

Sustainable Small Harbors Project

PROJECT GOAL

To identify the key barriers to small harbor economic, social and environmental sustainability and provide a toolkit to help small harbor managers create more stability in their communities.

MI Sea Grant

Sustainable Harbor Design Charrette September 2016 – January 2017







Acknowledgements

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1.0 Executive Summary of Process

Administered by the state, county, and local units of government, there are over 80 small public harbors and marinas throughout the State of Michigan. These harbors are a critical component of the state's blue economy with impacts from Great Lakes recreational boating in the billions of dollars. Unfortunately, a decade-long trend of lower water levels, at least temporarily reversed in 2014, combined with increasingly severe economic constraints have resulted in strained local economies. Most significantly, state and federal funding for public harbors maintenance is increasingly limited. Accordingly, by 2015, public harbors will be required to develop five-year master plans in order to receive financial support from the Waterways Commission of the Michigan Department of Natural Resources (MDNR). Therefore, research is needed to inform both the development and the content of these plans as harbors seek a more sustainable future.

The Sustainable Small Harbor Management Strategy project entails developing a strategy for small harbors to become economically, socially, and environmentally sustainable. A key feature includes documenting the value these small harbors provide to various stakeholders including boaters, anglers, property owners, and businesses and identifying potential revenue streams for the future. Project findings will inform the development of a toolkit of best practices, resources, and funding opportunities to support small harbor planning.

The research is being conducted by Lawrence Technological University, Environmental Consulting & Technology, Inc., David Knight LLC, and Veritas Economic Consulting along with representatives of government agencies who are sponsoring the project. Funding for the project is coming from a unique collaboration of agencies including Michigan Sea Grant (MSG), Michigan Department of Natural Resources (MDNR), Michigan Department of Environmental Quality (MDEQ) Office of the Great Lakes (OGL), and Michigan State Housing Development Authority (MSHDA). Finally, a state-wide Advisory Board has been engaged to guide the project and reviewing/summarizing documents that pertain to challenges small harbors face. The Advisory Board is comprised of key partners and stakeholders including policy makers, managers, harbor masters, industry representatives and lobbying organizations that deal with this topic¹. As such, there is a tremendous amount of experience and organizational capacity being applied to this problem.

Au Gres, New Baltimore, Ontonagon, and Pentwater were selected as the four research communities. These communities were selected based on a criteria system that included diverse location, the harbor type (small shallow draft), harbor position relative to the

¹ Additional details available at http://www.miseagrant.umich.edu/smallharborsustainability/



community type (suburban, city, downtown), population size, current organizational capacity, and economic condition. A strategic guidebook was developed based on those communities and research conducted by the team. Two additional communities, St Ignace and Rogers City, were selected as "proof of concept" communities for revising the guidebook.

In support of the design charrette process, information gathered and analyzed for Rogers City included:

- Organizational and leadership charts of the community
- o Marina statistics such as boats berthed, launched, demand, etc.
- Employment data and other related census data
- Master planning efforts (existing or in progress) or special assessment districts
- Zoning for harbor and downtown/adjacent land areas
- Any recent planning or improvement grants received
- Specific challenges Rogers City is experiencing (regulation, policy, laws, water levels, maintenance, etc.)
- Economic information (budget for community, budget for harbor operations, funding mechanisms, grants received, etc.) for Rogers City
- Existing tourist information (flyers, magazines, etc.) and existing tourist way finding signage
- Aerial photograph/maps

Developing a vision for a sustainable harbor requires input from a wide range of stakeholders, including landowners, waterfront users, planning officials and local citizens. As such, the charrette design team engaged the Rogers City community in a multi-day community visioning and collaborative design exercise (also known as a design charrette) to identify opportunities to secure the economic, social and environmental sustainability of public waterfront facilities. The team followed the National Charrette Institute (NCI) Charrette System™ for this phase of the project. An NCI charrette is an iterative rapid design process involving public interaction. The charrette design team hosted an initial meeting on September 21. Those who attend the initial meeting weighed in on the future of Rogers City's waterfront and identified assets linked to existing and potential public waterfront facilities. A three-day public planning meeting or "community design charrette" to garner feedback, develop ideas and create a sustainable vision for Rogers City's waterfront was conducted from October 25 to 27 (Table 1). In the community design charrette participants assessed and prioritized design and planning options. Community participation that framed the options included public sessions and technical meetings with key constituents. These meetings resulted in three alternatives for the public waterfront as an asset to the community. Those alternatives were further refined into a preferred alternative that represents a single vision for Rogers City in 2036. The charrette team compiled community input to develop a sustainable vision specific to Rogers City. The final



vision, as well as the process for development, for Rogers City is documented in this report and was presented to municipal leadership and the citizenry on January 23, 2017.

