

Northwest Michigan Freight Plan

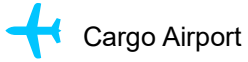


Draft for Review



Freight Assets Map

Legend



Cargo Airport



Cargo Port



Railroad

National Function Class

Intrastate and Other Freeway

Other Principal and Minor Arterial

Major and Minor Collector

0 5 10 20 Miles



St Ignace

Mackinaw City

Pellston

Alanson

Harbor Springs

Petoskey

Charlevoix

Boyne City

Boyne Falls

Ellsworth

East Jordan

Northport

Suttons Bay

Central Lake

Bellaire

Manistota

Elk Rapids

Traverse City

Lake Ann

Kalkaska

Empire

Frankfort

Elberta

Beulah

Benzonia

Honor

Thompsonville

Copemish

Bear Lake

Onokama

Kaleva

Buckley

Mosick

Marion

Lake City

Manistee

Cadillac

McBain

Introduction

The Traverse City Small Urban Area is expected to transition into a Metropolitan Planning Organization (MPO) based on the 2020 Census results. An MPO is a federally mandated and funded transportation policy-making organization. As part of this transition, the Traverse Transportation Coordinating Initiative (TTCI) has taken up work to create a freight plan. The freight plan will help serve as a guide to improve the transportation network which helps the movement of freight and the region's economic growth.

The Michigan Department of Transportation's (MDOT) Freight Primer: An Introduction to Freight Modes in Michigan cites "an efficient and well-maintained transportation system serves as the backbone for all economic activity." MDOT further defines freight as any good, product, or raw material carried by a commercial means of transportation such as air, highway, rail, water, and pipelines. Additionally, logistics is defined as the activities involved in the management of how and where freight moves. Logistics plays a vital role in the movement of freight as demand is increased, traffic congestion, transportation infrastructure, fuel costs, and other factors that increase the cost of moving freight.

Freight in NW Michigan

The following will present a brief overview of freight modes in the Northwest Michigan region, major commodities moved, and the share each mode has in terms of movement of freight in, throughout, and out of the region, as well as other pertinent information. The region saw nearly 7 billion dollars and over 7 million tons of freight moving in, out, and throughout the region in 2018, which was the most recent data available.

Value of Commodities by Mode			Tonnage of Commodities by Mode		
	Value	Percent of Total		Tonnage	Percent of Total
Air	N/A	-	Air	1,563.21	0.02%
Truck	\$ 5,678,278,048.26	82%	Truck	4,842,970.21	68%
Rail	\$ 154,529,049.81	2%	Rail	436,240.00	6%
Port	\$ 1,117,846,892.97	16%	Port	1,822,069.00	26%
TOTAL	\$ 6,950,653,991.04	100%	TOTAL	7,102,842.42	100%
Source: MDOT 2018 Data			Source: MDOT 2018 Data		

Trucking

Northwest Michigan contains over 2800 miles of federal-aid highways, which are defined as "public roads other than a highway classified as a local road or rural minor collector". An inventory of the conditions of these roads, called PASER (Pavement Surface Evaluation Rating) is [available here](#). Trucking was responsible for just over 80% of the value and nearly 70% of the tons of freight moved from and to the Northwest Michigan region. The trucking industry continues to play a pivotal role in the economy, even with the increased utilization of e-commerce.

The following charts show the top ten commodities moved in terms of value and tonnage moved.

