

# Non-Motorized Plan Sault Tribe of Chippewa Indians



Prepared by:

Opus International Consultants Inc.  
27333 Meadowbrook Road  
Suite 210  
Novi, MI 48377

248-539-2222 (phone)  
[www.opusinternational.com](http://www.opusinternational.com)

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## I.0 INTRODUCTION

### I.1 Background

The Sault Ste. Marie Tribe of Chippewa Indians are currently in the process of applying the principals of Complete Streets. The first steps have included working with all of the local communities to develop and approve a Complete Streets resolutions or ordinances. The tribe has funded the development of non-motorized plans for several of the municipalities where tribal communities are located. This project involves developing a non-motorized transportation plan for the tribal areas and in particular its facilities and communities across the Eastern UP.

This plan includes a comprehensive stakeholder consultation process, an evaluation of existing conditions, safety analysis, analysis of the route hierarchy, development of design guidelines, and the preparation of an implementation plan. This plan is **designed to document the tribe's non-motorized transportation needs and to guide the tribe's investment decisions related to non-motorized facilities**. The plan encompasses tribal areas including housing developments, schools, offices, casinos, and other tribal facilities. The plan has been developed in consultation with the tribal council, members of the Sault Tribe, and other stakeholders.

### I.2 Study Purpose

The objectives of this project are as follows:

- Proactively consult with tribal members and other stakeholders on non-motorized issues;
- **Document the tribe's non-motorized transportation needs;**
- **Develop a plan to guide the tribe's investment decisions for non-motorized facilities;** and
- Assist with the identification of implementation funding.

### I.3 Methodology

The project involved the following tasks.

***Kick-off Meeting*** – A kick-off meeting was held in May 2013 with the Sault Tribe.

***Opening Presentation*** – An introduction to the project was presented to the Tribal Council on May 28, 2013.

***Stakeholder Meetings*** – Meetings were held with stakeholders within each of the tribal communities. Below is a list of the meetings which were held.

- Kincheloe – July 29, 2013
- Sault Ste. Marie – July 29, 2013
- Newberry – July 30, 2013
- Munising/Wetmore – July 30, 2013
- Manistique – July 30, 2013
- Hessel – July 31, 2013

- St. Ignace – July 31, 2013

**Survey** – A survey was developed and administered via SurveyMonkey. It was advertised to tribal members via the Tribe’s newspaper, intranet and flyers in tribal buildings.

**Review of Existing Facilities** – On-site observations were conducted to review the safety, operations, design, road user behavior, and connectivity of the non-motorized network.

**Traffic Safety Analysis** – A safety analysis was conducted utilizing michigantrafficcrashfacts.org.

Non-Motorized Network Upgrades – **A list of proposed upgrades and improvements to the Tribe’s non-motorized network** was developed.

**Implementation Plan-** The proposed improvements were prioritized and improvement costs were classified as low, medium, or high.

#### **I.4 Background Materials**

The following background materials were reviewed during the development of this plan.

- Odenaang Development Plan (2013)
- Kinross Non-Motorized Transportation Plan (2013)
- City of Manistique Non-Motorized Transportation Plan (2012)
- City of Sault Ste. Marie Non-Motorized Transportation Plan (2012)
- MDOT Superior Region Non-Motorized Transportation Plan and Investment Strategy (2009)

## 2.0 EXISTING CONDITIONS



### 2.1 Existing Facilities – Hessel

The Sault Tribe community in Hessel is located on Three Mile Road about three miles north of Hessel in Mackinac County. The community includes a casino, housing development, health center and campground. All facilities except the campground are located on the west side of Three Mile Road. FIGURE 2.1 illustrates the Hessel tribal community. TABLE 2.1 summarizes the key non-motorized issues.



**FIGURE 2.1 HESSEL TRIBAL COMMUNITY**

**TABLE 2.1 NON-MOTORIZED ISSUES IN HESSEL**

 <p>Looking West on N. Opaming Drive</p>	 <p>Looking South on Three Mile</p>
<p><b>1a. Lack of Sidewalks and High Speeds in Housing Development</b> – When a neighborhood does not have sidewalks, young children tend to play in the street. Additionally, pedestrians have a greater likelihood to walk in the street. The risk of a crash with a non-motorized road user increases due to the lack of lighting. Finally, there is also a risk of higher speeds in the housing areas due to the low traffic volumes. Higher speeds combined with non-motorized road users increase the risk of a serious crash.</p>	<p><b>1b. Lack of Non-Motorized Connection with Village of Hessel-</b> It was noted during the stakeholder meetings that residents of the tribal community in Hessel want to be able to walk and bike along Three Mile Road to the Village of Hessel, which is located three miles south. No shoulders or off road non-motorized facilities are currently provided along Three Mile Road. This lack of non-motorized facilities combined with the high speeds (speed limit is 55 mph) on Three Mile Road increase the risk of a severe crash involving a non-motorized road user.</p>



Looking North on Three Mile

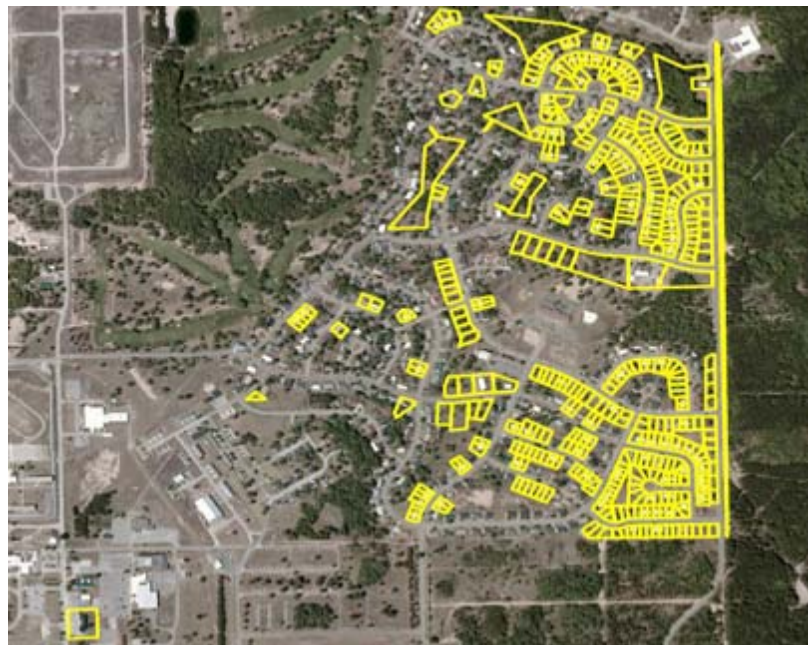


Looking South on Three Mile

**1c. No Link Between Campground and Casino-** Many guests of the tribally owned campground across Three Mile Road want to walk to the casino. Currently there is not a designated location to cross Three Mile Road. The risk is increased due to the hill north of the location where most pedestrians were observed crossing this high speed road. The hill limits the visibility of the crossing for northbound drivers.

## 2.2 Existing Facilities – Kincheloe

The Sault Tribe community in Kincheloe is located in Kinross Township within Chippewa County. The tribal areas are primarily located within the residential areas north of M-80 and west of Country Club Drive. The community includes housing and a community center. FIGURE 2.2 illustrates the Kincheloe tribal community. TABLE 2.2 summarizes the key non-motorized issues.



**FIGURE 2.2 KINCHELOE TRIBAL COMMUNITY**

**TABLE 2.2 NON-MOTORIZED ISSUES IN KINCHELOE**



Example of a Street with No Sidewalks

**2a. Lack of Sidewalks and High Speeds in Housing Development** – When a neighborhood does not have sidewalks, young children tend to play in the street. Additionally, pedestrians have a greater likelihood to walk in the street. In some cases, the sidewalks are located only on one side of the roadway, which also increases risk. The risk of a crash with a non-motorized road user increases due to the lack of lighting. Finally, there is also a risk of higher speeds in the housing areas due to the low traffic volumes. Higher speeds combined with non-motorized road users increase the risk of a serious crash.



Example of a Narrow Sidewalk

**2b. Narrow Sidewalks in the Housing Area-** A portion of the Kincheloe housing area has sidewalks. Sidewalks which have been provided are only three feet wide. Narrow sidewalks can result in pedestrians walking in the street.