The goal of the community engagement portion of the project is to facilitate regular stakeholder involvement and feedback which builds trust in the process and builds support for the implementation plan. This allows the project team to quickly gain consensuses and reduce the time to implement a sustainability plan.

Table 1 – Rogers City Design Charrette Schedule

	Tuesday, 10/25	Wednesday, 10/2	26	Thursday, 10/27
8:30	Team travel to Rogers City			Convene at City Hall,
9:00		Convene at City Hall,		Finalization of
am		Debrief on night	meeting	alternatives
10:00		Refine vision	Harbor Advisory Committee	Pin Up/Team meeting
11:00		Team Pin Up	Parks and Recreation	Production of
		and Develop	Committee	preferred plan
11:30	Team to meet for group	alternatives		Final check with RC
	lunch			stakeholder team
12:00		Team lunch at	"Super Pos" Group:	Team lunch at Library
pm		Library	business people, others	
			with positive energy	
1:00	Walking Tour	Develop alternatives, cont.		Production of
2:00				preferred plan, cont.
3:00	Meet with RC stakeholder			Transition to Library
	team to present results of			and Prepare for Final
	prelim. meeting (Library)			Presentation
4:00	Set up for evening (Library)			"Work in Progress"
5:00	Facilitator briefing (Library)	Transition to Library and Set up for		Session at Presque
		Open House		Isle District Library
6:00	Public Input Workshop	Open House: Selecting a Preferred		Break down studio
	Presque Isle District	Vision at Presque Isle District Library		
	Library	(preferred vision, alternative		
	(visioning and assets)	preference)		
8:15		Preferred concepts synthesis		
		Team dinner		
9:00	Close for day	Close for day		
Legend: Grey = public meeting; Yellow = Stakeholder Team meeting; Orange = technical meetings.				



2.0 Design Alternatives Overview

Each alternative was defined by a unique harbor/waterfront edge feature and developed/evaluated on four additional criteria (Land-Use, Connectivity, Economic Development, and Natural Systems) as represented in the Alternative Content Matrix (Table 2). The Alternative Content Matrix was completed as part of the charrette process to succinctly disseminate the unique, but parallel alternative concept plans.

2.1 Design Alternative 1

Design Alternative 1 is formed by integrating the museum with the waterfront and improving green space along the water's edge. In this scenario, excess parking spaces in the Marina lot were removed and replaced with green space for public use. Private development adjacent to the marina includes a pub or restaurant and condos. Table 2 lists the main aspects of this design and Figure 1 is the display board from community voting.

Table 2 - Alternative 1 Content Matrix

Alternative 1	
Harbor/Waterfront Edge Driver	Waterfront Park at Marina; Mixed Use Residential
Land-use	 Public park and boater facilities at marina Marine sanctuary visitor center Kayak launch and natural harbor Senior housing and multi-unit residential Marina support buildings
Connectivity	 Green boulevards to downtown Huron Sunrise Trail throughout site Extend Lake Street
Economic Development	 Increased tax base Increased local spending Increased tourist spending
Natural Systems	 Green infrastructure along Huron Ave. and Michigan Ave. Natural habitat along waterfront
Engineering Consideration	 Major road improvements to marina Major underground infrastructure improvements (water, sanitary, sewer) to site IT/Cable/Electrical improvements to site



Figure 1 - Alternative 1 Presentation Board

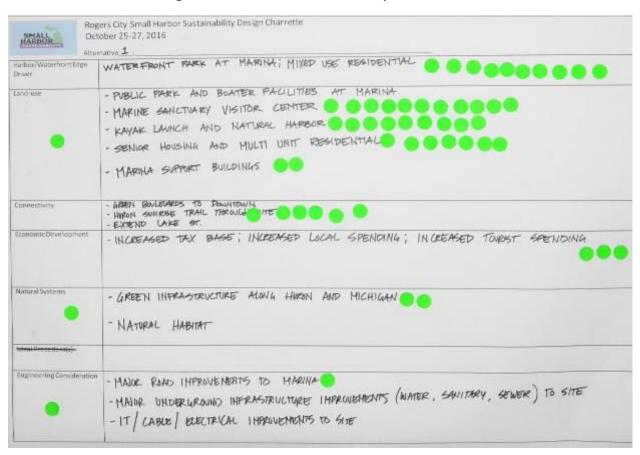




Alternative 1 did not receive any rejection votes (red dots) by community members on the second night of the charrette. The voting is shown in Figure 2 with green dots representing positive votes for individual elements. The top three most popular design elements in this alternative were:

- Waterfront Park at Marina; Mixed Use Residential (10 votes)
- Marine Sanctuary Visitor Center (10 votes)
- Kayak Launch and Natural Harbor (9 votes)

Figure 2 - Alternative 1 Community Vote Results





2.2 Design Alternative 2

Design Alternative 2 was defined by an RV Park at the marina and including senior housing and boat storage on adjacent land. Table 3 lists the main aspects of this design and Figure 3 is the display board from community voting.

Table 3 - Alternative 2 Content Matrix

Alternative 2	
Harbor/Waterfront	Waterfront RV Park at Marina
Edge Driver	Senior Housing
	Boat Storage
Land-use	 Pubic park and boater facilities at marina
	 Pub/restaurant
	 Senior housing and multi-unit residential
	 Kayak launch and "natural" harbor (old fish docks)
	Marina support buildings
Connectivity	 Green boulevards through downtown
	 Huron Sunrise Trail through site
	Extend Lake Street
Economic	 Increased tax base
Development	 Increased local spending
	 Increased tourist spending
	Boat storage
	RV parking rental
Natural Systems	 Green infrastructure along Huron Ave. and Michigan Ave.
	Natural habitat
Engineering	 Major underground infrastructure improvements
Considerations	 IT/cable/electrical improvements to site
	 Marina parking lot reconfiguration/new RV park
	 New restaurant/museum and marina building
	New Lake Street and trail



Figure 3 - Alternative 2 Presentation Board





Alternative 2 received 24 rejection votes (red dots) by community members on the second night of the charrette. Majority of the red votes (21) were regarding the location of the RV Park. Two red votes were for the location of the boat storage and one red vote for the Huron Sunrise Trail extension being too close to the marina edge. The voting is shown in Figure 4 for the individual elements within the table. Oral feedback during the public input session included:

- "Did not like the RV park location"
- "Love the Idea (of boat storage) just not on/near the waterfront. Maybe better to the north."
- "Keep space for festival tent in all options"

- HAIDE UNDERLIEWED INPRASTRUCTURE INPROVENENTS

- NEW LAKE ST + TRAIL

- IT/CARLE/ ELECTRICAL IMPROVEMENTS TO SITE
- NAVINA PARKING OF RECONFIGURATION / NEW RV PARK (
- NEW RESTAURANT / HUSBUH + MARINA BUILDINGS

- "Use boat storage as festival space and move it to a new green space, use as a farm market, the tent is \$11,000-15,000/year"
- "RV park between hotel and beach-access from SE or at baseball fields"
- "Trail too close to marina edge"

Rogers City Small Harbor Design Charrette HARBOR October 25-27, 2016 MARINA I SENIOR HOUSING; BOAT STORAGE - PUBLIC PARK & BOATER FACILITIES & MARINA - PUB / PESTAVBANT - SENIOR HOUSING + MULTI UNIT RESIDENTIAL - KAYAK LAUNCH & "NATURAL" HARBOR @ 0 - MARINA SUPPLET BUILDINGS GEBEN BULLEWEDS THEORIA DUNITOWN . HAYON SUMEISE TRAK THROUGH SITE! EXTEND LAKE ST. - INCREMED TAX BUSE; INCREMSED LOCAL SPEA MED BURNT SPENOWIC - BUT STRANE; RV PARKING RENTAL Natural Systems - WEEN INFRASTRUCTURE ALUNG HURON + HICHIGAN - NATURAL HABITAT

Figure 4 - Alternative 2 Community Vote Results

Engineering Consideration



2.3 Design Alternative 3

The third design alternative enhances the existing marina by adding a new larger festival lawn and amphitheater. The festival lawn stretches towards the waterfront and reduces the size of the parking lot. Adjacent to the festival lawn, a new marina entrance extends from Michigan Avenue. Further North along the shore new multi-unit residential is developed. Table 4 lists the main aspects of this design and Figure 5 is the display board from community voting.

