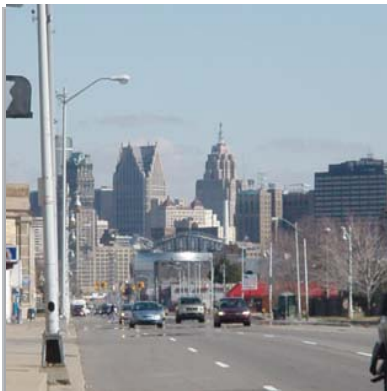


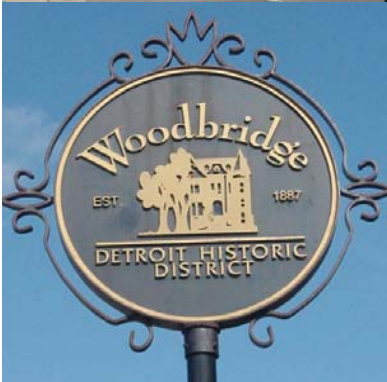
# WOODBIDGE COMMUNITY



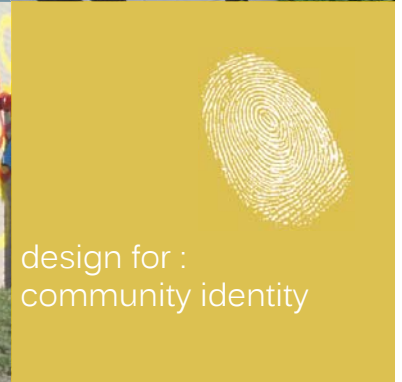
design for :  
alternative transportation



design for :  
community



design for :  
environment



design for :  
community identity

# GREENWAY & BIKE PLAN

A project submitted in partial fulfillment of the requirements  
for the degree of Master of Landscape Architecture  
at the University of Michigan's School of Natural Resources  
and Environment.  
May 2009

Cara Kappler  
Lindsey Miller

Faculty Advisor: MaryCarol Hunter  
Professional Advisor: Susan Bryan

# TABLE OF CONTENTS

Vision Statement	ii		
I INTRODUCTION	2	III DESIGN for COMMUNITY	53
History	3	Community Spaces Map	55
Previous Design Work	4	Opportunities for Social Interaction	56
Site Inventory	5	Community Parks Character Sketches	57
Community Meeting	9		
		III DESIGN for COMMUNITY IDENTITY	65
II DESIGN for ALTERNATIVE TRANSPORTATION	11	Woodbridge Identity and Character	67
Woodbridge Greenway Bike Plan Introduction	13	Signage	69
Streetscape Improvement Features	15	Site Furnishings	71
Stormwater Management Features	16	Lighting Plan and Fixtures	72
Proposed Streetscape Improvements	17		
		Acknowledgements	73
III DESIGN for the ENVIRONMENT	35		
Woodbridge Neighborhood Greenway Introduction	37	Biographies	74
Ecological Features of the Greenway	39	Appendix I References	75
Ecological Site Character Sketches	40	Appendix II Photo Credits	76
The Importance of Native Plants	47	Appendix III Detailed Plant List	79
Plant Palette	48		

## Vision Statement

The Woodbridge Greenway Design and Bike Plan strives to enhance the pedestrian and non-motorized transportation experience throughout the Woodbridge neighborhood. The greenway design identifies Woodbridge as a unique community within the city, creates opportunities for local ecology and wildlife habitat, and promotes social interaction among residents. The proposed bike plan routes provide access to amenities within the neighborhood and the surrounding area including downtown, Detroit's cultural district, and the Corktown-Mexicantown Greenlink and Midtown Loop greenways.

The greenway will offer recreational and educational opportunities such as community gardening, an environmental education center, and both active and passive recreation areas. The reclamation of the vacant lots which includes planting native vegetation and implementing stormwater management techniques will improve the local ecology and wildlife habitat. These diverse uses encourage social interaction while enhancing both safety and the sense of community within the Woodbridge neighborhood. The primary objectives of our design recommendations for the Woodbridge Greenway and Bike Plan are to:

1. Implementing Community Input:

Address the lack of usable green space through programming that takes into account observed or stated activities and interests.

2. Encourage Social Interaction:

Provide opportunities for gathering in diverse settings ranging from outdoor education, constructed park settings and passive outdoor space.

3. Improve Environmental Quality:

Enhance and/or restore local ecology and wildlife habitat where possible, or where the modification will benefit the community and non-human users.

4. Promote Human Health:

Define best routes for pedestrian and bike lanes to encourage physical activity through non-motorized transportation while connecting to nearby greenways and designated bike lanes.

5. Stimulate Economic Growth:

Attract local businesses and potential homeowners to the neighborhood by providing recreational opportunities and a positive quality of life.

# INTRODUCTION

## Woodbridge Background

Woodbridge is located 2 miles from downtown Detroit and is bordered by major freeways on two sides. The Edsel Ford Freeway lies to the north, and the John Lodge Freeway on the east. Grand River Avenue is the southern border of the community and serves as a primary connection to downtown Detroit. The proximity of the neighborhood to Detroit's Midtown area and Wayne State University, provides it with many local amenities.

The area surrounding Woodbridge has recently been gaining strength economically. To guide future development, Woodbridge recently underwent a collaborative community planning process with Detroit Collaborative Design Center that resulted in a master plan and development strategy. The proposed master plan included a greenway corridor through the neighborhood serving as a link to adjacent neighborhoods and amenities.

The objective for our master's project was to further develop the concept of a greenway for Woodbridge and create a greenway design, bike plan and guidelines that improve and enhance the pedestrian and non-motorized transportation experience throughout the Woodbridge neighborhood.



Woodbridge Location Map

The greenway design identifies Woodbridge as a unique community within the city, creates opportunities wildlife habitat, and promotes social interaction among residents.

The proposed bike plan routes provide access to amenities within the neighborhood and the surrounding area including downtown, Detroit's cultural district, and the Corktown-Mexicantown Greenlink and Midtown Loop greenways.



Source: Maps Live

Aerial Image of Woodbridge

## History

The Woodbridge neighborhood began as a farming community and was annexed by the city of Detroit in 1857. It was named after William Woodbridge, whose large farm provided the majority of land that comprises Woodbridge. William Woodbridge served terms as a State Supreme Court Justice, U.S. Senator and as Territorial Governor of Michigan from 1819 to 1820. His wife, Juliana Trumbull was the daughter of wealthy land owner, John Trumbull, who also donated land to the Woodbridge community and for whom a neighborhood street is named<sup>1</sup>.

Residential development occurred mainly between 1860 and 1920. A variety of architectural styles are represented in the housing including Victorian, Italianate, and Queen Anne. Many prominent Detroit families lived in the neighborhood during this time. John Scripps, founder and publisher of the Detroit News, and Ty Cobb of the Detroit Tigers both resided in Woodbridge<sup>1</sup>.

During post World War II urban renewal, the neighborhood experienced an economic downturn. Woodbridge was declared an urban renewal site by the city, which allowed an expansion of Wayne State University into the neighborhood, and quickly caused vacancy and blighting as residents moved to the suburbs<sup>2</sup>.

The John Lodge Freeway was built on the eastern border of the neighborhood, resulting in a physical disconnect from downtown Detroit. The image to the right illustrates how the construction of the freeway system through Corktown, a neighborhood south of Woodbridge, disrupted the community.

In the mid 1970's, Woodbridge began attracting families and experienced the start of a revival mainly attributed to the quality of the original housing .



Historical Photo Illustrating the Effects of Highway Construction on Urban Communities<sup>2</sup>

The Woodbridge Citizen's Council received funding from the city's block grant program for preservation and housing repair beginning in the early 1970's. This group disbanded in the late 1980's when funding stopped. A citizen's group known as the Woodbridge Farms Association was organized to promote preservation and stop demolition of historic homes<sup>1</sup>.

Today, Woodbridge is home to several art galleries, festivals, and a diverse mix of residents. The neighborhood continues to survive and is beginning to gain development strength along with the adjacent Midtown neighborhood in Detroit.

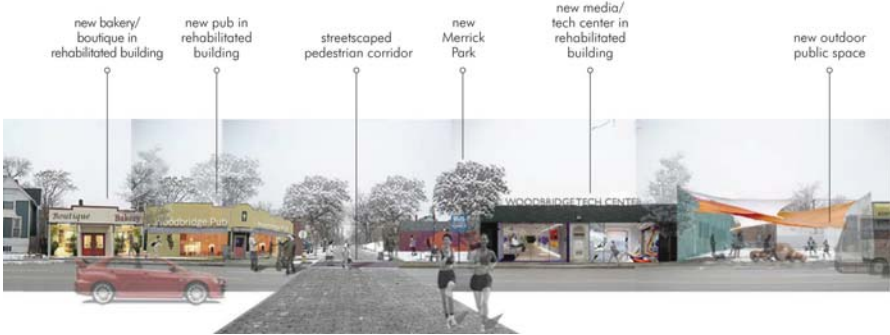
# Previous Design Work

The renewal occurring in and near Woodbridge spurred the need for a neighborhood master plan. In February 2008, participating Woodbridge residents completed a community design process led by the Detroit Collaborative Design Center (DCDC), a multi-disciplinary non-profit organization located within the School of Architecture at the University of Detroit Mercy.

DCDC’s strategy involves community input and support. The planning process included three meetings with community members and the Woodbridge Neighborhood Development Corporation board. Residents were encouraged to articulate their vision for the future of the Woodbridge Neighborhood. The result was a master plan and development strategy driven by the proximity of the area to Wayne State and Detroit’s Cultural District, as well as existing commercial and residential areas.



DCDC Woodbridge Master Plan<sup>4</sup>



Source: Detroit Collaborative Design Center<sup>3</sup>

Included in the proposed master plan was a neighborhood greenway. Its path follows Rosa Parks Boulevard to Merrick Street where it intersects with Wayne State University’s campus. The greenway proposed by DCDC, illustrated in the master plan by a green line, traverses different uses within the neighborhood including industrial, commercial, and green space, but does not define spaces or specify design guidelines. To supplement the proposed master plan, our work focused specifically on designing the greenway and determining what purpose the greenway would serve and how it could be designed to benefit Woodbridge residents.

# Site Inventory

To begin the development of greenway planning and design, multiple site visits were made to record the physical and environmental factors. During these visits, all notable information regarding the site and community, specifically elements that pertained to alternative transportation, environment and community culture, were recorded. These observations were taken into consideration when determining the best location and uses of the greenway.

## Alternative Transportation

Traffic and pedestrian circulation throughout the neighborhood were observed, helping to identify the major and minor thoroughfares that would effect the greenway. Streets that provide important connections to amenities outside of the neighborhood were also noted. The street and sidewalk widths, the number of vehicular lanes, automobile/pedestrian/bike uses of the street and sidewalks, the presence of on street parking, and the existence of street trees and easement strips were recorded for roads that were likely to be used in the greenway or bike plan.

Many of the roads in the community appear to have been designed to support larger traffic volumes than what was observed during site visits. Canfield Street, and Rosa Parks Boulevard, both one-way traffic, and Grand River Avenue, are the primary examples of large roads that have outlived their purpose. In some aspects Trumbull Street and Warren Avenue, within the Woodbridge boundary, are large enough that the roadway is used inefficiently.



Photos of Existing Streetscape Conditions



The existing sidewalk system is thorough and walkable, but large roadways are intimidating to cross, and there are few pedestrian amenities such as bus shelters. Pedestrian bridges do exist over the John Lodge Freeway at Canfield and Merrick Streets helping pedestrian circulation between neighborhoods otherwise severed by a highway.

## Environment

Most notably, there is a high proportion of vacant land in the neighborhood. Some of these parcels clearly had remnants of residential gardens, others had overgrown completely. The vegetation on these sites supports local wildlife. Pheasants, goldfinches, and black squirrels were observed in the neighborhood.

Many streets have intermittent or sparse street tree plantings and on some streets there are no trees planted. Street tree species observed include: Honey locust, Buckeye, Sycamore, and Silver Maple. In some cases, residents have taken it upon themselves to plant their own street trees where they were missing. There is also evidence of vacant lot beautification and upkeep by residents.

There are little to no engineered sustainable stormwater management features such as rain gardens and bioswales in the neighborhood. Vacant land may offer stormwater infiltration, but was found to often hold stormwater runoff on the surface. Flooding was observed during one site visit on Grand River Avenue and Rosa Parks Boulevard.



Phragmites on Vacant Lot



Existing Vacant Lot Beautification

## Streetscape Inventory

Street Names	Street Width	Sidewalk Width	# Lanes	Parking	Easement	Street Trees	Tree Species	Notes
Trumbull Ave. (Residential)	52'	7'; 6' on east side	5: 2 each way; 1 turning lane	Both sides	5': East side	Intermittent	None	Mexicantown-Corktown Greenlink
Trumbull Ave. (Commercial)	52'	8'	5: 2 each way; 1 turning lane	Both sides	None	None	None	Mexicantown-Corktown Greenlink
Warren Ave. (East)	31.5'	9.5'	3 one way	North side	None	Yes+Blvd.	Maple and Locust	Midtown Loop and Wayne State
Warren Ave. (West)	44'	8'	4: one way	Both sides	None	None	None	Midtown Loop and Wayne State
Grand River Avenue	73'	13.5'	7: 3 each way; 1 turning lane	Intermittent	None	None	None	Connection to Downtown
Rosa Parks Blvd.	33'	5.5'	3: one way	None	6.5'	West side	Locust	Central Location in Neighborhood
Canfield St.	35'	6.5'	2: 1 each way	East side	3': East side	Yes	Locust	Pedestrian Bridge to Midtown
Merrick St.	27'	6'	2: each way	Both sides	9.5'	Intermittent	Maple, Chestnut, Sycamore	Pedestrian Bridge to Midtown

## Community

The primary land use in Woodbridge is residential with commercial activity concentrated along Trumbull Street and Grand River Avenue. Two art galleries are located in the neighborhood: the Contemporary Art Institute of Detroit and 4731 Gallery. Through conversations with residents we learned that there are a number of artists that call the neighborhood home.

The residential housing is dominantly dense single-family detached housing and located west of Trumbull Street. A new residential development, Woodbridge Estates, is in progress east of Trumbull Street. This development is also single family detached housing, with larger lot sizes than the rest of the neighborhood.

Five educational institutions are located in Woodbridge: George Croquette Academy, Douglass Academy, Detroit Day School for the Deaf, Edison Elementary School, and The Woodbridge Community Youth Center.



1. Woodbridge Community Youth Center
2. Edison Elementary School
3. Detroit Day School for the Deaf
4. Douglass Academy
5. George Crockett Academy



Trumbull Market



George Crockett Academy



Detroit Institute of the Arts



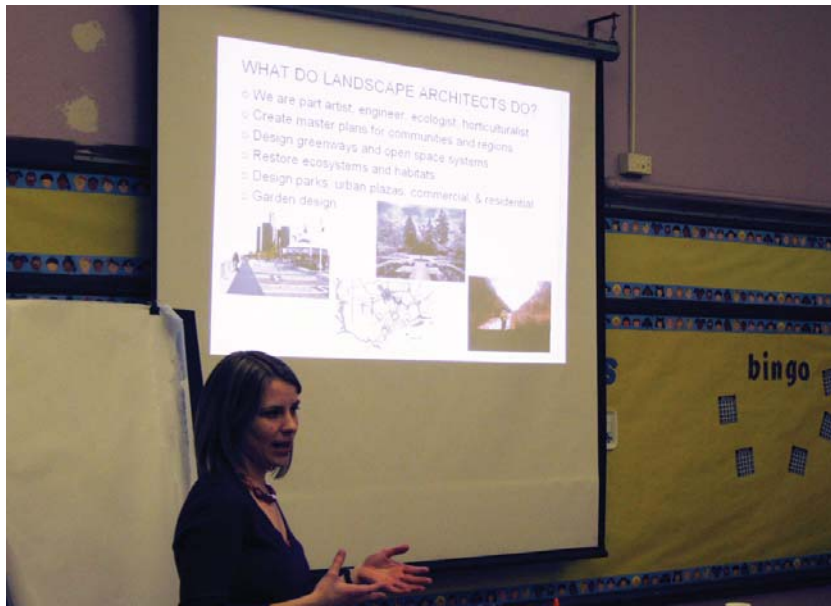
1. Midtown
2. Wayne State University
3. Woodbridge Pub
4. Contemporary Art Institute of Detroit (CAID)
5. Boy Scouts of America Detroit Headquarters
6. Architectural Salvage
7. Gallery 4371 and Woodbridge Neighborhood Development Corporation
8. "Central Park"
9. Scripps Park
10. Local Branch of Detroit Public Library
11. Trumbull Market
12. University Foods

# Community Meeting

Community input concerning the greenway design was an important research component. Obtaining resident feedback on design concepts and ideas will provide the Woodbridge neighborhood with a greenway design that addresses the needs and concerns of those who live there. The meeting was held at the Woodbridge Community Youth Center in March, 2009.

In preparation for the meeting, we organized a Power Point presentation that included:

- The definition of a greenway
- 3 examples of existing urban greenways (Pittsburgh, Boston, Vancouver)
- Greenway uses
- Illustrated examples of typical features found in a greenway design including stormwater management techniques, public art, pocket parks, traffic-slowing structures, recreational activities and non-motorized transportation alternatives.
- Our greenway design and bike plan location, based on DCDC's original plan and modified after further research and site inventory, with loose design ideas and programmatic elements we generated



Photos of Community Meeting Presentation



Resident Looking at Proposed Greenway and Bike Plan Map

The second half-hour of the meeting was devoted to discussion based on previously determined questions related to the presentation. Residents were encouraged to express their thoughts on safety concerns, design program, and any topic of relevance to them. In addition to the community meeting we also constructed a paper survey containing eleven questions regarding residents' feelings specifically about transportation, recreation, and strengths and weaknesses of their community. The survey was given to our community meeting participants.