Country Club Drive at Blueberry Looking North

**2c. Crossing Country Club Drive to access Dukes Lake** – During the stakeholder meeting it was noted that non-motorized are crossing Country Club Drive at Blueberry Road. This is the primary route to Dukes Lake from the housing area. No facilities are provided for pedestrians to cross Country Club Drive.



Primary Walking Route to Commercial Area

**2d. Limited Non-Motorized Connections with Community Center and Commercial Areas** – Access to key destinations such as the community center and commercial areas were provided. During the stakeholder meeting it was mentioned that in the winter, pedestrians need to walk in the street when the direct routes are covered with snow.

### 2.3 Existing Facilities – Manistique



The Sault Tribe community in Manistique is located in Schoolcraft County west of Downtown Manistique. There are two primary tribal areas which include the casino/health center area and a residential area. The casino and health center are located in the same site which fronts US-2. The housing area is approximately three miles northwest of the casino and health center, located near the intersection of River Road and Faketty Road. FIGURE 2.3 illustrates the Manistique tribal community. TABLE 2.3 summarizes the key non-motorized issues.



**FIGURE 2.3 MANISTIQUE TRIBAL COMMUNITY**

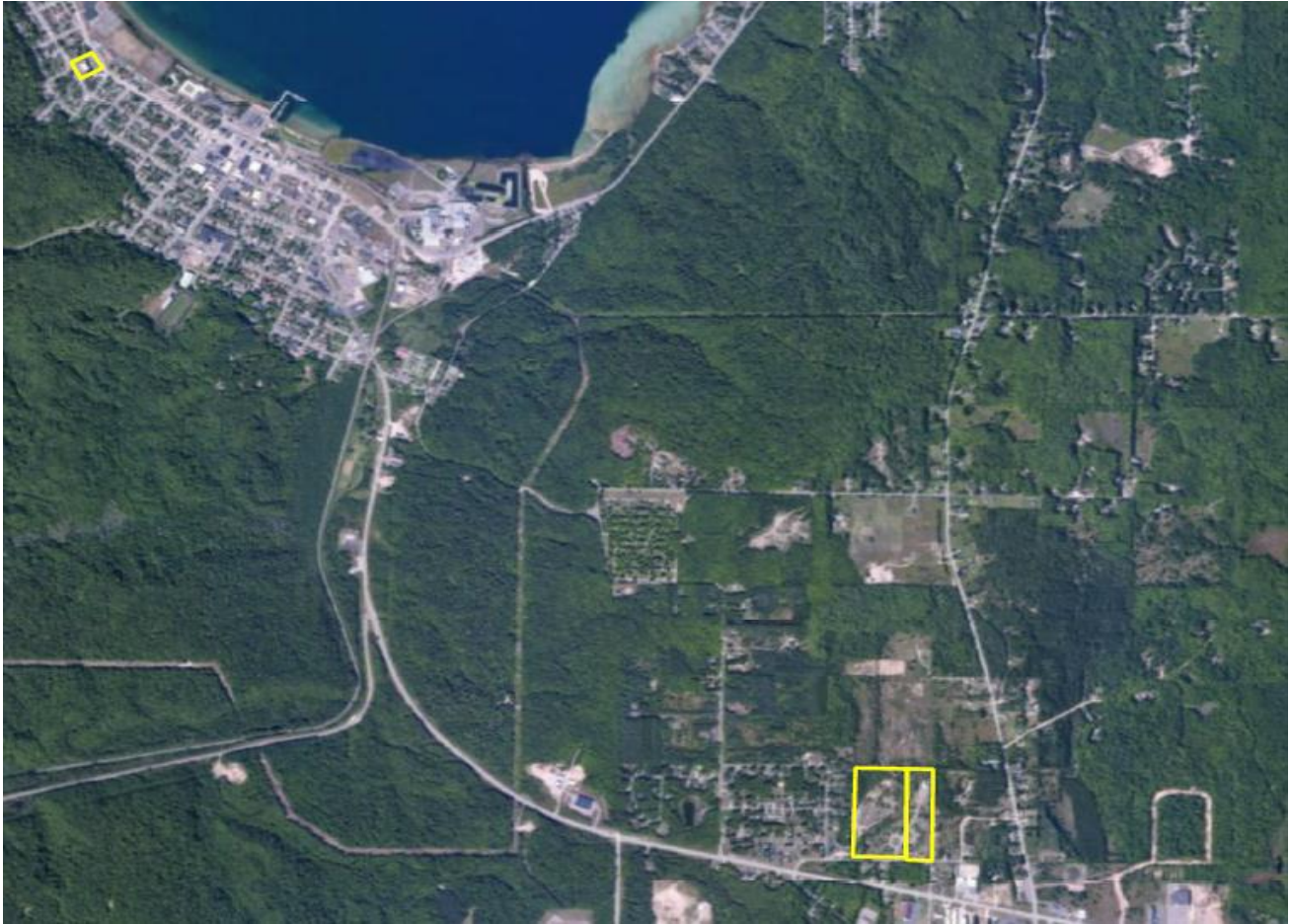


**TABLE 2.3 NON-MOTORIZED ISSUES IN MANISTIQUE**

 <p>River Road looking North</p> <p><b>3a. Limited non-motorized link between the housing area and the casino/health center-</b> Pedestrians and bicyclists who want to travel from the housing area to the casino/health center site are required to use the gravel shoulder of River Road and the paved shoulder of US-2. No off road sidewalk or trail is provided.</p>	 <p>Roadway Link Between Health Center and Casino</p> <p><b>3b. No sidewalks/trails around the casino/health center –</b> No sidewalks or trails are provided within the casino/health center site. This requires pedestrians to walk in the street between the two buildings. This is particularly an issue when health center employees want to walk to the restaurant at the casino for lunch. It was also mentioned during the stakeholder meeting that health center employees would like walking trails on the site.</p>
 <p>Example Roadway with No Sidewalk</p> <p><b>3c. Lack of Sidewalks and High Speeds in Housing Areas-</b> When a neighborhood does not have sidewalks, young children tend to play in the street. Additionally, pedestrians have a greater likelihood to walk in the street. The risk of a crash with a non-motorized road user increases due to the lack of lighting. Finally, there is also a risk of higher speeds in the housing areas due to the low traffic volumes. Higher speeds combined with non-motorized road users increase the risk of a serious crash.</p>	

## 2.4 Existing Facilities – Munising/Wetmore

The Sault Tribe community in Munising/Wetmore is located in Alger County. There are three primary tribal areas which include a residential area in Wetmore, health center in Downtown Munising, and casino in Christmas. FIGURE 2.4 illustrates the Munising/Wetmore tribal community. TABLE 2.4 summarizes the key non-motorized issues.



**FIGURE 2.4 MUNISING/WETMORE TRIBAL COMMUNITY**

**TABLE 2.3 NON-MOTORIZED ISSUES IN MUNISING/WETMORE**

 <p style="text-align: center;">Atik Ameg Drive Looking North</p>	 <p style="text-align: center;">Looking East on US-41 in front of Casino</p>
<p><b>4a. Lack of Sidewalks and High Speeds in Housing Areas-</b> When a neighborhood does not have sidewalks, young children tend to play in the street. Additionally, pedestrians have a greater likelihood to walk in the street. The risk of a crash with a non-motorized road user increases due to the lack of lighting. Finally, there is also a risk of higher speeds in the housing areas due to the low traffic volumes. Higher speeds combined with non-motorized road users increase the risk of a serious crash.</p>	<p><b>4b. No connection with the Casino and Regional Trails-</b> It was mentioned during the stakeholder meeting that there is no non-motorized connection between the casino and other regional trails in the area.</p>



**2.5 Existing Facilities – Newberry**

The Sault Tribe community in Newberry is located in Luce County. The primary tribal area is located south of M-28 east of M-123. FIGURE 2.5 illustrates the Newberry tribal community. TABLE 2.4 summarizes the key non-motorized issues.