Top Trucking Commodities by Tons		Top Trucking Commodities by Value	
Commodity	Tons	Commodity	Value
Farm Products	937,002	Transportation Equipment	\$ 779,900,013
Nonmetallic Ores and Minerals	753,877	Food Products	\$ 732,257,634
Food Products	551,368	Machinery	\$ 638,121,797
Logs, Lumber, and Wood Products	484,155	Secondary Traffic	\$ 490,601,183
Clay, Cement, Glass or Stone Products	433,389	Rubber and Plastics	\$ 450,061,246
Secondary Traffic	393,838	Electrical Equipment	\$ 413,248,974
Petroleum or Coal Products	334,740	Farm Products	\$ 363,391,615
Waste or Scrap Material	228,668	Fabricated Metal Products	\$ 341,813,524
Primary Metal Products	160,829	Primary Metal Products	\$ 341,004,901
Rubber and Plastics	99,426	Logs, Lumber, and Wood Products	\$ 222,010,041
Source: MDOT 2018 Data		Source: MDOT 2018 Data	

Rail

The State of Michigan hosts 3600 miles of rail, of which approximately 70 miles are located within the Northwest Michigan region. The three rail companies that operate the railways in Northwest Michigan are Great Lakes Central Railroad, Huron and Eastern Railway, and Marquette Rail. Great Lakes Central Railroad maps show there are two transload locations in the region, in Cadillac and Yuma. Transloads allow inventory to be staged for businesses that are not located directly on the track to use rail freight.

While there have been discussions of increased passenger train usage in the past, freight movement still benefits from the existing railways. In 2018, rail was responsible for moving 436,000 tons of material worth over 150 million dollars.

The following shows the commodities that were moved by rail, by both value and commodity.

Rail Commodities by Ton		Rail Commodities by Value	
Commodity	Tons	Commodity	Value
Nonmetallic Ores and Minerals	143,200	Nonmetallic Ores and Minerals	\$ 86,635,866
Logs, Lumber, and Wood Products	127,680	Logs, Lumber, and Wood Products	\$ 47,422,879
Paper and Pulp Products	106,760	Paper and Pulp Products	\$ 9,479,709
Chemical Products	35,960	Chemical Products	\$ 6,120,403
Petroleum or Coal Products	13,840	Petroleum or Coal Products	\$ 2,544,435
Clay, Cement, Glass or Stone Products	6,040	Clay, Cement, Glass or Stone Products	\$ 1,428,758
Waste or Scrap Material	2,760	Waste or Scrap Material	\$ 897,000
Total	436,240	Total	\$ 154,529,050
Source: MDOT 2018 Data		Source: MDOT 2018 Data	

Marine

There are 3200 miles of shoreline in the state of Michigan, holding 33 active cargo ports. 3 of those cargo points are within the Northern Michigan region being St James (Beaver Island), Manistee, and Charlevoix. The federal government typically maintains the infrastructure (such

as navigation channels, aids to navigation, and other marine services, while the private sector typically provides marine terminals, vessels, and access channels to public waters.

While there are only 3 cargo points registering data in the Northwest Michigan region, marine freight was responsible for over 1 billion dollars of nearly 2 million tons of commodity movement. Manistee accounted for 45% of the value, while Charlevoix was 34% and St. James at 20%. However, Charlevoix was responsible for 78% of the tons, while Manistee moved 21% and St. James made up the remaining.

Cargo Port Commodities by Ton		Cargo Port Commodities by Value	
Commodity	Tons	Commodity	Value
Petroleum	19,150	Petroleum	\$ 2,467,703
Cement	1,400,000	Cement	\$ 160,369,160
Limestone, sand, gravel and Other	40,862	Limestone, sand, gravel and Other	\$ 440,901
Slag	31,333	Slag	\$ 21,528,607
Coal	258,648	Coal	\$ 8,034,965
Uknkown Products	72,076	Uknkown Products	\$ 925,005,558
Total	1,822,069	Total	\$1,117,846,893
Source: MDOT 2018 Data		Source: MDOT 2018 Data	

Air

While Northwest Michigan has a variety of airports and some offer scheduled air service, only Pellston and Traverse City had recorded 2018 data from air freight. Airports are an important piece of bringing access to the global economy and serve local community economies by providing air cargo services as well as passenger services. Air cargo is typically used for time-sensitive or high-value commodities, which MDOT staff noted that documentation of air cargo commodities are difficult to track.