After performing the site inventory and conducting the community meeting, our final greenway design and bike plan for the Woodbridge neighborhood of Detroit was determined. The greenway location follows the original path generated by DCDC (north along Rosa Parks Boulevard and east across Merrick), but also includes Canfield Street which added an important pedestrian connection. The greenway design emphasizes a reinterpretation of road uses to improve alternative transportation connectivity, and support an open space network emphasizing ecological function and social interaction. Our design defines the programmatic elements of the open space network and describes the necessary adjustments for bicycle use and streetscape enhancements.

This booklet is intended to communicate our goals for the bike plan and greenway master plan through design guidelines and proposed site uses. The information is divided into three themes: Design for Alternative Transportation, Design for Environment, and Design for Community. An additional section, entitled Design for Community Identity, covers site furnishing, signage and lighting choices that were inspired by, and enhance, Woodbridge's character and identity.



Flyer Advertising Community Meeting



design for 

ALTERNATIVE  
TRANSPORTATION

Alternative transportation is a term that describes all non-motorized forms of transportation, from bikes to pedestrians. To make a streetscape suitable for uses other than motorized vehicular traffic requires an understanding of the pedestrian experience and how bikes travel city roadways. This portion of the booklet presents the bike plan and streetscape improvements recommended for Woodbridge.

# Woodbridge Greenway and Bike Master Plan



The shift towards alternative methods of transportation is evident in the city-wide grass roots greenway and bike lane efforts. The Woodbridge Greenway and Bike Master Plan illustrates how the Woodbridge neighborhood furthers this movement by connecting two proposed greenway routes; the Corktown-Mexicantown Greenlink and the Midtown Loop. The location of the bike plan was heavily informed by these two proposed greenways as well as the attractions of Midtown and the location of Wayne State University.

The bike plan contains two types of routes, illustrated in the greenway and bike master plan as “designated” and “signed.” Designated routes contain a separate lane solely for bikes which is differentiated from vehicular traffic through a painted stripe on the road. On signed bike routes, however, drivers and bicyclists share the road. These routes do not have a painted bike lane but do contain informative signage such as “Share the Road” in order to alert vehicles to cyclists.

Additional signage including route identification and way finding can be found along both types of bike routes throughout the greenway (See ‘Design for Community Identity’ section for greenway signage types and locations).

The streets with **designated bike routes** include: Trumbull Street, Warren Avenue, Grand River Avenue, and Rosa Parks Boulevard.

## Trumbull Street and Warren Avenue

These are two very important thoroughfares in the bike plan. The potential connections provided by Warren Ave. and Trumbull St.



integrate the Woodbridge greenway and bike plan into local and regional greenway efforts. The designated bike route on Trumbull St. provides a connection to the Corktown-Mexicantown Greenlink, and the bike route heading east on Warren Ave. intersects the Midtown Loop. If extended further east, the Warren Ave. bike lane will connect directly to the proposed path of the Dequindre Cut, rails to trails project in East Detroit. If extended west, the Warren Ave. bike route will connect to the Rouge River Park.

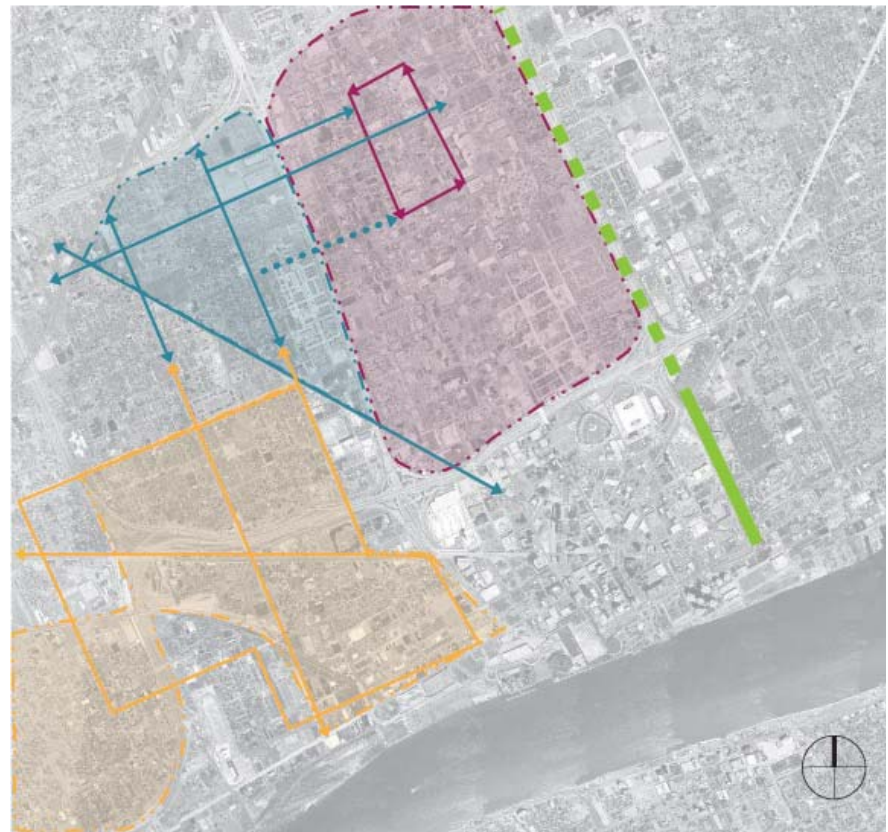
### Grand River Avenue

The designated bike route along Grand River Ave. runs from Woodbridge into downtown Detroit and completes the Woodbridge neighborhood bike loop between Trumbull St., Warren Ave. and Grand River Ave. This local 2.5 mile loop can be used by residents for recreational purposes. Additionally, both the Grand River Ave. and Warren Ave. bike routes provide options to residents who commute into Detroit for work.







### Rosa Parks Boulevard

The final designated bike route is on Rosa Parks Blvd. As the main axis of the greenway plan, it was important to provide a designated bike lane on this street. It is also thought that the presence of bikes along Rosa Parks Blvd. will aid in slowing traffic.

**Signed bike routes** within the Woodbridge greenway and bike plan include: **Merrick** and **Canfield Streets**. Both of these streets are mainly residential and experience local traffic, however the streets are not wide enough to include both on-street parking and a designated bike lane so they must remain as signed routes.



Location Map of Woodbridge, Corktown-Mexicantown and Midtown Neighborhoods

-  Woodbridge Neighborhood Boundary & Bike Routes
-  Midtown Neighborhood Boundary & Bike Routes
-  Corktown-Mexicantown Neighborhood Boundaries & Bike Routes
-  Proposed Pedestrian Connection-Woodbridge to Midtown
-  Dequindre Cut Current Trail
-  Dequindre Cut Future Trail Expansion

# Streetscape Improvements Features

## Bike Lanes

Designated and signed routes improve circulation within Woodbridge and greater Detroit  
Encourage the use of alternative methods of transportation  
Provide recreational opportunities to residents  
Improve physical health and wellness



Source: Streets Blog<sup>6</sup>  
Designated Bike Lane

## Stormwater Management Techniques

Include curb cuts, bump outs, infiltration trenches, and porous pavement  
Absorb, infiltrate, and cleanse urban runoff from storm events  
Reduce impacts on the sewer system  
Prevent pollutants from discharging into local streams and waterways  
Recharge groundwater



Source: Sustainable Stormwater<sup>7</sup>  
Curb Bump Out

## Signage

Directional signage improves circulation and pedestrian safety  
Interpretive signage educates residents regarding greenway programming  
Welcome signs greet neighborhood residents and guests  
Showcases community identity and character



Source: City of Richmond, California<sup>8</sup>  
Bike Route Sign

## Pedestrian Elements

Raised or stamped crosswalks slow traffic and increase pedestrian safety  
Street trees and planted medians enhance the pedestrian experience  
Benches and sitting areas provide a place to rest  
Lighting improvements increase safety



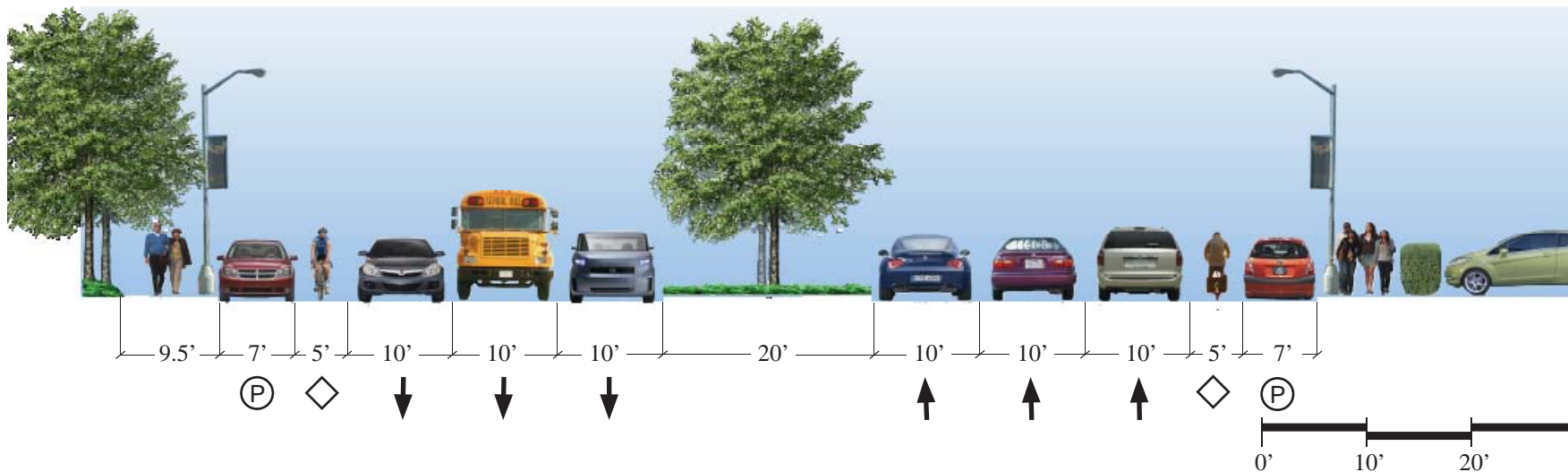
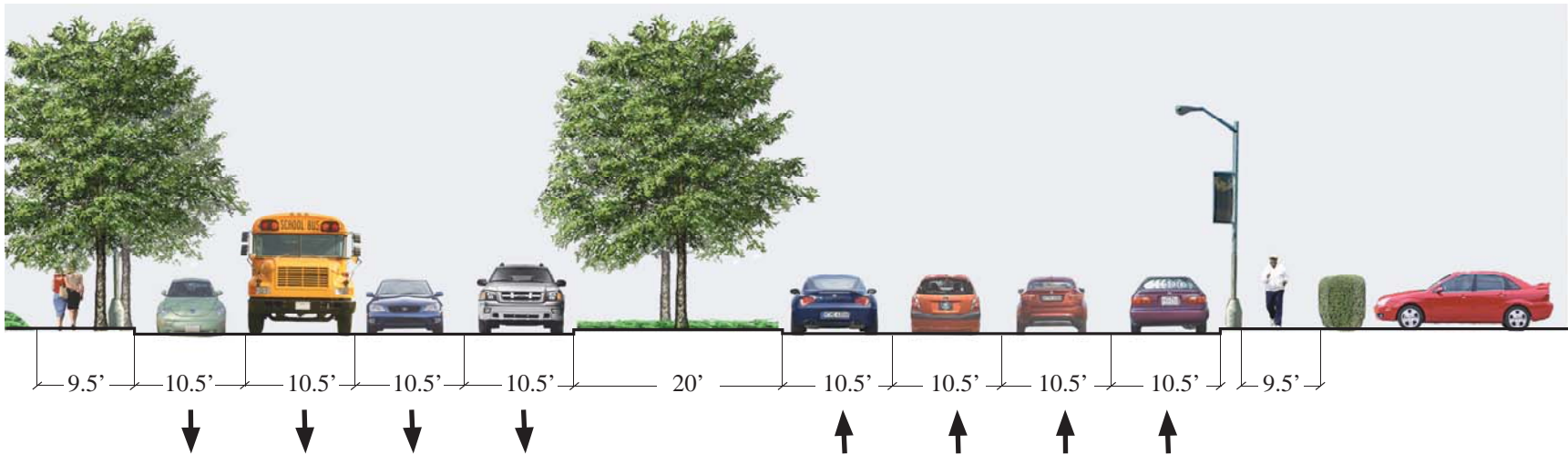
Source: Liveable Streets<sup>9</sup>  
Pedestrian Crosswalk



# Proposed Streetscape Improvements

The implementation of the bike plan requires altering existing streetscapes. The proposed adjustments to the roadway and bike lane additions were based on the recommendations and examples in the City of Chicago's Bike Lane Design Guide and the City of Pittsburgh's Bicycle Facility Guidelines and Policies. All redesign, proposed within the right-of-ways, maintain the existing width. Lanes and sidewalk adjustments are also within the existing width. The proposed design elements strive to achieve improvements to the streetscape that are cost effective and realistic.

## Warren Avenue, East of Trumbull Street



## Existing

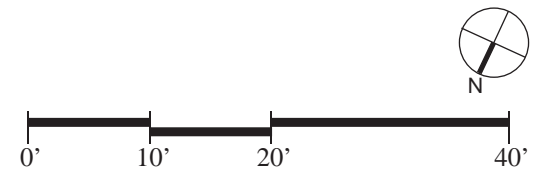
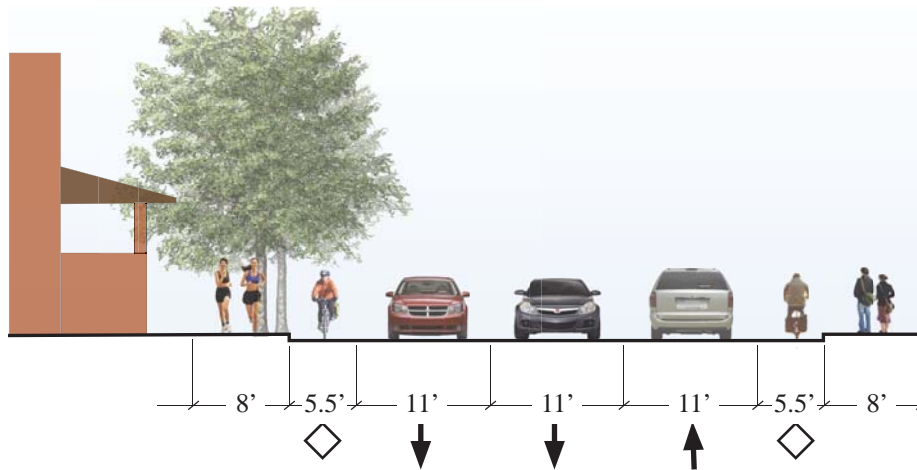
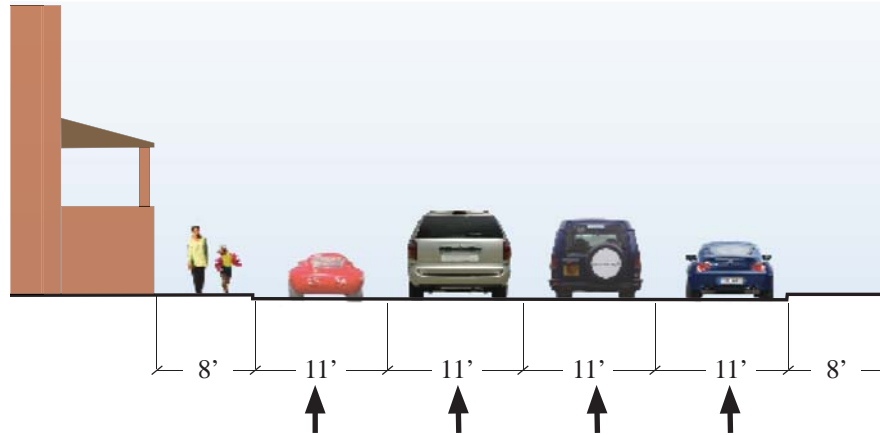
East of Trumbull Street, Warren Avenue extends into Midtown Detroit. This is outside of the study area, but needed to be addressed as it connects proposed bike lanes to the Midtown Loop. Most notably on this portion of Warren, there are 4 traffic lanes in either direction each 10.5' wide. The total road width is 42' (sidewalk curb to boulevard curb) in each direction. In the center of the roadway there is a 20' median planted with trees. Parking is available along the North side of the street, adjacent to Wayne State University Fields, and for a short span on the South, between Trumbull Street and the University Foods shopping center. Warren Avenue, on this side of Trumbull, is relatively pedestrian friendly with 9.5' sidewalks and grated street tree plantings. The boulevard provides a refuge for those trying to cross the street.

## Proposed

Within the 42' of driving space, we chose to maintain 3, 10' wide, traffic lanes on both sides of the street. The south side of Warren can be expanded to 4 traffic lanes east of the University Foods shopping plaza, as it is currently designed. By reducing each side of Warren by one traffic lane and reducing the lane widths, we are able to provide space for a 5' designated bike lane and a 7' designated parking lane in either direction.

The sidewalk and easements areas are untouched in our design. The wide sidewalks, Honey Locust street trees and Wayne State University banners make for a pleasant pedestrian experience. The median is also maintained in our design because of its traffic calming and pedestrian crossing properties.

