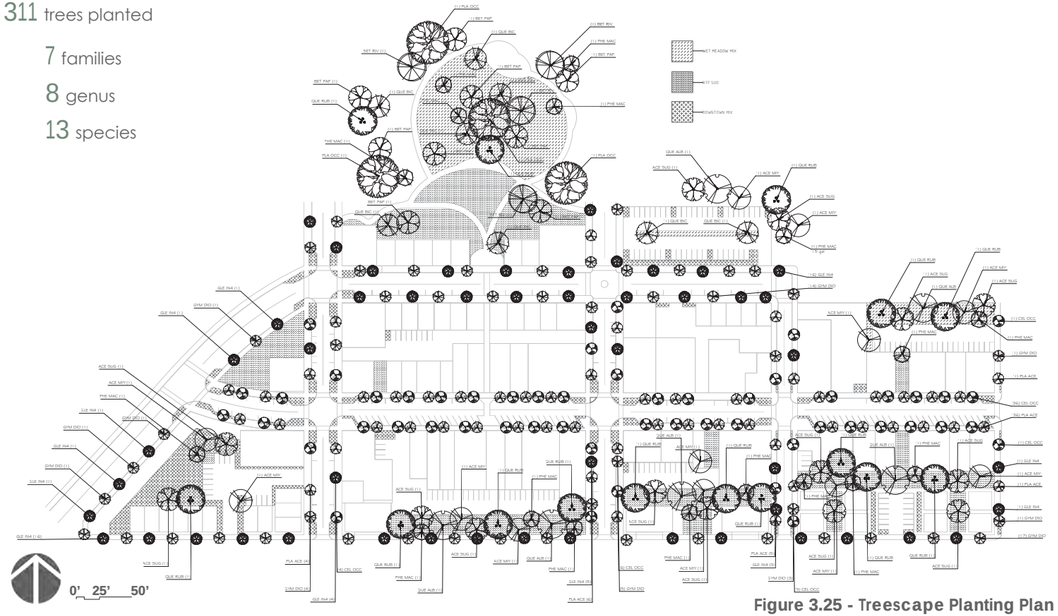


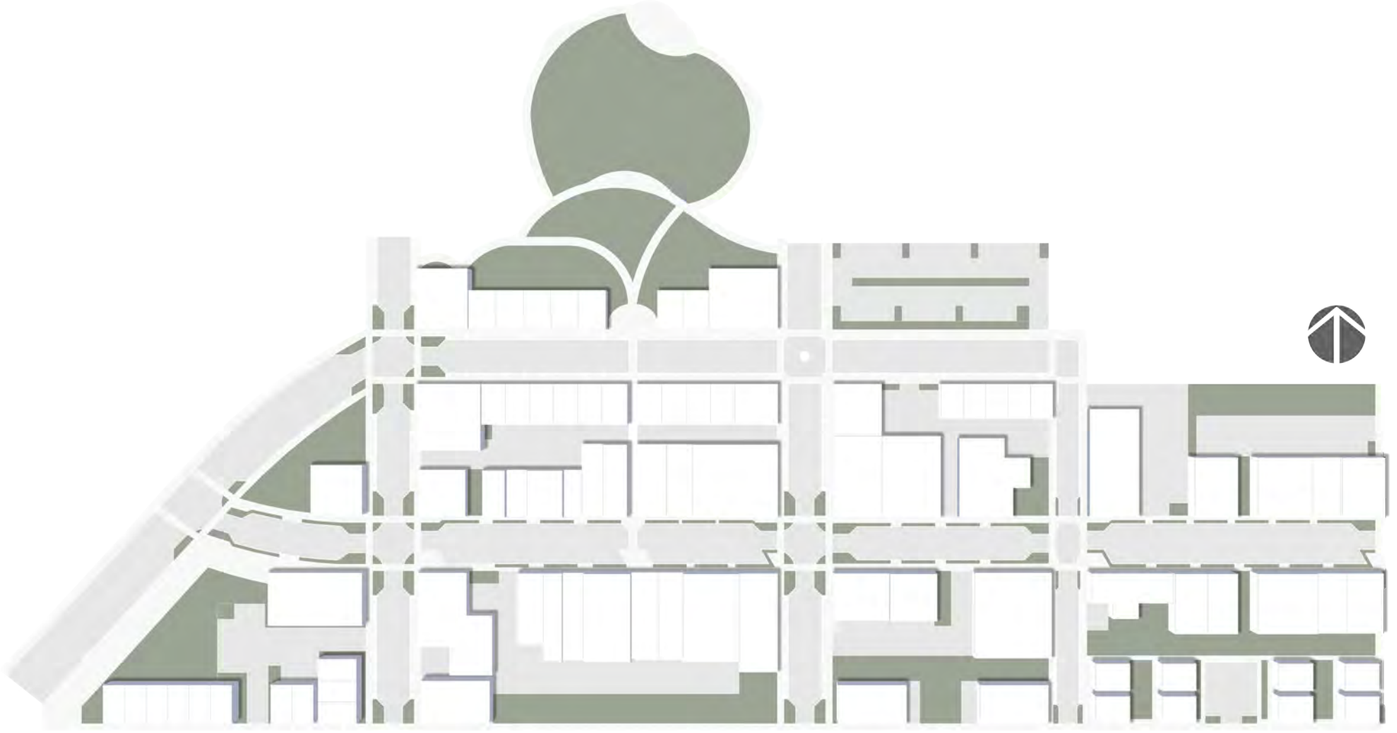
Figure 3.25 - Treescape Planting Plan

Site Plan

PROPOSED GREEN & OPEN SPACE

Greenspaces in the downtown district are few and far between. My solution greatly increases this resource with the installation of pocket parks and plazas, the Memory Lake Park Overlook, the Community and Stormwater Park to the north, as well as the streetscape verge plantings and hillside buffers between the downtown commercial center and the residential opportunities to the south.

These greenspaces include both play areas for children in the community as well as relaxing nooks for respite opportunities and diverse planting mixes which will create a distinct vegetative and open space character for the district.



PROPOSED CONDITIONS

Redeveloped Open Space

Figure 3.26 - Proposed Green & Open Space

Site Plan

PUBLIC OPEN SPACE DESIGN

This image visualizes the new Memory Lake Park Overlook located near the Lion's Club building on the western portion of the site. Current conditions see an informal parking lot along West Olson Drive.

Proposed conditions see the elevation of the landscape to provide a new vista along this prime piece of property and allow for safer pedestrian opportunities as well as a new community gathering space.

The landscape is also updated to provide greater vegetative diversity as well as strategically placed street trees to provide different viewsheds to Memory Lake Park.

