

EXECUTIVE SUMMARY

From 2007 to 2011 there were 1,284 crashes 17 fatalities and 476 injuries in Tama County Iowa, which includes the Meskwaki Settlement. To help combat these issues, the Meskwaki Tribe initiated the development of a Tribal Safety Management Plan in 2017.

The Meskwaki Tribe seeks to provide safe travel options for community members and visitors, to include vehicular, pedestrian, and other means of transportation. The Meskwaki Safety Plan was developed to identify unsafe conditions associated with the community's transportation infrastructure, and establish a plan for protecting the life and safety of community members. This plan was funded by a 2017 Tribal Transportation Program Safety Planning Grant from the Federal Highway Administration (FHWA). Once complete, this plan will serve as an important resource for reducing crashes on tribal lands. The plan will identify emphasis areas and implementation strategies to improve transportation safety for the Meskwaki community. The focus of this Safety Plan will be transportation safety issues and potential improvements on the Meskwaki Settlement.

The Safety Plan is a "living document," it is important that the Tribe reevaluate and update the document on a regular basis.

BACKGROUND

The Meskwaki Settlement encompasses 8,000 acres in central Iowa and is home to the Meskwaki Nation. The Settlement was created on July 13, 1857, when the Meskwaki formally purchased their first 80 acres in Tama County, which gave formal federal identity to the Meskwaki people.

The Meskwaki Settlement is located in the northeast corner of central Iowa. The Settlement is located approximately 50 miles east of the City of Ames, 5 miles east of the City of Le Grand, and 5 miles west of the City of Toledo. U. S. Highway 30 runs west to east through the northern section of the Meskwaki Settlement, and highway E49 bisects the southern sections. The Iowa River travels west to east through the southern parts of the Settlement as does the Union Pacific Railroad tracks.

At current, the Meskwaki Tribe has several commercial facilities located along Highway 30. The commercial enterprises located along Highway 30 are: the Meskwaki Bingo Casino Hotel, the Travel Plaza, and the Red Earth Gardens (located behind the casino).

While much of the traffic volume along Highway 30 is commercial and passer-by traffic the rest of the traffic on the Settlement is from Meskwaki community members or Tribal Operation employees. There are currently 50.95-miles of roads located on the Meskwaki Settlement.

A Tribal Transportation Safety Plan is a community based, multi-disciplinary approach to identify transportation safety issues and potential implementation strategies with the goal of improving transportation safety on Tribal Lands. The Federal Highway Administration describes them as: *"Tribal Transportation Safety Plans are a tool used to identify and address transportation risk factors that have a potential of leading to serious injury or death. Safety Plans also organize the efforts of a variety of entities to more effectively reduce risk and can cover multiple transportation modes (roads, maritime, trails, air travel, and others). Safety plans may lead to implementation of a project or program, renewed efforts in an existing program, or further study of a roadway section (using an engineering study or Road Safety Audit).*

A Tribal Safety Plan should not be developed with a focus on any one funding source. Instead, a Tribal Safety Plan should demonstrate the safety concerns in a community and the strategies that will be explored to implement the plan. To the greatest extent possible, the concerns demonstrated by a safety plan should be selected based on incident history (data). Data allows funding entities to understand the needs and may even compel the funding of the community's needs. Safety Plans can

provide a forum for utilizing data sets that are not otherwise considered by funding agencies such as public testimony when formal crash data does not exist”.

The benefits of developing transportation safety plans has been well documented and includes the opportunity to leverage resources, work towards a common goal, consider all road users, pedestrians and reduce deaths and injuries in the Meskwaki community.

Vision

Update based on meeting info

Process

Plan Team Members

The plan was developed by:

- Meskwaki Deputy Executive Director
- Meskwaki Director of Public Works
- Meskwaki Grant Writer/Planner
- Meskwaki Police Chief
- Meskwaki Director of Natural Resources
- Meskwaki Health Director

As part of creating the plan, input was received from Meskwaki Settlement School, Meskwaki Economic Development, Meskwaki Bingo-Casino-Hotel, Meskwaki INC., and Meskwaki Facilities.

Public Outreach

Update

Timeline

Update

2018 TRIBAL TRANSPORTATION SAFETY PLANNING MEETING

The 2018 Meskwaki Tribe Tribal Transportation Safety Plan was developed using available data and the personal knowledge and expertise of the participants that attended the planning meeting that was held on the Meskwaki Settlement, on November 27, 2018. The group included state, federal and Tribal safety representatives from engineering, enforcement, education, emergency services, health service and the school system. The meeting agenda and a list of participants are included in [Appendix A](#).

Existing Efforts

Update

- Fire EMS agreements
- EMS started
- MPD existing
- Tribal Court existing
- Gentlemen’s agreement with Tama County Sheriff Department
-

The Four E’s

Four main types of safety professionals drive traffic safety initiatives. These are **education, enforcement, engineering, and emergency responders**. Each discipline has a unique perspective on how to improve traffic safety while also remaining connected to the other disciplines.

Education

Education plays a key role in helping the public determine what they should and should not do when driving. Effective education efforts lead to a change in driving habits and ultimately, a decline in fatalities and serious injuries on our roadways.

Emergency medical services

Swift response from emergency personnel can save lives of those involved in a traffic crash. While emergency medical personnel assist anyone injured in a crash, other emergency responders can also clear roadways and therefore reduce the risk of secondary crashes.

Enforcement

Enforcement is needed to remind people of the laws associated with the use of our transportation system. Even with driver education and carefully designed roadways, the role of enforcement remains vital in ensuring drivers adhere to the rules of the road.

Engineering

The focus on safety within engineering begins with designing and building our roadways, drainage, bridges, trails, lighting and other essential elements of multi-modal transportation. Transportation engineers and land planners use design principles that are reliable and reduce the risk of crashes. National standards are used for signs and traffic markings to provide consistency for the traveling public. In addition to using proven design methods, engineers and planners continue to research new ways to make transportation safer.