# Warren Avenue West of Trumbull Street



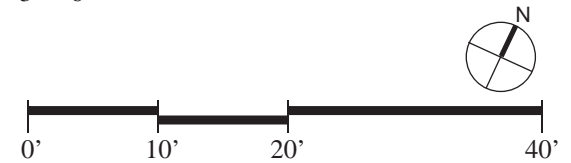
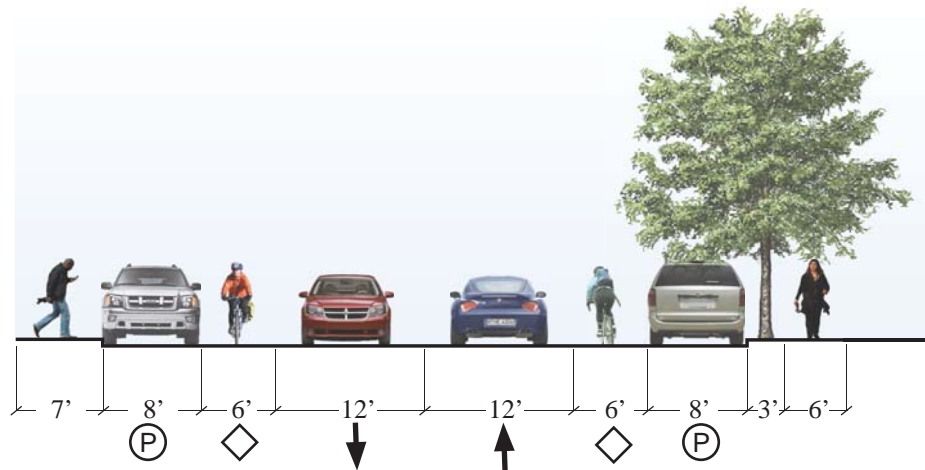
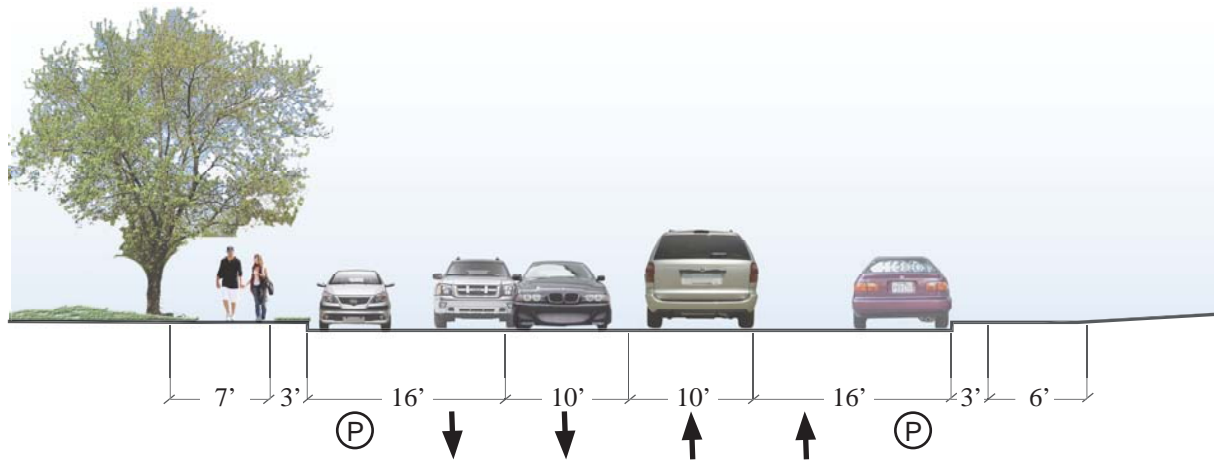
## Existing

Warren Avenue West is the portion of Warren Avenue that runs through the Woodbridge neighborhood heading west. Currently, this street is 44' wide (sidewalk curb to sidewalk curb), includes four 11' wide traffic lanes, and is one-way. Traffic moves fast due to the lack of oppositional traffic and is dangerous for pedestrians, especially those that live along this portion of Warren Avenue. We found little to no on-street parking occurring on the street. There is a noticeable lack of street trees; however the sidewalks measure 8' wide.

## Proposed

Our recommendation for Warren Avenue is to convert it from a one-way street into a two-way street, with two lanes of east/inbound traffic and one west/outbound lane. Reducing the roadway from four 11' traffic lanes to three, allows space for one 5.5' designated bike lane in each direction. The width of the sidewalks allows for the addition of grated street trees.

# Trumbull Street - Residential District, South of Warren Avenue





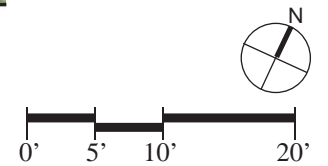
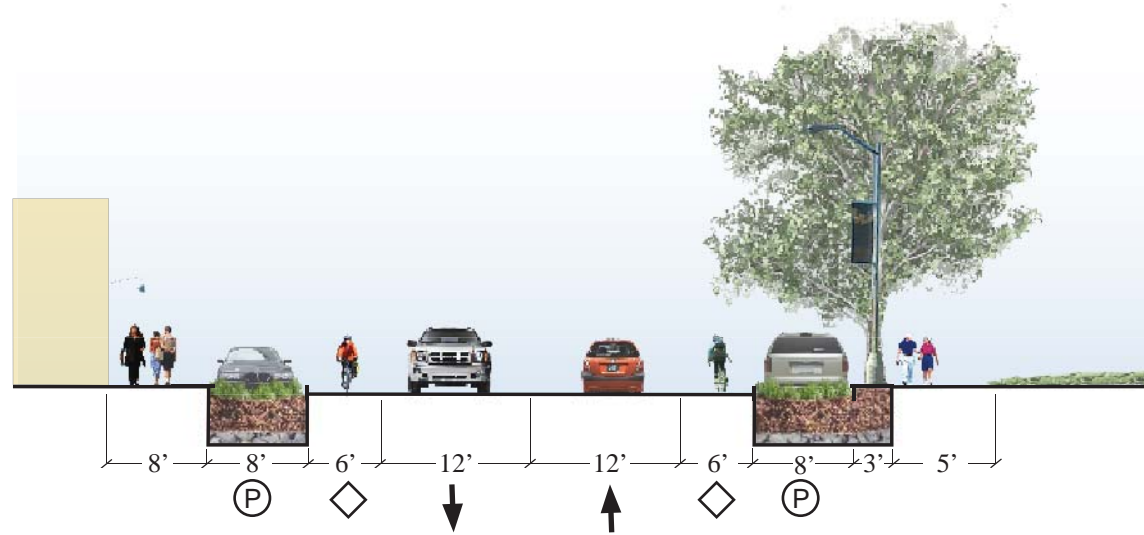
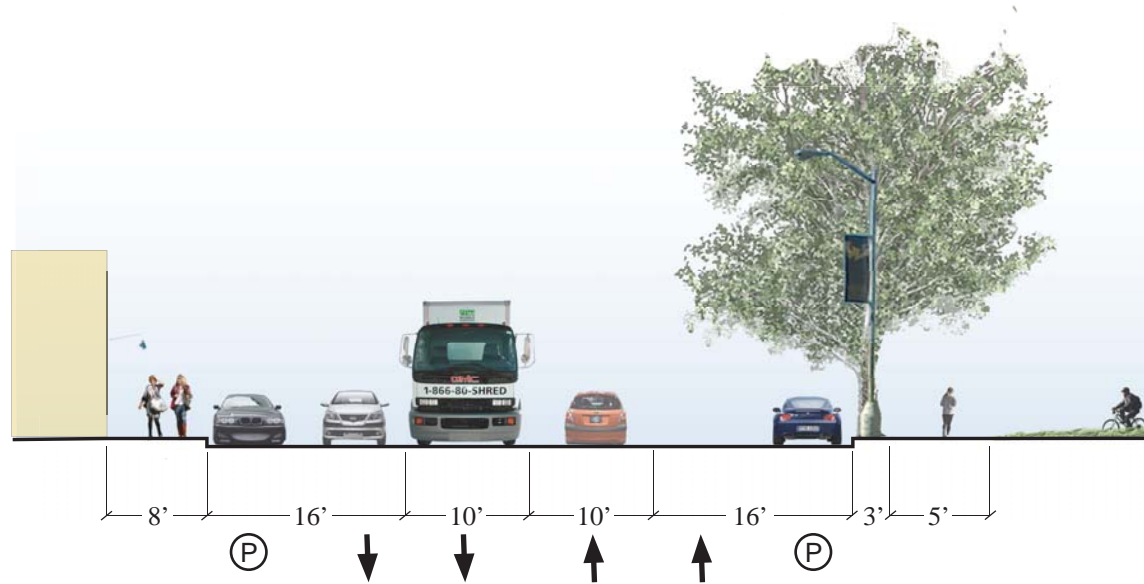
## Existing

The residential section of Trumbull St. has wide sidewalks and a narrow, intermittent, and sometimes highly sloped easement. Street trees are sparse and occur randomly on both sides of the street. Currently on Trumbull St., the parking lane is included in a larger traffic lane. Measuring from the curb, the shared parking/driving lane reaches 16' and the additional driving lane is another 10' to the center. The total width of the street is 52' (sidewalk curb to sidewalk curb). It was also observed that the amount of traffic does not support the need for 2.5 traffic lanes in either direction.

## Proposed

The design for Trumbull Street-residential district includes reducing the traffic lanes to two (one in each direction) and increasing their width from approximately 10' to 12'. Street parking is heavy in this area so an 8' parking lane is proposed. A designated 6' bike lane is added to both sides of Trumbull St. To address the lack of street trees in this residential area, it is recommended that new street trees be planted where the easement is sufficiently wide enough (4' from curb to sidewalk) and level.

# Trumbull Street - Commercial District, North of Warren Avenue



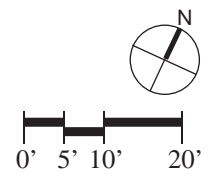
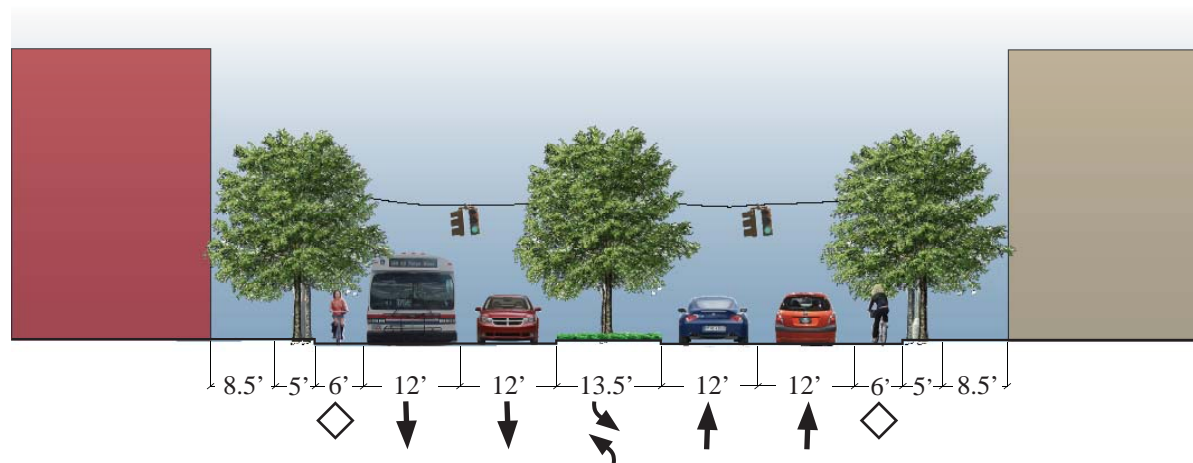
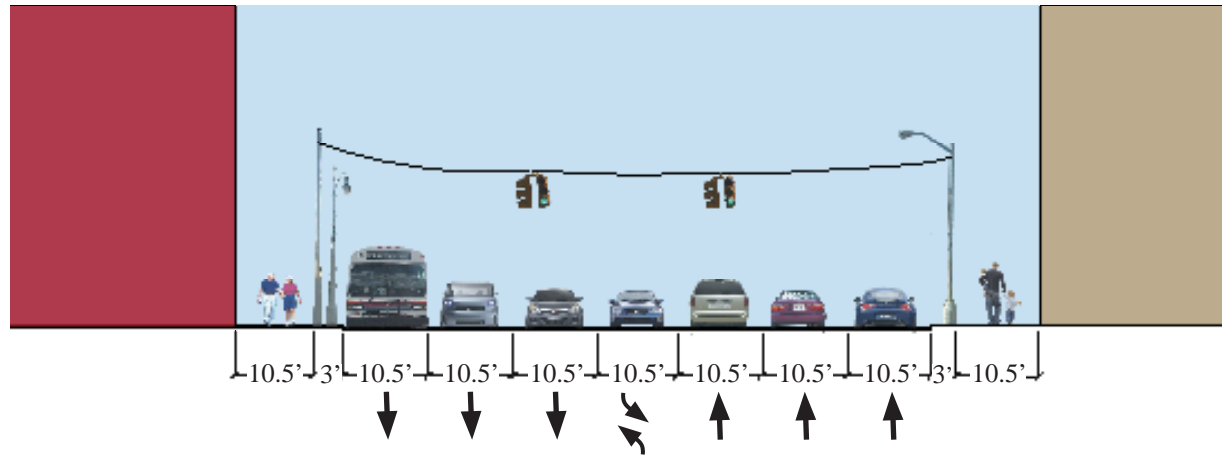
## Existing

The commercial portion of Trumbull St. begins at the intersection of Warren Avenue and runs north. The total street width is 52' (sidewalk curb to sidewalk curb) and, similar to the residential section, includes a 10' driving lane and a 16' driving/shared parking lane in each direction. The sidewalks are 8' wide and include a 3' easement on the east side with sycamores planted as street trees.

## Proposed

The proposed streetscape improvements involve altering the roadway to include one 12' traffic lane in each direction, an 8' designated parking lane on each side, and a 6' designated bike lane on each side. To reduce stormwater runoff, we propose retrofitting the parking lanes with porous pavement and infiltration trenches, which allow stormwater to drain into the soil below. The wide sidewalks and street trees on the east side of the street already allow for easy pedestrian movement and shade. However, we do not recommend adding street trees to the west sidewalk due to the possibility of that side becoming more heavily used as a commercial district.

# Grand River Avenue



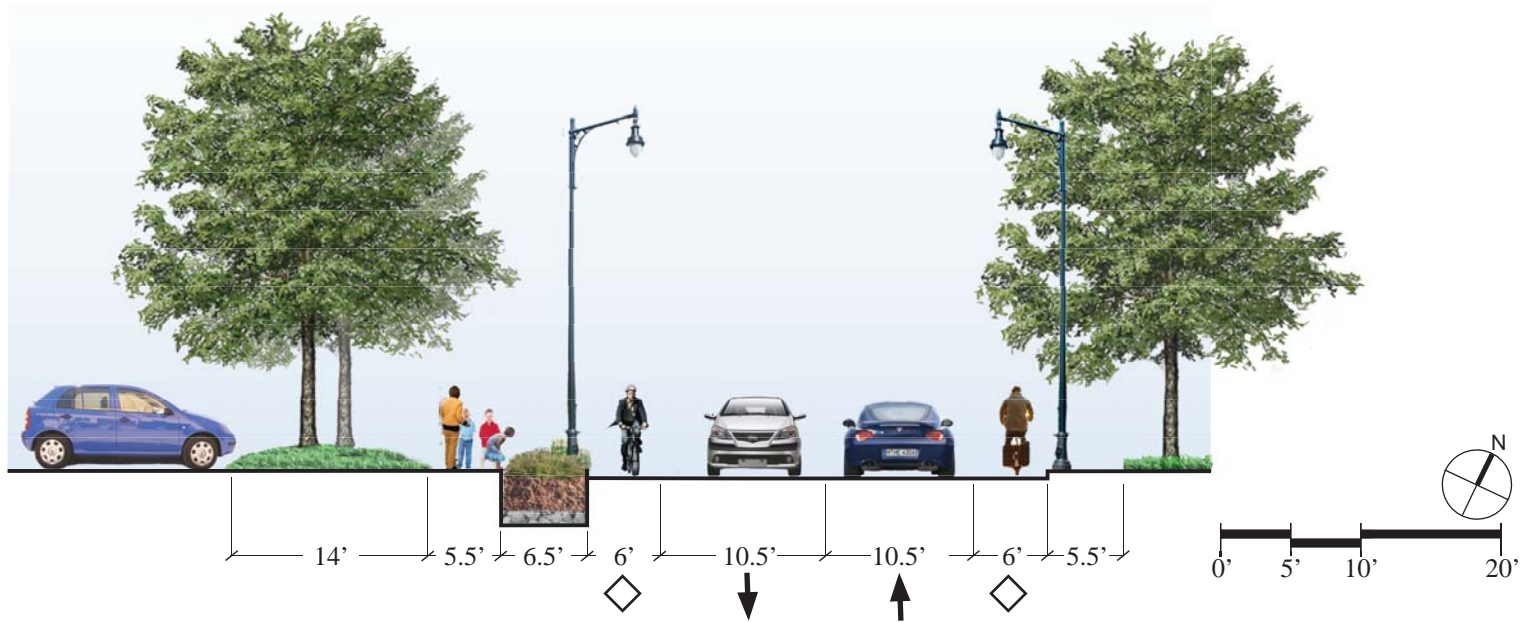
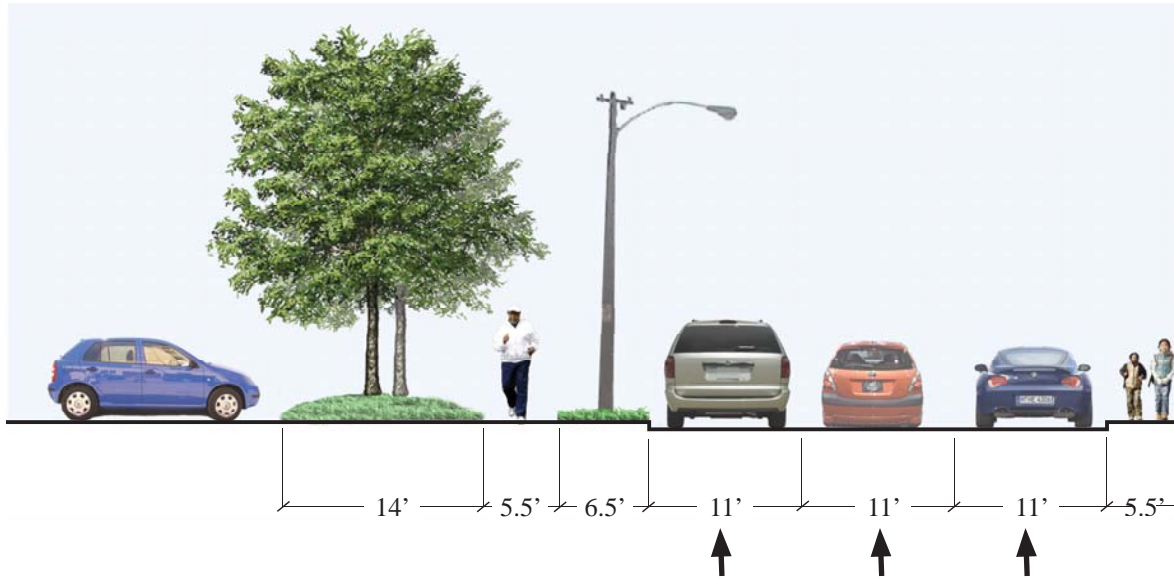
## Existing

Grand River Avenue is the largest roadway in Woodbridge. The total road width measures 74' (sidewalk curb to sidewalk curb). The most notable feature of Grand River Ave. is the width of the road and the lack of traffic congestion. There is not enough traffic to support the amount of asphalt. There is an unofficial parking lane on both sides of the street, and cars are usually found outside one of the few businesses that are located along Grand River Ave., north of Rosa Parks Boulevard. Due to its width, the road presents a hazard to pedestrians. There are currently no street trees; however the sidewalks are large enough at 13.5' to support tree grates.