Air Cargo Tons Moved		
	Tons Deplaned	Tons Enplaned
Pellston	327.89	133.38
Traverse City	783.59	318.35
Total	1,111	452
Source: MDOT 2019 Data		

Intermodal Connectors

Intermodal connectors are roads that provide the “last mile” between major rail, port, airport, and intermodal freight facilities on the National Highway System (NHS). Northwest Michigan has one intermodal connector, which is located at Cherry Capital Airport in Traverse City. It serves as a connector between the airport and M-37/US-31 via Airport Access Road.

Intermodal Connectors			
Facility	Type	Connector Description	Connector
Traverse City, Cherry Capital Airport	Airport	Airport Access Road (entrance to US-31/M-	0.5
Source: MDOT			

National Freight and 2040 Michigan Transportation Plan Goals

The State of Michigan Freight Plan is a supplement to the 2040 Michigan Transportation Plan. Within the plan, the state mentions its strategic goals as well as the National goals. The national freight goals as established by the FAST Act were:

- Improve the contribution of the freight transportation system to economic efficiency, productivity, and competitiveness
- Reduce congestion on the freight transportation system;
- Improve the safety, security, and resilience of the freight transportation system
- Improve the state of good repair of the freight transportation system
- Use advanced technology, performance management, innovation, competition and accountability in operating and maintaining the freight transportation system
- Reduce adverse environmental and community impacts of the freight transportation system
- Improve the flexibility to support multi-state corridor planning and the creation of multi-state organizations to increase the ability of states to address multimodal freight connectivity
- Improve the short- and long-distance movement of goods that travel across rural areas between population centers, between rural areas and population centers, and from the nation's ports, airports, and gateways to the National Multimodal Freight Network

The 2040 Michigan Transportation Plan reaffirmed and supported the following goals:

- System Improvement: Modernize and enhance the transportation system to improve mobility and accessibility
- Efficient and Effective Operations: Improve the efficiency and effectiveness of the transportation system and transportation services, and expand MDOT's coordination and collaboration with partners
- Safety and Security: Continue to improve transportation safety and ensure the security of the transportation system
- Stewardship: Preserve transportation system investments, protect the environment, and utilize public resources in a responsible manner

The 2040 Michigan Transportation Plan also recognized the following goals as specific to the Corridors of Highest Significance (COHS):

- Modal Choice: Provide choices for user segments, connectivity between modes, and connectivity between activity centers for a seamless transition between modes
- Freight Adequacy: Support for Michigan businesses, industry, freight shippers, and haulers to improve economic competitiveness

Survey

To help shape the challenges and opportunities that freight users experience, a survey was developed and multiple communications were sent to over 150 businesses in the region, as well as 12 chambers of commerce and various associations (such as Michigan Trucking Association). Additional notice was sent through the Northwest Michigan Small Business Development Corporation (SBDC) eNews and Northwest Michigan Procurement Technical Assistance Center (PTAC) monthly newsletter. The survey was open from July 13 to August 14 and received 26 responses at that time.

25 of the 26 respondents' primary mode of freight movement were trucking with one response being air. 39% of freight movement needs were primarily in Grand Traverse County followed by both Antrim County and Charlevoix County both at 17%.

Identified Priority Routes		
Route	Value	Percent of Total
US 131	22	40%
US 31	14	25%
M 72	11	20%
M 22	2	4%
M 37	4	7%
M 32	1	2%
I 75	1	2%
TOTAL	55	100%
Source: 2020 NW MI Freight Survey (26 responses)		

US 31 was marked as the most important route for movement of freight, followed by US 131 and M 72. It should also be noted that there are other routes which are vital to freight movement such as M 113 or Garfield Road which connects Kinglsey to Traverse City. Grand Traverse County Road Commission staff also noted that trucks utilize Supply Road, Williamsburg Road, and Elk Lake Road as cut through routes.

The biggest risks to the future of freight movement identified were regulation changes, changes to energy sources and costs, and changes to business dynamics (such as e-commerce). The changes in commodity cost and demand were also listed as a top risk to freight movement.