These strategies were prioritized around the 4E's of transportation safety and included:

Education-

Enforcement

- -

Enforcement

- -

Engineering

- -

Emergency Response

- -

DATA

Meskwaki Settlement Demographics

As we start reviewing data relating to accidents, it is important that the population of the Meskwaki Settlement be known. The population will provide a yardstick from which to measure crash data against. Tama County and the Meskwaki Settlement information are from the US Census Bureau and the American Community Survey.

Table 1 Tama County Demographics

	Tama County, Iowa
Population estimates, July 1, 2017, (V2017)	17,058
Population estimates base, April 1, 2010, (V2017)	17,767
Population, percent change - April 1, 2010 (estimates base) to July 1, 2017, (V2017)	-4.00%
Population, Census, April 1, 2010	17,767

Table 2 Meskwaki Settlement Demographics

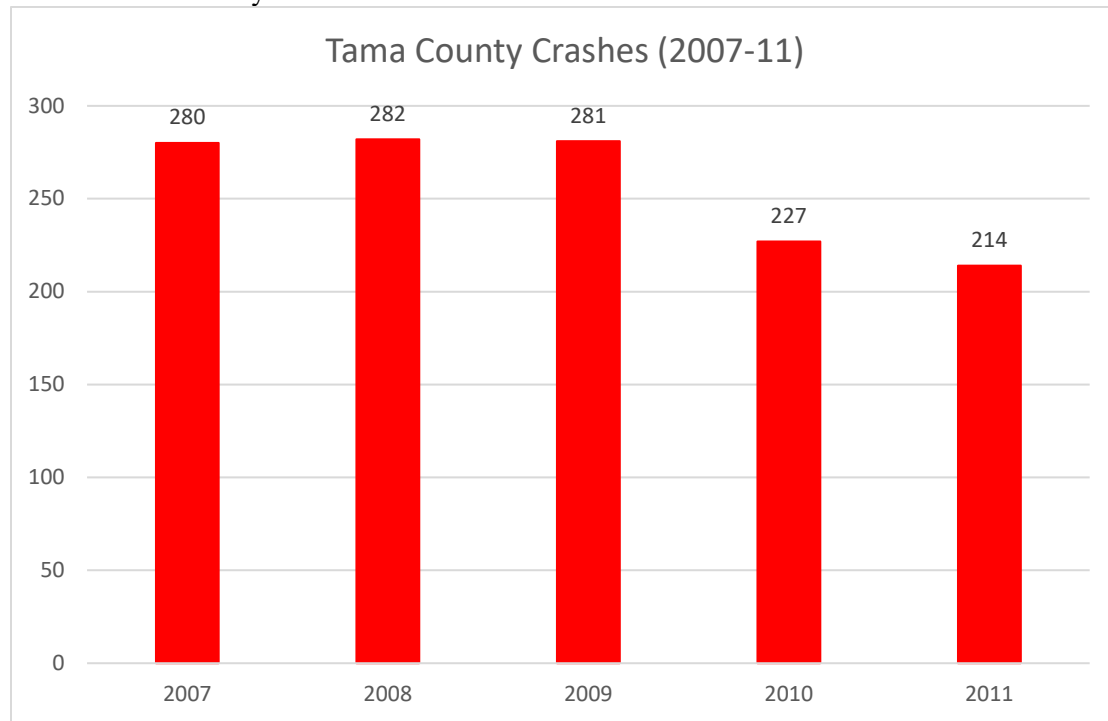
	2008-12	2010-14	2011-15	2012-16
Total Population	1,200	1,200	1,277	1,310
Number of Household	333	335	372	354
Avg. Household Size (persons)	3.5	4	3.86	5.09

Accident/Crash Data

One of the important factors in the development of a Tribal Transportation Safety Plan is for crash data to be analyzed and utilized in the identification of issues and the development of strategies. This data is also important as Tribes apply for federal and state funding, as many funding agencies require this data to support grant applications. The data is from the Iowa Department of Transportation (IDOT).

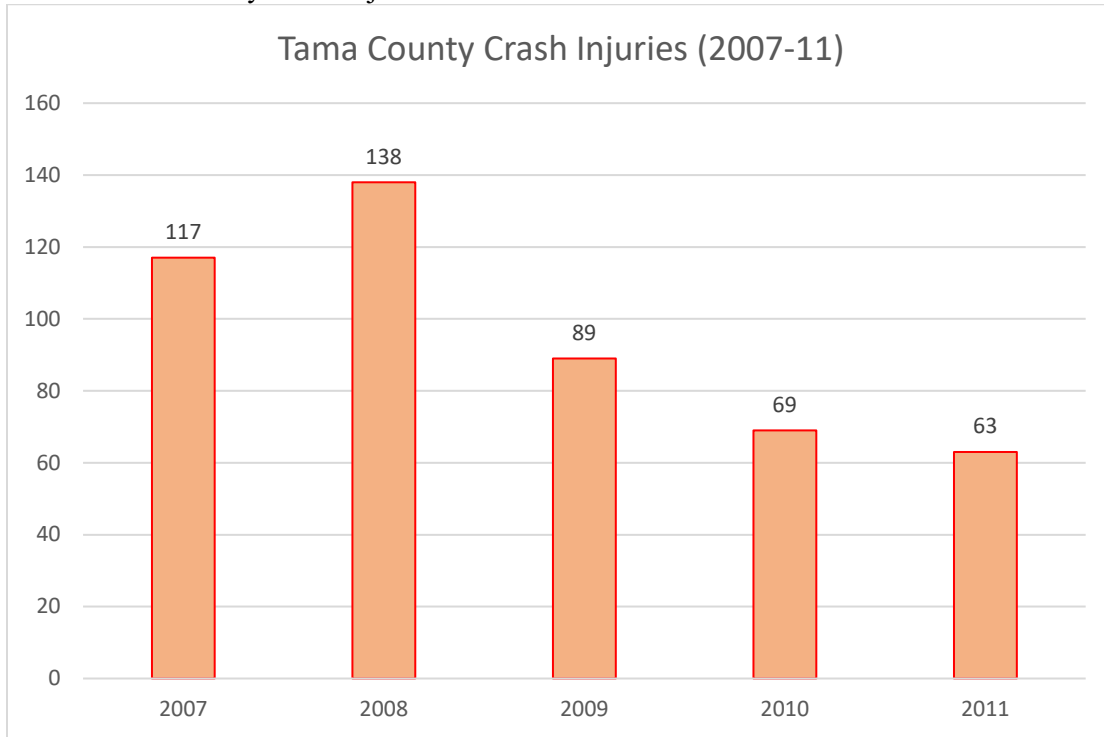
In years, 2007 thru 2011 there were 1,284 crashes in Tama County reported to IDOT. The table below shows the total number of crashes has remained over 200 crashes per year.