## Proposed

To reduce the imposing effect of excessive asphalt, we propose retrofitting the center lane into a 13.5' wide planted median, similar to the one currently on Warren Avenue. The vacant space available along Grand River Ave. can be converted to small parking lots to accommodate customers. The traffic lanes can be reduced to only two 12' lanes in each direction. This change allows space for two 6' designated bike lanes. The sidewalk width can be reduced to 8.5' to provide room for a 5' tree planting space.

# Rosa Parks Boulevard



## Existing

Rosa Parks Boulevard is the primary street in our greenway. It is currently one-way with three 11' traffic lanes. The east side of the road has a roadside easement 6.5' wide, and a 14' wide setback between Canfield St. and Forest St. The existing street trees (honey locust) are primarily found on the west side of the road. The sidewalk on the west side of the road is 5.5' wide.

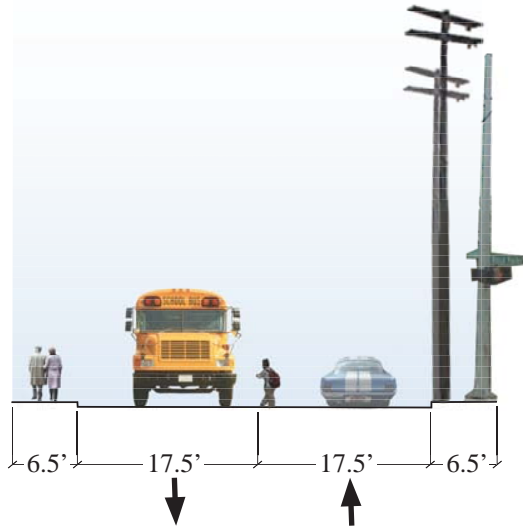
## Proposed

The primary change to Rosa Parks that we propose is altering the traffic pattern from a one-way to a two-way street. The street would include one 10.5' traffic lane in each direction. Designated bike lanes on either side of the street would be 6'. The easement on the west side of the road can be retrofitted to provide stormwater capture through the use of curb cuts, which channel stormwater runoff into the easement depression where it infiltrates into the soil.

# West Canfield Street

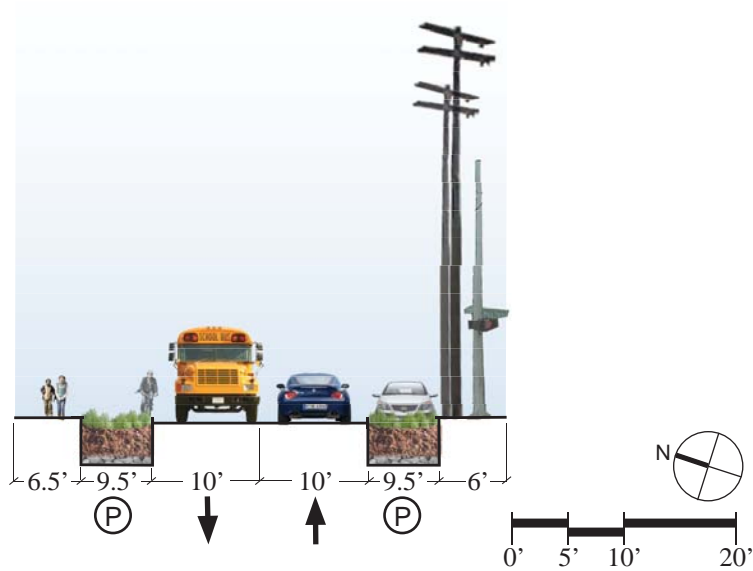
## Existing

West Canfield Street is a secondary route for our greenway. The street is currently 35' wide with one 17.5' wide lane in each direction. Minimal on-street parking was observed along this road. The sidewalks are 6.5' wide and the south side contains the telephone pole and streetlights.



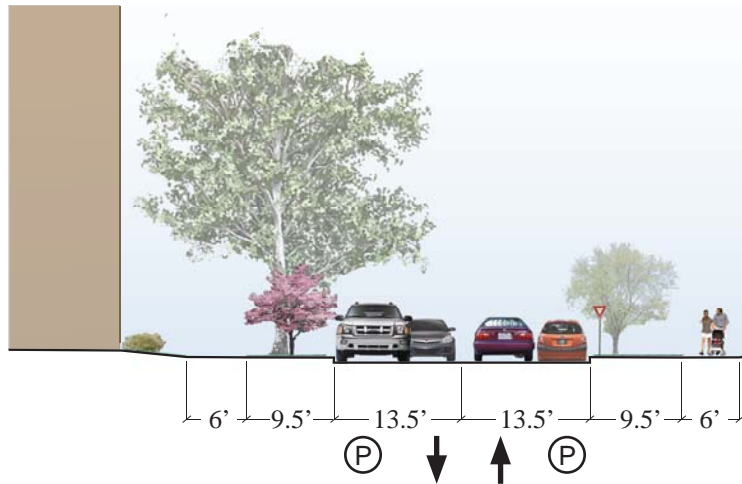
## Proposed

The changes proposed for Canfield St. include decreasing the traffic lanes to 10', and adding two on-street parking lanes. In addition to parking lanes, vegetated curb bump outs can be placed at each intersection to reduced traffic speed and provide a space for stormwater infiltration. The plantings in the bump outs provide streetscape beautification in addition to providing an environmental educational amenity that captures stormwater through curb cuts and infiltrates it through the soil.



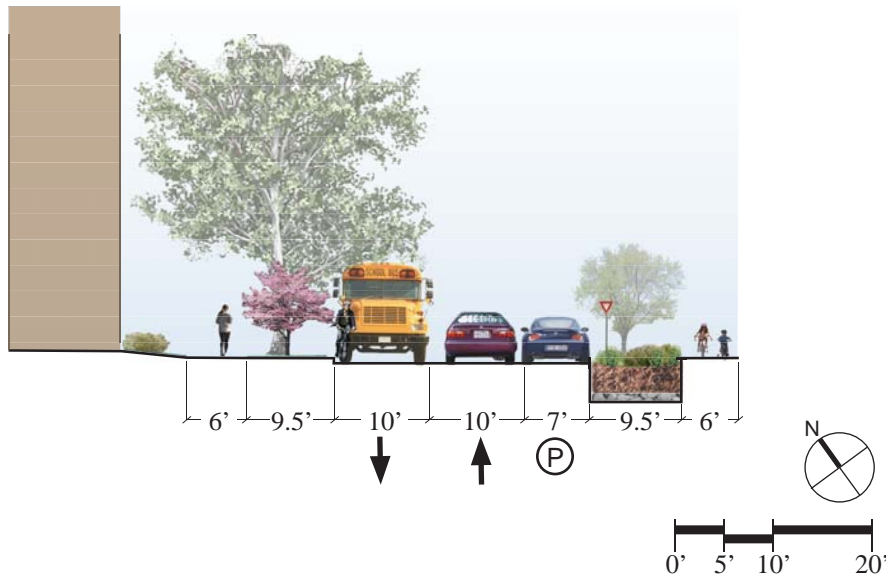


# Merrick Street



## Existing

Merrick Street, like Canfield St., is a secondary route in the greenway. It is currently 27' wide, with on-street parking on both sides of the street. It was observed that this causes difficulty for drivers when faced with opposing traffic. The sidewalks are 6' wide and both sides have a 9.5' easement strip. The street trees are intermittent and some residents have planted new trees in the easement strip.



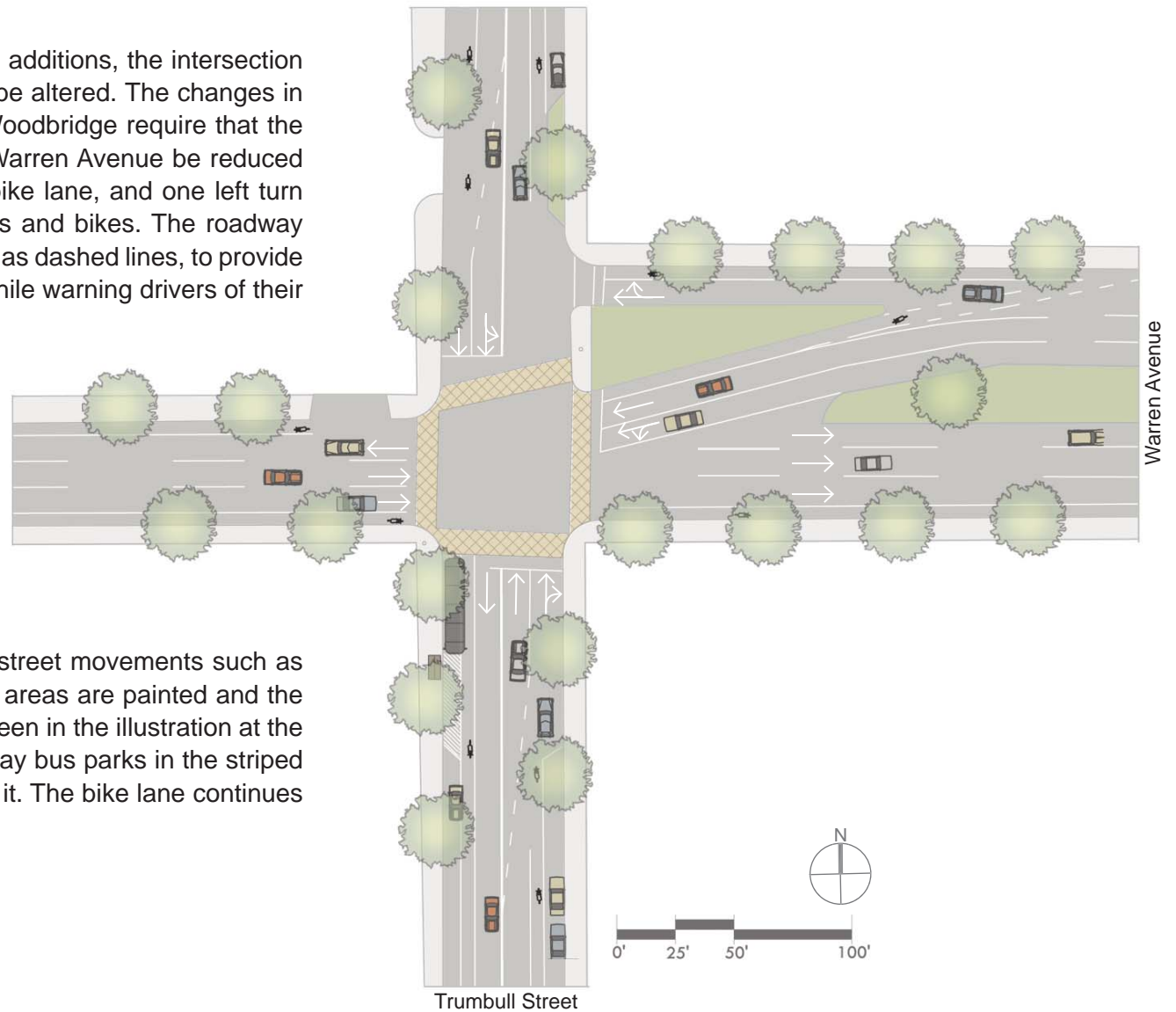
## Proposed

The difficulty of driving on Merrick St comes from the parked cars on both sides of the street. We propose removing parking from the north side of the street, and allowing it only on the south side. This change allows room for 10' traffic lanes, a 7' parking lane and a vegetated infiltration trench in the current south side easement strip. The bike route on Merrick St. will be marked with directional signage, but not with a painted lane.

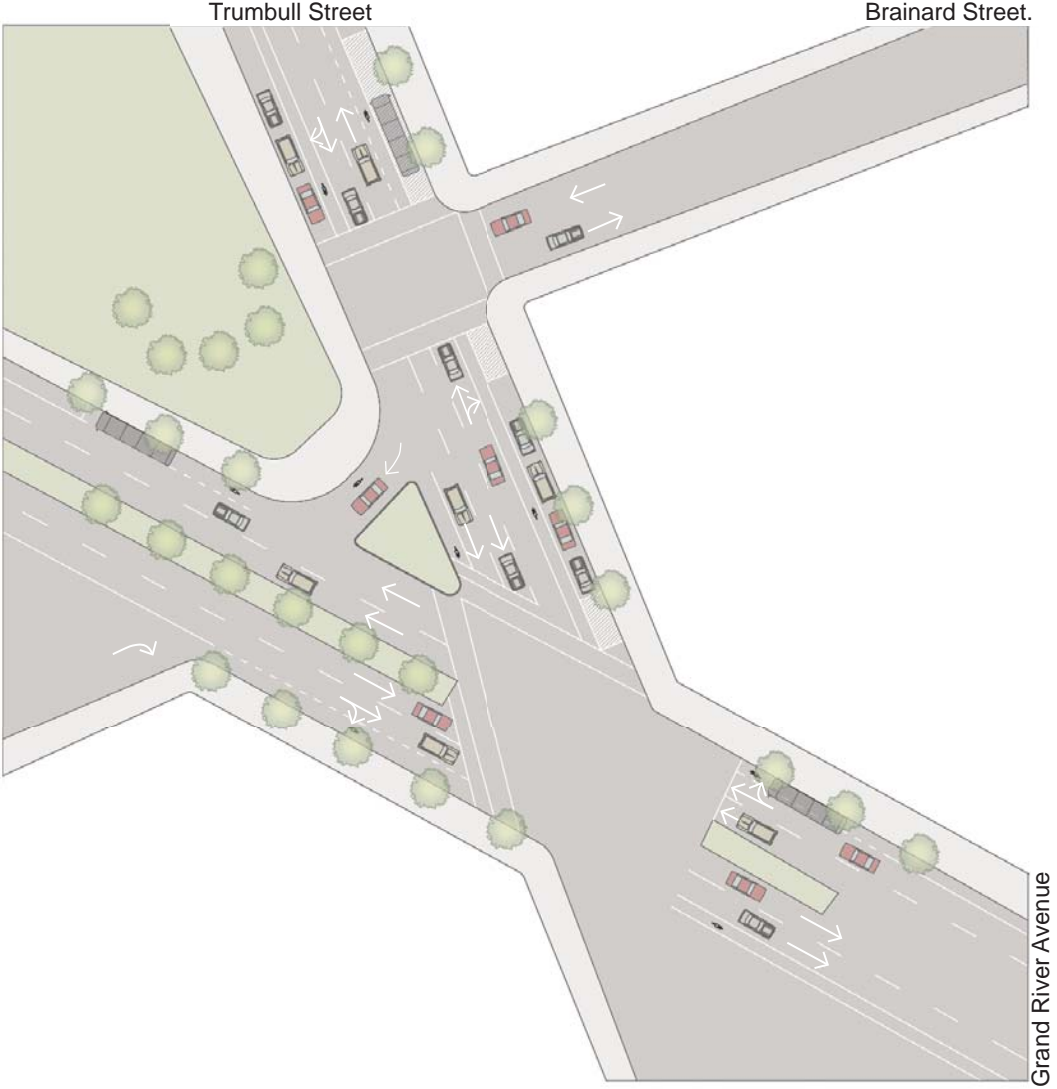
## Warren Avenue and Trumbull Street Intersection

Based on our recommendations for bike lane additions, the intersection of Warren Avenue and Trumbull Street must be altered. The changes in traffic direction on West Warren Avenue in Woodbridge require that the lanes entering the neighborhood from East Warren Avenue be reduced to one straight outbound lane, one straight bike lane, and one left turn lane to be shared by both motorized vehicles and bikes. The roadway additions include lane-painting changes, such as dashed lines, to provide bikers access to changing lanes for turning while warning drivers of their potential movements.

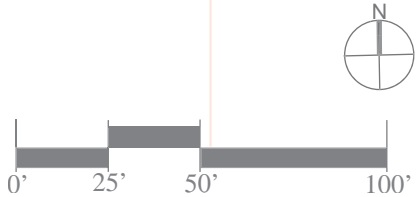
Bike lanes must be incorporated into typical street movements such as bus stops. In these situations, the bus pull-in areas are painted and the bike lanes moves around them. This can be seen in the illustration at the southwest corner on Trumbull St. The dark gray bus parks in the striped area and the bike lane shifts to the outside of it. The bike lane continues past the parallel parking.