Further results of the survey are covered in the next section and full results are available in the appendices.

Freight Challenges

The most common challenge that freight users experience is the geographical location of the region with one respondent noting that there are several large lakes that impact more efficient routing. Northwest Michigan does not directly have an interstate highway within its boundaries which could have an impact on freight movement as well as the impact on the decision-making

of freight and logistics companies. However, lack of interstate highway was the 4th most mentioned challenge, while traffic congestion and transportation costs ranked slightly ahead.

An additional survey question asked freight users to help identify bottleneck or chokepoints that exist. The most mentioned location was at the US 31 and M 72 intersection which sees regular backups, particularly in the summer. The Charlevoix Bridge on US 31 was also mentioned as a problem spot, as well as Three Mile Road in Traverse City between South Airport and Hammond Road.

Further challenges that were mentioned included too many crosswalks in downtown Charlevoix slowing traffic and causing delays, single-lane roads with no options to pass, low hanging trees and branches on corners or other obstructions to line of sight at stop signs, and state and federal highways which are routed through downtowns.

Freight Opportunities

New and improved roads were listed as the top opportunity to improve freight movement in the region. This was followed very closely by road and bridge improvements, and truck parking. New roads are not always feasible, whether fiscally, environmentally, or other pressures so PASER ratings are a key component to looking at road improvements in the region.

Rerouting options were also mentioned as an opportunity to improve freight movement which may be important if there is a large event that hampers traffic (such as the National Cherry Festival in Traverse City) or if there were to be a chemical spill that closed down roadways. While only mentioned once, UPS expanding services gives the ability to use air freight more.

With the more common use of roundabouts, survey respondents were asked if there were improvements that could be made to roundabouts that would benefit freight movement. The most common answer was the sizing of the roundabouts and truck and trailers' ability to move through the roundabouts.

One respondent mentioned that their drivers had difficulty maneuvering 48 and 53-foot trailers through the current size of roundabouts without crossing the lines or driving up on curbs, both of which could present safety issues. Grand Traverse County Road Commission staff noted that roundabouts are designed to slow traffic and the bigger the roundabout, the more speed is seen through them. They added that the inside aprons (also called truck aprons) are meant for trucks and trailers to drive up on, although there is a slight bump when doing so they are designed for trucks to drive on.

Freight Improvements

When considering projects, the National Freight and State of Michigan Transportation Plan goals should be thought of. Additionally, the United States Code Title 23 identifies the following as freight projects:

- Construction, reconstruction, rehabilitation, and operational improvements directly relating to improving freight movement
- Intelligent Transportation Systems (ITS) and other technology directly relating to improving freight movement
- Efforts to reduce the environmental impacts of freight movement on the primary freight network
- Railway-highway grade separation
- Geometric improvements to interchanges and ramps
- Truck-only lanes
- Climbing and runaway lanes
- Truck parking facilities eligible for funding under Jason's Law
- Real-time traffic, truck parking, roadway condition, and multi-modal transportation information systems
- Improvements to freight intermodal connectors
- Improvements to truck bottlenecks

The results of the survey see freight users mention some specific projects to look in to within the TTCI boundaries, including:

- Cherry Bend Road
- Turn Arrow at US 31 and M72 for traffic headed north
- Limited Access Road around the Urban Core
- Roundabout on Hammond Road and Townline Road
- Repave Townline Road
- Make Three Mile Road from South Airport Road to Hammond Road four lanes with bike lanes and left-turn lanes.
- Light Timing on Hammond
- Better East-West routes across town

While the roadway system services the majority of freight movement in the region, the other methods of freight movement are still being used. Further examining intermodal connectors to increase air freight possibilities in the region, working with railway operators to seek possible improvements to the railway system, or looking at cargo port improvements particularly as assistance to high water issues that are affecting the region.

A project to consider that was suggested is to work with the Grand Traverse County Emergency Management department to create procedures to move freight (such as medical supplies) should there be an emergency declared. This could particularly be an issue if an emergency happens during events that see population swells adding additional traffic to the roadways.