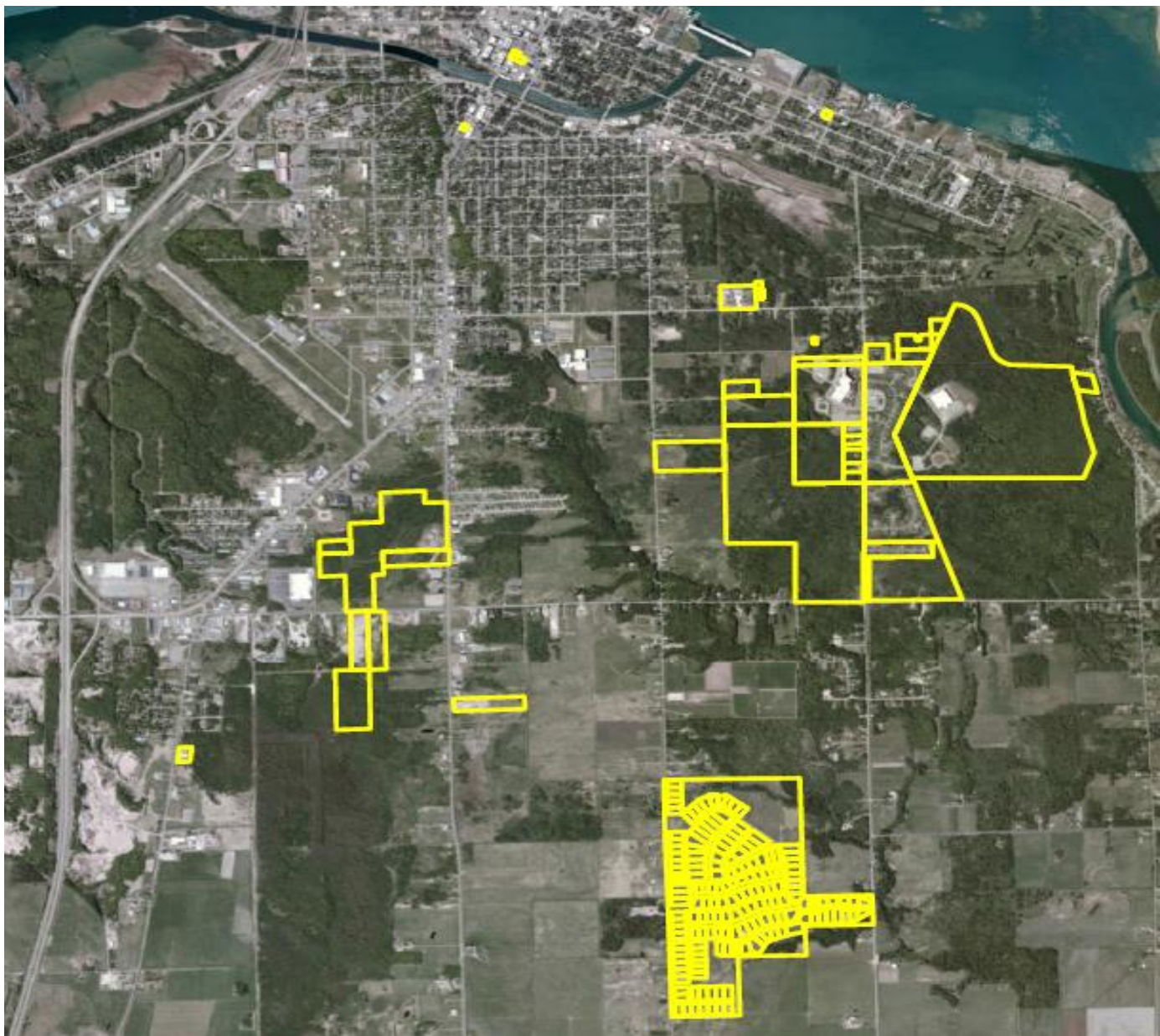
**FIGURE 2.5 NEWBERRY TRIBAL COMMUNITY**

**TABLE 2.5 NON-MOTORIZED ISSUES IN NEWBERRY**

 <p>Looking down Zeez-Ba-Tik Drive</p>	 <p>Newberry Health Center Parking Lot</p>
<p><b>5a. Lack of Sidewalks and High Speeds in Housing Areas-</b> When a neighborhood does not have sidewalks, young children tend to play in the street. Additionally, pedestrians have a greater likelihood to walk in the street. The risk of a crash with a non-motorized road user increases due to the lack of lighting. Finally, there is also a risk of higher speeds in the housing areas due to the low traffic volumes. Higher speeds combined with non-motorized road users increase the risk of a serious crash.</p>	<p><b>5b. Children walking, riding bikes and playing in Health Center Parking Lot-</b> The playground is extremely close to the Newberry Health Center’s parking lot. This causes kids to play in the parking lot and increases the risk for a crash involving a non-motorized road user.</p>

## 2.6 Existing Facilities – Sault Ste. Marie

The Sault Tribe community in Sault Ste. Marie is integrated into the Sault Ste. Marie area in Chippewa County. FIGURE 2.5 illustrates the Sault Ste. Marie tribal community. TABLE 2.4 summarizes the key non-motorized issues.



**FIGURE 2.6 SAULT STE. MARIE TRIBAL COMMUNITY**

**TABLE 2.6 NON-MOTORIZED ISSUES IN SAULT STE. MARIE**

**6a. Lack of or Narrow Sidewalks and High Speeds in Housing Areas-** When a neighborhood does not have sidewalks, young children tend to play in the street. Additionally, pedestrians have a greater likelihood to walk in the street. The risk of a crash with a non-motorized road user increases due to the lack of lighting. Narrow sidewalks increase the risk that a pedestrian will walk in the street. Finally, there is also a risk of higher speeds in the housing areas due to the low traffic volumes. Higher speeds combined with non-motorized road users increase the risk of a serious crash.



**6b. Non-Motorized Safety and Access on Shunk Road near Casino** – The sidewalk provided along the westside of Shunk Road is non-contiguous. As a result, pedestrians are required to walk through the casino parking lot in order to continue south on Shunk Road. This increases the risk of a pedestrian crash. Additionally, there are no designated locations for pedestrians to cross Shunk Road near the casino. This encourages pedestrians to take risks and cross at less optimal locations.



**6c. Limited Non-Motorized Connections to the Health Center** – Limited non-motorized facilities are present in the area surrounding the Health Center on Ashmun Road north of Three Mile. This limits access and encourages pedestrians and bicyclists to walk in the street on Ashmun increasing the risk for high severity crashes on this high speed roadway.



**6g. Pedestrian Safety Near JKL Bahweting School** – the lack of sidewalk on the north side of Marquette Street between the school and the the Marquette/Shunk intersection was brought up as a concern. The tribe attempted to gain approval from the impacted residents in 2011 but was unsuccessful. This missing sidewalk link requires pedestrians walking towards the housing areas to cross the street twice rather than only once if this sidewalk was provided.



Casino South Entrance (Stop Controlled Crossing)



Casino South Entrance (Columns)

**6e. Pedestrian Crossings in Casino Parking Lot** – Some crossings have stop signs while others do not leading to a lack of consistency. This violates driver expectations for how to behave at a crossing. The columns block the visibility of pedestrians looking to cross from the casino's south entrance to the south parking lot.

**6f. Pedestrian Safety in Alley Behind Administration Building-** Concerns were brought forward during a stakeholder meeting related to the visibility of pedestrians within the alley behind the administration building in Downtown Sault Ste. Marie.

## 2.7 Existing Facilities – St. Ignace

The Sault Tribe community in St. Ignace includes several areas in St. Ignace within Mackinac County. The casino and housing area is located along Mackinac Trail approximately five miles north of Downtown St. Ignace. A small housing area is located several blocks west of Downtown St. Ignace and the health center shares a facility on the I-75 Business Loop with the hospital. FIGURE 2.7 illustrates the St. Ignace tribal community. TABLE 2.7 summarizes the key non-motorized issues.



**FIGURE 2.7 ST. IGNACE TRIBAL COMMUNITY**



**TABLE 2.7 NON-MOTORIZED ISSUES IN ST. IGNACE**

**7a. Lack of Sidewalks and High Speeds in Housing Areas** - When a neighborhood does not have sidewalks, young children tend to play in the street. Additionally, pedestrians have a greater likelihood to walk in the street. The risk of a crash with a non-motorized road user increases due to the lack of lighting. Narrow sidewalks increase the risk that a pedestrian will walk in the street. Finally, there is also a risk of higher speeds in the housing areas due to the low traffic volumes. Higher speeds combined with non-motorized road users increase the risk of a serious crash.



**7b. Pedestrian Crossings Near Casino** – Non standard pedestrian signing is present within the casino loop. This signing is not as recognizable as standard pedestrian signing.



**7c. Limited Bicycle Facilities on I-75BL Between Downtown and I-75** – No bicycle facilities are present on the I-75BL. This requires bicyclists to ride in the roadway of this high speed roadway.