# Grand River Avenue and Trumbull Street Intersection

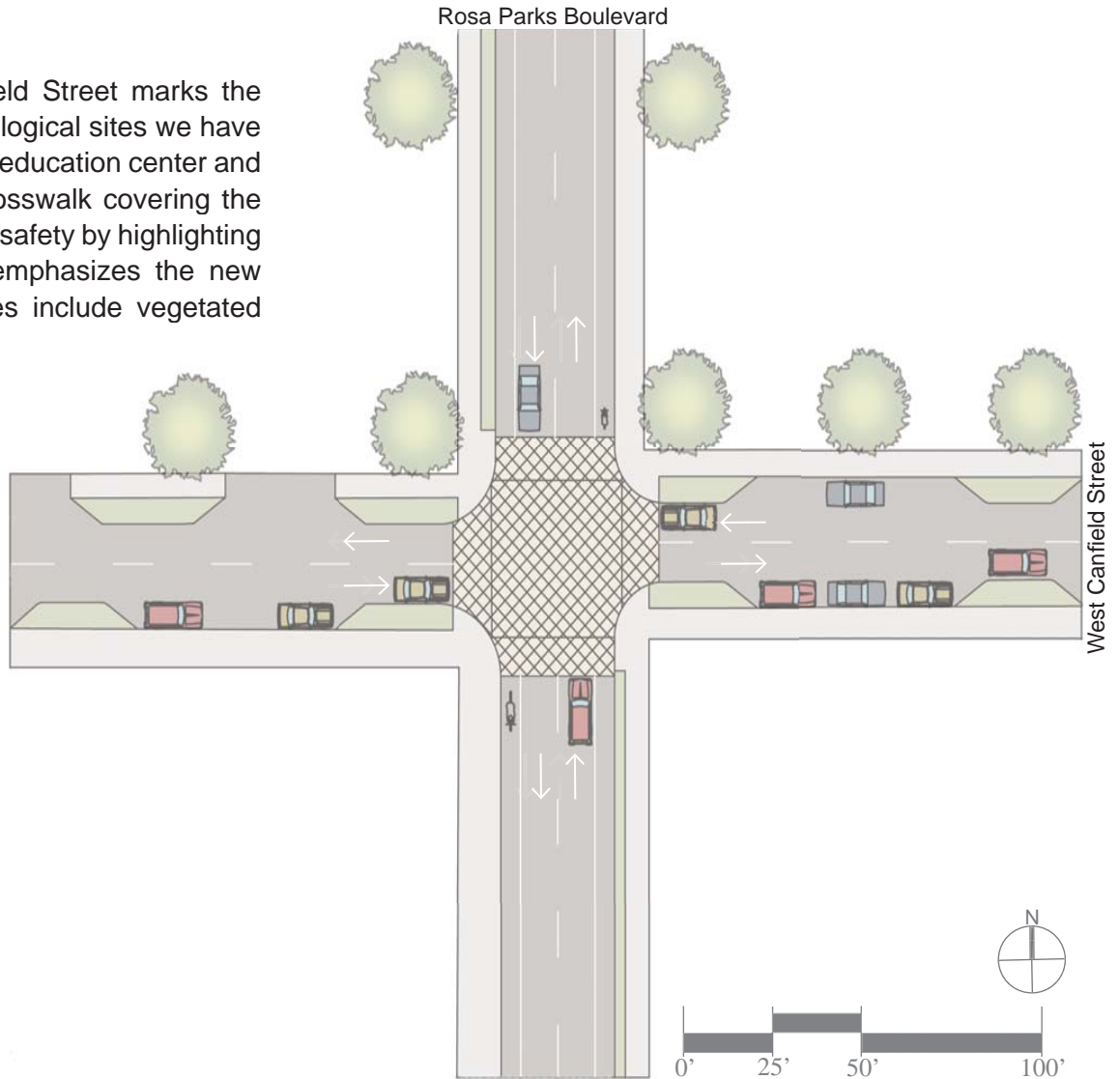


The proposed design for the intersection of Grand River Avenue and Trumbull Street includes a planted median, street trees, and bike lanes so that bike traffic will be able to easily continue along the Woodbridge bike way or head into downtown Detroit. The proposed median on Grand River Ave. is extended slightly past the intersection with Trumbull St. The existing concrete median located on Trumbull St. to divide right-turning traffic can also be vegetated with short grasses to maintain sight lines. Bus shelters on Trumbull St. are painted with diagonal stripes and bike lanes are shifted to the outside. Painted bike lanes are dashed in areas where bikers must navigate to a left hand turning lane.

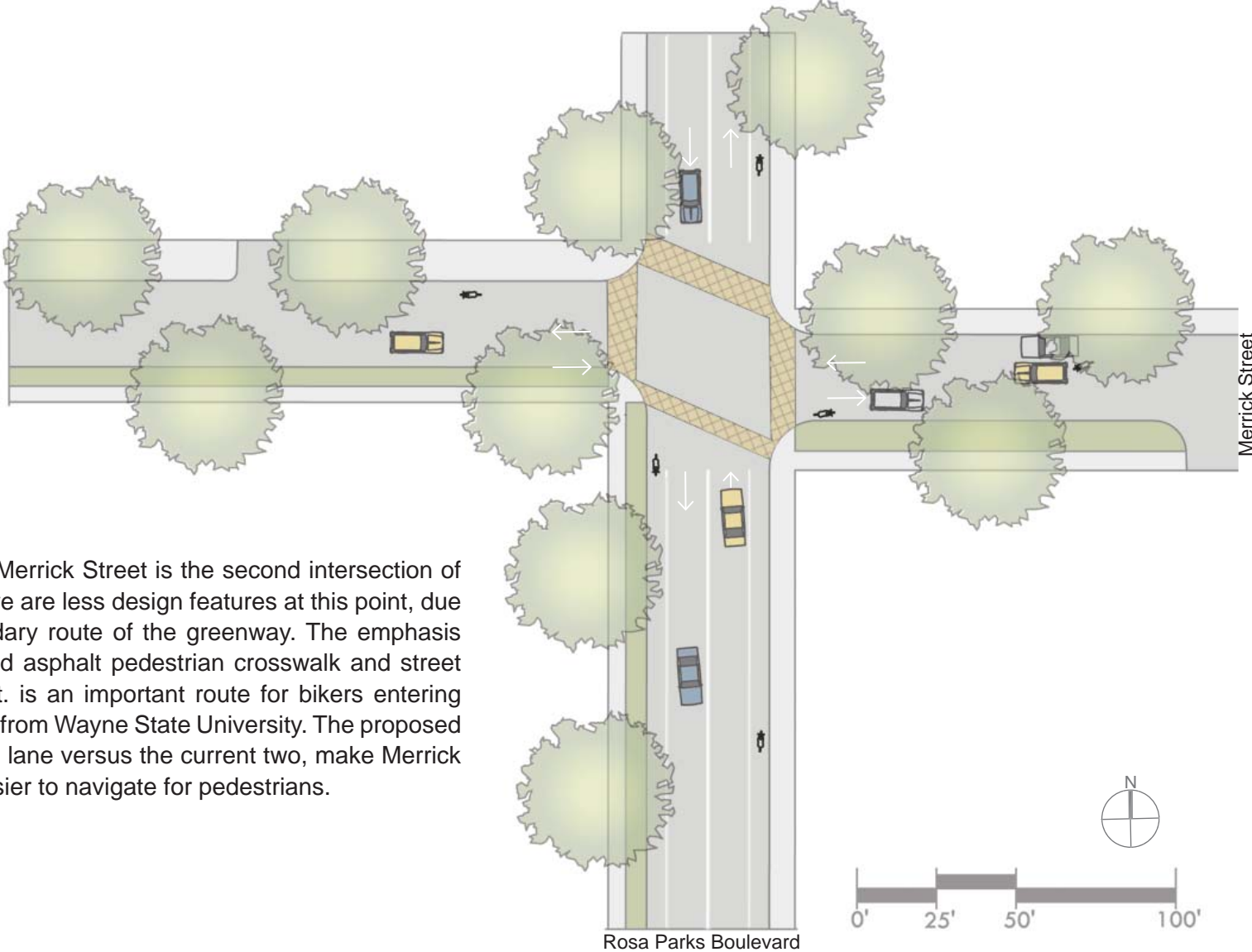


## Rosa Parks Boulevard at West Canfield Street

The intersection of Rosa Parks Boulevard and Canfield Street marks the center of the proposed greenway. In addition to the ecological sites we have proposed for the corner lots, including an environmental education center and a demonstration prairie, we are proposing a raised crosswalk covering the intersection. This type of crosswalk improves pedestrian safety by highlighting the crossing area, forces traffic to slow down, and emphasizes the new greenway features. Additional traffic calming measures include vegetated bump outs on Canfield Street.



# Rosa Parks Boulevard at Merrick Street



Rosa Parks Boulevard at Merrick Street is the second intersection of two greenway routes. There are less design features at this point, due to Merrick being a secondary route of the greenway. The emphasis is on a stamped and tinted asphalt pedestrian crosswalk and street tree additions. Merrick St. is an important route for bikers entering the Woodbridge greenway from Wayne State University. The proposed designation of one parking lane versus the current two, make Merrick St. safer for bikers and easier to navigate for pedestrians.

design for 

ENVIRONMENT

The vast amount of vacant land in the City of Detroit offers a unique opportunity for its residents to engage in activities that urban dwellers of other cities cannot, due to a lack of land resources. The community gardening movement has already begun in both Detroit and the Woodbridge neighborhood. The proposed greenway design is intended as a framework for a green infrastructure network that the community of Woodbridge can take ownership of and nurture. It is unknown whether or not Detroit will experience a surge in development in the future, but by organizing existing vacant parcels into a neighborhood, and eventually, a city-wide open space system, ensures that it will persist for future generations of Detroiters.

# Woodbridge Neighborhood Greenway

The Woodbridge Neighborhood Greenway is located along Rosa Parks Boulevard, Merrick and Canfield Streets. The greenway location along Rosa Parks Blvd. and Merrick St. was initially determined by the community design work of the Detroit Collaborative Design Center. The location is further supported by us for the amount of usable, vacant land and existing open space on Rosa Parks Blvd. that offers opportunities for the design of ecologically functioning and recreational spaces.

The intent of the greenway is to organize existing vacant land into defined, usable outdoor space that improves pedestrian circulation and safety, promotes social interaction, and increases physical activity while exhibiting the unique character of the Woodbridge Community. Additions such as raised or stamped crosswalks, street trees and easement plantings promote walking and biking as a form of transportation and exercise by creating a more visually appealing environment. The proposed reuse of vacant lots for sports and recreation or habitat enhancement offers alternatives for residents.

Rosa Parks Boulevard is the primary axis of the greenway which runs north through the neighborhood from Grand River Avenue to the Edsel Ford Freeway. Design features include habitat enhancement and creation, stormwater management structures, public art, community gardens, and both active and passive opportunities for recreation and community interaction. The two secondary greenway axes are Merrick Street and Canfield Street which intersect with Rosa Parks Boulevard.

An important goal for the greenway design was to create an educational resource for students and teachers both inside and outside of the Woodbridge neighborhood. Designating Canfield Street as a secondary greenway strengthens the connection between Rosa Parks Blvd. and the Woodbridge Community Youth Center, the Edison Elementary School, the Detroit Day School for the Deaf, and Woodbridge Estates residential development; all located east of Trumbull Street. The intersection of Rosa Parks Blvd. with Canfield Street is also the location of a large vacant parcel that is currently used as a passive, natural walking area. This became the primary node of the greenway and is enhanced with the addition of an urban environmental education center and prairie demonstration site. Merrick Street is also envisioned as a secondary greenway route based on the connection it provides to Wayne State University, Midtown, and the Trumbull Street commercial district.

Overall, the greenway was designed with all ages and interests in mind and has a variety of spaces for residents to embrace and enjoy. The following section provides illustrations and explanations of the different uses proposed for Rosa Parks Blvd. and Merrick and Canfield Streets.



Greenway and Bike Master Plan



# Greenway Master Plan



# Ecological Features of the Greenway

## Stormwater Management Techniques

- Include rain gardens and constructed wetlands which:
- Absorb, infiltrate, and cleanse urban runoff from storm events
- Reduce impacts on the sewer system
- Prevent pollutants from discharging into local streams and waterways

## Habitat Enhancements

- Increasing and improving existing habitat and creating new habitat areas
- Creates food and habitat for birds, small mammals and insects
- Enables wildlife movement through the city

## Habitat Diversity

- Includes a constructed wetland, a native grass prairie, and wet meadows which:
- Attract a diverse range of birds, small mammals, and insects
- Provide educational and recreational opportunities to learn from and enjoy

## Native Plant Species

- Attract butterflies, bees and birds
- Prevent the spread of invasive species which can destroy local ecosystems
- Require less water, fertilizer, and general maintenance
- Prevent soil erosion



Bioswale



Source: Iowa State University<sup>14</sup>

Native Grass Prairie



Source: CIRIA<sup>15</sup>

Constructed Wetland



Source: Flickr Website<sup>16</sup>

Lanceleaf Tickseed

# Greenway Entrance Character Sketch

## Rosa Parks Boulevard and Grand River Avenue



- Welcoming Entrance
- Welcome Sign
- Native Planting Bed
- Stormwater Management
- Sitting Area
- Potential Building Re-use

This perspective portrays one of the main entrances to the Woodbridge Greenway at the intersection of Rosa Parks Boulevard and Grand River Avenue. The building that currently resides on the site is abandoned with a large concrete pad in front. Removing some of the concrete and planting a beautiful bed of native plants provides a bright and welcoming entrance into the neighborhood while reducing stormwater runoff from the surrounding roofs and sidewalks. Also included in the design is the implementation of street trees and designated bike lanes along both Grand River Avenue and Rosa Parks Boulevard, a stamped and tinted crosswalk to increase pedestrian safety, and a Woodbridge Greenway welcome sign. Building re-use opportunities include a neighborhood welcome center, office space, or an ice cream and snack shop that offers greenway users a place to stop and grab a bite to eat on their journey.

# Stormwater Management

## What is a rain garden?

A rain garden is a 6-12" depression in the ground vegetated with plants that can tolerate both drought and saturated soil conditions. Rain gardens capture and infiltrate rainwater runoff from impervious surfaces such as roofs and driveways into the soil.

They attract butterflies, birds, and other wildlife and are a low maintenance, ecologically beneficial alternative to a formally planted garden<sup>7</sup>.



Source: AB Native Plants<sup>17</sup>  
Swamp Milkweed



Source: Syracuse University<sup>19</sup>  
Big Bluestem



Source: Kinnickinnic Native Plants<sup>18</sup>  
Smooth Blue Aster

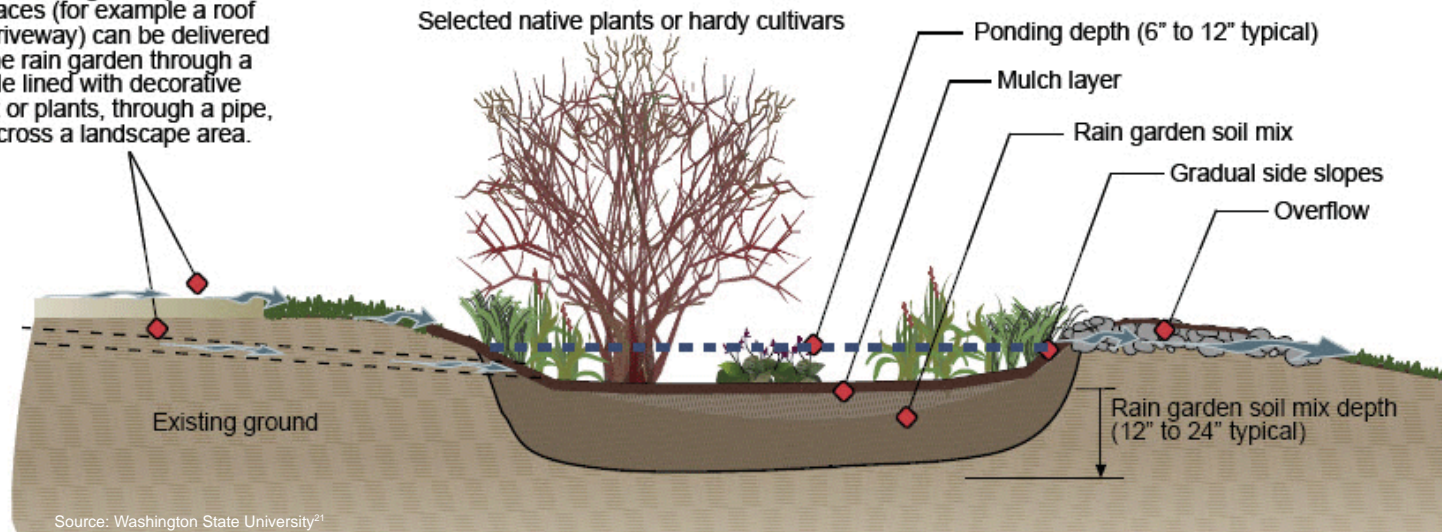
Typical Rain garden Plants



Source: Emmitsburg, Maryland<sup>20</sup>

Rain garden Example

Water flowing off impervious surfaces (for example a roof or driveway) can be delivered to the rain garden through a swale lined with decorative rock or plants, through a pipe, or across a landscape area.



Source: Washington State University<sup>21</sup>

# Rain garden Character Sketch

## Rosa Parks Boulevard and Calumet Street



Stormwater Management  
Environmental Education  
Interpretive Signage  
Native Planting  
Sitting Areas

This proposed rain garden sits on a vacant, triangular parcel of land at the corner of Rosa Parks Boulevard and Calumet Street. The buildings in the background front Grand River Avenue. Currently, there are two existing trees and turf grass on site. If the topography allows it, or stormwater management techniques such as curb cuts, bioswales, and gutter disconnects are implemented, it would be an excellent spot for a rain garden. This stormwater management feature provides an educational opportunity through hands-on learning and interpretive signage, attracts butterflies and birds, provides food and habitat for other insects and wildlife, and creates an attractive backdrop for a resting place along the greenway.

# Constructed Wetlands

A natural wetland has a variety of ecological functions that are beneficial to the environment. Those include, but are not limited to: ground water recharge, floodwater storage, sediment stabilization, nutrient removal from water, and wildlife diversity. In highly developed urban areas these functions are not met, particularly with regards to flood water storage and groundwater recharge, due to the amount of impervious (paved) surfaces. Constructed stormwater wetlands are replications of natural wetlands, but are specifically designed to handle stormwater runoff and flooding.

The benefit of a constructed wetland in an urban environment is to capture the stormwater prior to it entering the sewer system. In older cities, such as Detroit, rain storms can lead to Combined Sewer Overflows (CSO's), where excessive stormwater runoff mixes with sanitary sewage and discharges raw effluent into rivers.