Figure 3.27 - Memory Lake Park Overlook Facing Northwest

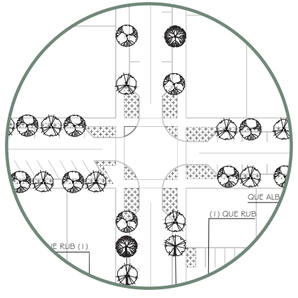
Site Plan

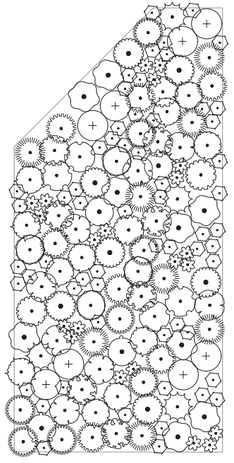
PUBLIC OPEN SPACE DESIGN : MADISON AVENUE PLANTING PATTERN A - CURB BUMPOUT TYPOLOGY

This planting plan provides a framework on which the community can build off of when designing the curb bumpouts along Madison Avenue. The full plant schedule is located in the Appendix of this document and details total quantities and purchasing conditions for this plant palette.

The design for these bumpouts follows the diagonal shape of the planting verges and provides for a mixture of native and ornamental plants which are clumped together in groups of 2 - 3.

The design will feature blooms and texture that carry the downtown district plantings through the seasons as well as provide visual interest in the winter months with a variety of seed pods.






White Coneflower

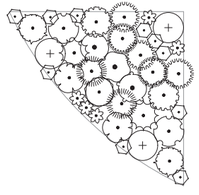

Caradonna Sage

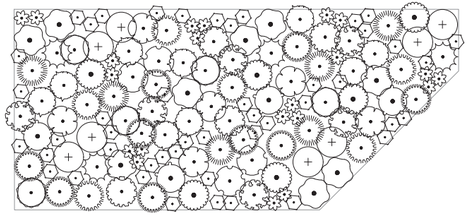

Striped Squill


Little Bluestem


Tufted Hair Grass


Burnet





SCALE: 1/4'' = 1' - 0''

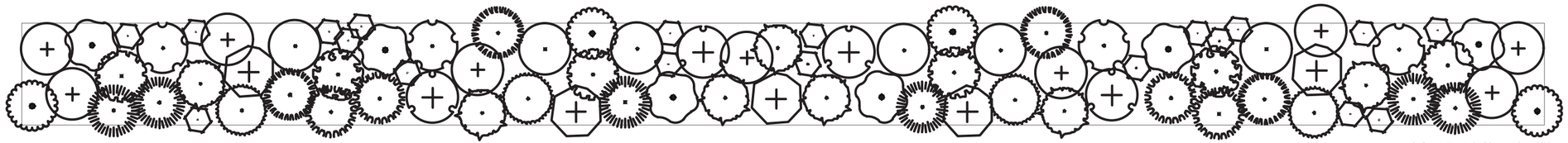
- Striped Squill
- Tussock Sedge
- Allium ‘Summer Beauty’
- Blue Grama Grass
- Goldtau Tufted Hair Grass
- Dwarf White Coneflower
- ‘Pixie Meadowbrite’
- Caradonna Sage
- Blue Hill Sage
- Burnet
- The Blues Little Bluestem
- Stonecrop Sedum
- Goldenrod
- Prairie Dropseed
- Bishop’s Wort
- ‘October Skies’ Aster

Figure 3.28 - Planting Pattern A : Curb Bumpout

Site Plan

PUBLIC OPEN SPACE DESIGN : MADISON AVENUE PLANTING PATTERN A - CURB BUMPOUT TYPOLOGY

This planting scheme provides an example of plant mixing that could be achieved along Madison Avenue. Note that this is just an example and provides a loose structure for the potential plant groupings that could be decided on at the community's discretion.



SCALE: 1/4'' = 1' - 0''

'Summer Beauty'

Stonecrop Sedum

Goldenrod

'October Skies'

'Blonde Ambition'

- Tussock Sedge
- Allium 'Summer Beauty'
- Black Chokeberry
- Blue Grama 'Blonde Ambition'
- Green Gem Boxwood
- Purple Beautyberry
- Goldtau Tufted Hair Grass
- Caradonna Sage
- Blue Hill Sage
- The Blues Little Bluestem
- Stonecrop Sedum
- Goldenrod
- Prairie Dropseed
- Heath Aster
- 'October Skies' Aster

Figure 3.29 - Planting Pattern B : Madison Avenue Planting Trenches

Site Plan Phasing Strategy

PHASE I : STREETSCAPE UPDATES

Phase I includes the installation of the new hardscapes, including the subsurface systems for immediate stormwater capture.

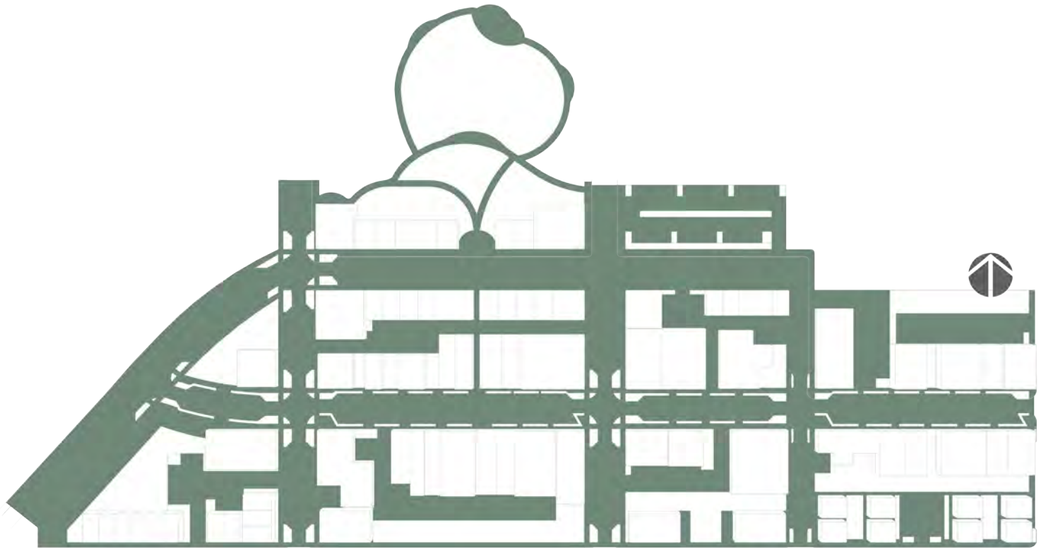


Figure 3.30 - Phase I

PHASE II : OPEN SPACE IMPROVEMENTS

Phase II includes the creation of the districts new green and open spaces and involves the installation of all street plantings to allow for treescape maturation and development as soon as possible.