**7d. Limited Non-Motorized Connection Between Housing Area and Mid-Jim Gas Station-** There is no non-motorized connection between the housing area and the Mid-Jim.



**7e. Limited Pedestrian Connection Between Casino and Housing Area –** The fence limits connectivity between the housing area and the casino and senior center in St. Ignace. As a result, non-motorized road users are required to walk out to Mackinac Trail to access these facilities. This discourages walking and biking in the area.

## 2.8 Traffic Crash Data

An analysis of pedestrian and bicycle crash data was conducted to determine if there were any documented crash trends around each tribal community. Crash data for the years 2008-2012 were analyzed. TABLE 2.8 lists the pedestrian and bicycle crash frequency within and around each tribal community. TABLE 2.9 is a summary of the five crashes involving non-motorized road users.

**TABLE 2.8 NON-MOTORIZED CRASH FREQUENCY (2008-2012)**

Tribal Community	Pedestrian Crashes	Bicycle Crashes
Hessel	0	0
Kincheloe	0	0
Manistique	0	0
Munising/Wetmore	1	1
Newberry	0	0
Sault Ste. Marie	1	2
St. Ignace	0	0
TOTAL	2	3

**TABLE 2.9 SUMMARY OF NON-MOTORIZED CRASHES**

Crash Type	Community	Details
Pedestrian	Munising/Wetmore	Pedestrian was walking in the road on Balko Street and was struck by a vehicle. The crash occurred in snowy conditions and resulted in an injury for the pedestrian.
Bicycle	Munising/Wetmore	Bicycle turned to cross M-28 across from casino in Christmas. The crash resulted in an injury for the bicyclist.
Pedestrian	Sault Ste. Marie	Vehicle was turning from Middle School to Marquette when driver struck a pedestrian in the crosswalk. It was raining and dark when the crash occurred. The crash resulted in an injury to the pedestrian.
Bicycle	Sault Ste. Marie	Vehicle turning from Peck Street onto Ashmun struck a bicycle. The crash did not result in an injury.
Bicycle	Sault Ste. Marie	Vehicle turning from Ashmun to East Spruce struck a bicycle who did not yield right-of-way. The crash did not result in an injury.

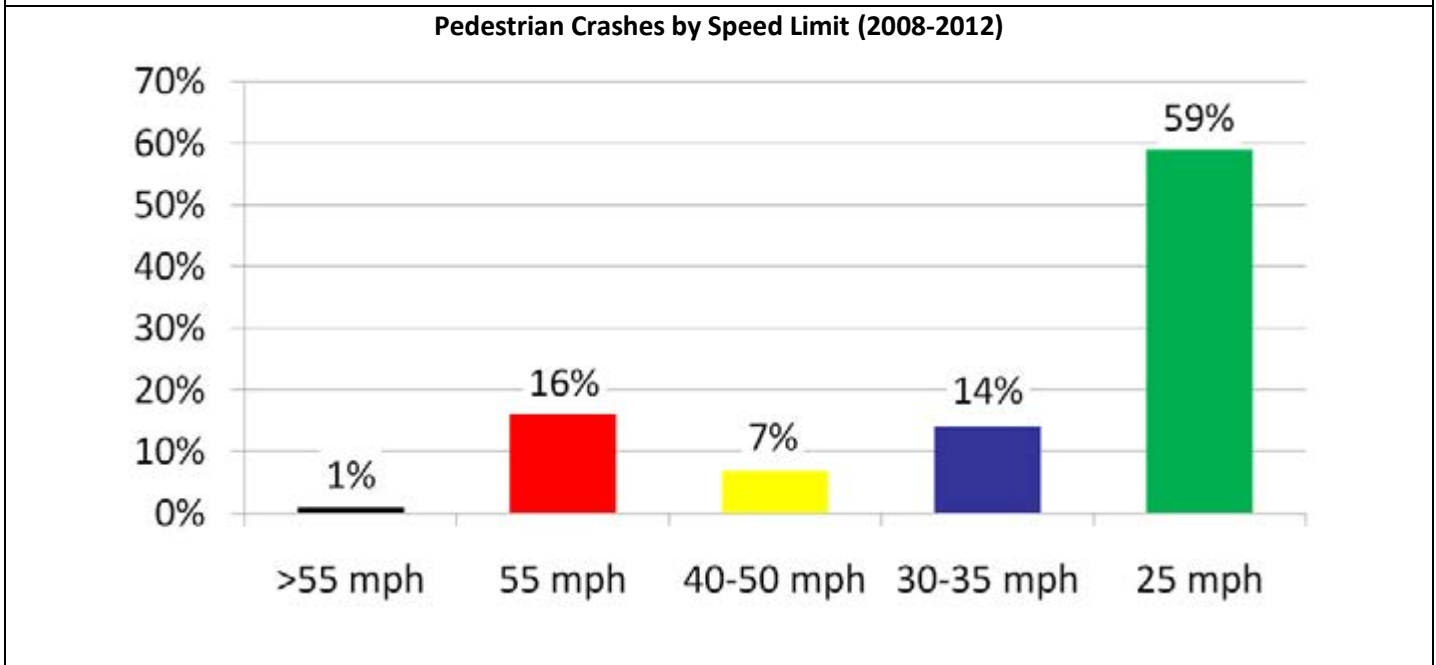
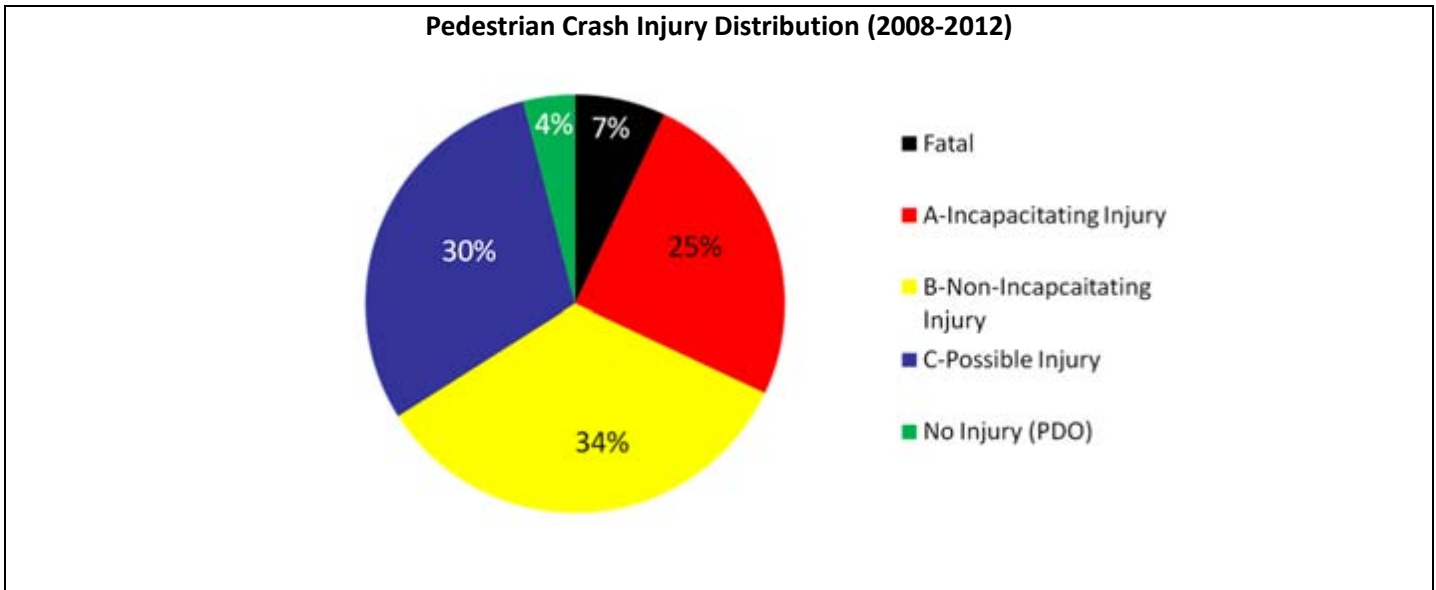
Further analysis was conducted of the pedestrian and bicycle crashes for the entire Upper Peninsula. This was conducted due to the low frequency of pedestrian and bicycle crashes in and around the tribal communities. FIGURE 2.8 outlines trends with pedestrian crashes in the UP and FIGURE 2.9 outlines trends with bicycle crashes in the UP.