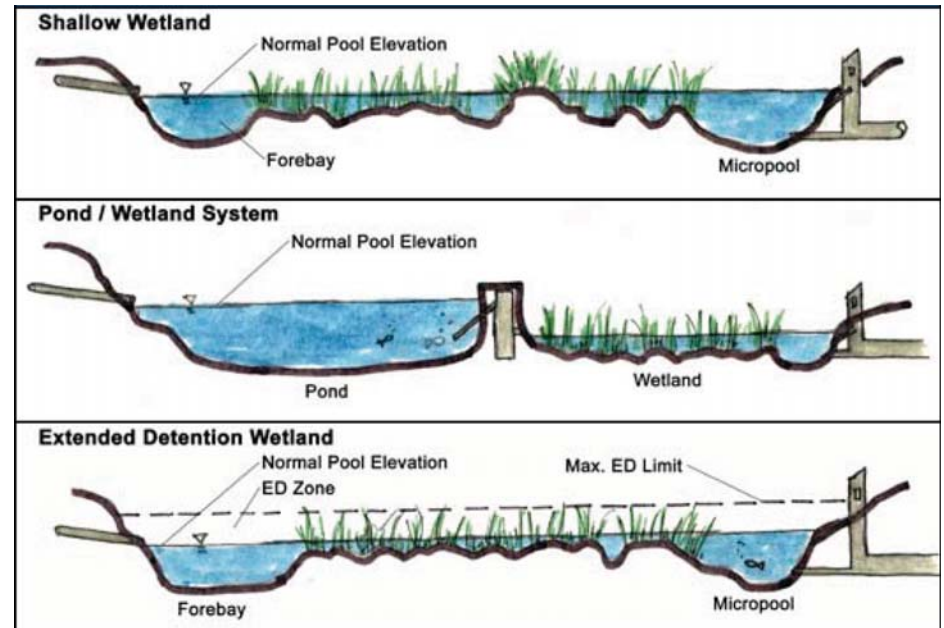
There are a number of considerations that need to be addressed before designing a constructed wetland because their use is constrained by factors such as soil type, depth to ground water, drainage area, and available land area. The most desirable soil type is fine textured, such as loam to silt loam, because of its ability to establish vegetation, retain surface water, permit groundwater recharge and capture pollutants.

If inappropriate soil types are found in the proposed constructed wetland area, or the area is found to be contaminated, the constructed wetland can be lined throughout and still provide stormwater treatment benefits. In many areas, constructed wetlands are required to be lined to protect groundwater in the event that the stormwater is not properly treated. Infiltration can occur off site or the water can be discharged back into the conventional sewer system. The source of the water in this area needs to be determined and tested prior to any specific design or construction activities<sup>8</sup>.



Source: Minnesota Stormwater Manual<sup>22</sup>

Stormwater pond - St. Croix Fields, Lake Elmo, MN



Source: Minnesota Stormwater Manual

Constructed Wetland Types Cross Sections

# Constructed Wetland Character Sketch

## Rosa Parks Boulevard and Canfield Street

We observed that the large parcel of vacant land on Rosa Parks Boulevard and Canfield Street that residents refer to as “central park,” currently holds standing water and is also depressed below the street grade. Water loving plant species such as Salix spp. (Willow) were observed on the site. The physical features of the site, and its current use by residents as a naturalistic, passive recreation area, gave us reason to believe that this is a potential site for a lined, constructed stormwater wetland. The site is adjacent to the environmental education center and should be used a passive recreational and learning space. A constructed marsh wetland combined with a boardwalk and trail loop will provide accessible trails through enhanced wildlife habitat.

- Stormwater management
- Environmental Education
- Interpretive Signage
- Native Planting
- Sitting Areas



# Environmental Education Center Character Sketch

## Rosa Parks Boulevard and Canfield Street

The Urban Environmental Education Center is at the intersection of Rosa Parks Boulevard and Canfield Street and serves as the heart of the greenway. It is located on the same property as the constructed wetland. The education center lies nearly in the center of all of the schools in Woodbridge, and is intended to be used by young and old to engage in the understanding of urban ecological systems and the integration of humans and the environment. The building is designed with a southern roof exposure so that it can be fitted with solar panels. The entrance is oriented towards the Rosa Parks Blvd. and Canfield St. intersection, which is retrofitted with a raised crosswalk of stamped and tinted asphalt, which makes a safe area for children to cross the street to access the center.

- Education
- Community Center
- Raised Crosswalk
- Dark Skies Street Lighting





# Native Grassland Prairie Character Sketch

## Rosa Parks Boulevard and Canfield Street



Environmental Education  
Wildlife Habitat Creation  
Strong Seasonal Plant Interest

The prairie demonstration site is located on Rosa Parks Boulevard and Canfield Street directly across from the education center and supplements the educational resources by increasing habitat diversity in Woodbridge. The prairie demonstration allows residents to learn about the Midwestern landscape and the ecology of a fire-dependent ecosystem. The native grass plantings support wildlife habitat, particularly of birds, adding another layer to the environmental educational opportunities.

# The Importance of Native Plants



Source: U.S. Fish and Wildlife Service<sup>24</sup>

Native Prairie



Source: Chicago Wilderness Magazine<sup>25</sup>

Prairie Dropseed  
*Sporobolus heterolepis*



Source: Chicago Wilderness Magazine<sup>26</sup>

Butterflyweed  
*Asclepias tuberosa*



Source: University of Nebraska<sup>27</sup>

Indian Grass  
*Sorghastrum nutans*



Source: White Flower Farm<sup>28</sup>

Goldsturm Black-eyed Susan  
*Rudbeckia fulgida* var. *sullivanti* 'Goldsturm'



Source: North Creek Nurseries<sup>29</sup>

Little Bluestem  
*Andropogon gerardii*



Source: Texas A&M University<sup>30</sup>

Purple Coneflower  
*Echinacea purpurea*



Source: Smithsonian Museum of Natural History<sup>31</sup>

Downy Serviceberry  
*Amelanchier arborea*

Native plants are species that are indigenous to a particular region or area and have evolved over time to adapt to the local geology, hydrology, and climate of that area. Because of this they are hardier than species that have been introduced from other regions of the world and require less water and fertilizer to grow. They generally require less care than non-natives and are low maintenance plants. Their vibrant colors and varied forms are a beautiful addition to any landscape. Native plant species play an important role in the great lakes ecosystem by preventing the spread of invasive species, providing food and shelter for insects and wildlife, and preventing soil erosion<sup>9</sup>. The plants shown above are just a few examples of native Michigan plants - all of which are recommended for use throughout the Woodbridge greenway.

# Woodbridge Neighborhood Plant Palette

The following pages contain a selection of plants specifically chosen to suit the planting needs of the Woodbridge greenway design. They are broken down by type and/or use and include street tree recommendations, flowering trees, evergreen trees, shrubs, rain garden/herbaceous species, and finally prairie plants/grasses. The species selection relies heavily on plants native to Michigan. Additionally, due to the harsh growing conditions in the urban environment the plants chosen can tolerate a wide range in soil moisture types and nearly every species is salt tolerant. This list is comprehensive although not exhaustive and can be used as a tool for homeowners and community members when choosing plants for their yard or common spaces.



Woodbridge Vacant Lot Garden

## Examples Elsewhere...



Source: Portland Online<sup>32</sup>

Portland Curb Cut Example



Source: Million Trees NYC<sup>33</sup>

Street Trees in New York City



Source: Green Brooklyn<sup>34</sup>

Planted Median in Brooklyn, New York

## Street Trees



Source: North Carolina State University<sup>35</sup>

Red Oak  
*Quercus rubra*



Source: College of Charleston<sup>36</sup>

White Oak  
*Quercus alba*



Source: Missouri State University<sup>37</sup>

Honey Locust  
*Gleditsia triacanthos*



Source: About.com Forestry<sup>38</sup>

Horsechestnut  
*Aesculus hippocastanum*



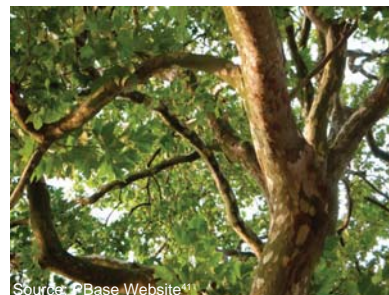
Source: Love To Know Garden<sup>39</sup>

Ginkgo  
*Ginkgo biloba*



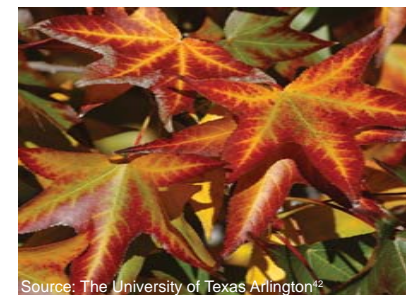
Source: Pendulous Plants<sup>40</sup>

Littleleaf Linden  
*Tilia cordata*



Source: Base Website<sup>41</sup>

London Planetree  
*Platanus x Acerifolia*



Source: The University of Texas Arlington<sup>42</sup>

Sweetgum  
*Liquidambar styraciflua*

Street trees occurred sporadically on three of the six streets in the greenway. Species noted include London Planetree, Silver Maple, Honey Locust, and Horse Chestnut. As part of a streetscape improvement plan, street trees should be planted on all streets to provide shade, wildlife habitat and stormwater management benefits. Tree species that provide food and habitat for wildlife but do not interfere with underground pipes or existing infrastructure should be chosen. This includes species that do not have deep tap roots, survive well in dry, compacted soils, and tolerate salt.

The tree species shown here are all suitable street trees and can be found on many cities' street tree specimen lists. We recommend filling any small gaps in street tree spacing with the same type of species that is currently found there, but for large gaps we suggest using a different species we have listed here. Through volunteer efforts and street tree funding sources the Woodbridge neighborhood can have beautiful tree lined streets.

## Flowering Trees



Source: Mooseys Country Garden<sup>43</sup>

Flowering Crabapple  
*Malus* spp.



Source: Smithsonian Museum of Natural History<sup>44</sup>

Downy Serviceberry  
*Amelanchier arborea*



Source: Nature Photo - CZ<sup>45</sup>

Eastern White Pine  
*Pinus strobus*



Source: Arthur Haines<sup>46</sup>

White spruce  
*Picea glauca*

Flowering trees offer beautiful, bursts of color and fragrance in spring time and are best used as accent plants in places where their beauty can be appreciated. They also work well as street trees or in median strips where overhead power lines are present. Their blooms attract butterflies and bees as well as provide food and habitat for wildlife.



Source: Duke University<sup>47</sup>

Redbud  
*Cercis canadensis*



Source: University of Texas<sup>48</sup>

Eastern Red Cedar  
*Juniperus virginiana*

Evergreen trees provide year round color and interest and should be planted in areas in need of large amounts of vegetation. They provide food and shelter to wildlife, especially in winter.

## Shrubs



Source: Cornell University<sup>49</sup>  
**Blue Muffin Viburnum**  
*Viburnum dentatum* 'Blue Muffin'



Source: Flickr Website<sup>50</sup>  
**Kelseyi Red Osier Dogwood**  
*Cornus stolonifera* 'Kelseyi'



Source: Flickr Website<sup>53</sup>  
**Red Sprite Winterberry**  
*Ilex verticillata* 'Red Sprite'



Source: University of Richmond<sup>54</sup>  
**Gro-lo Fragrant sumac**  
*Rhus aromatica* 'Gro-lo'



Source: Swallowtail Garden Designs<sup>57</sup>  
**Dwarf fothergilla**  
*Fothergilla gardenii*

These shrub species tolerate a wide range of soil moistures, provide food and habitat for wildlife, and have great aesthetic qualities. Vibrant berries, colorful stems, and brilliant fall color are just a few of their traits. They will work well in rain gardens or as understory plants.

## Rain garden Plants



Source: Christopher Sprague<sup>51</sup>  
**Blazing Star**  
*Liatris spicata*



Source: North Creek Nurseries<sup>52</sup>  
**Little Bluestem**  
*Andropogon gerardii*



Source: Flickr Website<sup>55</sup>  
**Purple Prairie Clover**  
*Dalea purpurea*



Source: Flickr Website<sup>56</sup>  
**Blue False Indigo**  
*Baptisia australis*



Source: Flickr Website<sup>58</sup>  
**Sneezeweed**  
*Helenium autumnale*

These herbaceous plant species tolerate wet and dry soils as well as salt. Their blooms are beautiful and attract pollinators.

## Prairie Plants



Source: Chicago Wilderness Magazine<sup>50</sup>

Prairie Dropseed  
*Sporobolus heterolepis*



Source: White Flower Farm<sup>51</sup>

Switchgrass  
*Panicum virgatum*



Source: John Martin Photography<sup>51</sup>

Wild Oats  
*Chasmanthium latifolium*



Source: Texas A&M University<sup>52</sup>

Purple Coneflower  
*Echinacea purpurea*



Source: Illinois Wildflowers<sup>53</sup>

Sideoats Gramma  
*Bouteloua curtipendula*



Source: Chicago Wilderness Magazine<sup>54</sup>

Butterflyweed  
*Asclepias tuberosa*



Source: White Flower Farm<sup>55</sup>

Goldsturm Black-eyed Susan  
*Rudbeckia fulgida* var. *sullivanti* 'Goldsturm'

Native grass prairies are an ecological sanctuary for insects, birds, and small mammals. Throughout the growing season the prairie's flowering plants bloom vibrant colors while the grasses turn from bright greens to deep golds, browns, and reds. Prairies are great outdoor classrooms and offer a chance to learn from nature.

design for:



COMMUNITY



“By feeling at home (community attachment), having bonds with others (social interactions), a sense of connection with the place (community identity), and access for local exploration (pedestrianism), residents gain a stronger sense of community<sup>10</sup>.”

# Community Gathering Spaces



# Opportunities for social interaction

## Pocket Parks

- Range from a concrete, vacant lot between two buildings to a serene, highly vegetated park
- Offer resting places along the greenway
- Provide a place of respite in the urban environment
- Serve as community gathering places



Source: Streetsblog  
Alley Converted to Park

## Recreation

### Active Recreation:

- Improves physical health and fitness
- Provides opportunities for social interaction, increasing social capital

### Passive Recreation:

- Improves emotional well being
- Provides a connection with nature



Source: Takoma Soccer Organization<sup>67</sup>  
Soccer Game

## Community Gardens

- Provides food security and access to fresh, nutritious food
- Offer educational opportunities for both adults and children
- Increase physical activity
- Build a sense of community



Source: Hope Community Garden  
Urban Gardening

## Public Art

- Express a community's identity and sense of values
- Enhances roadsides, pedestrian corridors, and community gateways
- Demonstrates civic and commercial pride
- Encourages social interaction and dialogue



Source: Curbed SF<sup>69</sup>  
Art on Display

# Pocket Park Character Sketch

## Rosa Parks Boulevard and Calumet Street



- Passive Recreation
- Social Interaction
- Sitting Areas
- Native Planting
- Residential Park Space

This rendering illustrates the intended pocket park in the vacant lot on the northeast corner of Rosa Parks Boulevard and Calumet Street, across from the abandoned Wilbur Wright High School. The lot is situated in a primarily residential area. In the event a developer converts the school into residential units, this space would act as a passive recreation area and neighborhood park for apartment dwellers and nearby residents. Native planting beds, sitting areas, and a stone walkway create an enjoyable atmosphere in a residential area.

# Examples Elsewhere....



Source: The New York Times<sup>10</sup>

## Brooklyn, New York

As part of the The New York City Public Plaza Initiative, new open spaces are popping up in the boroughs. The Department of Transportation transformed a triangular parking lot in Brooklyn into an urban oasis with paint, plants, and furniture additions. Local artists contributed sculpture pieces. Large boulders from the Williamsburg Bridge were recycled into bollards to prevent vehicles from entering the site<sup>11</sup>.

This park exemplifies how creativity combined with local donations can bring small, under utilized spaces to life.



Source: Streetsblog<sup>12</sup>



Source: Streetsblog<sup>11</sup>

# Recreational Park Character Sketch

## Rosa Parks Boulevard and Forest Avenue



Multi-generational  
Active recreation  
Sports Courts  
Social Interaction  
Picnic Pavilion & Seating

The proposed multi-generational recreation park, located on the abandoned elementary school property along Rosa Parks Boulevard across from the Douglass Academy, currently contains a full length basketball court that gets regular use. The goal for this site is to provide an area centered around active, organized recreation to increase and improve Woodbridge residents' physical activity and health. In order to accommodate different levels of physical abilities and encourage social interaction between generations, the sport courts include two basketball courts, a sand volleyball court, two bocce courts, and a horse shoe pit. The sand volleyball court was an amenity that a participant in our community meeting had expressed interest in. The design also includes a picnic pavilion, seating areas, and vegetation enhancements.

## Canfield Street and Trumbull Street



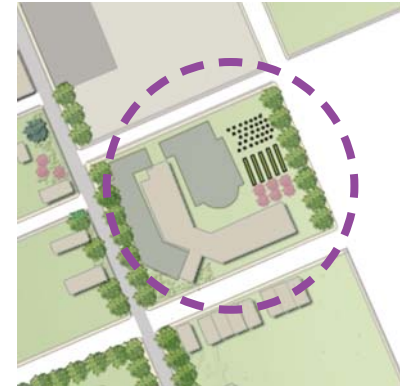
During our community meeting, participants expressed a concern that the Woodbridge Estates and developments east of Trumbull Street were disconnected from the rest of the neighborhood. The extension of the greenway along Canfield Street and the creation of a new park, specifically designed with traditional park elements and abundant play equipment to draw families from either side of Trumbull Street, forges a stronger link between the two sides of the neighborhood.