Staff from Grand Traverse County Road Commission mentioned that most trucks will utilize GPS which will give them the shortest routes. Road Commission staff noted that when considering projects to improve freight, we should consider where the trucks are trying to get to and how

we can improve the transportation network for freight movement with that information in mind.

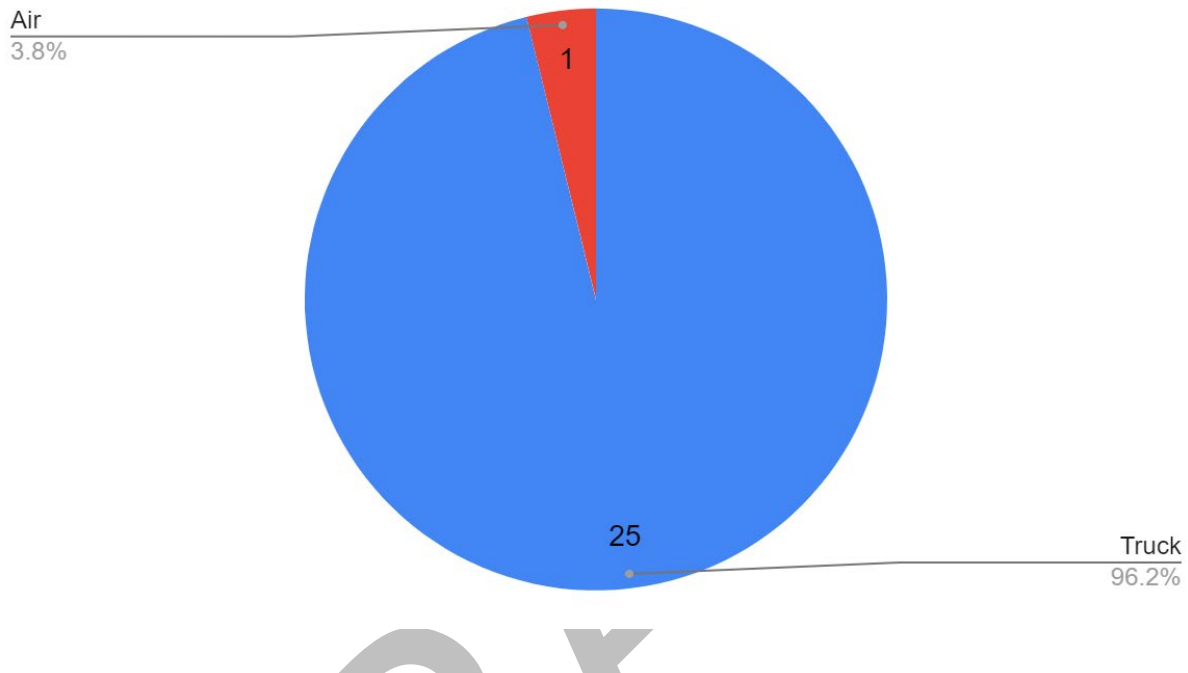
Further, performing a freight and economic analysis study to further assist with developing the bond between freight and economic development could be examined. Southeast Michigan Council of Governments (SEMCOG) Southeast Michigan Freight and Economic Analysis Study from July 2011 found links between freight and economic development by describing regional freight flow patterns, the perspective of businesses that use freight system, and provided guidance for regional transportation planning, among other findings.

As the transition to an MPO takes place, the MPO should continue to utilize input from freight users when looking at improvements relating to freight. This has been done by some MPO's through the creation of a freight committee or subcommittee. This allows for members to suggest freight-related projects and consider projects that improve the current capacity for freight movement. It also brings the opportunity for networking between public officials and freight users to better the current freight system.

