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Michigan Passenger Rail Station Community Benefits Study

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by

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Table of Contents

Michigan Passenger Rail Station
Community Benefits Study

Executive Summary

Passenger rail service is perceived to provide important benefits to Michigan communities. The extent of these benefits has never been quantified in a systematic way and, in 2008, the Michigan Department of Transportation (MDOT) contracted with Grand Valley State University to perform a broad based assessment of the community level benefits of passenger rail service.

The main objective of the research project has been to estimate the full range of these benefits at the community level. It is understood that passenger rail services provide important additional benefits to the state and the region in terms of congestion relief, safety, air quality improvement, and energy conservation. These benefits are discussed in the report but statewide or regional benefits are not quantified.

The research included a literature survey of other related studies to assess methodological implications for this project. Conclusions derived were that: benefits are sensitive to ridership activity (which is in turn influenced by service offerings); regional economic data should be used where possible; benefits of foregone travel should be estimated; long term benefits are contingent on local and regional development plans; and, projected benefits represent only estimates at a point in time subject to changing demographics, the economic profiles of different regions and the cost structure of competing forms of transportation.

It is important to recognize that Michigan communities receive only low or medium frequency levels of passenger rail service. Eleven of Michigan's 22 station communities have only a single daily round trip while the other half have from two to four daily round trips. These levels of service should not be expected to generate the kinds of economic impacts experienced by communities served by commuter rail, light rail, or heavy rail systems with hourly or more frequent service throughout the day. That said, existing Amtrak services to Michigan communities have been found to generate significant benefits and these benefits can be meaningfully quantified.

The National Railroad Passenger Corporation, operating under the Amtrak name, has since 1971, been the sole provider of intercity passenger rail service in Michigan. These services are provided to Michigan stations located on three corridors…

- The Wolverine Corridor between Pontiac, Detroit and Chicago
- The Blue Water Corridor between Port Huron and Chicago
- The Pere Marquette Corridor between Grand Rapids and Chicago.

Ridership on these services has grown by over 50% thus far this decade—from 457,000 passengers in the year 2000 to 724,000 passengers in 2008.

The 22 stations vary greatly in terms of ownership, age, architecture, staffing, and operation. They range from simple bus stop type shelters to historic restored depots to relatively modern buildings. Only ten of the stations are staffed with Amtrak station agents. Passengers boarding at other locations must purchase their ticket from a ticket machine, travel agent, Amtrak's web site, or from the conductor on the train. Thirteen of the stations are city owned, five are Amtrak owned, one each are owned by a local transit agency, Michigan State University, MDOT and a private owner. Operating responsibilities lie with cities, transit agencies, Amtrak, civic organizations or a mix of any of these organizations. There is no common model.

The principal objective of this research was to determine the benefits of passenger rail service to a local community. As such, a unique "Community Benefits Summary Sheet" was prepared for each station community. This Excel spreadsheet approach utilized information from MDOT's Transportation Management System (TMS). The spreadsheet is easily updatable and could possibly be directly integrated with the TMS system. Benefits may be classified into the following categories:

a. Individual traveler benefits. Passenger trains offer an economical mode of transportation that is usually less expensive than flying or driving. This task compared existing passenger rail costs to costs that would be incurred if there were no passenger rail service in a community and alternative modes were used (or, alternately the trip was foregone). Ridership information was first obtained for each station from MDOT's Transportation Management System. The second step was to determine whether these travelers would make the trip in the absence of Amtrak service, and, if so, what mode would they use (auto, bus or plane). The 2007 MDOT/University of Michigan on-board survey was used for this purpose. The third step was to determine the costs of alternative mode travel. This was done primarily by internet searches of bus and airline fares assuming a 14-day advance purchase of a round trip ticket on a non-peak travel day. Costs for auto drivers was assumed to be the first half of 2008, IRS rate of $.505 per mile divided by auto occupancy of about 1.8 persons (occupancy levels varied somewhat from corridor to corridor). This information was compiled for all major travel pairs for each station. Total statewide traveler savings were calculated as $20.0 million for those individuals who used Amtrak instead of other modes of transportation. An estimate of the economic benefit of Amtrak service for passengers who would not make the trip in the absence of Amtrak service was calculated at $2.7 million.

b. Local business benefits. Travelers may utilize the train to travel to or from a community where they may use a taxi, rent a car, stay at a hotel, and eat at a restaurant. They may attend a conference or a sports event and they may shop in the community. This may vary from community to community but these and similar expenditures send a stream of benefits to many parts of the area. On-board survey data was used to determine the percentage of travelers that used taxis, rental cars, or local transit to access the train. Information was also obtained on passengers using hotels as well as length of stay. Respondents also indicated a primary trip purpose such as business or shopping. These responses allowed the research team to develop estimates, for example, of the number of persons who used taxis, stayed at hotels and shopped in station communities. The team was careful to isolate persons spending money in Michigan as opposed to Chicago or other out-of-state locations. Since Chicago is an important destination for Michigan train travelers it was important to exclude certain costs for travelers who resided in Michigan and were going to Chicago. As such, a conservative approach was utilized that considered Michigan hotel stays, meals, shopping and other activities for only non-Michigan residents. These types of direct expenditures send a stream of benefits throughout the community and were subject to an economic multiplier that resulted in local community benefits of $25.7 million.

c. Amtrak Expenditures. Amtrak operates all of the passenger rail services in Michigan. As such, Amtrak expends considerable amounts of money in Michigan for employee wages, supplies, and stations. In 2008, Amtrak employed 115 persons in Michigan. There are 48 persons involved in train operations as engineers, conductors, or train maintenance workers. There are 27 persons involved with station services including selling tickets. There are 40 employees involved in track and signal maintenance jobs related to the Amtrak owned track between Kalamazoo and Porter, Indiana. These employees were assigned to individual stations based on their work assignments. Other costs such as hotel, meal, and taxi costs for crew layovers in Michigan were also calculated by station, as were estimates for fuel and other supplies purchased in Michigan for use on Michigan services. As might be expected Amtrak expenditures are heavily weighted towards those station communities that serve as a crew base for Amtrak employees. Pontiac and Niles are good examples of stations with modest ridership but high levels of Amtrak expenditures. Costs for Amtrak vendor procurements that were not directly related to Michigan train operations were <u>not</u> included (e.g., purchase of over $1 million in shoes from a Michigan vendor). Direct and indirect expenditures associated with Amtrak service in Michigan amounted to $13.6 million.