## 2.9 Survey Results

A survey was conducted to document non-motorized travel patterns, issues, concerns, and suggestions from tribal members. The study was conducted online using SurveyMonkey.com. It was advertised in **the Tribe's newspaper, website, and on notice boards in several** tribal buildings. Thirty-one people responded to the survey. Details are provided in APPENDIX A. Below are the results of the survey.

- 10% of respondents walk or bike to work;
- More than 40% of respondents reported biking more than one hour per week
- 90% of respondents walked more than one hour per week;
- More than 25% of respondents reported walking more than four hours per week;
- More than 40% of respondents reported that biking in and around the tribal communities was unpleasant;
- Nearly 2/3 of respondents reported that walking in and around the tribal communities was somewhat pleasant .
- Nearly 80% of respondents reported that their sidewalks were not well maintained;
- The improvements which respondents indicated they felt would most improve safety and quality of the non-motorized facilities are listed below:
  - Dedicated Bike Lanes (68%)
  - Recreational Trails (54%)
  - Sidewalks (51%)
  - Improve Pavement on Existing Sidewalks (48%)
- Most respondents indicated they would walk or bike to work or to a friend/neighbor house if facilities were provided.

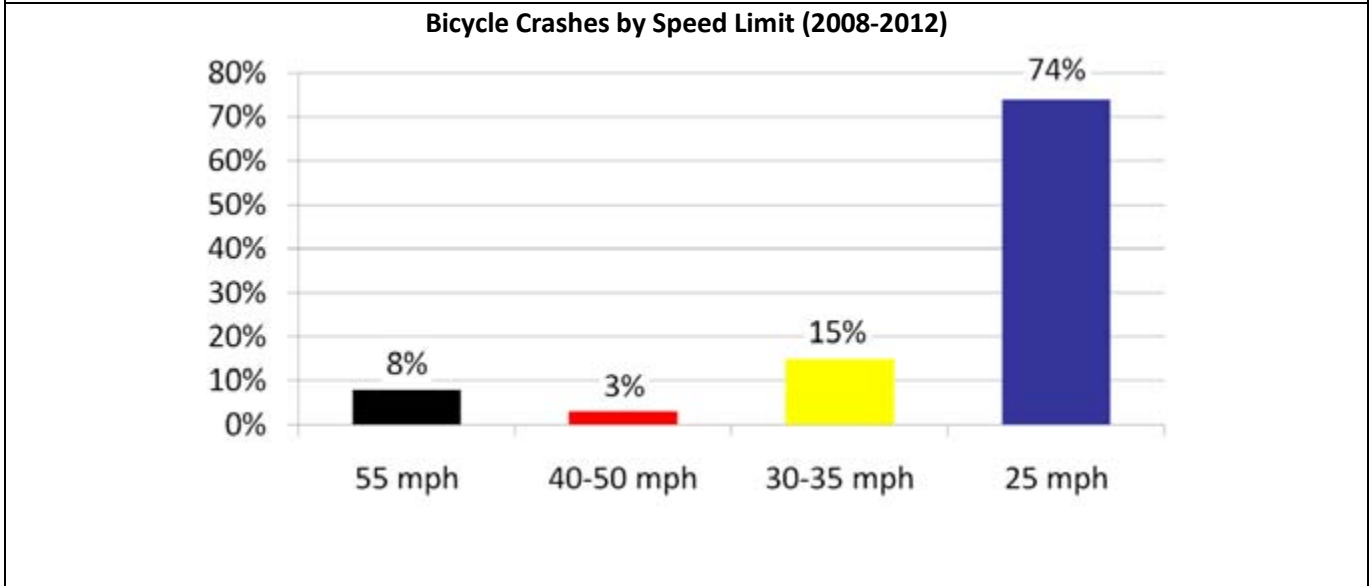
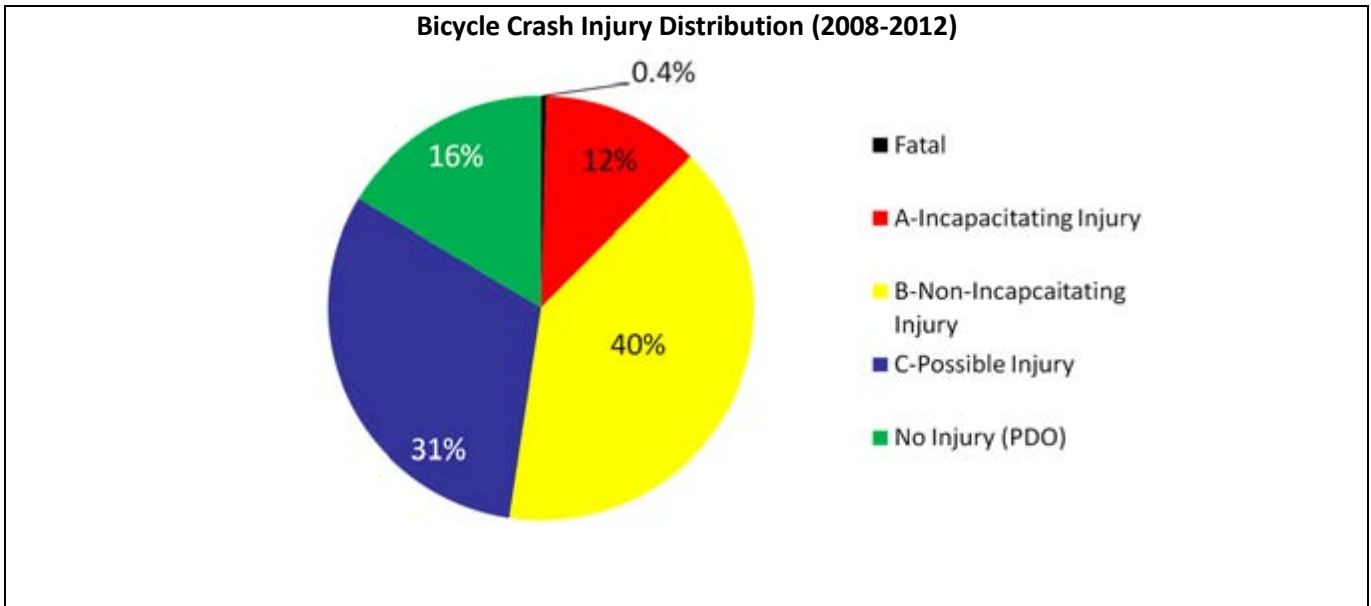
**FIGURE 2.7 PEDESTRIAN CRASH TRENDS IN THE UPPER PENINSULA**



Below are several pedestrian crash trends for the Upper Peninsula.

- 16% Involved Drinking
- 2.5% Involved Drugs
- About 2/3 not at intersections
- 42% occurred at night
- Vast majority in good weather

**FIGURE 2.9 PEDESTRIAN CRASH TRENDS IN THE UPPER PENINSULA**



Below are several bicycle crash trends for the Upper Peninsula.

- 3% Involved Drinking
- 2.5% Involved Drugs
- 60% at intersections
- 16% occurred at night
- 9% on non-Dry Roads

### 3.0 PROPOSED NETWORK

The proposed route network is intended to create a comprehensive system of pedestrian and bicycle facilities covering each of the tribal communities, with connections to adjacent communities, trails, commercial areas, recreation centers, health centers, and other major destinations. The proposed route networks are shown in the following sections. Improvements to address the issues outlined in Section 2 are also provided. Whether each improvement for the proposed network is included within the local or MDOT non-motorized plan is also noted.

#### 3.1 Proposed Network – Hessel

TABLE 3.1 outlines the details of the proposed improvements to the non-motorized network in Hessel.

**TABLE 3.1 DETAILS OF THE PROPOSED NETWORK - HESSEL**

Issue	Improvement	Local Plan	MDOT Plan
1a. Lack of Sidewalks in Housing Development	<ul style="list-style-type: none"> <li>• Add sidewalks to N. Opaming Drive</li> <li>• Add a sidewalk connection between N. Opaming Drive, health center and casino.</li> </ul>	<b>NO</b>	<b>NO</b>
1b. Lack of non-motorized connection with the Village of Hessel	<ul style="list-style-type: none"> <li>• Provide one of the following alternatives for Three Mile Road between the tribal community and the Village of Hessel: <ul style="list-style-type: none"> <li>○ An off road non-motorized trail – preferred</li> <li>○ Paved Shoulders</li> </ul> </li> </ul>	<b>NO</b>	<b>NO</b>
1c. No link between the campground and the casino	<ul style="list-style-type: none"> <li>• Add a marked crossing on Three Mile Road across from the casino. This location has the best visibility. Placing the crossing closer to the campground has limited pedestrian visibility for northbound drivers due to the vertical curve on Three Mile Road.</li> <li>• Add a sidewalk link to the west side of Three Mile Road between the campground and the crossing.</li> </ul>	<b>NO</b>	<b>NO</b>

### 3.2 Proposed Network – Kincheloe

TABLE 3.2 outlines the details of the proposed improvements to the non-motorized network in Kincheloe.