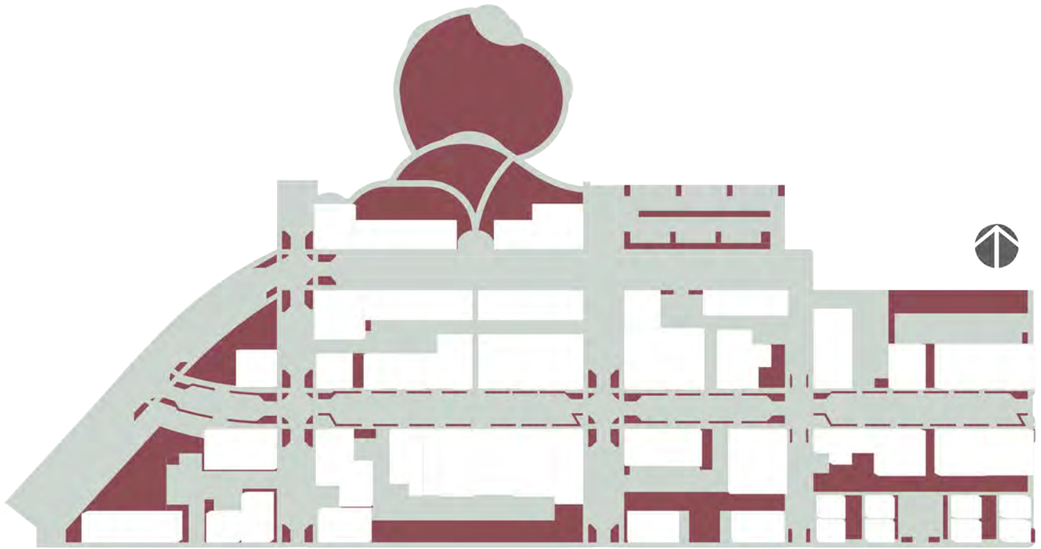


Figure 3.31 - Phase II

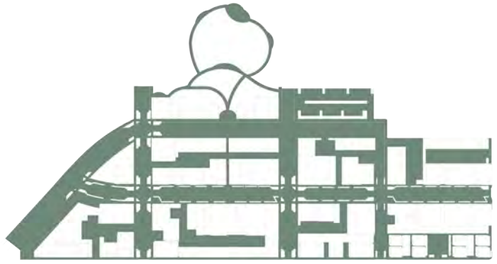
Site Plan Phasing Strategy

PHASE III : BUILDING DEVELOPMENT & FACADE UPDATES

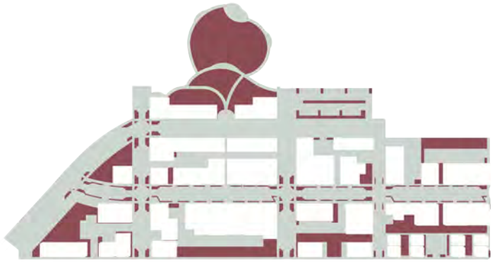
Phase III sees all of the infill development and existing building upgrades. Note: this phase could be interspersed throughout both Phase I and Phase II as funds become available.

Figure 3.32 - Phase III

PHASE I : STREETSCAPE UPDATES



PHASE II : OPEN SPACE IMPROVEMENTS

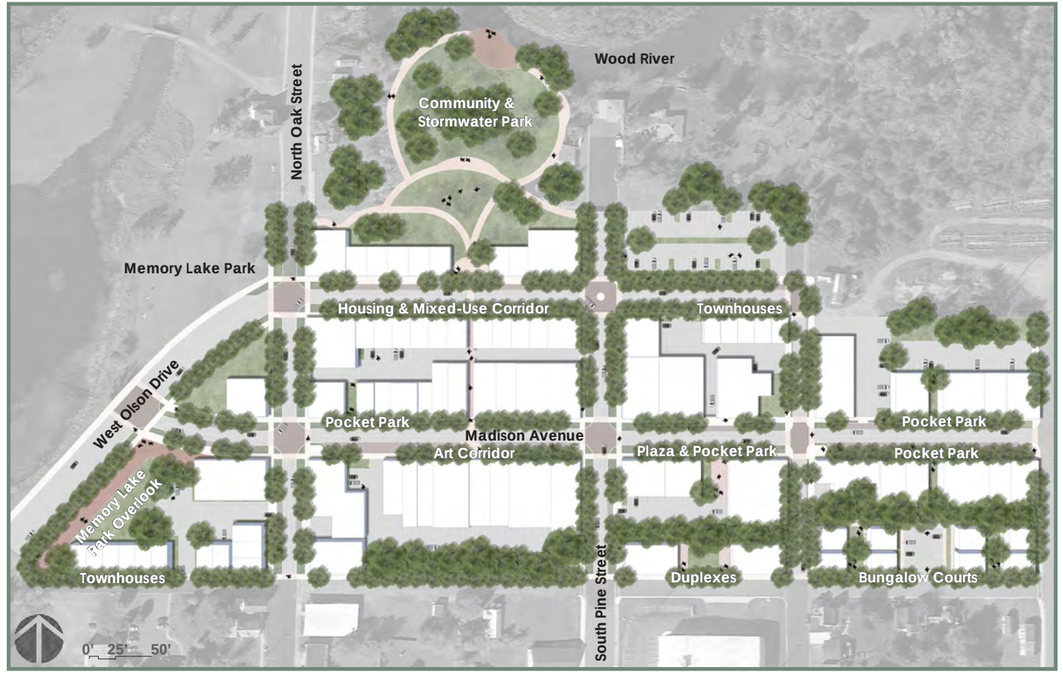


PHASE III : BUILDING DEVELOPMENT & FACADE UPDATES

Figure 3.33 - Phasing Comparisons

Project Impacts

RESULTS



Economic Impacts

- **Improved & Updated** Building Facades
- **Retention of Parking Capacity** for Commercial Access
- **Upgraded Sidewalk & Streetscape Amenities** for Encouraged Pedestrian Visitation

Social Impacts

- **Installation of Quality Street Amenities** for Improved "Third Realm" Atmosphere
- **Provision of Public Gathering Spaces** for Strengthened Community Connections
- **Reorganization of Vehicular Realm** to Allow for Increased Pedestrian Safety

Environmental Impacts

- **Increased Public Greenspace** Throughout the Site
- **Installation & Maintenance of Quality Vegetation**
- **Management of Stormwater** Through Quality Material Use & Strategic Planning

Grant Opportunities

STATE & FEDERAL GRANT OPPORTUNITIES

Wisconsin Economic Development Corporation (WEDC)

"The Wisconsin Economic Development Corporation (WEDC) is committed to creating and maintaining a business climate that allows you to maximize your potential. Working with more than 600 statewide partners, including regional economic development organizations, academic institutions and industry groups, we're enhancing our communities, supporting business development, advancing industry innovation, tapping global markets and developing a talented workforce to help Wisconsin realize its full economic potential."

Main Street America

"By partnering with organizations and leaders at the local, city, state, and national level, Main Street America protects the historic character of cities and towns across the country, and promotes shared prosperity. Our approach is comprehensive, inclusive, place-based and people-focused."

National Endowment for the Arts

"Established by Congress in 1965, the NEA is the independent federal agency whose funding and support gives Americans the opportunity to participate in the arts, exercise their imaginations, and develop their creative capacities. Through partnerships with state arts agencies, local leaders, other federal agencies, and the philanthropic sector, the NEA supports arts learning, affirms and celebrates America's rich and diverse cultural heritage, and extends its work to promote equal access to the arts in every community across America"

National Creative Placemaking Fund

"The Our Town grant program supports creative placemaking projects that help to transform communities into lively, beautiful, and resilient places with the arts at their core. This funding supports local efforts to enhance quality of life and opportunity for existing residents, increase creative activity, and create a distinct sense of place. Our Town offers support for projects in two areas, arts engagement, cultural planning, and design projects along with projects that build knowledge about creative placemaking."