Northwest Michigan Freight Survey Responses

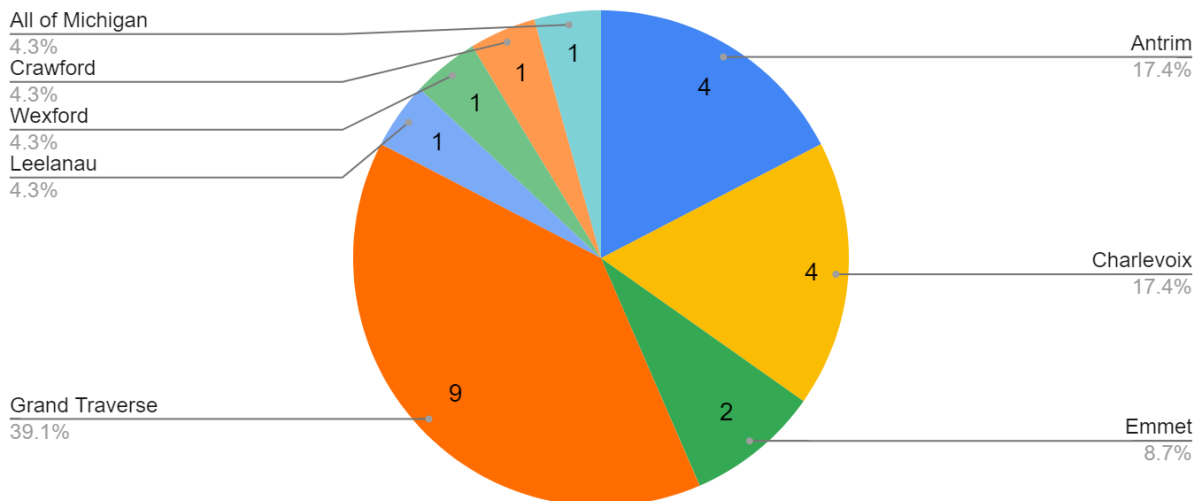
What is your primary method of moving freight?

26 responses



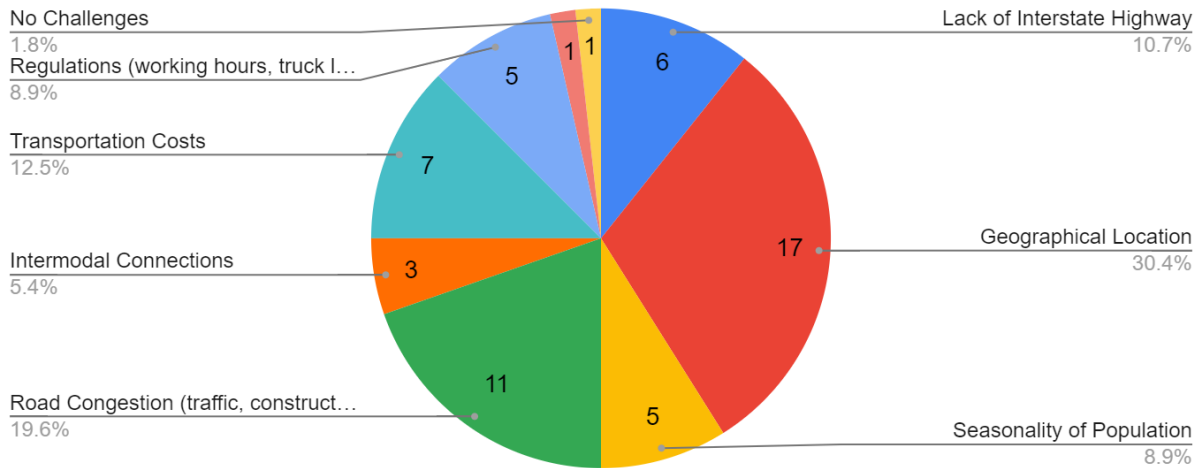
Which county represents the bulk of your freight movement needs?