The 22 Michigan communities with Amtrak stations receive $62 million annually in quantifiable benefits attributable to passenger rail service. These benefits are summarized below for each of the three corridors. It is important to state that these represent quantifiable benefits attributable only to the local communities. Additional benefits more difficult to quantify relate to how the existence of passenger rail service in a community enhances its image as a place to live and do business. Significant additional benefits also accrue to the region and the state related to traffic congestion relief, safety, energy conservation, and air quality improvement. These benefits are substantial and research for the American Public Transportation Association (APTA) indicates that safety and vehicle emission costs alone amounted to $.07 per vehicle mile in 1999. It is important to emphasize that these and other macro level benefits must be included in any consideration of the overall value of Amtrak service.

Summary of Quantifiable Community Benefits

	Pere Marquette Corridor	Blue Water Corridor	Wolverine Corridor	Total Statewide
Traveler savings	$2,808,380	$4,283,972	$12,872,105	$19,964,456
Non-traveler savings	$ 345,737	$ 545,449	$ 1,848,575	$ 2,739,761
Local business benefits	$3,572,199	$2,942,865	$19,159,480	$25,674,544
Amtrak expenditures	$ 551,035	$1,949,089	$11,133,556	$13,633,680
Total community benefits	$7,277,351	$9,721,374	$45,013,716	$62,012,441

Telephone interviews of community leaders and field surveys of each station were conducted as part of the work effort. This enabled the research team to obtain information and determine perceived and actual benefits associated with having an Amtrak station in a community. In general, there was a high degree of community support for the stations. The importance of the station to the community varies depending on the size and nature of the community and the type of station. In the smaller communities, the station may serve as a focal point for local activities and may even provide meeting space for public events or house the offices of the local chamber of commerce. In many cases, the station is seen as the only public link to intercity transportation because of the lack of intercity bus service or access to air service.

In larger communities, the service is viewed as one part of the multimodal transportation system but an important asset to the community. The location of the facility determines its potential for acting as a catalyst for further community economic development. The direct impact of the station on local businesses was generally acknowledged but little hard data was available. Restaurants and bars near stations receive additional business from travelers waiting for the train or disembarking in the community. Taxis serve most stations if the community is large enough to support a taxi service. In tourist-oriented communities, rail service provides direct access (walking) to local attractions. This is the case in St. Joseph, Dearborn (Greenfield Village platform) and New Buffalo. The survey respondents viewed passenger rail service as an important option for minority

and low income populations in the communities. It was also seen as an important service for college students in university communities such as East Lansing, Ann Arbor, Kalamazoo, and Albion.

A number of station communities have recently improved their stations and others are planning to do so. The report contains case studies of strategic approaches to station development by six Michigan communities. The report also contains a discussion of other community development benefits resulting from station development initiatives. This includes increased employment, increased property values and increased tax base. The concept of Transit Oriented Development (TOD) is discussed. Further, a literature review was undertaken of economic impacts associated with rail related developments. Most of the national research deals with developments in high-density urban areas where high levels of transit service are being proposed. This is quite different from the Michigan situation but does offer some insight on the strategic and developmental aspects of station development. The authors did obtain information on economic development issues relating to a proposed new commuter rail service in Wisconsin and the Amtrak "Downeaster" service from Boston to Portland. The latter service is more closely aligned with Michigan type services, but with important differences in terms of corridor length and service frequency. Economic studies of the "Downeaster" service expect significant growth in ridership and local development adjacent to the stations over the next few years.

Significant local economic benefits are associated with the provision of Amtrak service in Michigan. This research indicates local communities currently realize $62.0 million annually in benefits. Additional benefits accrue to the region, state, and nation in the form of congestion relief, air quality improvement, energy conservation, and safety. The benefits accrue to the local community even though service is very limited with only a single daily round trip provided to half of Michigan's stations. This severely limits the potential for economic development impacts. The implementation of greatly improved levels of service and train speeds such as those in the proposed high speed Midwest Regional Rail System would dramatically change station area dynamics and overall benefit levels for local communities. The addition of commuter services in the southeast Michigan region would also result in major station development opportunities.

Michigan Passenger Rail Station Community Benefits Study

1.0 Project Background

1.1 Description and objectives.

Passenger rail service is perceived to provide important benefits to Michigan communities. The extent of these benefits has never been quantified in a systematic way and the Michigan Department of Transportation (MDOT) is interested in performing a broad based assessment of the community level benefits of passenger rail service. In Michigan, Amtrak provides intercity passenger rail service to 22 communities and these services have a wide range of direct, indirect, and induced economic impacts. Some of the direct impacts are related to the employment of workers and expenditures on the operation of the service. Other direct benefits relate to the increased mobility of the population at lower travel costs. Indirect benefits include expenditures by travelers for hotels, meals, taxis, and shopping and, economic development opportunities afforded to the community by the presence of passenger rail service. Induced benefits relate to the multiplier effect of these expenditures spread throughout the station community and the region.

The main objective of the research project has been to estimate the full range of these direct, indirect, and induced benefits at the community level and to develop approaches to incorporate the findings into MDOT processes such as the Transportation Management System. It is understood that passenger rail services provide important additional benefits to the state and the region in terms of congestion relief, air quality improvement, and energy conservation. These benefits are discussed in the report but statewide or regional benefits are not quantified.