National Recreation & Park Associations

"National Recreation and Park Association (NRPA) is the leading non-profit organization dedicated to the advancement of public parks, recreation and conservation. Our work draws national focus to the far-reaching impact of successes generated at the local level. Leveraging their role in conservation,health and wellness, and social equity to improve their communities NRPA's members of park and recreation professionals and advocates are 60,000 strong and represent public spaces in urban communities, rural settings and everything in between."

Conclusion

SENIOR CAPSTONE & THE VILLAGE OF GRANTSBURG

Content Reflection

Working on this project made me very aware of the specific scale of information needed to design a useful and comprehensive revitalization project for the Village of Grantsburg. With the extensive research, analysis, and description of my proposal conditions, I believe I've created a document package that reflects the complexity of this unique design.

Process Reflection

The community and site scales were both unique to work with, however with the level of design I eventually created, I think they were both appropriate to look at when considering my final design work.

The process was quite extensive, especially when working through the initial planning stages after having collected all relevant data during the Fall semester. However, I think having cultivated that level of data played very well into my final design and can be seen throughout the individual design choices I've made.

Premise Reflection

I believe the final design program I've created accurately represents what is needed to revitalize this downtown district and attract new residents and visitors to the area.

With the development of this project came the continued questions of: how will this truly revitalize the community? How does it relate to creative placemaking? Repetitively asking these questions definitely helped me to fully realize many of the elements of my design.

Self Reflection

My initial conceptions of the project were definitely not those that I ended up with when I completed the project. Talking with community members and gathering data on the community of Grantsburg made me realize that this project wasn't just a small town fix but a community transformation for future investment. What was needed wasn't just a repaved road or an updated building but a completely new structure on which to provide revenue as well as community involvement and pride for years to come.

Cross-Cultural Self Reflection

While I did not grow up in a small town, I was able to connect with this project at the basic human level by asking myself what would make me stay in an area that is seeing younger generations leave for the allure of a larger city?

The answer was the presence cultural opportunities in a central downtown location that allowed for me to fully experience all that my community has to offer. Sure, Grantsburg will never compete with cities like Madison or Minneapolis for tourism purposes, but through the revitalization of its unique and creative community assets it could become a charming place where families move to instead of away from. The presence of opportunity is needed in the Village of Grantsburg, and I believe my proposal fulfills that need and provides the foundation on which the community can realize its comprehensive goals in the years to come.

APPENDIX

Plant Schedules

COMMUNITY PARK MIX

Grasses

45%

Andropogon gerardii (10%)
Calamagrostis canadensis (10%)
Carex vulpinoidea (5%)
Spartina pectinate (15%)
Carex retorsa (5%)

Herbaceous Perennials

Spring

5%

Zizia aurea
Iris versicolor

Summer

20%

Iris virginica
Pycnanthemum virginianum
Monarda fistulosa
Eupatorium maculatum
Lobelia siphilitica

Autumn

20%

Helenium autumnale
Aster umbellatus
Aster novae-angliae
Gentiana andrewsii
Solidago rugosa

Shrubs

10%

Spiraea alba
Spiraea tomentosa
Aronia melanocarpa

TREESCAPE PLANTING

Botanical / Common	Quantity	Container Size	Root Condition	Size	Spacing	Comments
Acer miyabei `Morton` TM / Miyabei Maple	12	75 % of Roots	B & B	2" Cal	40' o.c.	Stake Until 4" Cal
Acer saccharum / Sugar Maple	14	75% of Roots	B & B	4" Cal	30' o.c.	
Betula nigra / River Birch	4	75% of Roots	B & B	4" Cal	30' o.c.	
Betula papyrifera / Paper Birch	9	75% of Roots	B & B	3" Cal	25' o.c.	
Celtis occidentalis / Common Hackberry	53	75% of Roots	B & B	2" Cal	40' o.c.	Stake Until 4" Cal
Gleditsia triacanthos inermis / Thornless Common Honeylocust	51	75% of Roots	B & B	2" Cal	40' o.c.	Stake Until 4" Cal
Gymnocladus dioica `Espresso` / Kentucky Coffeetree	49	75% of Roots	B & B	2" Cal	45' o.c.	
Phellodendron amurense / Macho Corktree	17	75% of Roots	B & B	3" Cal	35' o.c.	
Platanus occidentalis / American Sycamore	4	75% of Roots	B & B	4" Cal	30' o.c.	
Platanus x acerifolia / London Plane Tree	53	75% of Roots	B & B	2" Cal	40' o.c.	Stake Until 4" Cal
Quercus alba / White Oak	6	75% of Roots	B & B	3" Cal	50' o.c.	
Quercus bicolor / Swamp White Oak	8	75% of Roots	B & B	3" Cal	40' o.c.	
Quercus rubra / Red Oak	15	75% of Roots	B & B	3" Cal	35' o.c.	