Table 4 - Alternative 3 Content Matrix

Alternative 3	
Harbor/Waterfront Edge Driver	Enhanced park at marina; senior housing; RV resort
Land-use	 Public park and amphitheater at marina Pub/restaurant Senior housing and multi-unit residential Marina support buildings Festival lawn
Connectivity	 Green boulevards through downtown Huron Sunrise Trail through site Extend Lake Street Kayak launch New Michigan Avenue entrance
Economic Development	 Increased tax base Increased local spending Increase tourist spending RV site rental
Natural Systems	 Green Infrastructure Natural Habitat
Engineering Considerations	 Major underground infrastructure improvements (water, sanitary sewer, storm sewer) to site IT/cable/electrical improvements to site Marina parking lot reconfiguration RV resort New restaurant, museum, and marina buildings Road improvements to marina New Trail



Figure 5 - Alternative 3 Presentation Board

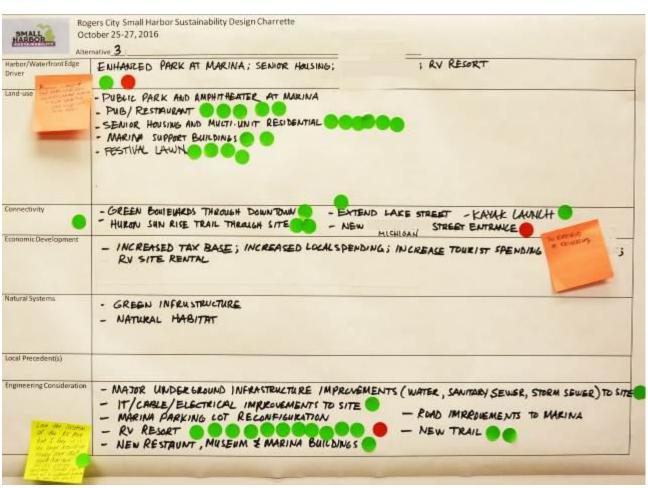




Alternative 3 received three rejection votes (small red dots) by community members. Two of the rejection votes were regarding the RV Park and the third regarding a new entrance on Michigan Avenue. The voting is shown in Figure 6 with votes for individual elements within the table. Oral feedback during the public input session included:

- "Love the location of the RV Park but I fear it is too large. Would we really have that much demand? Possibly placing another condo unit here w/a natural barrier to the RV park."
- "Premium waterfront land better used for maritime-related activity. Hoeft State Park is close enough for most RVers."
- "(New Michigan Avenue marina entrance is) too expensive to redevelop."

Figure 6 - Alternative 3 Community Vote Results





3.0 Preferred Alternative – Rogers City 2036

"Rogers City 2036" represents a shared future vision of the community based on the charrette design process. Alternative 1 had the majority of community approval votes and no red votes, so the "preferred alternative" was developed primarily from Alternative 1 with aspects of Alternative 2 and 3 included based on voting and oral feedback during the process. The final design includes the items in Table 5 and depicted in Figure 7.

Table 5 - Preferred Alternative Content Matrix

Rogers City 2036	
Harbor/Waterfront Edge Driver	Waterfront Park at Marina; Multi-Unit Residential; Class A RV Park
Land-use	 Public park and boater facilities at marina Indoor Boat Storage near marina Marine sanctuary visitor center Kayak launch and natural harbor Senior housing and multi-unit residential Marina support buildings Class A RV Park
Connectivity	 Green boulevards to downtown Huron Sunrise Trail throughout site Extend Lake Street
Economic Development	 Increased tax base Increased local spending Increased tourist spending
Natural Systems	 Green infrastructure along Huron and Michigan Natural habitat
Engineering Consideration	 Major road improvements to marina Major underground infrastructure improvements (water, sanitary, sewer) to site IT/Cable/Electrical improvements to site



Figure 7 - Preferred Alternative Full Site Plan





3.1 Marina

Modifications to the marina site include reducing the parking area and adding a green space buffer between the parking lot and marina. This area will house boater amenities as well as provide picnic options. The festival lawn for performances is expanded and encircled with a walking path. The Maritime Lore Museum has been moved from downtown to the waterfront with a Thunder Bay National Marine Sanctuary Visitor Center, Maritime Heritage Trail, and Seaman's Memorial. Inside the old commercial fishing harbor, a kayak launch is added and the harbor is enhanced by adding fish habitat and creating a natural space for wildlife. Figure 9 illustrates where these features are located and Figure 10 shows an artistic rendering of the proposed site.