It is also important to state that Michigan communities receive only low or medium frequency levels of passenger rail service. Half of Michigan's 22 station communities have only a single daily round trip while the other half have from two to four daily round trips. These levels of service should not be expected to generate the kinds of economic impacts experienced by communities served by commuter rail, light rail, or heavy rail systems with hourly or more frequent service throughout the day. That said, existing Amtrak services to Michigan communities generate significant benefits and these benefits can be meaningfully quantified. The results of this initiative should prove useful to local communities and the state in supporting the continuation or expansion of these services.

1.2 Types of benefits.

Three major categories of community level benefits are considered and quantified in this report. These are:

- Individual traveler benefits. Passenger trains offer an economical mode of transportation that is usually less expensive than flying or driving. These benefits are significant and this report quantifies the savings for each of the 22 station communities in Michigan.
- Benefits from Amtrak expenditures in station communities. Amtrak expends considerable amounts of money in Michigan communities for employee wages and for the procurement of goods and services. Information was obtained from Amtrak and estimates of expenditures for each station community were developed. This includes expenditures relating to train crews, station agents, fuel, and track and equipment maintenance. These expenditures are quantified for each station community.
- Local business benefits. Rail passengers may utilize a train to access a community where they use a taxi, stay at a hotel, eat at a restaurant, or shop at a store. These and similar expenditures send a stream of benefits

to many parts of the community. These expenditures have been estimated and quantified for each of the station communities.

The availability of passenger rail service may also afford a variety of quality of life and economic development benefits to a community. The report discusses community impacts in other states based on a literature review. It also contains a discussion of existing or planned station developments in Michigan and the kinds of benefits that are expected.

1.3 Assignment of benefits.

The study assigned all benefits to the community in which the station is located. That said, the authors recognize that the benefits may actually be spread more broadly across the entire service area of a given station. Special problems also exist in assigning benefits to stations located in Southeast Michigan where there are five stations serving the metropolitan area. Some of these stations are only a few miles apart (e.g., four miles between Birmingham and Royal Oak). Some travelers who may live in one part of the region may choose to travel to another (e.g., Pontiac residents may drive to Dearborn) to board a train because of perceived travel time, parking or other factors. Nonetheless, the values for each community when added together present a reasonable representation of the values for the region. Some outstate stations also draw from a large geographic area—for example, people from the Tri-Cities area may board the train at Flint whereas those from Mt. Pleasant may board in East Lansing and those from Traverse City may board in Grand Rapids. The station community may benefit to some degree even if the traveler is not a resident of the community where the station is located.

1.4 Other societal benefits.

Benefits at the community level represent only a portion of total societal benefits associated with passenger rail service. Other benefits accrue at the regional, state, and national level and include such things as energy savings, air quality improvements, congestion relief, and safety. In each of these categories, passenger trains provide a clear and quantifiable benefit over alternative modes. Any assessment of the total value of passenger rail service to Michigan must be sure to include these types of regional and statewide benefits in addition to the community level benefits that are the subject of this report. This is especially important when one is comparing the public sector costs of passenger rail service with the benefits derived from those services.

1.5 Time period representation.

The study is representative of the 2007-2008 time period. It utilizes calendar year 2007 ridership information and modal cost and other information from 2008.

2.0. Michigan's Passenger rail System

2.1 Overview and history.

Passenger rail services have been provided in Michigan for over 170 years. The first passenger train operated between Toledo and Adrian in 1836. By 1909, a 9000-mile network of railroad lines provided passenger service to nearly every city, town, and village in the state. The railway depot provided the doorway to the community and stations ranged from small wooden shelters to massive and distinguished buildings.

Railroads provided virtually all of the intercity transportation until the second decade of the 20th Century when automobiles and improved roads began to

siphon off local rail traffic. This trend accelerated over the decades as roads were improved and longer distance traffic shifted to air. By the early 1960's, the construction of the Interstate Highway System and massive investments in airports and airways dealt an almost fatal blow to the passenger rail industry. As ridership declined and losses grew, many passenger trains were discontinued by their private railroad operators and it became apparent that government must become involved if any passenger rail service was to survive.

In response to this crisis, in 1970, the federal government passed the National Railway Passenger Service Act that created the National Railroad Passenger Corporation known as Amtrak. This Act provided for private freight railroads to turn over passenger equipment and assets to Amtrak and, in return, they were relieved of their passenger service obligations. On May 1, 1971, virtually every privately operated intercity passenger train in the country was discontinued and most remaining services were assumed by Amtrak under a nationwide system.