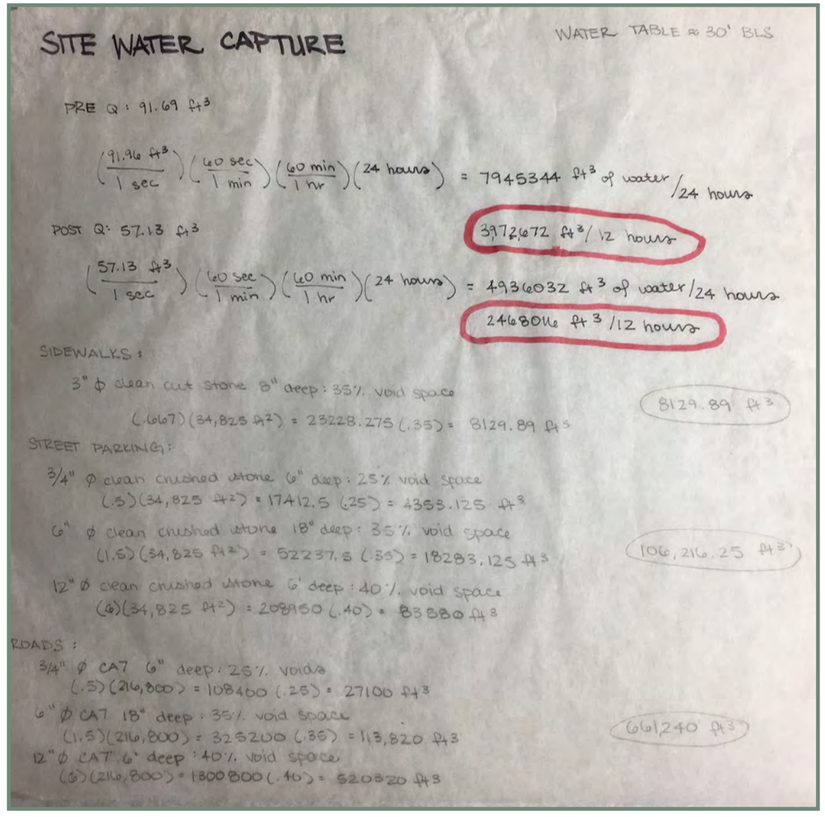
PLANTING PATTERN A

Botanical / Common	Quantity	Container Size	Root Condition	Height X Width	Spacing	Comments
Allium x `Summer Beauty` / Summer Beauty Allium	19	1 Quart	Pot	.5' x .5'	18" o.c.	Clumped
Bouteloua gracilis `Blonde Ambition` / Blue Grama	16	32 Per	Flat	.5' x .5'	12" o.c.	Clumped
Carex stricta / Tussock Sedge	115	32 Per	Flat	.5' x .5'	12" o.c.	Clumped
Deschampsia cespitosa `Goldtau` / Gold Dew Tufted Hair Grass	19	1 Quart	Pot	.5' x .5'	12" o.c.	Clumped
Echinacea purpurea `Baby White Swan` / Dwarf White Coneflower	10	1 Gal	Pot	1.5' x 1.5'	24" o.c.	Clumped
Echinacea purpurea `Pixie Meadowbrite` / Pixie Meadowbrite Coneflower	10	1 Gal	Pot	1.5' x 1.5'	24" o.c.	Clumped
Puschkinia scilloides / Stripped Squill	47	Bulbs			6" o.c.	Randomly Mixed
Salvia nemorosa / Perenial Salvia	22	.5 Quart	Pot	1' x 1'	18" o.c.	Clumped
Salvia x sylvestris `Blue Hill` / Sage	10	.5 Quart	Pot	1' x 1'	18" o.c.	Clumped
Sanguisorba menziesii / Alaskan Burnet	10	.5 Quart	Pot	.5' x .5'	12" o.c.	Clumped
Schizachyrium scoparium `The Blues` / Little Bluestem	16	1 Quart	Pot	.5' x .5'	12" o.c.	Clumped
Sedum x `Queen Bee` / Stonecrop	19	.5 Quart	Pot	.5' x .5'	12" o.c.	Clumped
Solidago rugosa `Fireworks` / Wrinkleleaf Goldenrod	12	1 Gal	Pot	1.5' x 2'	36" o.c.	Grouped
Sporobolus heterolepis `Tara` / Prairie Dropseed	13	1 Quart	Pot	1' x 1'	12" o.c.	Clumped
Stachys officinalis `Hummelo` / Hummelo Stachys	16	.5 Quart	Pot	.5' x .5'	12" o.c.	Clumped
Symphyotrichum oblongifolium `October Skies` / Fall Aster	11	1 Quart	Pot	1' x .5'	24" o.c.	Clumped

PLANTING PATTERN B

Botanical / Common	Quantity	Container Size	Root Condition	Height X Width	Spacing	Comments
Allium x `Summer Beauty` / Summer Beauty Allium	7	1 Quart	Pot	.5' x .5'	18" o.c.	Clumped
Aronia melanocarpa `Morton` TM / Iroquis Beauty Black Chokeberry	5	3 Gal	Pot	2' x 2'	24" o.c.	Grouped
Bouteloua gracilis `Blonde Ambition` / Blue Grama	7	1 Quart	Pot	1' x 1'	12" o.c.	Clumped
Buxus x `Green Gem` / Green Gem Boxwood	7	1 Gal	Pot	1' x 1'	24" o.c.	Grouped
Callicarpa dichotoma / Beauty Berry	6	1 Gal	Pot	1' x 1'	24" o.c.	Grouped
Carex stricta / Tussock Sedge	20	.5 Quart	Pot	.25' x .25'	6" o.c.	Clumped
Deschampsia cespitosa `Goldtau` / Gold Dew Tufted Hair Grass	5	1 Quart	Pot	.5' x 5'	12" o.c.	Clumped
Salvia nemorosa / Perenial Salvia	8	.5 Quart	Pot	1' x 1'	18" o.c.	Clumped
Salvia x sylvestris `Blue Hill` / Sage	5	.5 Quart	Pot	1' x 1'	18" o.c.	Clumped
Schizachyrium scoparium `The Blues` / Little Bluestem	5	1 Quart	Pot	.5' x .5'	12" o.c.	Clumped
Sedum x `Queen Bee` / Stonecrop	10	.5 Quart	Pot	.5' x .5'	12" o.c.	Clumped
Solidago rugosa `Fireworks` / Wrinkleleaf Goldenrod	3	1 Gal	Pot	1.5' x 2'	36" o.c.	Grouped
Sporobolus heterolepis `Tara` / Prairie Dropseed	5	1 Quart	Pot	1' x .5'	12" o.c.	Clumped
Symphyotrichum ericoides / Heath Aster	5	1 Quart	Pot	1' x 1'	12" o.c.	Clumped
Symphyotrichum oblongifolium `October Skies` / Fall Aster	5	1 Quart	Pot	1' x .5'	24" o.c.	Clumped

Stormwater Calculations



SITE WATER CAPTURE

WATER TABLE ≈ 30' BLS

PRE Q: 91.69 ft³

$\left(\frac{91.96\ ft^3}{1\ sec}\right)\left(\frac{60\ sec}{1\ min}\right)\left(\frac{60\ min}{1\ hr}\right)\left(\frac{24\ hours}{}\right)$ = 7945344 ft³ of water / 24 hours

3972672 ft³ / 12 hours

POST Q: 57.13 ft³

$\left(\frac{57.13\ ft^3}{1\ sec}\right)\left(\frac{60\ sec}{1\ min}\right)\left(\frac{60\ min}{1\ hr}\right)\left(\frac{24\ hours}{}\right)$ = 4936032 ft³ of water / 24 hours

2468016 ft³ / 12 hours

SIDEWALKS:

3" ϕ clean cut stone 8" deep: 35% void space

(.667)(34,825 ft²) = 23228.275 (.35) = 8129.89 ft³ — 8129.89 ft³

STREET PARKING:

3/4" ϕ clean crushed stone 6" deep: 25% void space

(.5)(34,825 ft²) = 17412.5 (.25) = 4353.125 ft³

6" ϕ clean crushed stone 18" deep: 35% void space

(1.5)(34,825 ft²) = 52237.5 (.35) = 18283.125 ft³

12" ϕ clean crushed stone 6' deep: 40% void space

(6)(34,825 ft²) = 208950 (.40) = 83580 ft³

106,216.25 ft³

ROADS:

3/4" ϕ CA7 6" deep: 25% voids

(.5)(216,800) = 108400 (.25) = 27100 ft³

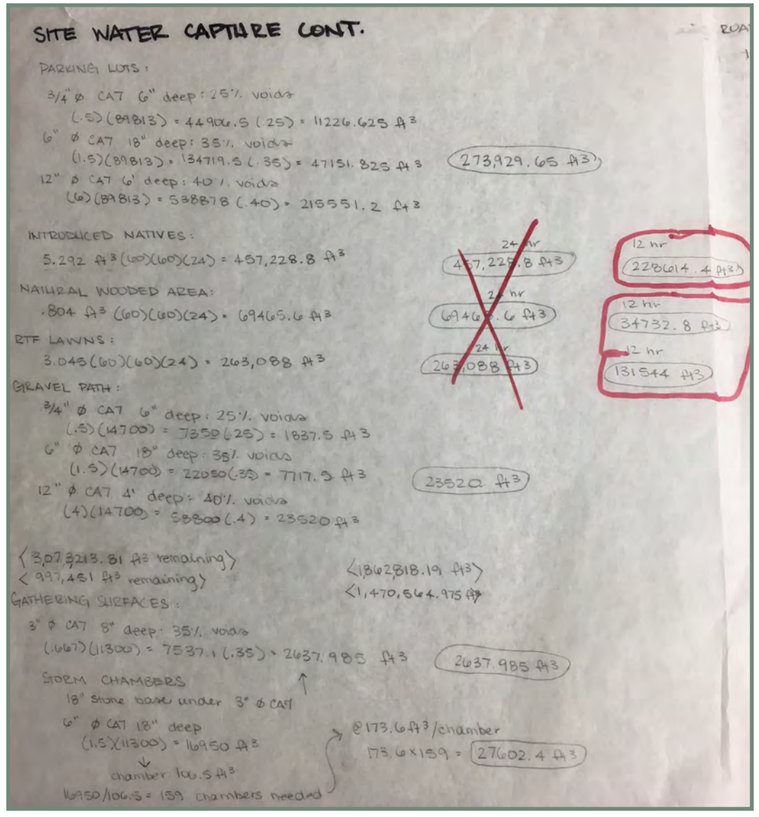
6" ϕ CA7 18" deep: 35% void space

(1.5)(216,800) = 325200 (.35) = 113,820 ft³

12" ϕ CA7 6' deep: 40% void space

(6)(216,800) = 1300800 (.40) = 520320 ft³

661,240 ft³



SITE WATER CAPTURE CONT.

PARKING LOTS:

3/4" ϕ CA7 6" deep: 25% voids

(.5)(89813) = 44906.5 (.25) = 11226.625 ft³

6" ϕ CA7 18" deep: 35% voids

(1.5)(89813) = 134719.5 (.35) = 47151.825 ft³

12" ϕ CA7 6' deep: 40% voids

(6)(89813) = 538878 (.40) = 215551.2 ft³

273,929.65 ft³

INTRODUCED NATIVES:

5.292 ft³ (60)(60)(24) = 457,228.8 ft³

NATURAL WOODED AREA:

.804 ft³ (60)(60)(24) = 69465.6 ft³

RTF LAWNS:

3.045(60)(60)(24) = 263,088 ft³

24 hr 457,228.8 ft³ — 12 hr 228614.4 ft³

24 hr 69465.6 ft³ — 12 hr 34732.8 ft³

24 hr 263,088 ft³ — 12 hr 131544 ft³

GRAVEL PATH:

3/4" ϕ CA7 6" deep: 25% voids

(.5)(14700) = 7350 (.25) = 1837.5 ft³

6" ϕ CA7 18" deep: 35% voids

(1.5)(14700) = 22050 (.35) = 7717.5 ft³

12" ϕ CA7 4' deep: 40% voids

(4)(14700) = 58800 (.4) = 23520 ft³

23520 ft³

⟨3,873213.81 ft³ remaining⟩

⟨997,451 ft³ remaining⟩

⟨1,862,818.19 ft³⟩

⟨1,470,564.975 ft³⟩

GATHERING SURFACES:

3" ϕ CA7 8" deep: 35% voids

(.667)(11300) = 7537.1 (.35) = 2637.985 ft³

2637.985 ft³

STORM CHAMBERS

18" stone base under 3" ϕ CA7

6" ϕ CA7 18" deep

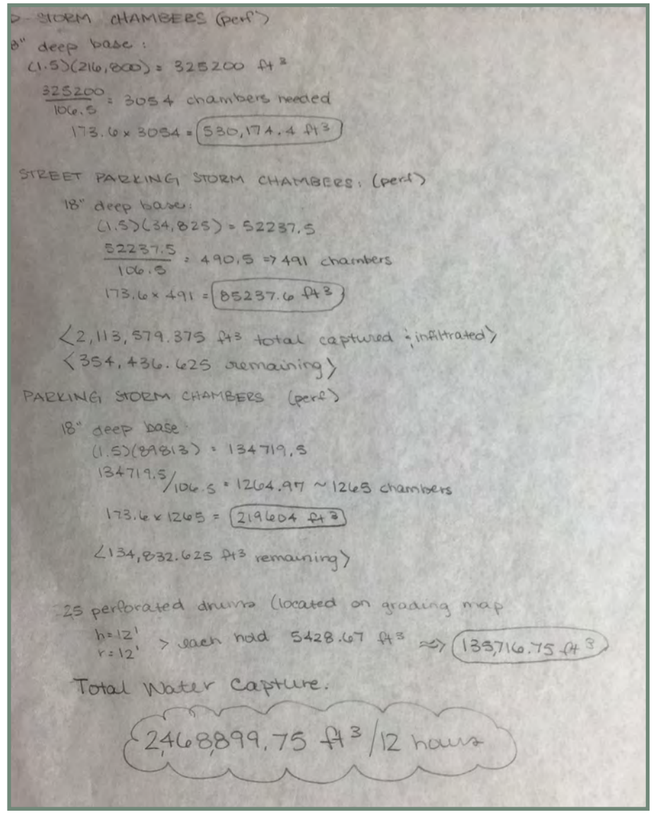
(1.5)(11300) = 16950 ft³

chamber: 106.5 ft³

16950/106.5 = 159 chambers needed

@ 173.6 ft³/chamber

173.6 × 159 = 27602.4 ft³



STORM CHAMBERS (perf)

8" deep base:

(1.5)(216,800) = 325200 ft²

325200 / 106.5 = 3054 chambers needed

173.6 × 3054 = 530,174.4 ft³

STREET PARKING STORM CHAMBERS: (perf)

18" deep base:

(1.5)(34,825) = 52237.5

52237.5 / 106.5 = 490.5 ≈ 491 chambers

173.6 × 491 = 85237.6 ft³

⟨2,113,579.375 ft³ total captured + infiltrated⟩

⟨354,436.625 remaining⟩

PARKING STORM CHAMBERS (perf)

18" deep base:

(1.5)(89813) = 134719.5

134719.5 / 106.5 = 1264.97 ≈ 1265 chambers

173.6 × 1265 = 219604 ft³

⟨134,832.625 ft³ remaining⟩

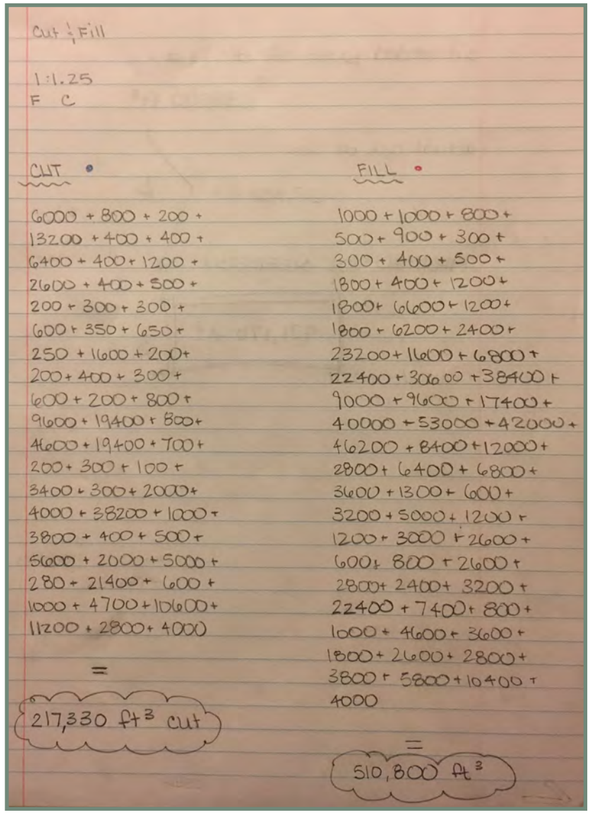
25 perforated drums (located on grading map

h=12' r=12' > each had 5428.67 ft³ ⇒ 135716.75 ft³

Total Water Capture.