Chart 1 Tama County Crashes



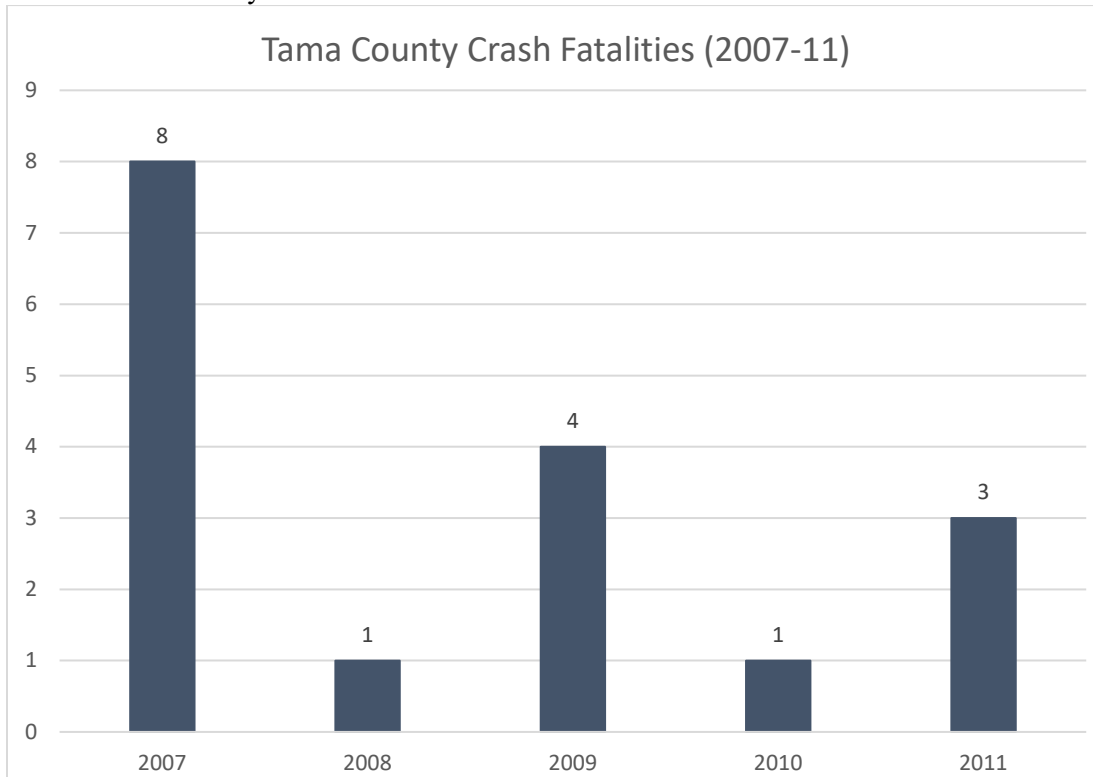
The table below shows that there were 476 injuries from crashes in Tama County from 2007-11. In comparison, the data from Meskwaki Police Department, shows there have been related injuries from crashes occurring on the Meskwaki Settlement.

Chart 2 Tama County Crash Injuries



Fatal crashes are typically lower than injury and total crashes. The table below shows that there were 15 reported crashes resulting in fatality in Tama County from 2007 thru 2011.

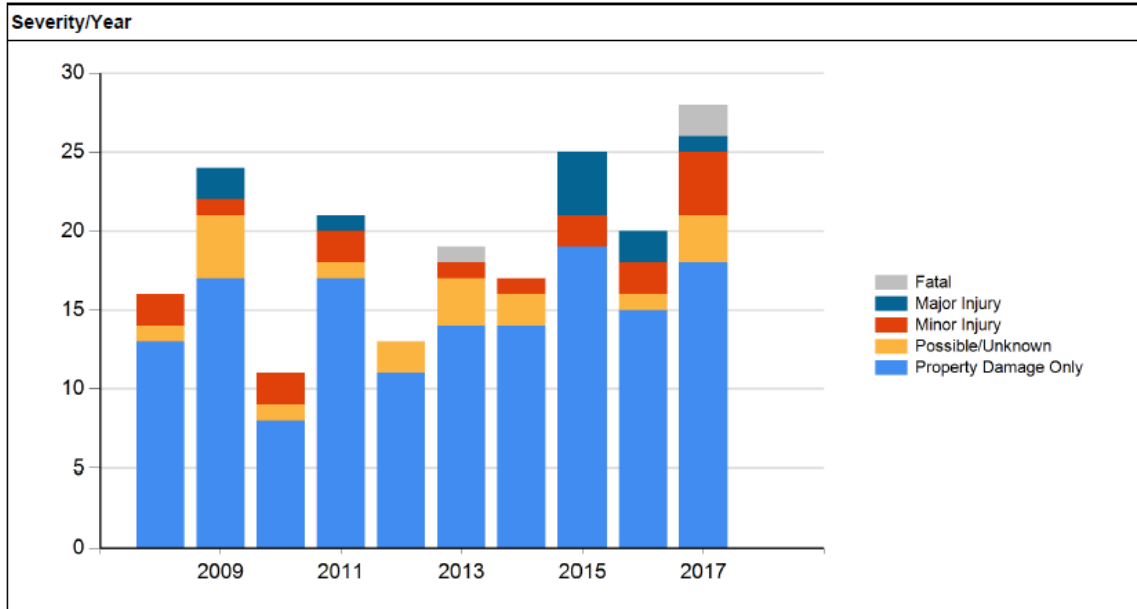
Chart 3 Tama County Crash Fatalities



US Highway 30 Crash Data

The data below is from the Iowa DOT and it is for the length of US Highway 30 that traverses the Meskwaki Settlement.