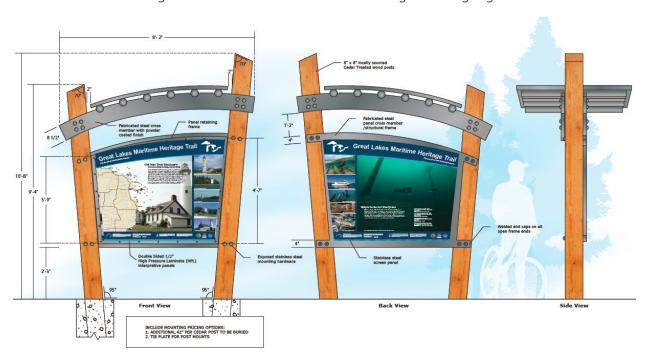


Figure 8 – Great Lakes Maritime Heritage Trail Signage



Figure 9 - Marina Site Plan

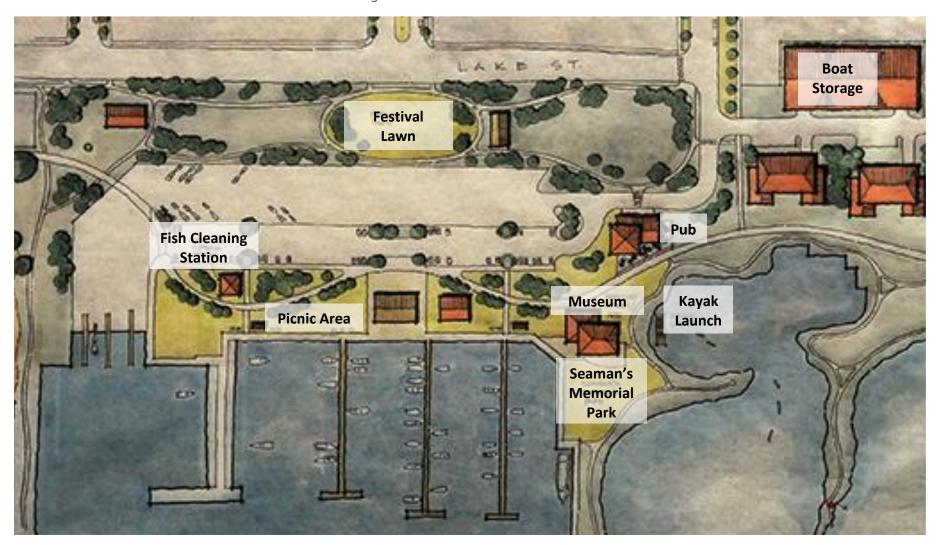




Figure 10 - Marina Existing Condition and Artistic Rendering







Utilizing the small harbor for paddle sports will improve access to Lake Huron and separate non-motorized craft from launching motor boats. This harbor is enhanced with underwater habitat improvements.









3.2 Multi-Unit Residential

Multi-unit residential with senior living and condos are shown along the currently vacant waterfront. Behind the residential units a large indoor boat storage facility was added. During summer months the indoor storage could alternatively be used as a festival shelter or covered farmers market. A closer view of the design is displayed in Figure 12. This area was the focus of previous feasibility studies (Figure 13 and Figure 14) that were referenced as part of the process.



Figure 12 – Multi-Unit Residential Plan



Figure 13 – Harbor Condos Site Plan (2004)