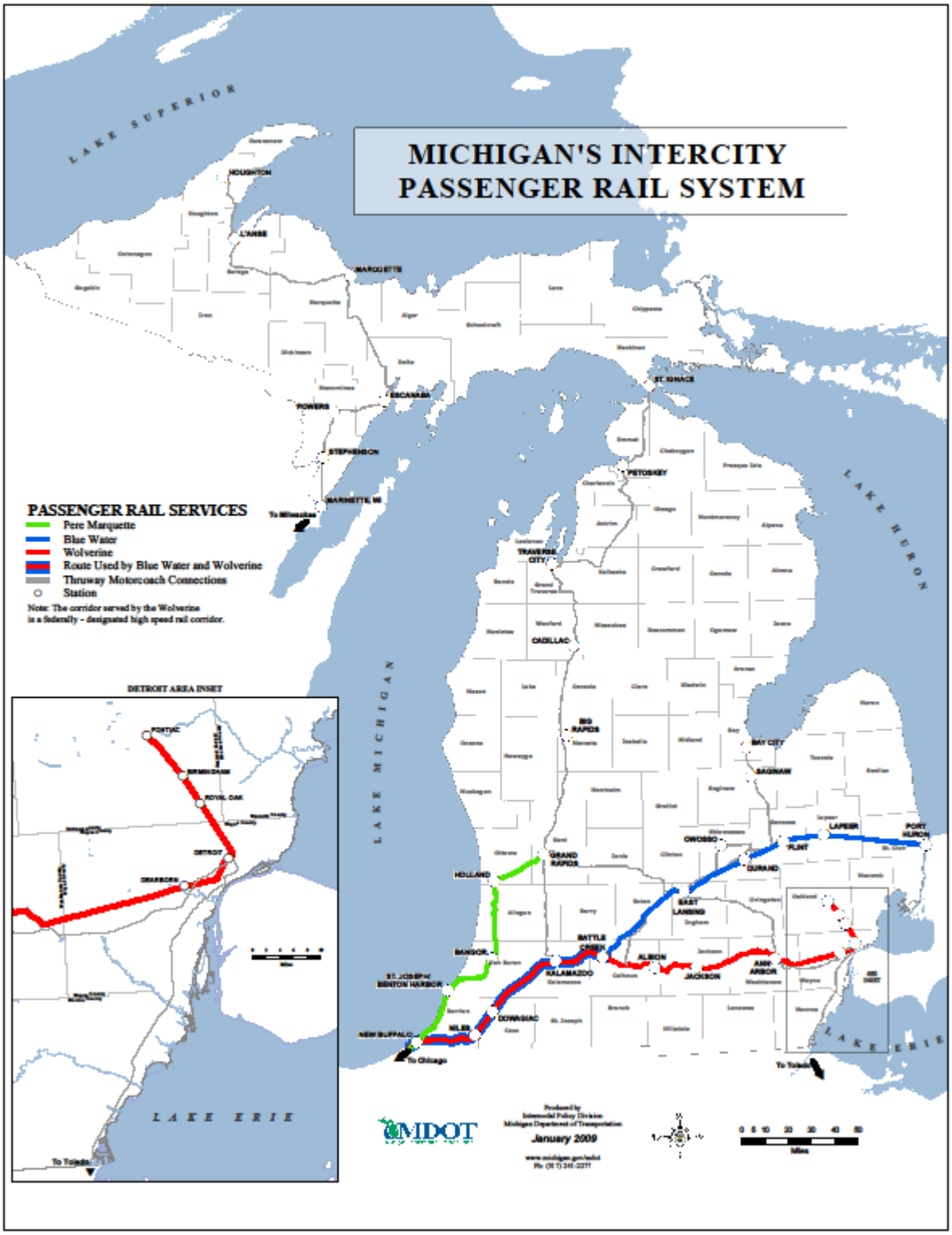
In Michigan, about a dozen daily round trips on seven routes operated on April 30, 1971. The next day, May 1, only two round trips operated between Detroit and Chicago. Since that time Amtrak has been the sole operator of intercity passenger rail services in Michigan and, with minor exceptions, the entire U.S. These services receive financial assistance from the federal government and from many states including Michigan. Additional routes were added at the request of the State of Michigan between Port Huron and Chicago in 1974 and between Grand Rapids and Chicago in 1984. The existing system is shown in Figure 2.1.

2.2 Michigan routes and services.

In 2009, three routes provide passenger rail service in Michigan as shown in Table 2.1. These services have generally been in place for many years as evidenced by the following:

- Wolverine Service provided by Amtrak began with two round trips on May 1, 1971 between Detroit and Chicago. A third round trip was added in 1975 and service was extended to Pontiac in 1994. Between 1980 and 1995, one of the round trips was extended to and from Toledo while continuing to serve Detroit and all other stations to the west.

Figure 2.1


MICHIGAN'S INTERCITY
PASSENGER RAIL SYSTEM
LAKE SUPERIOR
LAKE MICHIGAN
LAKE HURON
LAKE ERIE
PASSENGER RAIL SERVICES
Pere Marquette
Blue Water
Wolverine
Route Used by Blue Water and Wolverine
Thruway Motorcoach Connections
Station
Note: The corridor served by the Wolverine is a federally - designated high speed rail corridor.
DETROIT AREA INSET
HOUGHTON
L'ANSE
MARQUETTE
ESCANABA
POWERS
STEPHENSON
MARINETTE WI
To Milwaukee
ST IGNACE
PETOSKEY
TRAVERSE CITY
CADILLAC
BIG RAPIDS
BAY CITY
SAGINAW
OWOSSO
FLINT
LAPEER
PORT HURON
DURAND
GRAND RAPIDS
HOLLAND
EAST LANSING
BATTLE CREEK
BANGOR
ALBION
ANN ARBOR
JACKSON
KALAMAZOO
ST. JOSEPH/ BENTON HARBOR
NEW BUFFALO
NILES
DOWAGIAC
To Chicago
To Toledo
PONTIAC
BIRMINGHAM
ROYAL OAK
DETROIT
DEARBORN
MDOT
Produced by
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Michigan Department of Transportation
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Miles

- The Blue Water Service started in 1974 between Port Huron and Chicago. From 1982-2004, the service operated as an international route from Toronto and Port Huron to Chicago. The international component to Toronto was discontinued in 2004 and service again originated and terminated in Port Huron.
- The Pere Marquette Service started in 1984 between Grand Rapids and Chicago has operated continuously since that time.

Table 2.1

Michigan Passenger rail Routes

Route	Name of Service	Daily Round Trips	2007 Ridership	2008 Ridership
Pontiac-Detroit-Chicago	Wolverine	3*	455,020	474,479
Port Huron-Chicago	Blue Water	1*	130,063	138,604
Grand Rapids-Chicago	Pere Marquette	1	106,462	111,575
Statewide			691,545	724,658

* The Blue Water service operates on the Wolverine route from Battle Creek to Chicago resulting in 4 round trips on that segment.

The three corridors are operated by Amtrak with financial support for the Blue Water and Pere Marquette services coming from the State of Michigan. The Wolverine service is part of Amtrak's basic national system and does not receive State support for operations.