**TABLE 3.2 DETAILS OF THE PROPOSED NETWORK - KINCHELOE**

Issue	Improvement	Local Plan	MDOT Plan
2a. Lack of Sidewalks and High Speeds in Housing Development	<ul style="list-style-type: none"> <li>Add sidewalks proposed within the Kinross Non-Motorized Plan.</li> </ul>	<b>YES</b>	<b>NO</b>
2b. Narrow sidewalks in the housing area	<ul style="list-style-type: none"> <li>New sidewalks - provide sidewalks which are at least five feet wide</li> <li>Existing sidewalks – When sidewalks are upgraded, provide wider five foot sidewalks.</li> </ul>	<b>NO</b>	<b>NO</b>
2c. Crossing Country Club Lane to access Dukes Lake	<ul style="list-style-type: none"> <li>Provide a marked crossing across Country Club Drive at Blueberry Road.</li> </ul>	<b>NO</b>	<b>NO</b>
2d. Limited non-motorized connections with the Community Center and Commercial Areas	<ul style="list-style-type: none"> <li>Add non-motorized connections proposed within the Kinross Non-Motorized Plan.</li> </ul>	<b>YES</b>	<b>NO</b>
2e. High Speeds in Housing Development	<ul style="list-style-type: none"> <li>Conduct a traffic calming study within the neighborhoods to determine its feasibility.</li> </ul>	<b>NO</b>	<b>NO</b>

### 3.3 Proposed Network – Manistique

TABLE 3.3 outlines the details of the proposed improvements to the non-motorized network in Manistique.

**TABLE 3.3 DETAILS OF THE PROPOSED NETWORK - MANISTIQUE**

Issue	Improvement	Local Plan	MDOT Plan
3a. Limited non-motorized link between the housing area and the casino/health center	<ul style="list-style-type: none"> <li>• Provide one of the following alternatives for River Road between the tribal community and US-2:               <ul style="list-style-type: none"> <li>○ An off road non-motorized trail – preferred</li> <li>○ Paved Shoulders</li> </ul> </li> </ul> <p>This would connect with the existing paved shoulders on US-2 between River Road and the casino/health center.</p> <ul style="list-style-type: none"> <li>• Evaluate opportunities to improve local transit service between the housing area and casino/health center site as part of the upcoming transit study.</li> </ul>	<b>NO</b>	<b>NO</b>
3b. No sidewalks and trails around the casino/health center	<ul style="list-style-type: none"> <li>• Provide a sidewalk linking the health center and the casino.</li> <li>• Provide a trail loop on the casino/health center site.</li> </ul>	<b>NO</b>	<b>NO</b>
3c. Lack of Sidewalks and High Speeds in Housing Development	<ul style="list-style-type: none"> <li>• Provide sidewalks within the housing area.</li> <li>• Conduct a traffic calming study within the neighborhoods to determine its feasibility.</li> </ul>	<b>NO</b>	<b>NO</b>



### 3.4 Proposed Network – Munising/Wetmore

TABLE 3.4 outlines the details of the proposed improvements to the non-motorized network in Munising/Wetmore. FIGURE 3.4 illustrates the proposed network.

**TABLE 3.4 DETAILS OF THE PROPOSED NETWORK – MUNISING/WETMORE**

Issue	Improvement	Local Plan	MDOT Plan
4a. Lack of Sidewalks in Housing Development	<ul style="list-style-type: none"> <li>Provide sidewalks within the housing area.</li> </ul>	<b>NO</b>	<b>NO</b>
4b. No connection between the Casino and Regional Trails	<ul style="list-style-type: none"> <li>Provide a connection between the casino and regional trails such as the North Country Trail.</li> </ul>	<b>NO</b>	<b>NO</b>

### 3.5 Proposed Network – Newberry

TABLE 3.5 outlines the details of the proposed improvements to the non-motorized network in Hessel. FIGURE 3.5 illustrates the proposed network.

**TABLE 3.5 DETAILS OF THE PROPOSED NETWORK – NEWBERRY**

Issue	Improvement	Local Plan	MDOT Plan
5a. Lack of Sidewalks in Housing Development	<ul style="list-style-type: none"> <li>Provide sidewalks within the housing area.</li> </ul>	<b>NO</b>	<b>NO</b>
5b. Children walking in the Health Center parking lot.	<ul style="list-style-type: none"> <li>Provide a fence between the playground and the parking area.</li> <li>Provide a sidewalk connecting Zeez-Ba-Tik Drive and the playground behind the Health Center.</li> </ul>	<b>NO</b>	<b>NO</b>

### 3.6 Proposed Network – Sault Ste. Marie

TABLE 3.6 outlines the details of the proposed improvements to the non-motorized network in Sault Ste. Marie.

**TABLE 3.5 DETAILS OF THE PROPOSED NETWORK – SAULT STE. MARIE**

Issue	Improvement	Local Plan	MDOT Plan
6a. Lack of Sidewalks and High Speeds in Housing Development	<ul style="list-style-type: none"> <li>• Provide sidewalks within the housing areas.</li> <li>• Provide a sidewalk along Ice Circle Drive</li> <li>• Conduct a study to determine the feasibility of providing traffic calming in the housing areas along Shunk Road and Ice Circle Drive.</li> <li>• Implement the proposed Odenaang Development Plan's non-motorized connections.</li> </ul>	<b>NO</b>	<b>NO</b>
6b. Non-motorized access and safety on Shunk Road near the casino.	• Install a continuous sidewalk along the east side of Shunk Road in front of the casino	<b>YES</b>	<b>NO</b>
	• Provide improved separation between the sidewalk and roadway near the Mid-Jim.	<b>YES</b>	<b>NO</b>
	• Install gateway treatments on Shunk Road north and south of the casino to manage speeds.	<b>NO</b>	<b>NO</b>
	• Provide bike route on Shunk Road	<b>YES</b>	<b>NO</b>
	• Provide a crossing on Shunk Road near the casino. Provide a pedestrian refuge at the crossing.	<b>NO</b>	<b>NO</b>
6c. Limited non-motorized connections to the Health Center	• Install the proposed trail along Ashmun which is outlined in the City's non-motorized plan	<b>YES</b>	<b>NO</b>
6g. Pedestrian safety near JKL Bahweting School	• Provide sidewalk on north side of Marquette between school and Shunk Road.	<b>YES</b>	<b>NO</b>
6e. Pedestrian crossings in the casino parking lot	• Remove stop signs and provide raised crossings.	<b>NO</b>	<b>NO</b>
6f. Pedestrian safety in alley behind administration building	• No suggestions	<b>N/A</b>	<b>N/A</b>

### 3.7 Proposed Network – St. Ignace

TABLE 3.7 outlines the details of the proposed improvements to the non-motorized network in St. Ignace.

**TABLE 3.7 DETAILS OF THE PROPOSED NETWORK – ST. IGNACE**

Issue	Improvement	Local Plan	MDOT Plan
7a. Lack of sidewalks and high speeds in the housing areas	<ul style="list-style-type: none"> <li>Provide sidewalks within the housing areas.</li> </ul>	<b>N/A</b>	<b>NO</b>
	<ul style="list-style-type: none"> <li>Provide a sidewalk connections to the housing area along Spring Street and Dickenson Street.</li> </ul>	<b>N/A</b>	<b>NO</b>
	<ul style="list-style-type: none"> <li>Conduct a study to determine the feasibility of providing traffic calming in the housing areas near the casino.</li> </ul>	<b>NO</b>	<b>NO</b>
7b. Pedestrian crossing near casino	<ul style="list-style-type: none"> <li>Improve signing and markings for pedestrian crossings.</li> </ul>	<b>NO</b>	<b>NO</b>
7c. Limited bicycle facilities on I-75BL north of Downtown St. Ignace.	<ul style="list-style-type: none"> <li>Utilize a road diet to convert I-75BL from a four lane roadway to a three lane roadway. Provide bicycle lanes as part of the road diet.</li> </ul>	<b>NO</b>	<b>YES</b>
7d. Limited non-motorized connection between Housing Area and Mid-Jim.	<ul style="list-style-type: none"> <li>Provide sidewalk connection.</li> </ul>	<b>NO</b>	<b>NO</b>
7e. Limited pedestrian connection between the casino and housing area.	<ul style="list-style-type: none"> <li>Provide an opening/gate in the fence for residents to cross between the housing area and the casino area.</li> </ul>	<b>NO</b>	<b>NO</b>
7f. Limited pedestrian facilities connecting Health Center to sidewalk on I-75BL	<ul style="list-style-type: none"> <li>Provide a sidewalk connecting the front door of the Health Center to the sidewalk on I-75BL.</li> </ul>	<b>NO</b>	<b>NO</b>

## 4.0 IMPLEMENTATION PLAN

An implementation plan has been prepared for the overall plan. Each row lists the issue, proposed improvement, points from the prioritization tool, cost level and suggested agencies to be included within the intergovernmental collaboration efforts.