23 responses



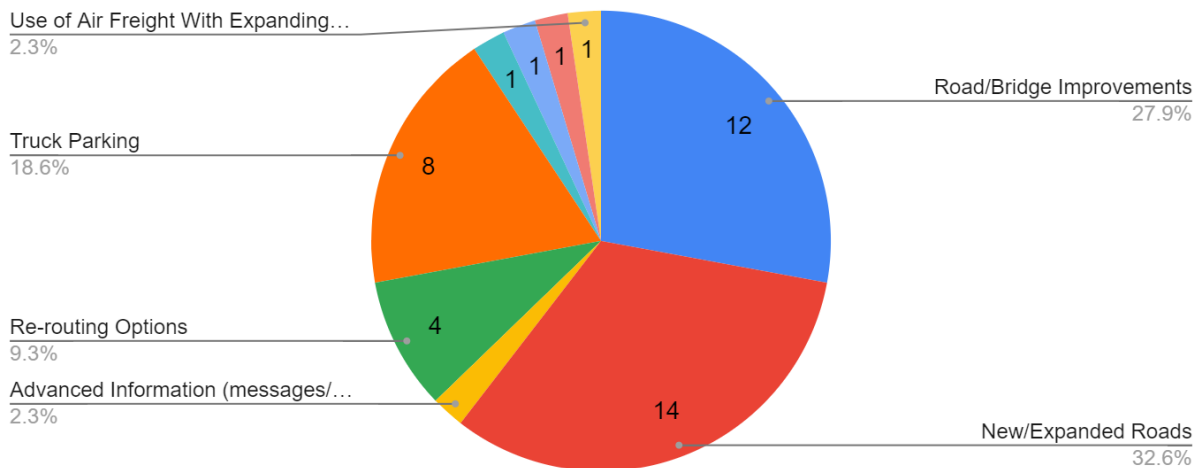
What are some current challenges affecting the movement of freight in the region? Select all that apply and feel free to add others.

26 responses



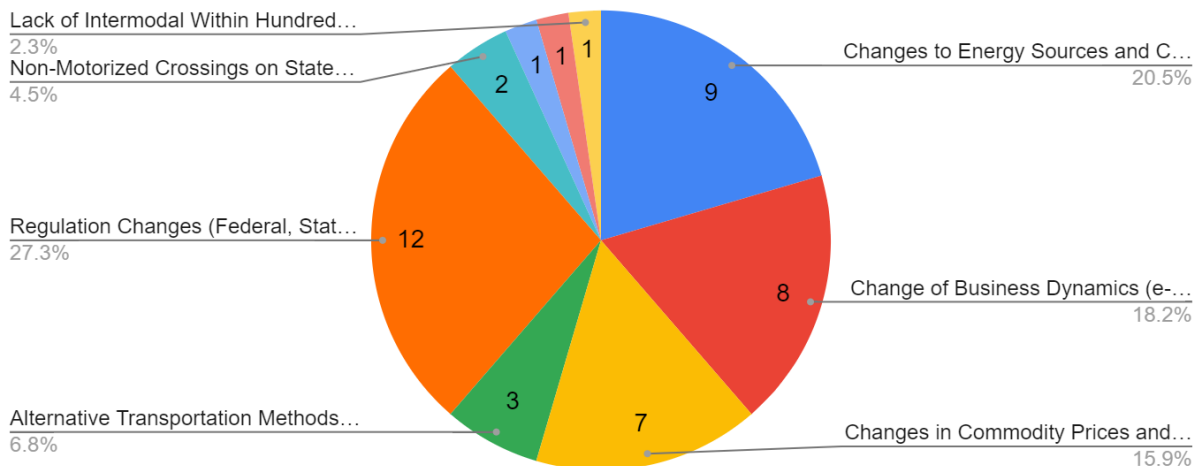
What are some current opportunities to improve the movement of freight in the region? Select all that apply and feel free to add others.

25 responses



What do you see as the biggest risks to the future of freight movement?
Select all that apply or feel free to add others.

24 responses



Are there any improvements to the implementation of roundabouts that would benefit freight movement (wider widths, etc.)?