2468899.75 ft³ / 12 hours

Cut & Fill Calculations


Cut & Fill

1:1.25
F C

CUT

6000 + 800 + 200 +
13200 + 400 + 400 +
6400 + 400 + 1200 +
2600 + 400 + 500 +
200 + 300 + 300 +
600 + 350 + 650 +
250 + 1600 + 200 +
200 + 400 + 300 +
600 + 200 + 800 +
9600 + 19400 + 800 +
46600 + 19400 + 700 +
200 + 300 + 100 +
3400 + 300 + 2000 +
4000 + 38200 + 1000 +
3800 + 400 + 500 +
51600 + 2000 + 5000 +
280 + 21400 + 600 +
1000 + 4700 + 101600 +
11200 + 2800 + 4000

=

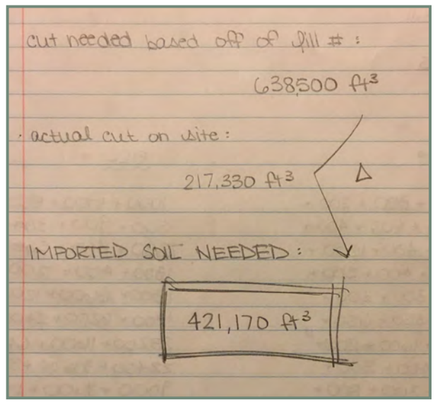
217,330 ft³ cut

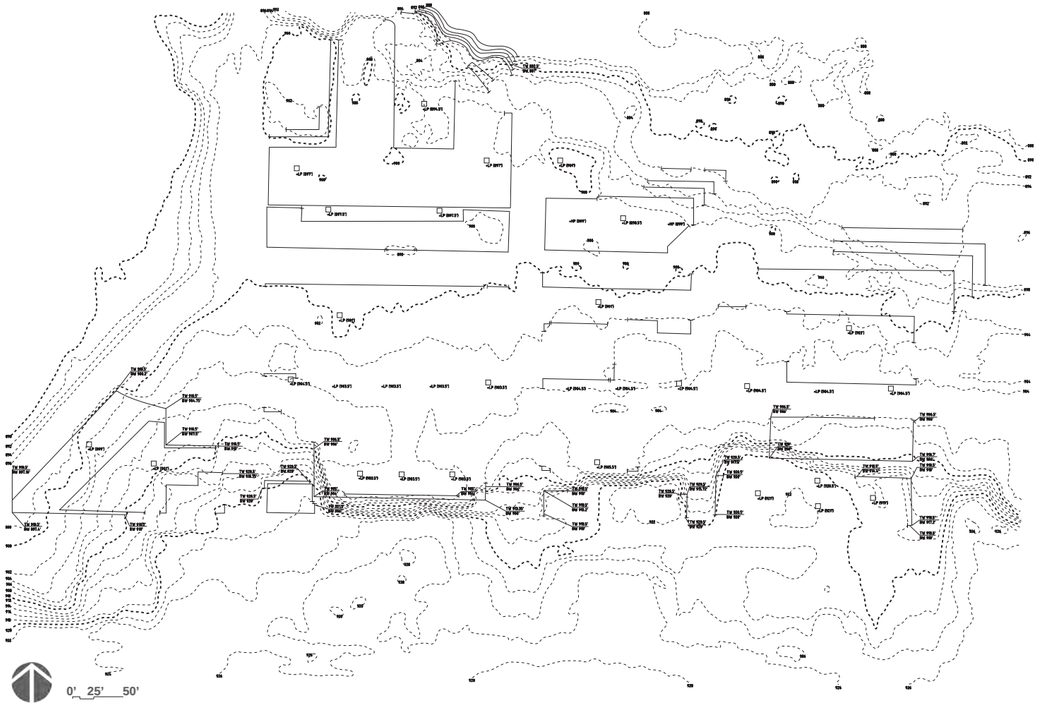
FILL

1000 + 1000 + 800 +
500 + 900 + 300 +
300 + 400 + 500 +
1800 + 400 + 12200 +
1800 + 66000 + 12200 +
1800 + 62200 + 2400 +
23200 + 11600 + 6800 +
22400 + 30600 + 38400 +
9000 + 9600 + 17400 +
40000 + 53000 + 42000 +
46200 + 8400 + 12000 +
2800 + 6400 + 6800 +
3600 + 1300 + 600 +
3200 + 5000 + 1200 +
1200 + 3000 + 2600 +
600 + 800 + 2600 +
2800 + 2400 + 3200 +
22400 + 7400 + 800 +
1000 + 41600 + 3600 +
1800 + 2600 + 2800 +
3800 + 5800 + 10400 +
4000

=

510,800 ft³





Time Log

Saige Henkel
Senior Capstone, Fall 2017

Day	Date	Task/Work Code	Hours Worked	Travel Time	Cumulative Totals
Code: D (design), P (presentation/prep), M (meeting), T (travel), O (organization/research), W (writing); other.					
Week 1					
	xx.xx.xx	M	0.00	0.00	0
	xx.xx.xx	M	0.00	0.00	0
		Total week 1	**0.00**	0.00	0.00
Week 2					
	09.11.17	O: Read through document package	2.00	0.00	
	09.13.17	O: Read through document package	1.50	0.00	
	09.14.17	W: Emailed Client	0.50	0.00	
		Total week 2	**4.00**	0.00	4.00
Week 3					
	09.18.17	O: Read through document package	1.00	0.00	
	09.19.17	O: Read through document package	1.00	0.00	
		Total week 3	**2.00**		6.00
Week 4					
	09.22.17	O: Read through document package	2.00		
	09.25.17	M: Client Meeting	1.00		
	09.26.17	D: Workflow Diagram	2.00		
		Total week 4	**3.00**		9.00
Week 5	09.29.17	T: Drove to Grantsburg, WI		4.00	
	09.29.17	M: GRO meeting	2.00		
	09.30.17	M: Grantsburg tour with GRO	4.00		
	09.30.17	W: Client goals, design drivers	2.00		
	10.01.17	T: Drove to Madison, WI		4.00	
		Total week 5	**8.00**		17.00
Week 6					
	10.09.17	O: Assignment #10 research	4.00		
		Total week 6	**4.00**		21.00
Week 7					
	10.16.17	O: Assignment #12 Research	4.50		
		Total week 7	**4.50**		25.50
Week 8					
	10.21.17	W: Assignment #12 Writing	3.00		
	10.23.17	P: Assignment #12 Presentation Creation	1.75		
		Total week 9	**4.75**		30.25