The three corridors primarily operate over rail lines owned by Michigan's major freight railroads—Canadian National Railway, Norfolk Southern, CSX Transportation plus portions of the Conrail Shared Assets territory in metropolitan Detroit. This is typical of all Amtrak operations throughout the nation. An

important exception is the railroad between Kalamazoo, Michigan and Porter, Indiana that is directly owned and operated by Amtrak. This line has been improved for service at speeds up to 110 mph, although the current allowable passenger train speed is 95 mph. This line segment is used by both the Wolverine and Blue Water trains.

The freight railroads used by Amtrak typically allow Amtrak operations at maximum speeds of 65-79 mph. Freight railroad ownership of the rail lines with the resulting control of dispatching duties has caused problems with on-time performance of passenger trains. Some of the line segments have heavy freight train volumes that often delay passenger trains, producing persistent on-time performance problems.

2.3 Ridership trends

Ridership on Michigan passenger trains has grown by over 50 % thus far in this decade-- from 481,223 passengers in year 2000 to 724,658 passengers in 2008. Current ridership is, by a wide margin, the highest ridership level since the inception of Amtrak in 1971.

Recent increases are part of nationwide increases in Amtrak ridership primarily caused by higher fuel and other transportation costs. In addition, state, local, and national marketing efforts have increased awareness of the advantages of train travel. In Michigan, anecdotal evidence suggests that the ridership would be even higher if more passenger cars were available and if on-time performance were more reliable. Ticket agents and others told the research team that many trains are sold out and potential passengers are unable to purchase tickets on the days that they prefer to travel. Table 2.2 provides information on ridership by route since 1994.

Table 2.2

Michigan Ridership Trends

1994-2008

Year	Wolverine	Blue Water	Pere Marquette	Statewide
2008	474,479	138,604	111,575	724,658
2007	455,020	130,063	106,462	691,545
2006	444,319	124,953	103,912	673,184
2005	411,092	115,741	98,299	625,132
2004	379,677	98,356	90,522	568,555
2003	344,107	88,530	75,606	503,243
2002	295,550	88,045	63,596	447,191
2001	294,570	103,197	59,437	457,204
2000	313,255	106,866	61,102	481,223
1999	334,946	113,864	69,934	518,744
1998	365,143	112,168	65,788	543,099
1997	414,601	125,126	65,065	604,792
1996	383,426	111,348	58,516	553,290
1995	366,365	111,773	45,159	523,297
1994	402,461	117,100	70,995	589,142

3.0 Michigan's Amtrak Stations

The research team visited all of Michigan's Amtrak stations, prepared an inventory of findings, took pictures, and talked to station personnel when possible. Follow up calls were also made to local community representatives to get their views on a number of matters pertaining to the station including perceived benefit to the community.

Table 3.1
Station Characteristics

Station Name	Fixed Route Bus	Intercity Bus	Adjacent Land Uses	Immediate Proximity			Indoor Waiting	No. of Seats	Ticket Agent	Electronic Ticket Info
				Food	Conven. Store	Lodging				
Albion		x	Mixed industrial, residential	x			x	15		
New Buffalo			Commercial							
Dowagiac			Commercial, retail, resident.	x	x	x	x	24		
Bangor			Commercial	on site	x		x	24		
Lapeer			Industrial, commercial				x	10+		
St. Joe/Benton Harbor			Residental	on site		x	x	16		x
Durand			Industrial, commercial				x	50+		x
Port Huron			Industrial, commercial				x	35	x	
Pontiac	x	x	Office, commer., industrial	x			x	20		
Niles			Residential, industrial				x	70	x	
Birmingham			Residential (lofts)	x						
Flint	x	x	Municipal, transit center				x	25	x	
Royal Oak	x		Commercial	x						x
Jackson	x		Commercial	x	x		x	80	x	x
Holland	x	x	Commercial	x		x	x	30		x
East Lansing	x	x/Thruwy	University bldg., retail	x	x	x	x	35	x	x
Battle Creek	x	x/Thruwy	Mixed retail, commercial			x	x	48	x	x
Grand Rapids	x	Thruway	Industrial, commercial			x	x	28		x
Detroit	x	Thruway	Office, commercial	x		x	x	64	x	x
Dearborn		Thruway	Municipal, Office Bldgs.				x	57	x	x
Kalamazoo	x	x	Commercial	on site	x	x	x	110	x	x
Ann Arbor	x	Thruway	Commercial, office	x			x	50	x	X

3.1. Station inventory.

Michigan has 22 Amtrak stations. These stations vary greatly in terms of ownership, age, architecture, staffing and parking availability. They range from simple bus stop type shelters to historic restored depots to relatively modern buildings. A tabular presentation of station characteristics is presented in Table 3.1. Stations are listed by ridership levels from low to high.

Some findings…

- Ten stations have ticket agents.
- Twelve have electronic ticket machines.
- All but three stations have indoor waiting rooms available.
- Most, but not all, stations have arrangements with local contractors to open the buildings at train time when no agent is available.
- All but one station have parking spaces available. Most are free but some require payment
- No food service is available at any of the Amtrak stations with the exception of Kalamazoo that has a small convenience store, St. Joseph where the station is located in a portion of a restaurant, and Bangor that has a coffee shop type restaurant. Some other stations have vending machines.
- Seven of the stations also serve intercity bus passengers and six are served by the Thruway Bus service
- Eleven of the stations are served by fixed route local transit.

3.2 Station types.

There are four general types of stations.

- Basic. (Three stations) Bus stop type shelters exist at Birmingham, New Buffalo, and Royal Oak. The Birmingham station may be replaced by a new station and the Royal Oak station is adjacent to a

SMART bus station that has indoor seating available. The New Buffalo Station is being relocated and enhanced.