M72 and US31

Greater size to accommodate tractor trailers.

No

Wider widths

No

improve traffic congestion

wider widths and not so tight a turn radius

MY Freight Drivers say they can not maneuver there 48 and 53 ft. trailer through the current size of the roundabouts without crossing the lines or driving up on the curbs. Make them bigger!!! Better yet get out and try to do it yourself.

Not at this time.

Wider and more truck and trailer friendly.

Not sure.

wider, bigger circles

Wider single lane Roundabouts helps

No.

They need to be wider to accommodate full sized semi's without encroaching into other lanes.

Roundabouts would not benefit our area.

all roundabouts need to be wider to handle large trucks

Are there any bottlenecks or chokepoints that hinder the movement of freight? If so, please list where.

M72 and US31

State and federal highways routed through downtowns.

Yes, The Division Street m72 intersection creates a tremendous backup especially in the summer

Three Mile Rd. South Airport to Hammond

Not at this time.

Single lane roads with no options to pass. Low hanging trees and branches on corners and obstructions to line of sight at stop signs.

Not sure

Charlevoix bridge, US31

Charlevoix Bridge on US 31. Too many cross walks down town Chalevoix that slow traffic down and cause delays.

downtown Charlevoix, downtown Petoskey

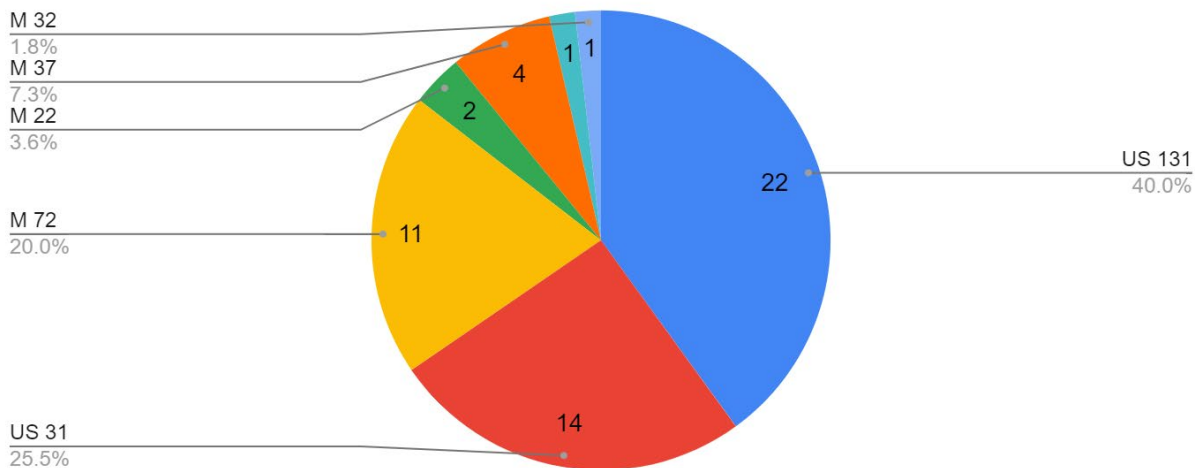
Traverse City, Charlevoix

Carrier availability due to being so far North, ex. No DHL service or same day service.

US 31 narrowing at Ludington

For your ability to move freight, what are the most important routes in Northwest Michigan? Select all that apply and feel free to add others.

26 responses



Are there any projects or goals within the impending MPO boundaries (see yellow area on map) that would assist with the movement of freight? (example: repave certain street that sees frequent freight travel)

Cherry bend road

If there could be a turn arrow at US31 and M72 for traffic coming from the North.

A limited access road around the urban core.

Put in a roundabout on Hammond and Townline rd. Bigger the better. Repave Townline. Make Three Mile South Airport to Hammond four lanes with Bike lane and left turn lanes.

None at this time.

Light timing on Hammond would be very nice

Need better East west routes across town

n/a

N/A