PLEASE NOTE

In an effort to gather additional comments and suggestions during the 2040 Long Range Transportation Planning process the Southwest Michigan Planning Commission is making the working draft sections of the plan available to the public.

Additional data collection and analysis is still being conducted and this information will be included in the next draft which is to be released mid April 2013.

Questions or comments can be directed to:
Southwest Michigan Planning Commission
185 E. Main Street Suite 701
Benton Harbor, Michigan 49022

NATS MPO
Suzann Flowers
269-925-1137 x 17
flowers@swmpc.org

TwinCATS MPO
Gautam Mani
(269) 925-117 x24
manig@swmpc.org

Rail

Rail service is an important transportation mode within the study area. Interconnecting rail passengers to destinations in the study area is a concern for a truly interconnected transportation system.

I. Passenger Service

Amtrak is the only passenger rail service that operates in the study area. The National Railroad Passenger Corporation, doing business as Amtrak (reporting mark AMTK), is operated and managed as a hybrid public private entity and began operations on May 1, 1971, to provide intercity passenger train service in the United States. Amtrak does require investment from the federal and state government, similar to other transportation modes throughout the country. The only station that is within the study area is the Niles train station. The structure was built in 1892 and is listed on the National Register of Historic Places and is a well known landmark within the community. Amtrak operates an engineering department branch at the Niles Amtrak station that maintains the 97-mile track segment between Kalamazoo and Porter, Indiana. Here, employees maintain the track for high-speed service.

Michigan's three Amtrak lines are the Wolverine, Blue Water, and Pere Marquette.

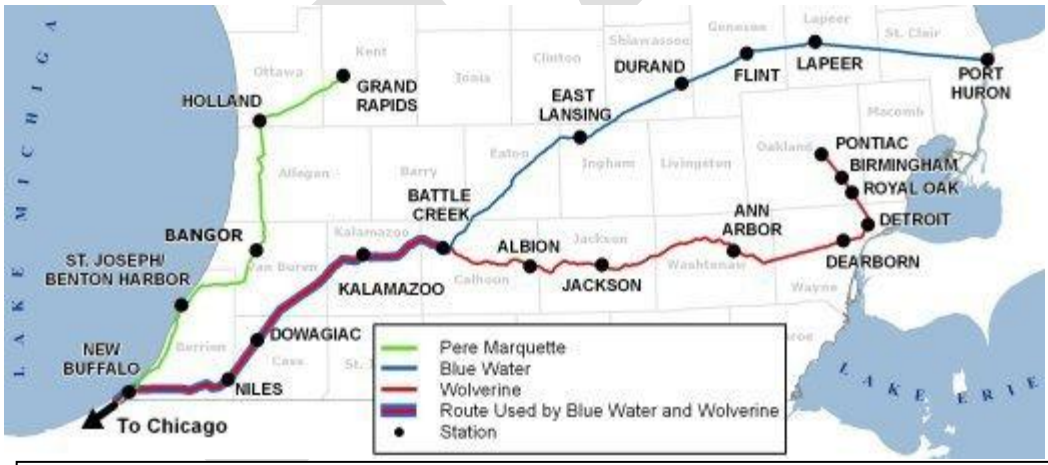

Image courtesy of MDOT http://mdotcf.state.mi.us/public/railstats/

Amtrak has two corridor passenger services in the NATS region including the Wolverine, and the Blue Water that focus on providing rail service between Detroit, MI and Chicago, IL.

- **The Wolverine** passenger service is a 304 mile line that offers three daily round trips from Chicago, IL to Pontiac, MI, with a stop in Niles, Michigan. The Wolverine operates over tracks owned by Norfolk Southern Railway, Amtrak, Conrail, and Canadian National Railway.

- **The Blue Water** is the second service that makes a daily stop in Niles, Michigan, from Chicago, IL to Port Huron, MI. The Blue Water operates on a 319-mile line Norfolk Southern Railway, Amtrak, and Grand Trunk Western Railroad own. The 97-mile segment between Porter, Indiana and Kalamazoo, Michigan, is the longest segment of track owned by Amtrak outside of the Northeast Corridor.
- **The Pere Marquette** provides a third train option that travels from Chicago to Grand Rapids daily. The line operates on CSX lines from Grand Rapids to Porter, IN then on a line owned by Norfolk Southern to Chicago, IL. There is one stop in the TwinCATS planning area and that is in St. Joseph. There is an advocacy group represented by local governments, public transit agencies, chambers of commerce, metropolitan planning organizations, the Michigan Department of Transportation (MDOT), and Amtrak called Westrain. Westrain Collaborative promotes the Pere Marquette and seeks to enhance the service while addressing service deficiencies.