Week 9				
	10.27.17	O: Assignment #5 Research & Data Gathering	4.00	
	10.28.17	O: Assignment #5 Research & Data Gathering	3.50	
	10.29.17	W: Assignment #5 Presentation Creation	2.50	
		Total week 1	**10.00**	40.25
Week 10				
	11.2.2017	O: Assignment #6	3.00	
	11.3.2017	O: Assignment #6	3.50	
	11.5.2017	W: Assignment #6 Presentation Creation	4.00	
		Total week 1	**10.50**	50.75
Week 11				
	11.8.2017	O: Assignment #13	2.00	
	11.12.2017	O: Assignment #13	2.00	
	11.13.2017	O: Assignment #13	3.00	
	11.14.2017	W: Assignment #13	7.00	
	11.15.2017	W + O: Proposal Document Revisions	5.00	
		Total week 1	**19.00**	69.75
Week 12				
	11.16.17	P: Proposal Writing	4.00	
	11.19.17	P: Proposal Writing	4.00	
	11.20.17	P: Proposal Writing	7.00	
	11.21.17	P: Proposal Writing	3.00	
		Total week 1	**18.00**	87.75
Week 13				
	11.22.17	P: Presentation Writing	3.00	
	11.25.17	P: Presentation Writing	3.00	
	11.26.17	P: Proposal Writing	6.00	
	11.28.17	P: Presentation Edits	5.00	
	11.29.17	P: Presentation & Proposal Edits	8.00	
		Total week 1	**25.00**	112.75
Week 14				
	12.1.17	P: Presentation Work	4.00	
	12.3.17	P: Presentation Work	5.00	
	12.5.17	P: Presentation Work	3.00	
	12.6.17	P: Presentation Work	6.00	
	12.8.17	P: Presentation Work	6.00	
	12.9.17	P: Presentation Work	8.00	
	12.10.17	P: Presentation Work	7.00	
		Total week 1	**39.00**	151.75
Week 15				
	12.14.17	P: Proposal Writing	5.00	
	12.15.17	P: Proposal Writing	7.00	
	12.16.17	P: Proposal Writing	8.00	
	12.17.17	P: Proposal Writing	6.00	
	12.18.17	P: Proposal Writing	9.00	
		Total week 1	**35.00**	186.75

Senior Capstone, Fall 2017

Day	Date	Task/Work Code	Hours Worked	Travel Time	Cumulative Totals
Code: D (design), P (presentation/prep), M (meeting), T (travel), O (organization/research), W (writing); other.					
Week 1					
	xx.xx.xx	M	0.00	0.00	0
	xx.xx.xx	M	0.00	0.00	0
		Total week 1	**0.00**	0.00	0.00
Week 2	1.28.18	D: Design Phase	4.00		
	1.29.18	D: Design Phase	5.50		
	1.30.18	D: Design Phase	3.50		
	1.31.18	D: Design Phase	8.00		
	2.1.18	D: Design Phase	4.50		
	2.2.18	D: Design Phase	3.75		
		Total week 2	**29.25**	0.00	29.25
Week 3	2.5.18	D: Design Phase	6.00		
	2.6.18	D: Design Phase	4.75		
	2.7.18	D: Design Phase	6.00		
	2.8.18	D: Design Phase	7.00		
	2.9.18	D: Design Phase	5.50		
	2.11.18	D: Design Phase	2.00		
		Total week 3	**31.25**		60.50
Week 4	2.12.18	D: Design Phase	6.00		
	2.13.18	D: Design Phase	6.75		
	2.14.18	D: Design Phase	9.50		
	2.15.18	D: Design Phase	7.50		
	2.16.18	D: Design Phase	4.00		
	2.17.18	D: Design Phase	9.00		
	2.18.18	D: Design Phase	9.25		
		Total week 4	**52.00**		112.50
Week 5	2.19.18	D: Design Phase	7.00		
	2.20.21	D: Design Phase	5.25		
	2.21.18	D: Design Phase	5.00		
	2.22.18	D: Design Phase	4.25		
		Total week 5	**21.50**		134.00
Week 6	2.26.18	D: Design Phase	8.00		
	2.27.18	D: Design Phase	5.00		
	2.28.18	D: Design Phase	5.00		
	3.1.18	D: Design Phase	7.00		
	3.2.18	D: Design Phase	5.00		
		Total week 6	**30.00**		164.00

CUMULATIVE HOURS 2017 - 2018 : 545.25

Week 7				
	3.5.18	D: Design Phase	2.50	
	3.6.18	D: Design Phase	7.00	
	3.7.18	D: Design Phase	4.00	
	3.8.18	D: Design Phase	4.75	
	3.9.18	D: Design Phase	6.00	
		Total week 7	**24.25**	188.25
Week 8	3.12.18	D: Design Phase	6.50	
	3.13.18	D: Design Phase	4.75	
	3.14.18	D: Design Phase	4.00	
		Total week 8	**15.25**	203.50
Week 9	xx.xx.xx	Pass/Fail		
		Total week 9	**0.00**	203.50
Week 10	xx.xx.xx	Spring Break		
		Total week 10	**0.00**	203.50
Week 11	4.2 - 4.8.18	P: Graphics & Presentation Prep	50.00	
		Total week 11	**50.00**	253.50
Week 12	4.9 - 4.15.18	P: Graphics & Presentation Prep	55.00	
		Total week 12	**55.00**	308.50
Week 13	4.16 - 4.22.18	P: Graphics & Presentation Prep & Edits	15.00	
		Total week 13	**15.00**	323.50
Week 14	4.23 - 4.29.18	P: Presentation Edits	15.00	
		Total week 14	**15.00**	338.50
Week 15	4.30 - 5.6.18	W: Document Work & Contour	10.00	
		Total week 15	**10.00**	348.50
Week 16	5.7 - 5.10.18	W: Document Work	10.00	
		Total week 16	**10.00**	358.50

Graphic Figures

Graphic Figures

Graphic Figures

Literature References

RESEARCH TOPIC & LITERATURE REVIEW

U.S. Environmental Protection Agency's Office of Sustainable Communities. "How Small Towns and Cities Can Use Local Assets to Rebuild Their Economies: Lessons from Successful Places." EPA. United States Environmental Protection Agency, 2015. Web. 9 Oct. 2017.

Nowak, Jeremy. "Distressed Places and Creativity." GIA Reader 19.3 (2008): n. pag. Grantmakers in the Arts, Web. 9 Oct. 2017.

Department of Urban and Regional Planning – University of Illinois at Urbana-Champaign. "Downtown Success Indicators." Center for Community & Economic Development. University of Wisconsin – Extension, 2014. Web. 9 Oct. 2017.