The prioritization matrix utilized within this plan is the same as was utilized in the MDOT Superior Region Non-Motorized Plan and Investment Strategy. This was done to ensure consistency between **the Tribe's plan and the MDOT plan**. The ranking criteria utilized is outlined in TABLE 4.1.

**TABLE 4.1 PROJECT PRIORITIZATION MATRIX**

Ranking Criteria	Scale	Points
Population within one mile of the proposed facility	Over 5,000	10
	1,000 to 5,000	5
	0 to 1,000	1
Connects Residential and Commercial Districts	Yes	10
	No	0
Proposed non-motorized facility connects tourist attractions (Heritage Routes, Natural Areas, Parks, Snowmobile and ORV Trail Heads, Historic Downtowns, etc.)	Yes	10
	No	0
Conceptual Plans Completed	Yes	5
	No	0
Proposed non-motorized facility exists in other community plan(s)	Yes	10
	No	0
Connects to existing non-motorized facility	Non-Motorized Trail	15
	Shared Use Path	10
	Sidewalk	5
Governmental participation/support	Multi-jurisdictional	5
	One jurisdiction	3
Maintenance agreement in place	Yes	5
	No	0
Previously applied for funding	Yes	5
	No	0
Affiliated with existing trail group/organization	Yes	10
	No	0
Ownership	Public Easement in Place	10
	Acquisition Required	0
Facility provides a Safe Route to School or is eligible for Safe Routes to School Funds	Yes	10
	No	0

Cost levels were also estimated for each improvement. The five cost levels utilized within this plan are listed below. The cost levels include engineering and construction costs to implement each proposed improvement.

1. Less than \$20,000
2. \$20,000 to \$100,000
3. \$100,000 to \$250,000
4. \$250,000 to \$500,000
5. Greater than \$500,000

The implementation plan is detailed in TABLE 4.2 below.

**TABLE 4.2 IMPLEMENTATION PLAN**

<b>Issue</b>	<b>Proposed Improvement</b>	<b>Total Points</b>	<b>Cost Level</b>	<b>Intergovernmental Collaboration</b>
1a. Lack of Sidewalks in the Hessel Housing Development	<ul style="list-style-type: none"> <li>• Add sidewalks to N. Opaming Drive</li> <li>• Add a sidewalk connection between N. Opaming Drive, health center and casino.</li> </ul>	39	3	<ul style="list-style-type: none"> <li>• Housing</li> <li>• BIA</li> </ul>
1b. Lack of non-motorized connection with the Village of Hessel	<ul style="list-style-type: none"> <li>• Provide one of the following alternatives for Three Mile Road between the tribal community and the Village of Hessel: <ul style="list-style-type: none"> <li>○ An off road non-motorized trail – preferred</li> <li>○ Paved Shoulders</li> </ul> </li> </ul>	14	5	<ul style="list-style-type: none"> <li>• Mackinac County Road Commission</li> </ul>
1c. No link between the campground and the casino	<ul style="list-style-type: none"> <li>• Add a marked crossing on Three Mile Road across from the casino. This location has the best visibility. Placing the crossing closer to the campground has limited pedestrian visibility for northbound drivers due to the vertical curve on Three Mile Road.</li> <li>• Add a sidewalk link to the west side of Three Mile Road between the campground and the crossing.</li> </ul>	34	2	<ul style="list-style-type: none"> <li>• Casino</li> <li>• Mackinac County Road Commission</li> </ul>
2a. Lack of Sidewalks and High Speeds in Kinross Housing Development	<ul style="list-style-type: none"> <li>• Add sidewalks proposed within the Kinross Non-Motorized Plan.</li> </ul>	55	5	<ul style="list-style-type: none"> <li>• Housing</li> <li>• Kinross Township</li> <li>• Chippewa County Road Commission</li> </ul>

Issue	Proposed Improvement	Total Points	Cost Level	Intergovernmental Collaboration
2b. Narrow sidewalks in the housing area	<ul style="list-style-type: none"> <li>• New sidewalks - provide sidewalks which are at least five feet wide</li> <li>• Existing sidewalks – When sidewalks are upgraded, provide wider five foot sidewalks.</li> </ul>	43	5	<ul style="list-style-type: none"> <li>• Housing</li> <li>• Kinross Township</li> <li>• Chippewa County Road Commission</li> </ul>
2c. Crossing Country Club Lane to access Dukes Lake	<ul style="list-style-type: none"> <li>• Provide a marked crossing across Country Club Drive at Blueberry Road.</li> </ul>	53	2	<ul style="list-style-type: none"> <li>• Kinross Township</li> <li>• Chippewa County Road Commission</li> </ul>
2d. Limited non-motorized connections with the Community Center and Commercial Areas	<ul style="list-style-type: none"> <li>• Add non-motorized connections proposed within the Kinross Non-Motorized Plan.</li> </ul>	60	5	<ul style="list-style-type: none"> <li>• Kinross Township</li> <li>• Chippewa County Road Commission</li> </ul>
2e. High Speeds in the Manistique Housing Development	<ul style="list-style-type: none"> <li>• Conduct a traffic calming study within the neighborhoods to determine its feasibility.</li> </ul>	43	1	<ul style="list-style-type: none"> <li>• Housing</li> <li>• Kinross Township</li> <li>• Chippewa County Road Commission</li> </ul>
3a. Limited non-motorized link between the housing area and the casino/health center	<ul style="list-style-type: none"> <li>• Provide one of the following alternatives for River Road between the tribal community and US-2: <ul style="list-style-type: none"> <li>○ An off road non-motorized trail – preferred</li> <li>○ Paved Shoulders</li> </ul> </li> </ul> <p>This would connect with the existing paved shoulders on US-2 between River Road and the casino/health center.</p> <ul style="list-style-type: none"> <li>• Evaluate opportunities to improve local transit service between the housing area and casino/health center site as part of the upcoming transit study.</li> </ul>	14	5	<ul style="list-style-type: none"> <li>• Schoolcraft County Road Commission</li> </ul>
3b. No sidewalks and trails around the Manistique	<ul style="list-style-type: none"> <li>• Provide a sidewalk linking the health center and the casino.</li> <li>• Provide a trail loop on the</li> </ul>	29	3	<ul style="list-style-type: none"> <li>• Casino</li> <li>• Health</li> <li>• BIA</li> </ul>