Table_____

	Ridership				**Ticket Revenue (In Dollars)**		
Year	Blue Water	Pere Marquette	Wolverine		Blue Water	Pere Marquette	Wolverine
2012	189,193	109,321	484,138		$ 6,094,659.00	$ 3,276,210.00	$ 17,704,897.00
2011	187,065	106,662	503,290		$ 5,797,878.00	$ 3,197,106.00	$ 18,769,770.00
2010	157,709	101,907	479,782		$ 4,741,560.00	$ 2,912,070.00	$ 16,909,193.00
2009	132,851	103,246	444,127		$ 4,111,375.00	$ 2,818,294.00	$ 15,041,919.00
2008	136,538	111,716	472,393		$ 4,158,742.00	$ 2,975,391.00	$ 16,243,510.00

Ridership, since 2008 on the Blue Water has increased 38% and has increased 2.5% on the Wolverine line. This is a significant increase in the amount of traveling being done by non-car drivers. We are seeing a similar trend in the amount of ticket revenues with an increase in revenues of 46% on the Blue Water and an 8.9% increase on the Wolverine. The sluggish performance of the Wolverine line is due to contractual expirations between Amtrak and Norfolk Southern. The track conditions deteoriated and resulted in lower travel speeds along this corridor, speed was reduced from 79 to 55 mph. With slower speeds and overall performance reductions this meant that people could not rely on the dependency of the route.

Table _____

	Boarding				Deboarding		
Year	Blue Water ***Niles*** New Buffalo	Pere Marquette St. Joseph	Wolverine ***Niles*** New Buffalo		Blue Water ***Niles*** New Buffalo	Pere Marquette St. Joseph	Wolverine ***Niles*** New Buffalo
2012	***3,702*** 3,260	5,118	***7,505*** 2,991		***2,529*** 3,495	5,700	***7,505*** 5,071
2011	***3,866*** 3,020	4,951	***7,663*** 2,291		***2,540*** 3,528	5,551	***7,663*** 4,279
2010	***3,606*** 2,578	4,622	***6,856*** 1,517		***2,278*** 2,647	5,221	***6,856*** 2,997
2009	***3,343*** 0	4,030	***5,513*** 0		***2,075*** 0	4,296	***7,264*** 0
2008	***3,509*** 0	3,963	***5,855*** 1		***2,037*** 0	4,387	***7,717*** 0

Passengers getting on the train are said to be boarding, while those getting off the train are said to be deboarding. We can see that there has been consistent increases in those boarding and deboarding at the Niles station for both routes. This information is particularly useful as we think about the inter-connected nature of what we would like our transportation system to consist of and where there are potential limitations. Currently, there is no transit service for those arriving by train after 5:00 p.m. Monday through Friday. However, if you are arriving by train on Saturday there is the option to take the Niles Dial A Ride, or what is known as demand response between the hours of 10:00 a.m. and 3:00 p.m. However, there are a couple of conditions. The demand response system requires a 24 hour reservation, which could make it difficult for rail passengers to schedule a transit ride, not knowing the exact time that they will arrive. The other issue is that there is no Sunday service for train riders.

High Speed Rail Along the Blue Water and Wolverine Lines

The 97-mile segment between Porter, Indiana and Kalamazoo, Michigan, is the longest segment of track owned by Amtrak outside of the Northeast Corridor. The Federal Rail Administration (FRA) has designated the Detroit to Chicago corridor as a high-speed corridor. The trains have increased their speeds from 95 mph to 110 mph on 80 miles of track between Kalamazoo and Porter, IN. The increased speeds in western Michigan set the stage for the expansion of 110 mph service from Kalamazoo east to near Dearborn on the track segment being purchased by the Michigan Department of Transportation from Norfolk Southern Railway in December of 2012. This purchase will reduce the travel time an additional 30 minutes.