- Historic Depots. (Ten stations). Historic station buildings have been restored in Lapeer, Dowagiac, Bangor, Durand, Niles, Albion, Jackson, Holland, and Kalamazoo. St. Joseph uses a portion of the old station as a restaurant.
- Modern. (Eight stations). Since 1971, Amtrak, sometimes with MDOT financial assistance, has constructed stations in Port Huron, Flint, Battle Creek, Detroit, Dearborn, and Ann Arbor. Grand Rapids has a very simple frame building. A new station is scheduled to be built in Pontiac in 2009.
- Other. East Lansing uses a converted warehouse owned by Michigan State University (MSU).

3.3 Ownership and management of stations.

There are several ownership models.

- Thirteen stations are owned by the City in which they are located.
- Five of the stations are owned by Amtrak.
- One station is owned by each of the following: MDOT, Flint MTA, MSU, and private owners.
- Stations in Kalamazoo, Battle Creek, Flint, and East Lansing are managed by the local transit authority.

3.4 Survey of community benefits associated with passenger rail service.

A telephone survey was conducted of contacts associated with individual stations to determine perceived and actual local benefits resulting from having an Amtrak station in their community. A variety of local officials and advocates were surveyed including city officials, regional planners, transit agency employees, and civic and business

organization staff. The same set of questions was used for each interview (see appendix 8.4 for the survey form).

The research team was able to find at least one person in each community who had some knowledge and/or responsibility for the station. However, it was sometimes difficult to obtain substantive information. There are major differences in ownership, maintenance, management, and operation from community to community. There is no single model and each community has developed an approach that is suitable for their specific situation. There is often no single individual who has responsibility for the station as this may be shared between a city, a transit agency, Amtrak or a civic organization.

In general, there is a high degree of community support for the stations. The importance of the station to the community varies depending on the size and nature of the community and the type of station. In the smaller communities, the station may serve as a focal point for local activities and may even provide meeting space for public events or house the offices of the local chamber of commerce. In many cases, the station is seen as the only public link to intercity transportation because of the lack of intercity bus service or access to air service.

In larger communities, the service is viewed as one part of the multimodal transportation system but an important asset to the community. The location of the facility determines its potential for acting as a catalyst for further community economic development.

Operational responsibilities may rest with the city, transit agency, regional planning agency, Amtrak, volunteers or a mix of any of these agencies. The organizations, other than city government, most commonly involved with the operation and promotion of the passenger rail service are the Chamber of Commerce, the Visitors and Convention Bureau, and various service organizations. In some instances, the actual operation of the station (opening and closing) is done by volunteers.

The impact of a community's station on local businesses was generally acknowledged but little hard data is available. Restaurants and bars near stations receive additional business from travelers waiting for the train or disembarking in the community. Taxis serve most stations if the community is large enough to support a taxi service. In tourist-oriented communities, rail service provides direct access (walking) to local attractions. This is the case in St. Joseph and the proposed New Buffalo station. Greenfield Village is currently served by a platform but is not a regularly scheduled stop. Greenfield Village is not accessible from the current Dearborn station but will be from a proposed new station location.

Expenditures for improvements to local stations are done on an ad hoc basis. Most improvements are funded by state or federal grants with no systematic funding mechanism in place. Several communities are involved in joint marketing efforts with other communities on the same line.

The passenger rail service is viewed as an important option for minority and low income populations in the communities. It is also seen as an important service for college students in university communities such as East Lansing, Ann Arbor, Kalamazoo, and Albion.

3.5 Station development perspectives

Each station is different in terms of its potential for development. Some stations are isolated from the surrounding community and offer little potential in their existing location. Others are located in areas where development can and sometimes is occurring. That said, most of the stations serve their intended purpose of providing an acceptable location to board the train. They typically have adequate parking and are generally, but not always, perceived to be in safe locations. With some exceptions, they tend to provide an adequate gateway to and from their communities given the relatively low levels of train service.

There are several situations in Michigan where local communities are making plans for relocating and constructing new stations to take advantage of favorable local conditions. Those situations are discussed in detail later in this study.

It is unrealistic to expect stations that have only a single daily round trip and a handful of passengers to trigger high levels of land development. Sometimes this development occurs in areas adjacent to the station because of other favorable factors that are incidental to the availability of passenger train service. Developers may perceive that improvements in service levels in the future could greatly enhance their investments.

3.6 Impact of potential new services.

As previously stated, development potential, and related economic benefits, are driven largely by passenger activity levels. These in turn are determined by the quality of the service offerings, especially those relating to service frequency (e.g., daily round trips), travel time, price, and train capacity. Interviews with Amtrak station personnel indicated that there is the need for additional passenger rail cars during peak travel time periods. In Michigan, there are several initiatives under way that could dramatically increase passenger activity levels.

3.61 Midwest Regional Rail System. The Midwest Regional Rail Initiative represents an ongoing effort to develop an improved and expanded passenger rail system in the Midwest. State transportation agencies in nine Midwestern states are sponsors of this initiative. The over all proposal is the operation of a 3000-mile “hub-and-spoke” system providing service to and through Chicago to locations in the Midwest. Trains would operate at speeds up to 110 mph. In Michigan, this system would initially involve an increase from 3 to 6 trains daily, eventually with 10 daily round trips at 110 mph between Chicago and Detroit with seven continuing on to Pontiac. In addition to the ten trains destined for Detroit or Pontiac, there would be an additional four trains between Chicago and Kalamazoo. These trains would be split at Kalamazoo, and would

continue as separate trains at reduced speeds to Port Huron and Grand Rapids/Holland.

The increased speeds and frequencies are expected to generate significant additional ridership. Major Michigan stations would receive 3-4 times the amount of daily train service compared to the current situation. The additional ridership would dramatically increase local community benefits. These would be further enhanced by the construction of the necessary new infrastructure including new stations and track structure. The Midwest Regional Rail System Executive Summary published in September 2004 indicates that Michigan infrastructure and train expenditures would total $1.1 billion (in 2002 dollars).