Bridges the Neighborhood  
Play Equipment for Children  
Picnic Shelter



# Community Gardens Character Sketch

## Rosa Parks Boulevard and Putnam Street

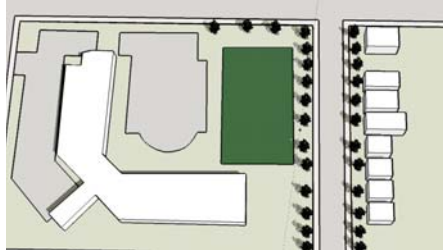


Individual Garden Plots  
Equipment Storage  
Community Orchards  
Food and Pollinator Plantings  
Knowledge and Resource Exchange

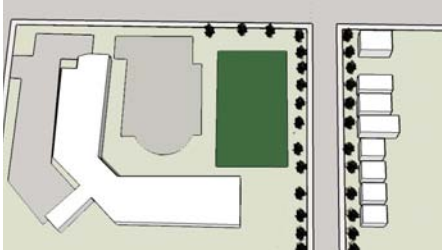
The location of community gardens next to the Boy Scouts of America facility on Rosa Parks Boulevard and Putnam Street was originally suggested by the Detroit Collaborative Design Center. The location is ideal due to the large plot of flat land, full sun exposure, and proximity to a populated street that ensures “eyes on the gardens” to deter vandalism. The boy scouts will have the opportunity to build structures for the garden as merit badge projects. The size of the parcel allows for a variety of gardening spaces including, orchards, individual plots and crop rows. The garden is envisioned as a space where residents can share their knowledge of plants and gardening with one another and promote the use of vacant parcels as spaces for food production and community building throughout the city.



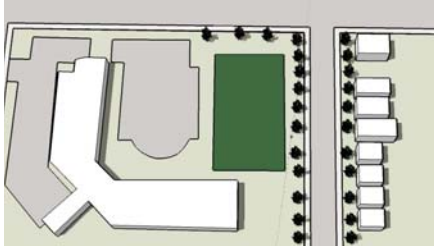
# Community Garden Location Sun/Shade Analysis



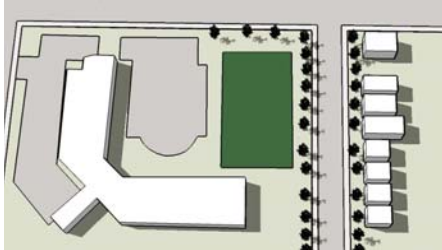
10AM June 21



12AM June 21



2PM June 21



4PM June 21

The sun/shade analysis illustrates that the location of the proposed community garden receives full sun, which is ideal for growing food crops.

## Examples Elsewhere...



Source: Growing Hope<sup>3</sup>

Beginner Gardener  
Green Thumb?

### Ypsilanti, Michigan

The Growing Hope organization in Ypsilanti, Michigan works with schools, neighborhoods, community groups, and families to begin and maintain gardens. Their mission to improve lives and communities through gardening has ensured that people in the surrounding areas have access to fresh and nutritious food<sup>12</sup>.



Source: Growing Hope<sup>4</sup>

Growing Hope Garden Plots

# Art Park Character Sketch

## Rosa Parks Boulevard and Bryant Street



Public Art Display  
Environmental Art Focus  
Integration with CAID  
Supporting Local Artists  
Community Identity

The art park envisioned for the vacant lot next to the Contemporary Art Institute of Detroit is where art and nature collide. This design highlights the artistic culture and identity of the Woodbridge neighborhood. The landscape features rounded earth mounds punctuated by sculptural elements and a winding pattern of native plantings throughout. This is the place to see and be seen along the Woodbridge Greenway.

# Examples Elsewhere...



Photo Source: 40BelowSummit<sup>75</sup>

## Syracuse, New York

Lipe Art Park is a project created by the Near West Side Initiative in Syracuse, New York as part of a revitalization strategy for a historic and economically challenged community. The re-use of a 2-acre former rail yard as an outdoor exhibition space helped to stimulate development and create excitement. Every summer artists apply to present their work in this small, art-focused neighborhood<sup>13</sup>.



Photo Source: Syracuse.com<sup>76</sup>

Lipe Art Park Sculptures

design for:



COMMUNITY  
IDENTITY

“‘Community Identity’ implies that local features of the built and natural environment characterize the physical identity of place, which in turn affects residents’ personal and group identity<sup>10</sup>.”

# Woodbridge Identity & Character

The Woodbridge neighborhood has a unique identity within the City of Detroit. It is home to a diverse community of students, artists, young professionals, families, and empty nesters. The neighborhood's art galleries, music scene, historic architecture and proximity to midtown and downtown Detroit are just a few of its outstanding qualities. Its residents are friendly and take great pride in their community and all it has to offer.

This greenway will help to identify Woodbridge as the unique community it is by incorporating its character and identity throughout. The following pages contain examples of the current Woodbridge neighborhood character as well as other communities' efforts in creating a sense of place unique to their city or town. Woodbridge's identity can be illustrated through the use of site furnishings including bike racks, benches and light fixtures, custom signage, public art, the selection of a signature plant palette, and a showcase for ecological design. Suggestions for some of these amenities have been included based on site visits and observations, but it is our hope that local artists and community members design some of these amenities themselves, truly showcasing Woodbridge's character.



Mural on the side of CAID



Houses on Commonwealth Avenue



Existing Historic District Marker



Apartment buildings on Commonwealth Avenue



Mural and pipe racks next to Woodbridge Pub

# Incorporating Woodbridge's Identity into the Greenway Details

## Examples Elsewhere...



Source: Pittsburgh Tribune Review<sup>77</sup>

Skyline Mural along the Pittsburgh Eliza Furnace Trail

These are all examples of community expression and character. These ideas can be easily incorporated into the Woodbridge Greenway Design and Bike Plan.

Some specific ideas to exhibit the Woodbridge neighborhood's character and identity include:

- Public Art
- Signage
- Site furnishings
- Bike racks
- Signature Plant Palette
- Ecological design showcase



Source: MC Smith Associates and Architectural Group, Inc.<sup>78</sup>

Signature Plant Palette - Frankenmuth, Michigan



Source: Momentum Planet<sup>79</sup>

Footprint Crosswalk - Montreal, Quebec



Source: The Silvermine Community Association<sup>80</sup>

Community Sign - Silvermine, Connecticut

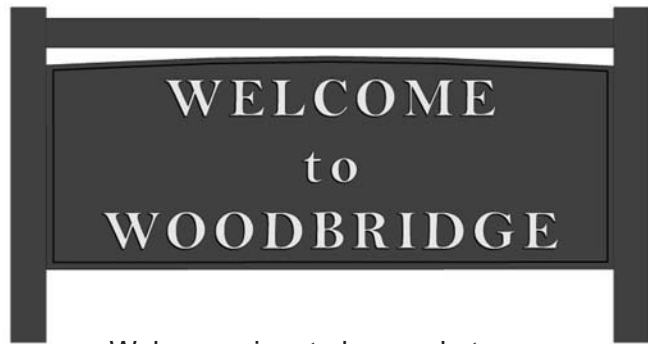


Source: Flickr Website<sup>81</sup>

Customized Bike Rack - Pittsburgh, Pennsylvania

# Greenway Signage Types

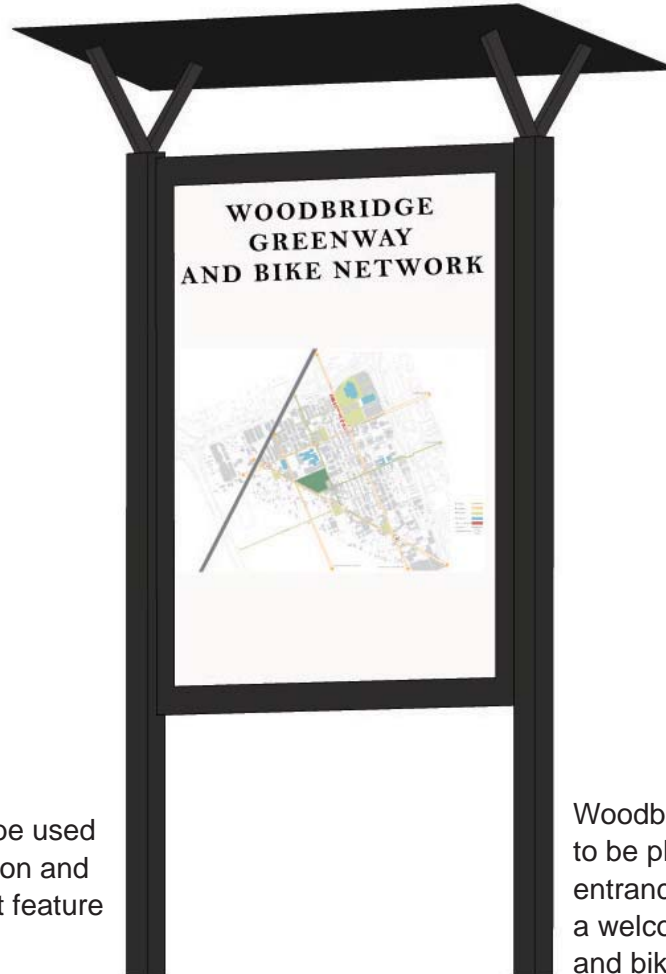
A hierarchy of signs will be used throughout the greenway to welcome and orient greenway users. There are three types: welcoming, educational, and directional. See the detailed diagram on the following page for the location of each sign type.



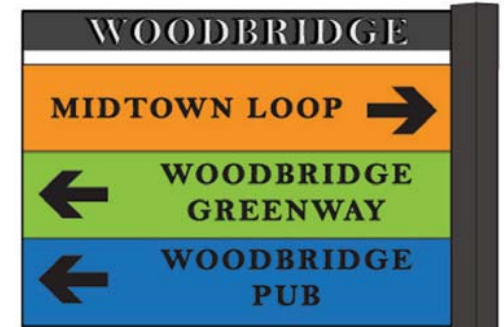
Welcome sign: to be used at main neighborhood entrances.



Interpretive Signage: to be used at environmental education and stormwater management feature locations.



Woodbridge Greenway and Bike Route Sign: to be placed at greenway and bike route entrances to the neighborhood. It contains a welcome message as well as a greenway and bike route map.



Pedestrian/Cyclist Way finding Sign: to be used throughout the greenway and along designated bike routes



# Greenway Signage Locations



- ▲ Welcome to Woodbridge
- Welcome to Greenway
- ★ Interpretive Signage
- Directional Signage

# Greenway Site Furnishings

## Existing



Historic Street Lamp with Wooden Pole



Woodbridge Historic District Sign

The historical character of the current street lights, poles and signage in the neighborhood influenced our choice of proposed site furnishings.

Two sets of furnishings were chosen. We envision the first set being used in natural, settings and the second in more urban settings.



Historic Street Lamp with Fluted Steel Pole

## Proposed



Manufacturer: Victor Stanley Series: GreenSites Series  
Models: CM-56, CM-50, & RTH-24

This set of site furnishings will be used in the more natural, park settings such as the constructed wetland area, the two proposed neighborhood parks, and in the community garden location. They have a natural wood appearance but are made almost entirely from recycled materials.



Bench & Litter Receptacle Manufacturer: Landscapeforms Series: Plainwell  
Details: Aluminum, Black

Tree Grate Manufacturer: McKinley Tree Grates Model: RS - Radial Square  
Details: Iron-aluminum

This set of site furnishings will be used in the more urban areas of the greenway including the art park adjacent to CAID, the entrance to the greenway on Rosa Parks Boulevard, throughout the Trumbull business district, and along any other streetscape.

# Greenway Lighting Plan and Fixtures



Woodbridge Lighting Plan



Acorn pendant light will replace current acorn light throughout Woodbridge.  
Manufacturer: King Luminaire  
Color: Black



Hooded pendant light will be placed along the greenway route  
Manufacturer: King Luminaire  
Color: Black

The lighting plan for the Woodbridge greenway features the use of hooded pendant, dark skies compliant lighting. These lights are covered on the top so that light is directed downward rather than towards the sky, reducing light pollution. The effect of light pollution in urban areas has been shown to negatively affect the mating, migration, and predation behaviors of many different species.

The lighting was chosen as an ecological and educational component of the greenway and should be phased in as existing lights expire. The acorn pendant light matches the historic character of the existing lights found throughout the community and is the recommendation for their replacement. The lighting plan has been illustrated to show the location of lighting along the greenway.

# Acknowledgements

We would like to thank those that assisted us in producing the Woodbridge Greenway and Bike Plan:

Professor MaryCarol Hunter, Faculty Advisor and Susan Bryan, Professional Advisor, for their support, guidance, and tireless reviews of our work.

Woodbridge Neighborhood Development Corporation, specifically, Ed Potas and Brian Schellabarger for believing in our project and answering our endless e-mails and questions.

Mike Wilson, Executive Director of the Woodbridge Community Youth Center for granting us use of the Woodbridge Community Youth Center for our Community meeting and for providing us with invaluable community history and information.

Participants in our community meeting and all the other community members who gave the time to meet with us and discuss greenway possibilities. Your feedback helped to form our vision for the Woodbridge Greenway and without it, this project could not be considered a success.

Dan Pitera, Executive Director, and Virginia Stanard of Detroit Community Design Collaborative, for introducing us to the Woodbridge neighborhood, taking the time to meet with us, and for lending us your materials.

Todd Scott, Michigan Trails & Greenways Alliance for divulging everything you know about greenways in the City of Detroit. Your information was invaluable.

Jim Geary, Woodbridge Pub for offering a dual perspective into the neighborhood as business owner and resident and for feeding us on our many visits to Woodbridge.

Our Friends and Family for their unending love and support. Special thanks go to Ed and Donna Kappler for always believing in me and knowing just what to say. To Jeffrey Jaworski for suffering dish-pan hands and lonely weekends. To Mom and Dad Miller and B Swett.

# Biographies



Cara Kappler

Came to Michigan to pursue her passion for landscape architecture, although at the time she didn't really know what that entailed. Little did she know that by the end she would be able to identify a tree by only its twig, survive consistently on little to no sleep, and define what a wicked problem is. She also didn't expect to find such an amazing group of friends or a new city to love, but is blessed and thankful that she has. Although, as a Pittsburgh native, she can never truly root for the Red Wings or the Lions...maybe the Tigers... As of now she is unsure of what the future holds but hopes to live in a city where she can work on urban design projects such as this and help to make a difference.



Lindsey Miller

Hails from the great city of Pittsburgh, Pennsylvania. She came to the University of Michigan for a master's in landscape architecture which she hopes to use in a career focusing on urban redevelopment and ecological design.

# Appendix I

## References

1. Scott, Gene. 2001. Detroit Beginnings: Early Villages and Old Neighborhoods. City of Detroit 300 Partners Program.
2. Darden, Joe, T., Child Hill, Richard, Thomas, June, & Thomas, Richard. 1987. Detroit: Race and Uneven Development. Philadelphia: Temple University Press.
3. Potas, Ed. 2008. *Woodbridge History*. Woodbridge Neighborhood Development Corporation.
4. Nevue Ngan Associates and Sherwood Design Engineers. 2009. San Mateo County Sustainable Green Streets and Parking Lots Guidebook.
5. Barr Engineering Company. 2001. Minnesota Urban Small Sites BMP Manual: Stormwater Best Management Practices for Cold Climates. Metropolitan Council Environmental Services.
6. Stormwater Center Website. Stormwater Management Fact Sheet: Porous Pavement. <[http://www.stormwatercenter.net/Assorted%20Fact%20Sheets/Tool6\\_Stormwater\\_Practices/Infiltration%20Practice/Porous%20Pavement.htm](http://www.stormwatercenter.net/Assorted%20Fact%20Sheets/Tool6_Stormwater_Practices/Infiltration%20Practice/Porous%20Pavement.htm)>. 16 May 2009.
7. Low Impact Development. What is a Rain Garden? <[http://www.lowimpactdevelopment.org/raingarden\\_design/whatisaraingarden.htm](http://www.lowimpactdevelopment.org/raingarden_design/whatisaraingarden.htm)>. 16 May 2009.
8. Campbell, Craig and Michael Ogden. 1999. Constructed Wetlands in the Sustainable Landscape. John Wiley and Sons, Inc. New York.
9. U.S. EPA. Landcaping With Native Plants. <<http://www.epa.gov/greenacres/nativeplants/factsht.html>>. 18 May 2009.
10. Kim, Joongsub and Kaplan, Rachel. (2004). Physical and psychological factors in sense of community. New Urbanist Kentlands and Nearby Orchard Village” *Environment and Behavior*, 36 (3), 313–340.
11. Chan, Sewell. (2007, August 9). Parking Lot in Dumbo Becomes a Public Plaza. *The New York Times*.
12. Growing Hope. <<http://www.growinghope.org>>. 17 May 2009.
13. The Salt District. <<http://www.saltdistrict.com/nwsi.php>>. 17 May 2009.