South Shore Line (South Bend, IN)

The South Shore Line, operated by the Northern Indiana Commuter Transportation District, provides interurban electric commuter train service between South Bend, IN and Chicago, IL. Notably, during summer months, the South Shore Line is powered directly by 100% renewable energy sources. Michigan City, IN has two boarding sites, a street-running station on 11th St and an off-street station at Carroll Avenue. The South Shore Line has thirteen daily departures from Michigan City, and thirteen returns from Chicago. From the TwinCATS region, connection to the Michigan City sites is by personal automobile. The South Bend boarding site, located at the South Bend Regional Airport, links the South Shore with domestic airline service and inter- and intra- city bus service. Seven daily trains leave from South Bend bound for Chicago, with five trains offering return service. The weekend and holiday schedule offers eight trains that originate from South Bend and seven trains that provide return service. The South Bend Regional Airport is the only multimodal passenger facility operating in the Michiana area. South Bend Regional Airport offers connecting air service through Chicago, Cincinnati, Detroit, Atlanta and Minneapolis, intercity bus service to Chicago, Indianapolis, commuter rail service to Chicago and local bus service to the South Bend- Mishawaka area.

Capitol and Lakeshore Limited

This service has two trains that leave from the South Bend, IN train station in the evening and retun in the morning. This service provides an additional connection to area residents fro travel east to Cleveland, Pittsburgh, Washington D.C., Philadelphia, upstate New York, New York City, and Boston.

The Future of Higher-Speed Rail

Federal

Momentum continues to grow across the country for greater investment in passenger rail service amid concerns over rising gas prices, climate change, and traffic congestion. On April 16, 2009, President Obama, together with Vice President Biden, and U.S. Transportation Secretary Ray LaHood, announced a new vision for developing high-speed intercity passenger rail in America, calling for a collaborative effort by the federal government, states, railroads, and other key stakeholders to help transform America's transportation system through the creation of a national network of high-speed rail corridors. To achieve this vision, FRA published the High-Speed Rail Strategic Plan in April 2009 and launched the High Speed Intercity Passenger Rail (HSIPR) Program in June 2009. To realize President Obama's vision of giving 80% of Americans access to high-speed rail within the next 25 years, Congress made $8 billion available through the American Recovery and Reinvestment Act of 2009 (ARRA). Congress continued to

build upon the Recovery Act by making available an additional $2.1 billion through annual appropriations for FY 2009 and 2010, using the framework initially established by the Passenger Rail Investment and Improvement Act of 2008 (PRIIA), bringing the total program funding to $10.1 billion. Michigan has benefited from this investment in high speed rail through federal funding to purchase the Norfolk Southern line from Kalamazoo to Dearborn. Additional funding has been provided to begin work to increase speeds to 110 mph over the next few years.

Regional

The Midwest Regional Rail Initiative (MWRRI) is a cooperative, multi-agency effort that began in 1996 and involves nine Midwest states (Indiana, Illinois, Iowa, Michigan, Minnesota, Missouri, Nebraska, Ohio, and Wisconsin) as well as the Federal Railroad Administration. The Midwest Regional Rail System (MWRRS) Plan elements include:

- Use of 3,000 miles of existing rail right of way to connect rural and urban areas
- Operation of a hub and spoke passenger rail system
- Introduction of modern, high-speed trains operating at speeds up to 110 mph
- Provision of multi-modal connections to improve system access

The goal of the initiative is to develop a passenger rail system that offers business and leisure travelers shorter travel times, additional train frequencies, and connections between urban centers and smaller communities.

This study includes the 435-mile corridor from the Twin Cities to Chicago. The Minnesota portion of the study includes approximately 150 miles in southeastern Minnesota from La Crescent to Minneapolis/St. Paul that could accommodate high-speed trains. Today, only one train brings passengers

from Minnesota to Chicago in about eight hours travel time. With the MWRRI, Minnesotans could travel to Chicago on an additional six trains in five-and-half hours of travel time.

The MWRRI will provide a large increase in service and will cut travel time between destinations by 30 to 50 percent. In addition, new equipment with reduced maintenance requirements, an advanced train signaling and control system, and line capacity improvements will help to establish and sustain a high-level of on-time performance.

As a result of faster trip times, more frequent and higher quality on-time service, rail ridership in the routes that encompass the MWRRI will increase greatly. This increase in ridership will help to reduce expected growth in automobile congestion on highways and reduce overcrowding and runway delays at regional airports. As stated in the description of the Pere Marquette line, the MWRRI would remove the Pere Marquette line with a feeder bus route from St. Joseph to Niles to connect to the Wolverine or Blue Water lines. Other alternatives being evaluated are to create a connection at New Buffalo for the Pere Marquette line to benefit from the higher speed line. The other option is to add a route from Grand Rapids to Kalamazoo to connect to the higher speed train in that location. This would offer two routes from Grand Rapids. The station communities along the Pere Marquette continue to monitor the activity with this rail plan. To explore more about the MWRRI please visit http://www.dot.state.mn.us/passengerrail/mwrri/index.html.