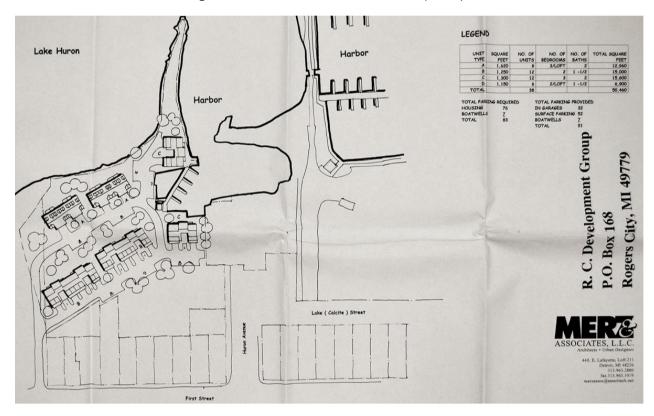
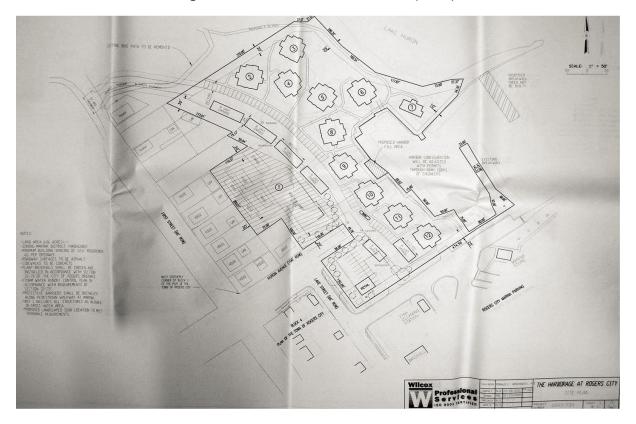


Figure 14 – Harbor Condos Site Plan (2004)





3.3 Class A RV Park

In the preferred alternative, the waterfront property adjacent to the water treatment facility hosts a Class A RV Park (Figure 14). It is designed for large RVs that are self-contained and do not require additional support buildings (Figure 15). A larger feasibility study was conducted in 2003 and is displayed in Figure 17, but the proposed 2003 location and scale was deemed unsuitable during the charrette process.

Figure 15 - RV Park Plan





Figure 16 – Class A RV Park (Sunlandrvresorts.com)





Figure 17 – RV Park Feasibility Study (2003)





4.0 Connectivity

The final section of this report considers connectivity as a key feature for a sustainable community and improved all season connectivity in Rogers City to attract transient visitors. Signage along M-23 is vital for Rogers City since the city is removed from the primary highway. Figure 18 provides the main vehicular transportation routes into town. The red dashed route could be marketed as a Scenic Waterfront Loop off of US-23 in order to draw people into town. The focus points for signage are circled in Figure 18. Unique signage features at these points would help to identify Rogers City as a destination and link with the rich history of the area (Figure 18-20).

Figure 18 - Connectivity Diagram





Figure 19 – Historical Excavator Signage Rendering



Figure 20 – Stone Signage Artistic Rendering





Figure 21 – Additional Stone Signage Artistic Rendering



4.1 Street Reconfiguration

Many of the streets in Rogers City are wider than recommended by Michigan Department of Transportation (MDOT). For a non-freeway urban arterial street MDOT Road Design Manual states, "12 ft., lanes are most desirable and should be used where practical. 11 ft. lanes are often used for low speed (45 mph design)." Many of the current roadways are wide enough to have 2 lanes in each direction and parking on each side of the street.

The preferred alternative specifies the pavement be narrowed on these streets Michigan Avenue, Huron Avenue, and Erie Street to make more green space and improve the environment and pedestrian spaces. Impermeable surfaces contribute to large amounts of polluted stormwater runoff during rainfall events so reducing the amount of paved surface reduces pollution entering Lake Huron.



Figure 22 – Michigan Avenue Pavement Reduction

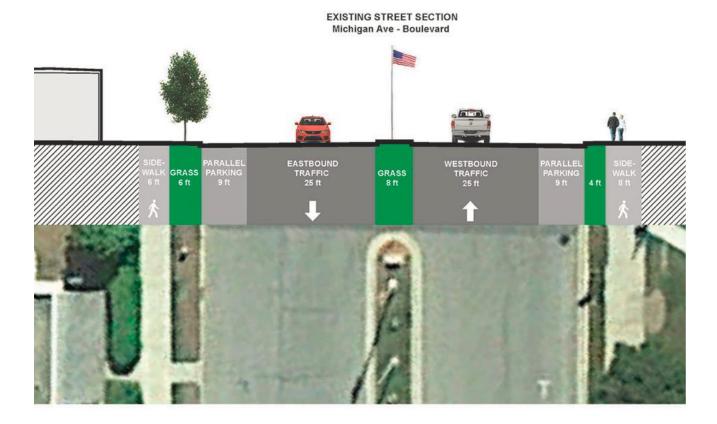






Figure 23 – Michigan Avenue Existing Condition and Artistic Rendering







Figure 24 – Huron Avenue Pavement Reduction