# Appendix II

## Photo Credits

1. <http://www.mapslive.com>
2. Scott, Gene. 2001. Detroit Beginnings: Early Villages and Old Neighborhoods. City of Detroit 300 Partners Program.
- 3-4. Detroit Collaborative Design Center. Woodbridge Neighborhood Development Strategy. 2008.
5. <http://www.flickr.com/photos/24150334@N08/3412660487/>
6. [http://www.streetsblog.org/wp-content/uploads/2007/08\\_20/buff\\_bike\\_lane\\_small.jpg](http://www.streetsblog.org/wp-content/uploads/2007/08_20/buff_bike_lane_small.jpg)
7. <http://www.sustainablestormwater.com/blog/>
8. [http://www.richmond.ca/\\_\\_shared/assets/Share\\_the\\_Road\\_Sign21552.jpg](http://www.richmond.ca/__shared/assets/Share_the_Road_Sign21552.jpg)
9. <http://www.livablestreets.com/streetswiki/raised-crosswalk/oceansideraisedxwalk.jpg>
10. Kevin Robert Perry: in San Mateo County Sustainable Green Streets and Parking Lots Guidebook. 2009.
11. City of Portland Water Quality Friendly Streets Program 2003.
12. Elizabeth Brink: "Beyond Dams"
13. <http://www.lakecountyiil.gov/Stormwater/LakeCountyWatersheds/BMPs/PublishingImages/bioswale.jpg>
14. <http://www.extension.iastate.edu/GrowingintheGarden/lessons.html>
15. [http://www.ciria.org.uk/suds/images/constructed\\_wetland\(rs\).jpg](http://www.ciria.org.uk/suds/images/constructed_wetland(rs).jpg)
16. [http://farm4.static.flickr.com/3129/2581573181\\_9e24a66034.jpg?v=0](http://farm4.static.flickr.com/3129/2581573181_9e24a66034.jpg?v=0)
17. [http://www.abnativeplants.com/\\_ccLib/image/plants/DETA-84.jpg](http://www.abnativeplants.com/_ccLib/image/plants/DETA-84.jpg)
18. <http://www.kinninatives.com/files/kinninatives/images/aster%20laevis2.jpg>
19. [http://web.syr.edu/~mhough/A/Andropogon\\_gerardii1.jpg](http://web.syr.edu/~mhough/A/Andropogon_gerardii1.jpg)
20. <http://www.emmitsburg.net/gardens/articles/adams/2008/photo/rain%20garden.jpg>
21. [http://www.pierce.wsu.edu/Water\\_Quality/LID/Raingarden\\_handbook.pdf](http://www.pierce.wsu.edu/Water_Quality/LID/Raingarden_handbook.pdf)
- 22-23. <http://www.pca.state.mn.us/publications/wq-strm9-01.pdf>
24. <http://www.extension.iastate.edu/GrowingintheGarden/lessons.html>
25. <http://www.chicagowildernessmag.org/issues/summer2001/prairiedropseed.html>
26. [http://chicagowildernessmag.org/issues/summer2006/images/myn\\_ButterflyMilkweed1.jpg](http://chicagowildernessmag.org/issues/summer2006/images/myn_ButterflyMilkweed1.jpg)
27. <http://arboretum.unl.edu/webimages/greatplants/sorgnuta.jpg>
28. <http://images.whiteflowerfarm.com/37500a.jpg>
29. <http://www.northcreeknurseries.com>
30. <http://aggie-horticulture.tamu.edu/wildseed/flowers/PurpleConeflower.jpg>
31. <http://botany.si.edu/DCflora/flowergallery/galloop.cfm?species=amelanchierarborea>
32. <http://www.portlandonline.com>
33. [http://www.milliontreesnyc.org/sp/images/photos/press\\_img\\_street\\_trees.jpg](http://www.milliontreesnyc.org/sp/images/photos/press_img_street_trees.jpg)

## Photo Credits Continued...








34. [http://greenbrooklyn.com/wp-content/uploads/31\\_29\\_nicemedian1\\_z.jpg](http://greenbrooklyn.com/wp-content/uploads/31_29_nicemedian1_z.jpg)
35. <http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/trees/images/picts/QuercRu2.jpg>
36. <http://everettj.people.cofc.edu/>
37. <http://www.biology.missouristate.edu>
38. [http://z.about.com/d/forestry/1/0/L/k/horse\\_chestnut\\_fall.jpg](http://z.about.com/d/forestry/1/0/L/k/horse_chestnut_fall.jpg)
39. <http://garden.lovetoknow.com/wiki/Ginkgo>
40. <http://www.pendulousplants.com>
41. <http://k53.pbase.com/v3/50/558950/2/49609854.planetreeok2.jpg>
42. <https://www.uta.edu/publications/albums/Campus-Life/sweetgum.sized.jpg>
43. <http://images.mooseyscountrygarden.com/mooseys-garden-tour/driveway-garden/crabapple-elm.jpg>
44. <http://botany.si.edu/DCflora/flowergallery/galloop.cfm?species=amelanchierarborea>
45. <http://www.naturephoto-cz.com/photos/others/eastern-white-pine-25288.jpg>
46. [http://www.arthurhaines.com/Florae\\_Novae\\_Angliae/Pinaceae/Picea-glauca-strobili.jpg](http://www.arthurhaines.com/Florae_Novae_Angliae/Pinaceae/Picea-glauca-strobili.jpg)
47. <http://www.duke.edu/web/butterflies/redbud050404-2391facez.jpg>
48. <http://www.sbs.utexas.edu/bio406d/images/pics/cup/Juniperus%20virginiana%20berries.jpg>
49. <http://www.hort.cornell.edu/vlb/images/vibdentfrlg.jpg>
50. [http://farm1.static.flickr.com/172/391233201\\_c53c2f4a2c.jpg](http://farm1.static.flickr.com/172/391233201_c53c2f4a2c.jpg)
51. [http://betelgeuse.umeqs.maine.edu/chris/details/thumbs\\_d/thumbs\\_p.html](http://betelgeuse.umeqs.maine.edu/chris/details/thumbs_d/thumbs_p.html)
52. <http://www.northcreeknurseries.com>
53. [http://farm3.static.flickr.com/2247/2169659279\\_2623dfc0a1.jpg](http://farm3.static.flickr.com/2247/2169659279_2623dfc0a1.jpg)
54. [http://facultystaff.richmond.edu/~jhayden/landscape\\_plants/Early%20Fall%20Woody%20Plants/rhus\\_aromatica\\_RED-BUTTE-UT\\_01s.JPG](http://facultystaff.richmond.edu/~jhayden/landscape_plants/Early%20Fall%20Woody%20Plants/rhus_aromatica_RED-BUTTE-UT_01s.JPG)
55. [http://farm2.static.flickr.com/1052/728525570\\_d4d2b25f03.jpg](http://farm2.static.flickr.com/1052/728525570_d4d2b25f03.jpg)
56. <http://www.flickr.com/photos/beginasyouare/2700113420/>
57. <http://www.swallowtailgardendesigns.com/images/Fothergilla%20Mt.%20Airie.JPG>
58. [http://farm1.static.flickr.com/58/208551699\\_a8bc0259c3.jpg](http://farm1.static.flickr.com/58/208551699_a8bc0259c3.jpg)
59. <http://www.chicagowildernessmag.org/issues/summer2001/prairiedropseed.html>
60. <http://images.whiteflowerfarm.com/30074a.jpg>
61. [http://www.fotoflora.com/filestore/perennials/grasses/chasmanthium\\_latifolium\\_056988\\_c15.jpg](http://www.fotoflora.com/filestore/perennials/grasses/chasmanthium_latifolium_056988_c15.jpg)
62. <http://aggie-horticulture.tamu.edu/wildseed/flowers/PurpleConeflower.jpg>
63. [http://www.illinoiswildflowers.info/grasses/photos/so\\_gramma1.jpg](http://www.illinoiswildflowers.info/grasses/photos/so_gramma1.jpg)
64. [http://chicagowildernessmag.org/issues/summer2006/images/myn\\_ButterflyMilkweed1.jpg](http://chicagowildernessmag.org/issues/summer2006/images/myn_ButterflyMilkweed1.jpg)
65. <http://images.whiteflowerfarm.com/37500a.jpg>
66. <http://www.livablestreets.com/streetswiki/pocket-parks>
67. <http://www.takomasoccer.org/images/homepic.jpg>
68. <http://hopecommunitygarden.wordpress.com/2008/10/16/putting-the-garden-to-bed-this-sunday-12-noon-5pm/>



## Photo Credits Continued...





69. [http://sf.curbed.com/archives/2008/08/05/fun\\_with\\_public\\_art\\_cool\\_globes\\_for\\_a\\_notsocool\\_crissy\\_fields.php](http://sf.curbed.com/archives/2008/08/05/fun_with_public_art_cool_globes_for_a_notsocool_crissy_fields.php)
70. <http://cityroom.blogs.nytimes.com/2007/08/09/parking-lot-in-dumbo-becomes-a-public-plaza/>
- 71-72. <http://www.streetsblog.org/2007/08/10/city-launches-public-plaza-initiative-at-dumbo-pocket-park/>
- 73-74. <http://www.growinghope.org>
75. <http://www.40belowsummit.com/news/showNews.php?n=117>
76. [http://blog.syracuse.com/video/2008/08/lipe\\_art\\_park\\_summer\\_exhibit.html](http://blog.syracuse.com/video/2008/08/lipe_art_park_summer_exhibit.html)
77. [http://www.pittsburghlive.com/x/pittsburghtrib/news/s\\_534179.html](http://www.pittsburghlive.com/x/pittsburghtrib/news/s_534179.html)
78. <http://www.livingdowntowndesmoines.com/wp-content/uploads/2009/03/footprint.jpg>
79. [http://www.momentumplanet.com/files/imagecache/article-large/images/lead/Roadsworth-NAfootprint\\_opt.jpeg](http://www.momentumplanet.com/files/imagecache/article-large/images/lead/Roadsworth-NAfootprint_opt.jpeg)
80. [http://www.silverminenews.com/images/This\\_is\\_Silvermine\\_Sign-545\\_small.jpg](http://www.silverminenews.com/images/This_is_Silvermine_Sign-545_small.jpg)
81. [http://farm1.static.flickr.com/216/499622848\\_29836fe959.jpg](http://farm1.static.flickr.com/216/499622848_29836fe959.jpg)

# Appendix III

Scientific Name	Common Name	Height	Color	Bloom Time	Light	Moisture	Value	ID	Picture
<b>Herbaceous</b>									
<i>Asclepias incarnata</i>	Swamp milkweed	3-4'	Pink	June-July	FS-PSh	MW	Attracts Butterflies; supports Bees; Native	1	
<i>Asclepias tuberosa</i>	Butterfly Weed	1.5-2'	Orange, Red, Yellow	May-July	FS-PSh	DM	Attracts Butterflies; Native; Good Fall Color	2	
<i>Aster laevis</i>	Smooth Blue Aster	2-4'	Lavender- Blue	Aug-Oct	FS-PS	DM	Attracts Butterflies; Food for Birds; Native	3	
<i>Baptisia australis</i>	Blue False Indigo	2-4'	Blue	June	FS-PSh	DM	Good Cut Flowers	4	
<i>Coreopsis lanceolata</i>	Lanceleaf Tickseed	1-2.5'	Yellow	April-June	FS-Sh	D	Attracts Butterflies; supports Bees; Native	5	
<i>Dalea purpurea</i>	Purple Prairie Clover	1-3'	Purple	June-aug	FS	DM	Attracts Butterflies; supports Bees; Native	6	
<i>Echinacea purpurea</i>	Purple Coneflower	2-4'	Purple	June-Oct	FS	DMW	Food for Birds & Wildlife; Attracts butterflies; Native; Long Bloom Time	7	

Key: Light, FS=Full, PS=Part Sun, PSh=Part Shade, Sh=Shade Moisture, D=Dry, M=Moist, W=Wet





# Detailed Plant List

Scientific Name	Common Name	Height	Color	Bloom Time	Light	Moisture	Value	ID	Picture
<i>Helenium autumnale</i>	Sneezeweed	2-4'	Yellow	Aug-Oct	FS-PS	MW	Native; Good cut Flowers	8	
<i>Listris spicata</i>	Blazing Star	2-4'	Purple	July-Aug	Fs	DM	Food for Birds and Wildlife; Attracts Butterflies; Native	9	
<i>Rudbeckia fulgida</i> var. <i>sullivanti</i> 'Goldsturm'	Goldsturm Black-eyed Susan	1-1.5'	Yellow	June-Aug	FS-PSh	DM	Food for Birds and Wildlife; Winter Interest	10	
<i>Sedum</i> 'Autumn Joy'	Autumn Joy Sedum	1.5-2.5'	Pink- Russet	July-Sept	FS-PSh	DM	Attracts Butterflies; Supports Bees; Winter interest	11	

## Grasses

<i>Andropogon gerardii</i>	Big Bluestem	3-9'	Bronze	July	FS-PS	DMW	Wildlife Food and Habitat; Native	12	
<i>Bouteloua curtipendula</i>	Sideoats Grama	2-2.5'	Purplish	July -aug	FS	D	Wildlife Food and Habitat; Attracts Butterflies; Native	13	
<i>Chasmanthium latifolium</i>	Wild Oats	2-5'	Green	Aug-Sept	FS-PSh	DM	Wildlife Food and Habitat; Native; Winter Interest	14	



Key: Light, FS=Full, PS=Part Sun, PSh=Part Shade, Sh=Shade Moisture, D=Dry, M=Moist, W=Wet

Scientific Name	Common Name	Height	Color	Bloom Time	Light	Moisture	Value	ID	Picture
<i>Panicum virgatum</i>	Switchgrass	3-5'	Pink	June-Aug	FS-PS	DMW	Wildlife Food and Habitat; Native	15	
<i>Schizachyrium scoparium</i>	Little Bluestem	2-3'	Rust	July-Sept	FS-PSh	DM	Food for Birds and Wildlife; Native	16	
<i>Sorghastrum nutans</i>	Indian grass	3-6'	Golden Brown	Aug-Sept	FS	DM	Wildlife Food and Habitat; Attracts Butterflies; Native	17	
<i>Sporobolus heterolepis</i>	Prairie Dropseed	2-3'	Pink and Brown	Aug-Oct	FS	DM	Attractive Foliage; Fragrant; Native	18	






**Shrubs**

<i>Cornus stolonifera</i> 'Kelsey'	Kelsey Red Osier Dogwood	3'	White	April-May	FS-PSh	DMW	Wildlife Food and Habitat; Supports Bees; Red stems - Winter Interest; Good fall Color	19	
<i>Fothergilla gardenii</i>	Dwarf Fothergilla	2-3'	White	April-May	FS-Sh	DMW	Supports Bees; Good Fall Color	20	
<i>Ilex verticillata</i> 'Red Sprite'	Red Sprite Winterberry	3'	White	April-May	FS-PSh	MW	Wildlife Food and Habitat; Supports Bees; Red Berries - Winter Interest;	21	

Key: Light, FS=Full, PS=Part Sun, PSh=Part Shade, Sh=Shade Moisture, D=Dry, M=Moist, W=Wet

Scientific Name	Common Name	Height	Color	Bloom Time	Light	Moisture	Value	ID	Picture
<i>Rhus aromatica</i> 'Gro-low'	Gro-lo Fragrant Sumac	2'	Yellow	March-April	FS-PSH	D	Wildlife Food and Habitat; Red Berries; Attractive Foliage; Good Fall Color	22	
<i>Viburnum dentatum</i> 'Blue Muffin'	Blue Muffin Arrowwood Viburnum	4'	White	June	FS-PSH	DMW	Wildlife Food and Habitat; Supports Bees; Attractive Foliage; Good Fall Color	23	




#### Deciduous Trees

<i>Aesculus hippocastanum</i>	Horsechestnut	40-60'	White	April-May	FS-PSH	DM	Wildlife Food and Habitat; Attractive Foliage; Street Tree	24	
<i>Amelanchier arborea</i>	Downy Serviceberry	25-40'	White	April-May	FS-PSH	DM	Wildlife Food and Habitat; Supports Bees; Native Flowering Tree; Good Fall Color	25	
<i>Amelanchier canadensis</i>	Shadblow	15-20'	White	April-May	FS-Sh	MW	Wildlife food and habitat; Supports bees; Flowering Tree; Good fall color	26	
<i>Betula Nigra</i>	River Birch	50-75'	Dark Brown	April-May	FS-PSH	MW	Wildlife Food and Habitat; Native; Attractive Bark and Foliage	27	
<i>Cercis canadensis</i>	Redbud	15-25'	Lavender-Purple	April-May	FS-PSH	DM	Wildlife food and habitat; Attractive foliage; Good fall color; Flowering Tree; Native	28	

Key: Light, FS=Full, PS=Part Sun, PSh=Part Shade, Sh=Shade Moisture, D=Dry, M=Moist, W=Wet

Scientific Name	Common Name	Height	Color	Bloom Time	Light	Moisture	Value	ID	Picture
<i>Ginkgo biloba</i>	Ginkgo	50-75'	Green	April-May	FS-PSh	DM	Attractive foliage; Bird Habitat; Good Fall Color; Street Tree	29	
<i>Gleditsia triacanthos</i>	Honey Locust	50-60'	Yellow-Green	May-June	FS	DM	Wildlife Food and Habitat; Attractive Seed Pods; Street Tree	30	
<i>Liquidambar styraciflua</i>	Sweetgum	50-75'	Green and Yellow	April-May	FS-PSh	DM	Wildlife Food and Habitat; Supports Bees; Good Fall Color; Street Tree	31	
<i>Malus spp.</i>	Flowering Crabapple	15-20'	Pink, Red, White	April-May	FS	D	Wildlife Food and Habitat; Supports Bees; Flowering Tree	32	
<i>Platanus x acerifolia</i>	London Planetree	70-85'	Yellow	April-June	FS	DMW	Wildlife Food and Habitat; Attractive Bark; Attractive Foliage; Street Tree	33	
<i>Quercus alba</i>	White Oak	50-75'	Brown	April-May	FS-PSh	DM	Wildlife Food and Habitat; Native; Good Fall Color; Street Tree	34	
<i>Quercus rubra</i>	Red Oak	50-75'	Yellow-Green	April-May	FS	DM	Wildlife Food and Habitat; Native; Good Fall Color; Street Tree	35	
<i>Tilia cordata</i>	Littleleaf Linden	50-75'	Yellow	June-July	FS-PSh	DM	Wildlife Habitat; Supports Bees; Good Fall Color; Street Tree	36	

Key: Light, FS=Full, PS=Part Sun, PSh=Part Shade, Sh=Shade Moisture, D=Dry, M=Moist, W=Wet

Scientific Name	Common Name	Height	Color	Bloom Time	Light	Moisture	Value	ID	Picture
<b>Evergreen Trees</b>									
<i>Juniperus virginiana</i>	Eastern Red Cedar	25'-50'	Green and Yellow	April-May	FS-PSh	D	Wildlife Food and Habitat; Evergreen	37	
<i>Picea glauca</i>	White Spruce	35'-50'	Red and Yellow	April-May	FS-PSh	DMW	Wildlife Food and Habitat; Evergreen	38	
<i>Pinus Strobus</i>	Eastern White Pine	50-75'	Pink and Yellow	April-May	FS-PSh	DM	Wildlife Food and Habitat; Evergreen	39	

Key: Light, FS=Full, PS=Part Sun, PSh=Part Shade, Sh=Shade Moisture, D=Dry, M=Moist, W=Wet