3.62 Commuter Rail Developments. Local communities could also benefit from the development of rail commuter services. Over the years, there have been studies of expanded commuter services in Southeast Michigan. Some of the plans involved the establishment of a comprehensive system serving most parts of the region. The plans have always assumed that service to/from Ann Arbor and Pontiac would be worthwhile. In fact, both of these corridors had publicly sponsored rail commuter service into the 1980's.

The most prominent current proposal is to implement restored service between Ann Arbor and Detroit. This project is being managed by the Southeast Michigan Council of Governments (SEMCOG) and start-up is scheduled to occur in October 2010. This would provide service to Ann Arbor, Ypsilanti, Dearborn, and Detroit as well as one or more new stations. This would provide the possibility of direct bus service to Detroit Metro Airport from a station in the Westland/Wayne/Inkster area and a connection to the proposed light rail service in the Woodward Avenue Corridor.

Another proposal involves the 'Wally' service from Howell to Ann Arbor with three intermediate stops. This project is being managed by the Ann Arbor Transportation

Authority. The initial service would not be able to serve the existing Ann Arbor Amtrak station due to railroad ownership and engineering issues.

4.0 Individual Station Benefits

The principal objective of this research is to determine the benefits of passenger rail service and its station to a local community. These benefits may be classified into the following categories:

a. Individual traveler benefits
b. Amtrak expenditures in station communities
c. Local business benefits

These benefits have been quantified for each station community and a summary sheet for each of Michigan's 22 Amtrak stations is contained in appendix 8.7. The information in the summary sheet is largely driven by ridership information contained in MDOT's Transportation Management System (TMS). The TMS contains information provided by Amtrak on the number of passenger boardings and deboardings at each of Michigan's Amtrak stations and the origin and destination of their trip. The possibility exists to automate a process where individual community benefit summaries could be routinely and easily updated as part of the TMS process.

4.1 Individual traveler benefits.

Passenger trains offer an economical mode of transportation that is usually less expensive than flying or driving. This task compares existing passenger rail costs to costs that would be incurred if there were no passenger rail service in a community and alternative modes were used (or, alternately the trip was foregone).

4.11 Procedure. The first step in the process was to obtain ridership information for each Michigan passenger rail station from MDOT's Transportation Management System (TMS). MDOT obtains this directly from Amtrak, and origin-destination

information is available for each station. Year 2007 information was utilized for this process and data was compiled for stations in the Wolverine, Pere Marquette, and Blue Water corridors.

The second step in the process was to determine the alternative travel mode that would be used if Amtrak service were not available. This decision was based on responses from the comprehensive on-board ridership survey conducted by the University of Michigan (U of M) in 2007. This survey asked how a traveler would make the trip in the absence of Amtrak service to a community. It also provided information on those that would not make the trip in the absence of Amtrak service. The research team supplemented the 2007 data with information from a similar survey conducted by U of M in 2000. Without the 2000 survey data, there would have been a number of gaps in the analysis, including duration of trip in days, number of travelers in party, and percentage of travelers using hotels.

The use of two separate surveys was beneficial in that different travel time periods and question sets were involved. For example, the 2000 survey was conducted during the December holiday travel period when trip purposes (e.g. more shopping) might be somewhat different than other times of the year. The spring 2007 survey was perceived to be more representative of overall travel characteristics but the 2000 data provided important additional information.

The third step in the process was to determine the costs of the alternative modes and compare them to Amtrak costs. This involved internet searches of intercity bus and airline companies in order to derive a reasonable estimate of ticket costs for those modes.

This effort is complicated by market-based pricing for each mode wherein the price can vary significantly on a daily or seasonal basis depending on travel demand. The basic approach was to utilize 14-day advance purchase fares based on a round-trip purchase. Thus, a traveler flying to Chicago in lieu of an Amtrak trip was

assumed to pay one-half of the round trip fare for each leg of the trip. For those travelers who would drive in lieu of train service, the IRS rate for the first half of 2008 of $.505 per mile divided by auto occupancy of about 1.8 persons per car was utilized, although this varied somewhat from corridor to corridor. The IRS rate was utilized because it is the most widely used measure for automobile cost. It includes gas, depreciation or lease payment, maintenance and repairs, insurance, tires, oil, and license and registration. Added for all modes were parking, tolls, and other appropriate fees to the trip. The last step in the process was to subtract Amtrak fares from alternative mode fare costs to determine whether there were any savings. Also a calculation was made for those individuals who would forego the trip. The procedure utilized was quite complex and numerous tables and data points were considered in preparing the summary tables at the end of this report. A more detailed discussion of the procedure is contained in separate technical memoranda.

Non-traveler benefit occurs because part of the population making a trip by train is unwilling to make that same trip with more expensive alternatives. Taking the trip has value to the citizen above the cost that they pay for the trip. An example is helpful. A regular train trip from Grand Rapids to Chicago is $35 but the overall cost of driving is $65. Therefore, this person will not make the trip because his consumer satisfaction is not as high as $65. However, if the trip is available by train for $35 and his consumer satisfaction is $50, there is an additional consumer surplus gain of $15. Knowing that a train traveler was willing to purchase the train ticket, but was unwilling to spend money on the most likely next expensive alternative provides an estimate of how much “consumer surplus” is lost by individuals who no longer are willing or able to take the trip in the absence of train travel. This estimate of non-traveler benefit takes into account that the money they spent on the ticket will be spent on something else, but they do not get the additional benefit of the trip beyond the original price of the ticket.

4.12 Results. Table 4.1 indicates that the availability of Amtrak service to Michigan communities saved travelers $22.7 million in 2007. This is again based on the 2007 on-board passenger survey indicating how people would make the trip in the event that Amtrak service was not available. Appendix 8.7 of this report provides a "Community Benefits Sheet" for each station community that shows the amount of money travelers save with the availability of Amtrak service.