Chart 4 US Highway 30 Crashes (Through the Meskwaki Settlement)



The chart below provides the causes of crashes along US Highway 30 as it traverses through the Meskwaki Settlement.

Chart 1 US Highway 30 Crash Cause

Major Cause		194	
Animal	92	Ran traffic signal	0
Ran stop sign	6	Failed to yield to emergency vehicle	0
FTYROW: At uncontrolled intersection	0	FTYROW: Making right turn on red signal	0
FTYROW: From stop sign	11	FTYROW: From yield sign	10
FTYROW: Making left turn	3	FTYROW: From driveway	0
FTYROW: From parked position	0	FTYROW: To pedestrian	0
FTYROW: Other	5	Drove around RR grade crossing gates	0
Disregarded RR Signal	0	Crossed centerline (undivided)	7
Crossed median (divided)	2	Traveling wrong way or on wrong side of road	0
Aggressive driving/road rage	0	Driving too fast for conditions	11
Exceeded authorized speed	3	Improper or erratic lane changing	0
Operating vehicle in an reckless, erratic, ca...	1	Followed too close	11
Passing: On wrong side	0	Passing: Where prohibited by signs/markings	0
Passing: With insufficient distance/inadequa...	0	Passing: Through/around barrier	0
Passing: Other passing	0	Made improper turn	1
Driver Distraction: Manual operation of an e...	0	Driver Distraction: Talking on a hand-held d...	0
Driver Distraction: Talking on a hands free ...	0	Driver Distraction: Adjusting devices (radio...	0
Driver Distraction: Other electronic device ...	0	Driver Distraction: Passenger	0
Driver Distraction: Unrestrained animal	0	Driver Distraction: Reaching for object(s)/f...	0
Driver Distraction: Inattentive/lost in thou...	1	Driver Distraction: Other interior distracti...	0
Driver Distraction: Exterior distraction	2	Ran off road - right	4
Ran off road - straight	2	Ran off road - left	1
Lost control	3	Swerving/Evasive Action	7
Over correcting/over steering	0	Failed to keep in proper lane	0
Failure to signal intentions	0	Traveling on prohibited traffic way	0
Vehicle stopped on railroad tracks	0	Other: Vision obstructed	0
Other: Improper operation	0	Other: Disregarded warning sign	0
Other: Disregarded signs/road markings	0	Other: Illegal off-road driving	0
Downhill runaway	0	Separation of units	0
Towing improperly	0	Cargo/equipment loss or shift	0
Equipment failure	2	Oversized load/vehicle	0
Other: Getting off/out of vehicle	0	Failure to dim lights/have lights on	0
Improper backing	0	Improper starting	0
Illegally parked/unattended	0	Driving less than the posted speed limit	0
Operator inexperience	0	Other	4
Unknown	4	Not reported	0
Other: No improper action	1		

Enforcement of the Meskwaki Settlement

For Fiscal Year 2018, the Meskwaki Police Department filed 78-civil traffic citations and 69-criminal traffic citations with the Meskwaki Tribal Court.

Roadway Inventory Results

Roadway vehicle inventory sites were determined by the classification of arterial type. All sites selected were determined to be local collectors. Local collectors were selected as inventory sites as they provide access to Tribal Services and connect to US Highway 30. Only paved roadways were selected as inventory sites. Gravel roadways would not permit the anchoring of the pneumatic tube counter to the road. All of the inventory sites selected are two lane roadways with a speed limit of 35 mph, with the exception of the Casino entrance which is 4-lanes. A total of four sites were selected.

The Roadway Inventory began on August 4, 2014 and was completed on September 29, 2014. All sites were inventoried for a period of one week using the Diamond Traffic Road Runner pneumatic tube

counter.

Table 3 Daily, Weekly and Yearly Traffic Counts

Site #	Street Name	Geographic Location	# of Miles	Average Daily Traffic	Weekly Traffic Average	Estimated Yearly Traffic
Site 1	Ave F	North of Casino & East of Trading Post*	0.23	3,250	22,750	1,183,000.00
Site 2	305 Street	East of Meskwaki Road Turn	2.15	1,882	13,174	685,048.00
Site 3	Meskwaki Road	South of 305 Street Intersection	3.51	1,159	8,113	421,876.00
Site 4	Red Earth Drive	West of Edgewood Turn	1.71	762	5,334	277,368.00
Site 5	Northwood Drive	East of F Ave	1	277	1,939	100,828.00
Total			9	7,330	51,310	2,668,120

The daily and weekly traffic counts for each site were conducted using the Diamond Traffic Road Runner pneumatic tube counter with the exception of the Casino entrance from Highway 30. Due to the narrow shoulders on the Casino Entrance, there was no opportunity to safely secure the pneumatic tube to the road. The traffic counts for the Casino Main Entrance are from the 2013 Iowa Department of Transportation Daily Traffic Count for Tama County.

For the yearly totals the weekly traffic volume was multiplied by 52 (weeks in a year). The weekly and yearly totals for local two-lane collectors on the Settlement were consistent with those from other government agencies such as the 2013 Iowa Department of Transportation Daily Traffic Count for Tama County.