<b>Issue</b>	<b>Proposed Improvement</b>	<b>Total Points</b>	<b>Cost Level</b>	<b>Intergovernmental Collaboration</b>
casino/health center	casino/health center site.			
3c. Lack of Sidewalks and High Speeds in the Manistique Housing Development	<ul style="list-style-type: none"> <li>Provide sidewalks within the housing area.</li> <li>Conduct a traffic calming study within the neighborhoods to determine its feasibility.</li> </ul>	44	5	<ul style="list-style-type: none"> <li>Housing</li> <li>BIA</li> </ul>
4a. Lack of Sidewalks in the Munising Housing Development	<ul style="list-style-type: none"> <li>Provide sidewalks within the housing area.</li> </ul>	59	5	<ul style="list-style-type: none"> <li>Housing</li> <li>BIA</li> </ul>
4b. No connection between the Christmas Casino and Regional Trails	<ul style="list-style-type: none"> <li>Provide a connection between the casino and regional trails such as the North Country Trail.</li> </ul>	34	5	<ul style="list-style-type: none"> <li>Casino</li> <li>MDOT</li> <li>Alger County Road Commission</li> <li>Au Train Township</li> </ul>
5a. Lack of Sidewalks in Newberry Housing Developments	<ul style="list-style-type: none"> <li>Provide sidewalks within the housing area.</li> </ul>	49	5	<ul style="list-style-type: none"> <li>Housing</li> <li>BIA</li> </ul>
5b. Children walking in the Newberry Health Center parking lot.	<ul style="list-style-type: none"> <li>Provide a fence between the playground and the parking area.</li> <li>Provide a sidewalk connecting Zeez-Ba-Tik Drive and the playground behind the Health Center.</li> </ul>	34	1	<ul style="list-style-type: none"> <li>Housing</li> <li>Health</li> </ul>
6a. Lack of Sidewalks and High Speeds in the Sault Ste. Marie Housing Developments	<ul style="list-style-type: none"> <li>Provide sidewalks within the housing areas.</li> <li>Provide a sidewalk along Ice Circle Drive.</li> </ul>	73	5	<ul style="list-style-type: none"> <li>Housing</li> <li>BIA</li> <li>City of Sault Ste. Marie</li> </ul>
	<ul style="list-style-type: none"> <li>Conduct a study to determine the feasibility of providing traffic calming in the housing areas along Shunk Road and Ice Circle Drive</li> </ul>	63	1	<ul style="list-style-type: none"> <li>Housing</li> <li>City of Sault Ste. Marie</li> </ul>
	<ul style="list-style-type: none"> <li>Implement the proposed Odenaang Development Plan's non-motorized connections.</li> </ul>	58	5	<ul style="list-style-type: none"> <li>Housing</li> <li>BIA</li> </ul>

Issue	Proposed Improvement	Total Points	Cost Level	Intergovernmental Collaboration
6b. Non-motorized access and safety on Shunk Road near the Sault Ste. Marie Casino.	<ul style="list-style-type: none"> <li>Install a continuous sidewalk along the east side of Shunk Road in front of the casino</li> </ul>	75	3	<ul style="list-style-type: none"> <li>Casino</li> <li>City of Sault Ste. Marie</li> </ul>
	<ul style="list-style-type: none"> <li>Provide improved separation between the sidewalk and roadway near the Mid-Jim.</li> </ul>	73	4	<ul style="list-style-type: none"> <li>Mid-Jim</li> <li>City of Sault Ste. Marie</li> </ul>
	<ul style="list-style-type: none"> <li>Install gateway treatments on Shunk Road north and south of the casino to manage speeds.</li> </ul>	63	2	<ul style="list-style-type: none"> <li>City of Sault Ste. Marie</li> </ul>
	<ul style="list-style-type: none"> <li>Provide bike lanes on Shunk Road</li> </ul>	60	5	<ul style="list-style-type: none"> <li>City of Sault Ste. Marie</li> <li>Chippewa County Road Commission</li> </ul>
	<ul style="list-style-type: none"> <li>Provide a crossing on Shunk Road near the casino. Provide a pedestrian refuge at the crossing.</li> </ul>	63	3	<ul style="list-style-type: none"> <li>Casino</li> <li>City of Sault Ste. Marie</li> </ul>
6c. Limited non-motorized connections to the Sault Ste. Marie Health Center	<ul style="list-style-type: none"> <li>Install the proposed trail along Ashmun which is outlined in the City's non-motorized plan</li> </ul>	33	5	<ul style="list-style-type: none"> <li>City of Sault Ste. Marie</li> <li>MDOT</li> </ul>
6g. Pedestrian safety near JKL Bahweting School	<ul style="list-style-type: none"> <li>Provide sidewalk on north side of Marquette between school and Shunk Road.</li> </ul>	70	3	<ul style="list-style-type: none"> <li>City of Sault Ste. Marie</li> </ul>
6e. Pedestrian crossings in the casino parking lot	<ul style="list-style-type: none"> <li>Remove stop signs and provide raised crossings.</li> </ul>	58	2	<ul style="list-style-type: none"> <li>BIA</li> </ul>
6f. Pedestrian safety in alley behind administration building	<ul style="list-style-type: none"> <li>No suggestions</li> </ul>	23	N/A	<ul style="list-style-type: none"> <li>City of Sault Ste. Marie</li> </ul>
7a. Lack of sidewalks and high speeds in	<ul style="list-style-type: none"> <li>Provide sidewalks within the housing areas.</li> </ul>	44	5	<ul style="list-style-type: none"> <li>Housing</li> <li>BIA</li> </ul>



Issue	Proposed Improvement	Total Points	Cost Level	Intergovernmental Collaboration
the St. Ignace housing areas	<ul style="list-style-type: none"> <li>Provide a sidewalk connections to the housing area along Spring Street and Dickenson Street.</li> </ul>	54	2	<ul style="list-style-type: none"> <li>Housing</li> <li>City of St. Ignace</li> </ul>
	<ul style="list-style-type: none"> <li>Conduct a study to determine the feasibility of providing traffic calming in the housing areas near the casino.</li> </ul>	49	1	<ul style="list-style-type: none"> <li>Housing</li> </ul>
7b. Pedestrian crossing near St. Ignace casino	<ul style="list-style-type: none"> <li>Improve signing and markings for pedestrian crossings.</li> </ul>	49	1	<ul style="list-style-type: none"> <li>Casino</li> </ul>
7c. Limited bicycle facilities on I-75BL north of Downtown St. Ignace.	<ul style="list-style-type: none"> <li>Utilize a road diet to convert I-75BL from a four lane roadway to a three lane roadway. Provide bicycle lanes as part of the road diet.</li> </ul>	74	3	<ul style="list-style-type: none"> <li>MDOT</li> <li>City of St. Ignace</li> </ul>
7d. Limited non-motorized connection between the St. Ignace Housing Area and Mid-Jim.	<ul style="list-style-type: none"> <li>Provide sidewalk connection.</li> </ul>	44	2	<ul style="list-style-type: none"> <li>Housing</li> <li>City of St. Ignace</li> </ul>
7e. Limited pedestrian connection between the casino and housing area in St. Ignace.	<ul style="list-style-type: none"> <li>Provide an opening/gate in the fence for residents to cross between the housing area and the casino area.</li> </ul>	47	1	<ul style="list-style-type: none"> <li>Housing</li> <li>Casino</li> </ul>
7f. Limited pedestrian facilities connecting Health Center to sidewalk on I-75BL in St. Ignace.	<ul style="list-style-type: none"> <li>Provide a sidewalk connecting the front door of the Health Center to the sidewalk on I-75BL.</li> </ul>	41	2	<ul style="list-style-type: none"> <li>Health</li> </ul>

## 5.0 DESIGN GUIDELINES

TABLE 5.1 outlines the design guidelines that should be referenced when designing non-motorized facilities.

**TABLE 5.1 DESIGN GUIDELINES**

<b>Non-Motorized Design Feature</b>	<b>Design Guideline Source</b>
All Pedestrian and Bicycle Signing	<ul style="list-style-type: none"> <li>• 2011 Michigan Manual on Uniform Traffic Control Devices (MMUTCD)</li> </ul>
Pedestrian Crossings – Markings	<ul style="list-style-type: none"> <li>• 2011 MMUTCD</li> </ul>
Pedestrian Crossings - Geometrics	<ul style="list-style-type: none"> <li>• MDOT Road Design Manual</li> <li>• 2004 AASHTO Guide for the Planning , Design and Operations of Pedestrian Facilities</li> </ul>
Sidewalks and Multi-Use Paths	<ul style="list-style-type: none"> <li>• MDOT Road Design Manual</li> <li>• 2004 AASHTO Guide for the Planning , Design and Operations of Pedestrian Facilities</li> </ul>
Bicycle Lanes - Geometrics	<ul style="list-style-type: none"> <li>• MDOT Road Design Manual</li> <li>• 2012 AASHTO Guide for the Development of Bicycle Facilities</li> </ul>
Bicycle Lanes – Markings	<ul style="list-style-type: none"> <li>• 2011 MMUTCD</li> </ul>

## 6.0 NEXT STEPS

To implement the plan, it is suggested that a task force be developed. This task force should be given the responsibility to coordinate its implementation. Below are the groups which should be represented on the task force.

- Transportation
- Casino
- Housing
- Health

The task force should coordinate with the following agencies as part of implementation of the plan.

- MDOT
- County Road Commissions
- BIA
- Cities/Townships/Villages

## **APPENDIX A: Survey Results**