State of Michigan

The State of Michigan Rail Plan of 2011 highlights the state's commitment to rail. "The Plan is based on the understanding that the maintenance and expansion of rail service is critical to the economic well-being of the citizens and businesses of Michigan. Railroads play a major role in the movement of freight within and throughout the state and provide vital connections to the global marketplace. Because rail access is essential to many companies, improved rail service provides an important tool in Michigan's business development efforts. Passenger rail service provides an alternative for traveling between major economic centers and helps to promote commerce and economic development, particularly in the areas adjacent to stations"(State Rail Plan, 2011). To review or read the plan please visit http://www.michigan.gov/documents/mdot/MDOT_MI_SRP_public_review_draft_2011-05-23_600dpi_353776_7.pdf

Rail Advocacy

The Michigan Association of Railroad Passengers, Inc. (MARP) was established in 1973 as a consumer advocacy group to passenger rail services, improved travel conditions for passengers, and the preservation of historic rail stations. MARP is working with the Midwest High Speed Rail Association and National Association of Railroad Passengers (NARP) to achieve high speed rail throughout the Midwest.

II. Freight Movement by Rail

Currently, southwest Michigan has two Class I railroads which are operated by Canadian National Railway and CSX Transportation. Class I railroads are national companies that primarily offer services for national and intermodal shippers and markets. Table ____ highlights the Class I railroads in southwest Michigan.

	Canadian National	CSX Transportation
Main Commodities	Petroleum, chemicals, grain, fertilizers, coal, metals, forest products, minerals, automotive parts	Agricultural products, automotive products, chemicals, coal, food, machinery, metals, minerals, paper, pulp, transportation equipment
Number of Miles in MI	1,017	569

The MPO does not have sufficient data to suggest how the Class I railroads directly impact southwest Michigan. The Michigan State Rail Plan has more detailed information regarding how rail impacts the state.

III. Benefits of Rail in Michigan

The Michigan State Rail Plan offers more information regarding the benefits of rail transportation than what the MPO currently has access to. "Rail transportation has the potential to provide significant benefits for the State of Michigan. Both passenger and freight rail services provide an alternative to less efficient transportation modes. By diverting passengers from automobiles and freight from trucks, rail provides significant benefits from reducing congestion and wear and tear on roadways, to reducing fuel consumption and reducing emissions of pollutants. Passenger and freight rail service in Michigan provides significant economic and environmental benefits to the state.

1. *Economic Benefits*

   Efficient freight and passenger rail service provides important economic development benefits to Michigan communities. Industrial development can be thwarted by the lack of freight rail service. Freight rail service is a key location factor for many new companies seeking to locate or expand in Michigan. Enhanced passenger rail service can provide important economic development benefits to Michigan communities by providing improved accessibility, connectivity and travel efficiency. An economic impact analysis has been prepared for the MWRRI Plan which recommends 110 mph high-speed rail service in the Chicago-Detroit/Pontiac corridor and enhanced service in other Michigan corridors. This analysis estimates that improved passenger rail service in Michigan will result in 6,970 new permanent jobs, $680 million in increased property values around Michigan stations and a $138 million increase in annual household income statewide.

   Rail transportation is also a catalyst for economic development and job creation. Access to freight rail transportation helps to encourage the development of new businesses and the expansion of existing businesses. Passenger rail services can be an important catalyst for shaping communities and spurring growth around rail stations

2. *Environmental Benefits*

   Rail service provides important environmental benefits to Michigan residents. Rail can move freight three times more efficiently than trucks on a per ton-mile basis. The U.S Environmental Protection Agency (EPA) estimates that a typical freight train emits only one-third the pollution of a truck on a ton-mile basis. Transportation by rail saves approximately $266 million annually in pavement damage and reduces truck congestion on Michigan roadways. Passenger rail travel has similar environmental benefits Data from the Oak Ridge National Laboratory

indicates that intercity passenger rail consumes 17 percent less energy per passenger mile than airlines and 21 percent less energy per passenger mile than autos.[9] Intercity passenger rail produces 60 percent fewer carbon dioxide (CO_2) greenhouse gas emissions per passenger mile than the average auto and about half (50 percent) of the greenhouse gas emissions per passenger mile of an airplane. Intercity passenger rail also generates fewer emissions per passenger mile of other pollutants such as oxides of nitrogen (NOx), volatile organic compounds (VOCs) and carbon monoxide (CO). Intercity passenger rail service provides "downtown to downtown" connectivity that encourages urban infill and downtown redevelopment. This type of "transit-friendly" development is more energy efficient, resulting in fewer harmful emissions and the ability to more efficiently provide urban services than in areas of low-density suburban sprawl" (Michigan State Rail Plan, 2011).