Table 4 Yearly Vehicle Miles Traveled (VMT)

Site #	Street Name	# of Miles	Average Daily Traffic	Weekly Traffic Average	Estimated Yearly Traffic	Yearly Estimated VMT
Site 1	Ave F	0.23	3,250	22,750	1,183,000.00	272,090.00
Site 2	305 Street	2.15	1,882	13,174	685,048.00	1,472,853.20
Site 3	Meskwaki Road	3.51	1,159	8,113	421,876.00	1,480,784.76
Site 4	Red Earth Drive	1.71	762	5,334	277,368.00	474,299.28
Site 5	Northwood Drive	1	277	1,939	100,828.00	100,828.00
Total		9	7,330	51,310	2,668,120	3,800,855

Below is an exert from the 2013 IDOT daily traffic count for Tama County. The exert focuses on the Meskwaki Settlement.

Table 4 2013 Iowa Department of Transportation Traffic Count US Highway 30

2013	Section Length (Miles)	Annual Average Daily Traffic	Vehicle Classification Distribution of Annual Average Daily Traffic											Average Daily Vehicle Miles	
			Motorcycles	Cars, Vans and Pickups	Total Trucks and Buses	Single Unit Trucks			Combination Trucks				All Vehicles	Trucks and Buses	
						Buses	2 Axle	3 Axle	4 or more Axles	4 or less Axles	5 Axle	6 or more Axles			Multiple Trailer
EAST JUNCTION CO RD T47	3.82	9100	47	7994	1058	36	159	38	4	82	684	24	31	34780	4044
JUNCTION F AVENUE	1.23	8400	43	7299	1058	36	159	38	4	82	684	24	31	10298	1297
JUNCTION OLD US 30	2.91	9200	48	8094	1058	36	159	38	4	82	684	24	31	26726	3073
US 30 OFF RAMP	0.17	1870	11	1782	77	4	16	4	0	5	44	2	2	309	13

Figure 1 2017 IDOT Traffic Count

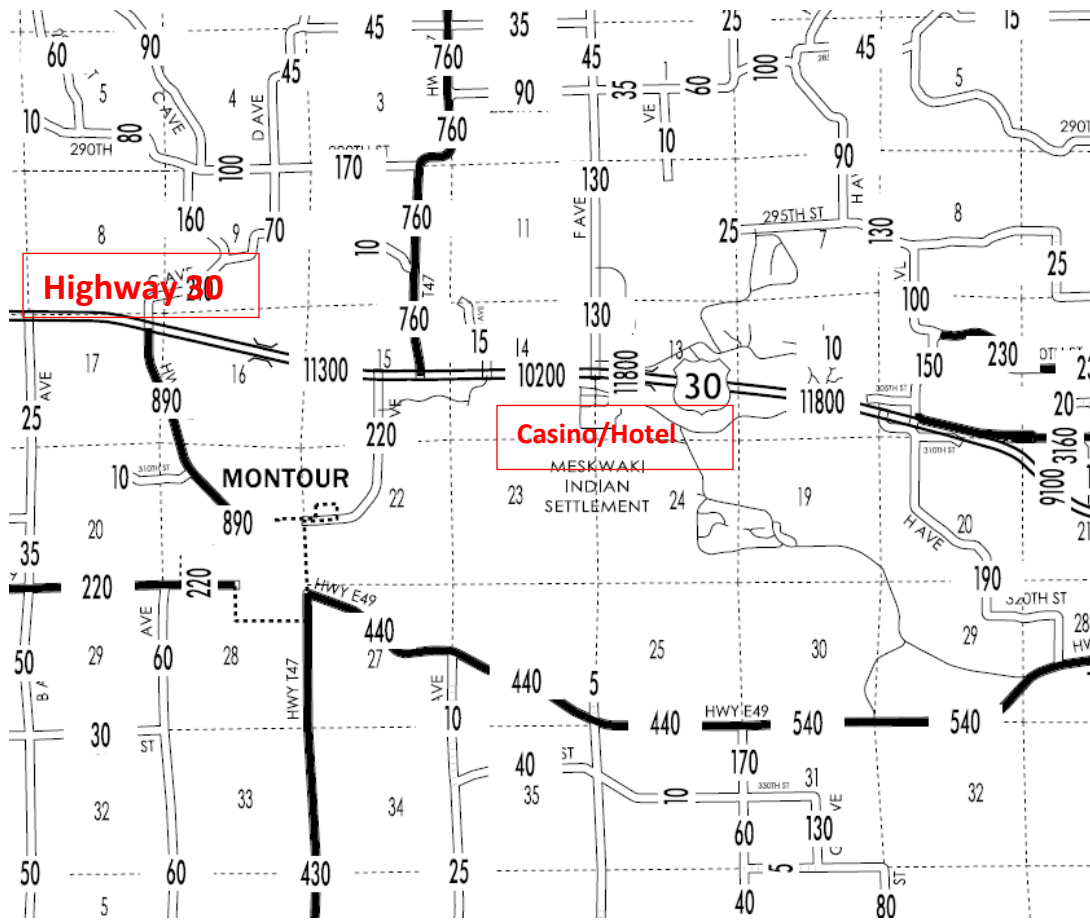


Figure 2 2013 IDOT Traffic Count

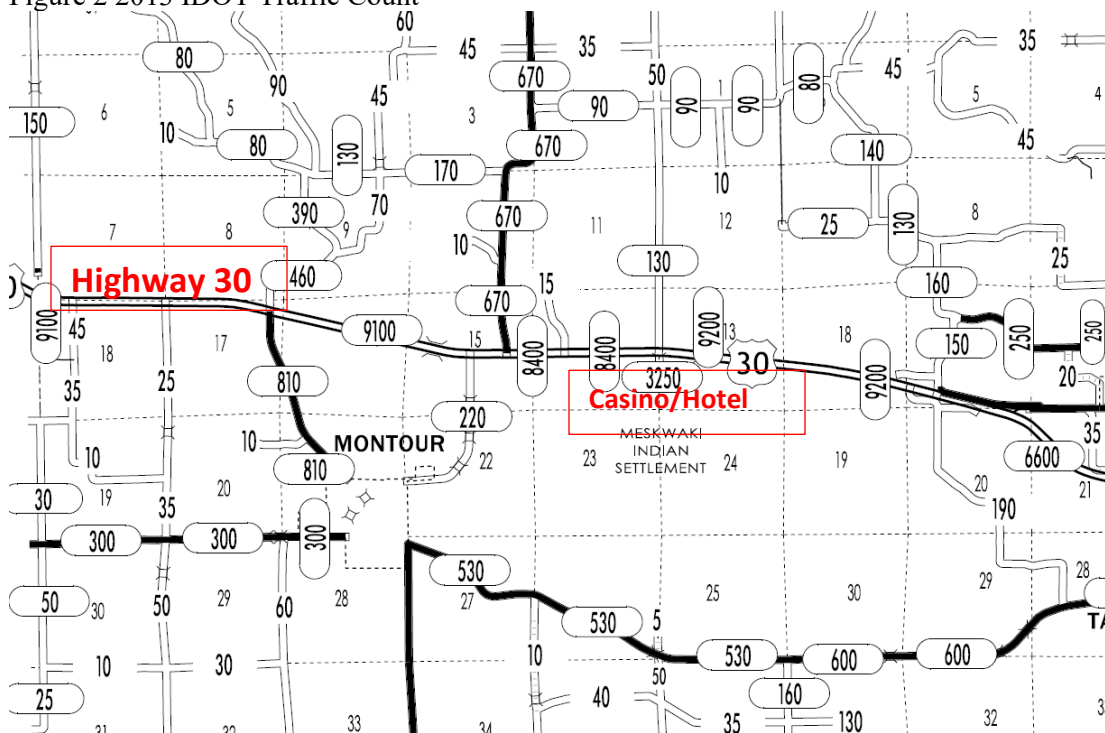


Figure 3 2009 IDOT Traffic Count

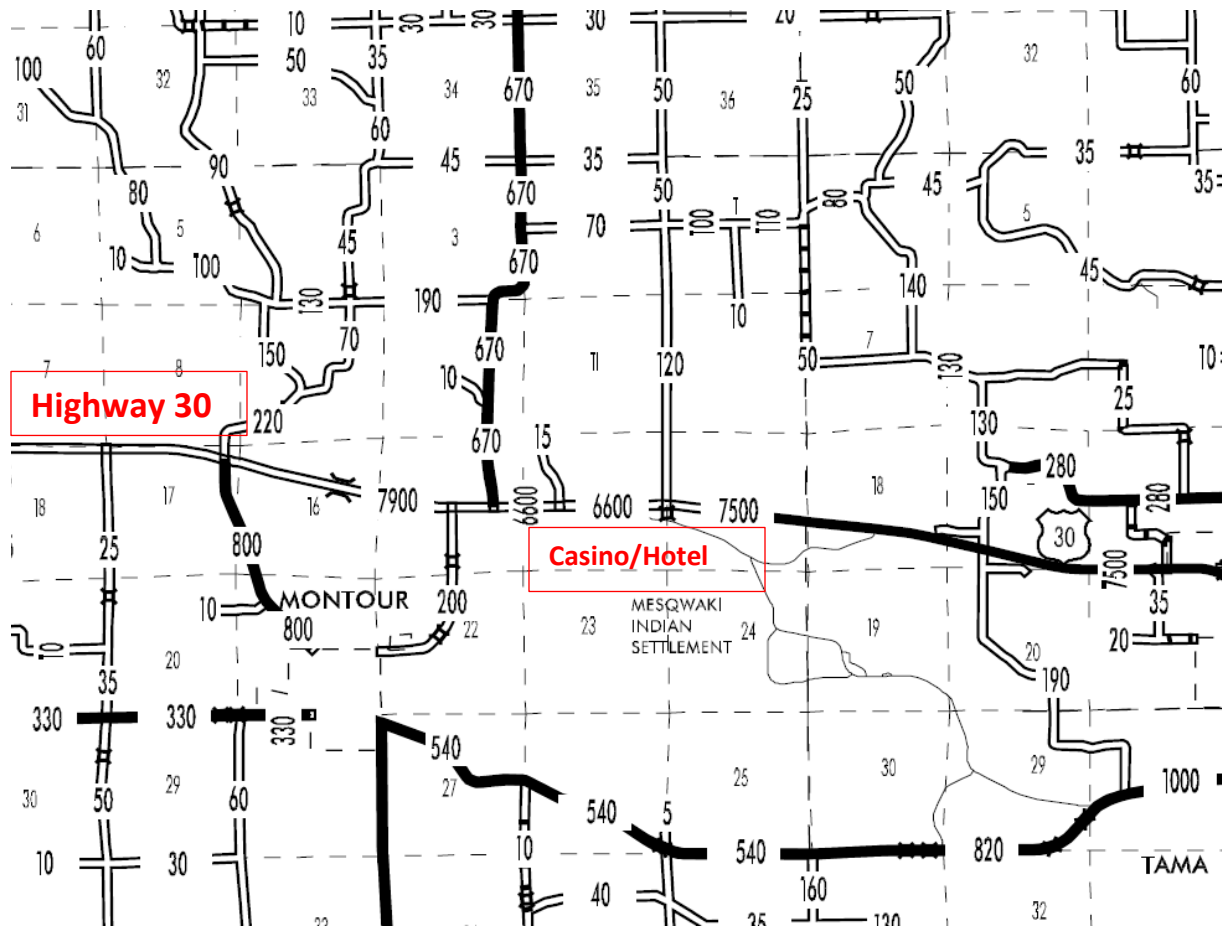


Figure 4 2005 IDOT Traffic Count

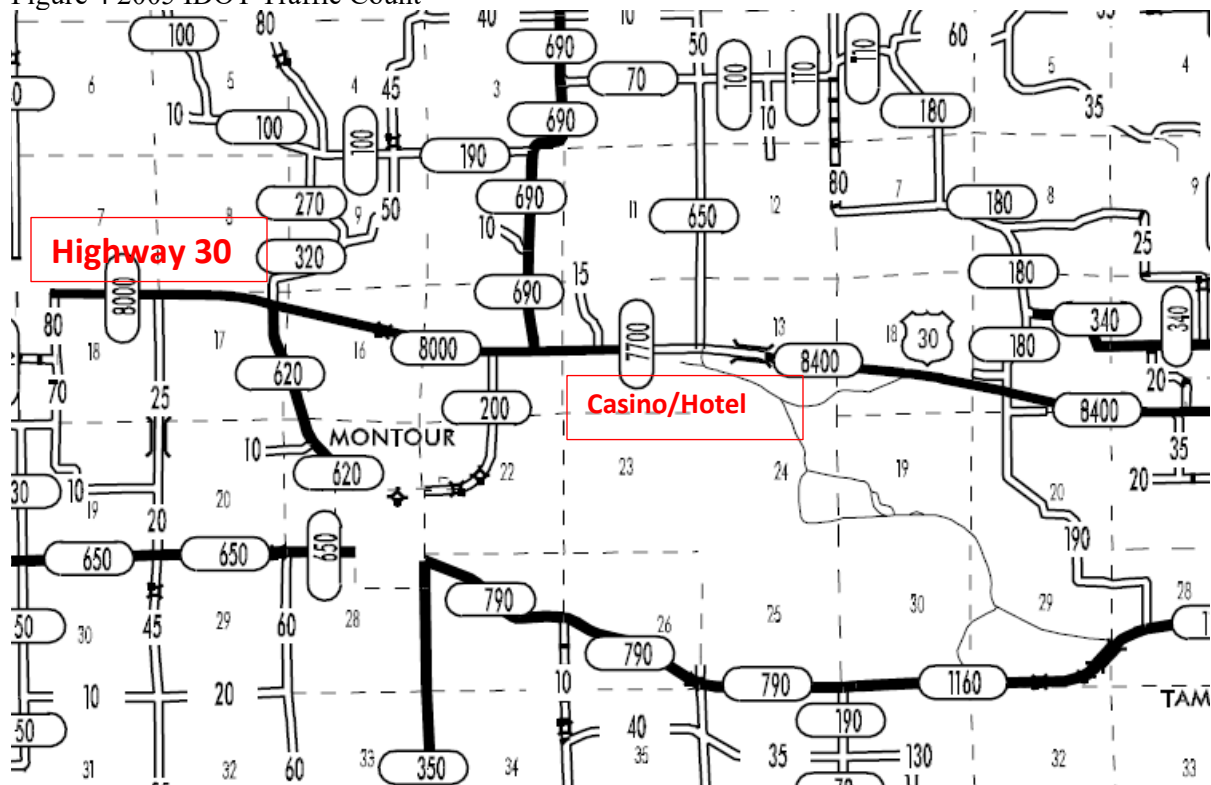
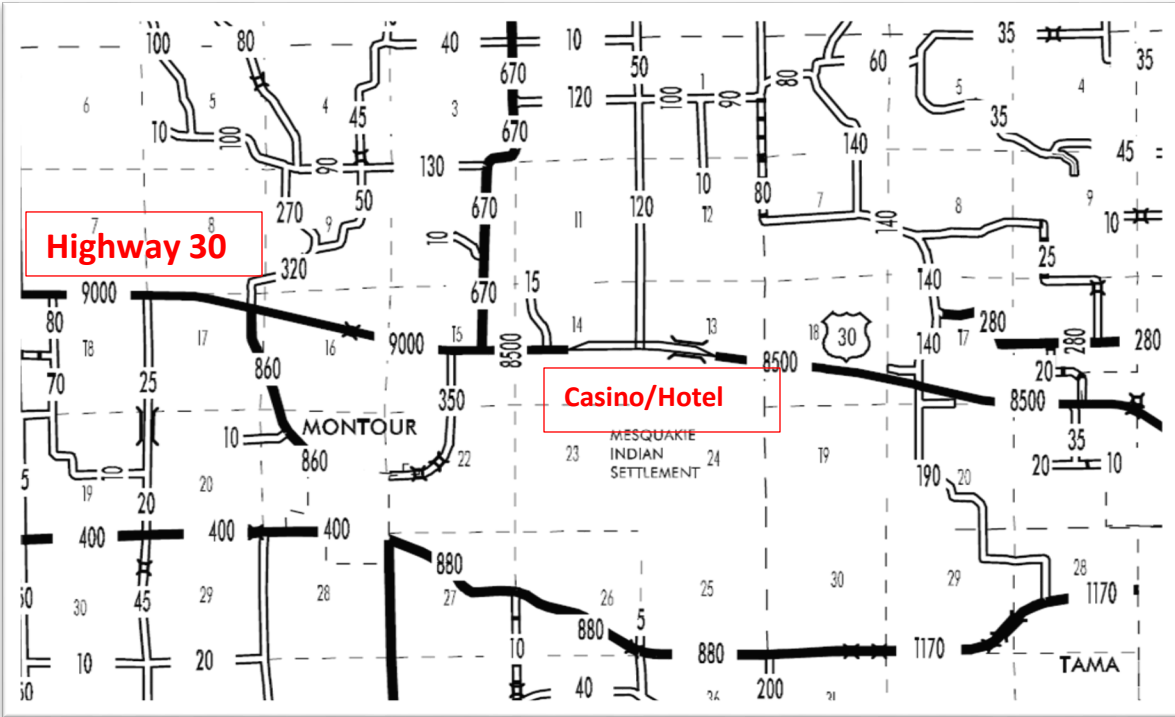


Figure 5 2001 IDOT Traffic Count



Tribal Court Citation

List below are the Traffic Citations processed in Tribal Court for FY18. These citations do not include those issued by the Tama County Sheriff’s Office or the Iowa State Highway Patrol, as they end up in Tama County Court. Highway 30, E-49 and county roads that abut the Meskwaki Settlement are patrolled by Meskwaki Police Department, Tama County Sherriff’s Office and Iowa State Highway Patrol.