3. *Preservation in Roadway Pavement*

   There is a logical connection to be made between more peole and products being moved by rail and the extension of pavement life on our roads, highways, bridges, and interstates. According to an article about the benefits of rail, "Amtrak removes 8 million cars from the road…A single intermodal freight train can take up to 280 trucks or 1,100 cars off of the highway. Without rail as an option, freight shippers would have to add 50 million additional trucks on the roadways."(Source http://www.amtrak.com/ccurl/216/645/CriticalLink2007_5.pdf). Additionally the American Association of State Highway and Transportation Officials, Transportation Invest in America Freight-Rail Bottom Line report of 2002,"if all freight-rail were shifted to trucks tomorrow, it would add 92 billion truck vehicle-miles-of-travel (VMT) to the highway system and cost federal, state, and local transportation agencies an addition-al $64 billion for highway improvements over the next 20 years. This $64 billion is a conservative figure that does not include the costs of improvements to bridges, interchanges, local roads, new roads or system enhancements. If these were included, the estimate could double". Source http://rail.transportation.org/Documents/FreightRailReport.pdf

IV. Safety Along Rail Corridors

Amtrak has partnered with the FRA and the State of Michigan to develop a radio-based train communication system, called the Incremental Train Control System (ITCS), which is designed to allow trains to operate safely at higher speeds. The ITCS is currently in place for high-speed revenue service on

Amtrak-owned track in Michigan and works to prevent train-to-train collisions, train over speed conditions, and protect on-track roadway workers.

Incremental Train Control System (ITCS), developed by General Electric Transportation Systems (GETS) is a communication-based signaling system overlaid on an existing signal system. This is one class of PTC that was designed to prevent train collisions and overspeed derailments. The program of upgrading 66 miles of Amtrak owned Michigan Line between Kalamazoo and New Buffalo, Michigan to allow 110-mph operation with this PTC system was initiated with a co-operative effort among FRA, Michigan Department of Transportation, and Amtrak. The program started in 1996 with a contract for Harmon Electronics, which has since been acquired by General Electric, to develop the first ITCS demonstration on this corridor.

The main function of the system is to enforce signal authorities, civil speed limits and temporary speed limits. It was designed as a vital overlay to an existing CTC system with a wireless computer network of servers along these 66 miles with radio communication. These servers communicated with the equipped locomotives through the communication system consisting a UHF radio network based on ATCS Spec 200 frequencies. Unique to this system is the employment of TDMA (Time Division Multiple Access) scheme to reduce the message collisions in the air. With this scheme, the communication to a number of locomotives can be conducted with more ease. Unlike an office centric system like IDOT PTC, all the communication tasks are performed locally device-to-device. Most of the decision-making processes are made with the host processors on-board the locomotives. A computer in the office however is necessary to transmit the temporary speed restrictions to the server and to download the health of the system when it is necessary. Train tracking system is based on GPS (Global Position System.)

ITCS, being vital, means that it will ensure that all the messages are delivered properly and accurately, and will continuously perform surveillance of all devices and interfaces of the system to ensure they are in proper working conditions, and if not, a fail-safe fall back will be enforced. Another feature that is critical to high-speed operation is the advanced grade crossing activation. When the train approaches a crossing, continuous location tracking and calculation are performed and will activate the crossing gates using wireless communication, instead of the conventional track circuit, at the appropriate time to insure the optimum advanced activation time.

The system has been in revenue service since September 2000. At the beginning, the speed limit of 79 mph was kept to gain experience and confidence with the system. The maximum speed limit was subsequently raised to 90 mph in January 2002 and then to 95 mph in September 2005. The goal is to increase the speed to 110 mph in the 4th quarter of 2007.

Source: http://www.fra.dot.gov/Page/P0287
http://www.michigan.gov/documents/mdot/MDOT_MI_SRP_public_review_draft_2011-05-23_600dpi_353776_7.pdf

V. Issues

A brief summary of the rail issues is presented below which captures the main deficiencies that would directly impact the MPO.

Passenger Rail	Freight Rail
Connections once off of the train	Only statewide information regarding rail freight data for MPO
Connections to South Shore Line	No information on the number of pounds of materials coming into and out of MPO
Potential removal of Pere Marquette line	
1 daily train on Pere Marquette line	