Table 5 Citation Processed in Meskwaki Tribal Court

Date	Total
Oct-17	21
Nov-17	21
Dec-17	10
Jan-18	13
Feb-18	14
Mar-18	5
Apr-18	8
May-18	9
Jun-18	9
Jul-18	19
Aug-18	11
Sep-18	7
Total	147

Railroad Inventory Results

The railroad inventory site was determined to be at the Battleground Road crossing. The site is the railroad crossing at a road on the Meskwaki Settlement.

The Railroad Inventory began on August 19, 2014 and was completed on September 24, 2014. All sites were inventoried using the train inventory sheet included in the approved 2014 Emission Inventory Environmental Protection Agency (EPA) Quality Assurance Project Plan (QAPP). The inventory included the number of trains, locomotives for each train and the number of cars.

Table 6 Train Inventory Counts

Total Count				
Date	Trains	Locomotives	Cars	Hours
Total	14	46	1,499	4.58
Estimated Hourly Total	3	10	327	
Estimated Daily Total	73	241	7,855	
Estimated Weekly Total	514	1,687	54,985	
Estimated Yearly Total	26,704	87,741	2,859,228	

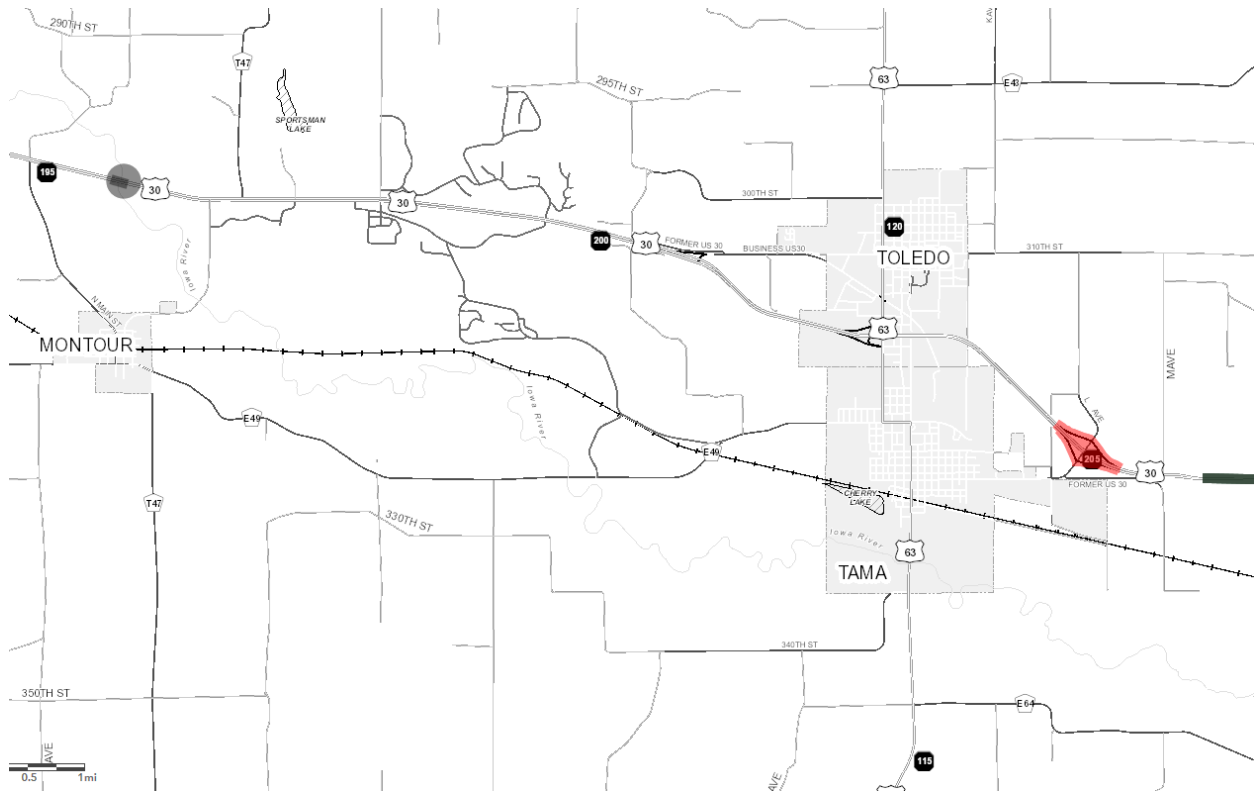
The survey included over 4.5-hours of train inventory. The number of trains, locomotives and cars inventoried were divided by the number of hours spent conducting the inventory. The hourly total was then used to create an estimated 24-hour (daily) total, an estimated weekly total, and an estimated yearly total. These numbers are consistent with data research conducted. In a December 2002, study by the Iowa Department of Transportation it was estimated that 66-trains a day were travel through the City of Ames and 70 through the City of Ogden. Both of the rail lines are operated by Union Pacific which is the owner and operator of the rail line through the Settlement.

Table 7 Yearly Miles Traveled by Train

Miles Traveled	
Miles of Railroad within the Settlement	4.36
Total Yearly Miles Traveled	116,429.14

The total miles traveled by train within the Settlement were calculated by multiplying the number of estimated trains per year by the length of railroad located on the Settlement.

Iowa Department of Transportation 5-year Plan 2019-2023



As evident on the Iowa DOT 5-year plan, no roads that navigate through the Meskwaki Settlement are scheduled to be updated. This includes US Highway 30. The intersection of Highway 30 and the entrance to the Meskwaki Casino is a highly traveled intersection. The intersection is at grade and is un-signalized.

Education

- Child Safety seats
-

Enforcement

- Radios
- Electronic ticketing

Engineering

- Build Frontage Road
- Raise Battleground Road
- Multi-Use Paths
- Street Lights at intersections
-

Emergency Response

- Radios