Table 4.1

Traveler Savings for Michigan Amtrak Passengers

	Pere Marquette Corridor	Blue Water Corridor	Wolverine Corridor	Total Statewide
Traveler savings with Amtrak	$2.8 m	$4.3 m	$12.9 m	$20.0 m
Non-Traveler savings	$.3 m	$.5 m	$1.8 m	$2.7 m
Total	$3.1 m	$4.8 m	$14.7 m	$22.7 m

4.2 Local Business Benefits

Travelers may utilize the train to travel to or from a community where they use a taxi, rent a car, stay at a hotel, and eat at a restaurant. They may attend a conference or a sports event and they may shop in the community. This may vary from community to community but these and similar expenditures send a stream of benefits to many parts of the area.

4.21 Procedure. This analysis relied heavily on responses contained in the 2000 and 2007 U of M ridership surveys of Michigan Amtrak passengers. Survey respondents indicated the mode of access to and from stations such as taxi, transit, private vehicle, or rental car. It also contained information on hotel use and length of stay. Respondents also indicated the primary purpose for the trip such as business or shopping. These responses allowed the research team to develop estimates, for example, of the number of persons who used taxis, stayed at hotels and shopped in station communities.

The research team was careful to isolate persons spending money in Michigan as opposed to Chicago or other out-of-state destinations. Since Chicago is a major destination for Michigan train travelers it was important to exclude those travelers who resided in Michigan and were traveling to Chicago. As such, hotel stays, meals, shopping and other activities were considered for only non-Michigan residents. Thus, only about 7% of all Amtrak passengers were assumed to utilize Michigan hotels for business, convention, shopping, or other purposes. This is a conservative estimate since there would likely be some Michigan residents who would stay and shop in-state.

A conservative set of estimates was used for these kinds of activities based on State of Michigan government travel rates for 2008 for hotels ($65/night) and meals ($38.50 per diem) and the assumption was made that the typical stay was four nights based on the survey results. An assumption was also made that those persons declaring shopping as the major trip purpose would expend $100. This is a very conservative estimate for those individuals declaring shopping as the primary reason for the trip.

It was also assumed that travelers would spend money for miscellaneous purposes including meals in the station community or other incidental expenditures. Discussions with local station agents or others indicated that passengers or persons dropping off or picking up passengers will sometimes eat at a nearby restaurant or purchase incidentals from a local coffee shop. Several examples of this include:

- Ann Arbor. Many passengers (or those meeting or dropping off passengers) eat at several nearby restaurants and at least one restaurant is very appreciative of the business. A server said they do a lot of Amtrak passenger related business.
- Bangor. Passengers often purchase coffee or breakfast items at the coffee shop located in the station. Sometimes the Amtrak train crew will call ahead and have items delivered to them when they stop.

- Kalamazoo. The station has a convenience store and there are nearby restaurants.
- St. Joseph. The waiting room is located in a restaurant.
- East Lansing. A nearby convenience store does considerable business since it is close to the station. This is especially true if the train is late.

4.23 Results

Table 4.2 indicates that local communities are the beneficiary of about $15.7 million annually in expenditures by Amtrak passengers using local passenger stations. This represents the equivalent of about $23 for every Amtrak passenger using Michigan Amtrak stations. The research team believes that the assumptions used represent a conservative estimate. However, it is also recognized that communities differ widely in terms of trip purposes that may utilize a station. For example, some smaller station communities may attract far fewer business or conference travelers than a larger more diverse metropolitan area such as Ann Arbor with the University of Michigan and its related Medical Center or Detroit as the business and cultural center of Michigan. As a result, it was decided to assume the following:

- Category 1 Station. Ann Arbor, Battle Creek, Birmingham, Dearborn, Detroit, Jackson, Kalamazoo, Niles, Pontiac, and Royal Oak. Defined as a metropolitan area station with multiple daily service frequencies----$25 per passenger.
- Category 2 Station. Grand Rapids, Holland, East Lansing, Flint, Port Huron, and St. Joseph. Defined as a metropolitan area station with a single daily frequency----$20 per passenger
- Category 3 Station. Albion, Dowagiac, Bangor, New Buffalo, Durand, and Lapeer. Smaller community station----$15 per passenger.

Station communities may argue that their value should be higher or lower depending on their special circumstances. The nature of this process allows them to simply insert a different value in the Community Benefit Summary Sheet to derive a different figure.

Table 4.2

Local Business Benefits from Passenger rail Service

	% using	Trip Universe	Total Trips	Average Cost	Total Cost	Cost/Pass. Statewide	Note
Access							
Taxi	8.5	691,545	58,781	$10	$587,813	$0.85	1
Transit	2.4	691,545	16,597	$1	$16,597	$0.02	1
Rental Car	0.1	691,545	692	$50	$34,577	$0.05	1
Personal Vehicle	81.7	691,545	564,992	$2.80	$1,581,978	$2.29	2
Total					**$2,220,966**	$3.21	3
Lodging/Meals							
Hotel/motel	7.42	345,772.5	25,656	$260	$6,670,643	$9.65	4
Meals	7.42	345,772.5	25,656	$154	$3,951,073	$5.71	4
Total					**$10,621,716**	$15.36	
Incidentals							
Shopping	5	345,772.5	17,289	$100	**$1,728,863**	$2.50	5
Incid. meals	10	691,545	69,155	$10	**$691,545**	$1.00	6
Misc.	100	691,545	691,545	$1	**$691,545**	$1.00	6
Total Expenditures by Passenger					**$15,954,635**	**$23.07**	Used to develop assumptions
						Assume Following at Community Level	
Category 1 Station		Metro area station w/ multiple service				**$25/passenger**	
Category 2 Station		Metro area with single service				**$20/passenger**	
Category 3 Station		Smaller community station				**$15/passenger**	
Results from Summary Sheets with Above Assumptions							
Grand Total from Summary Sheets					**$15,721,820**	**$22.73**	Avr. Direct Exp./Passenger
Indirect Expenditure Multiplier					**$9,952,725**		Avr. Indirect Exp./passenger
Grand Total Direct and Indirect Expenditures					**$25,674,545**	**$37.13**	**Avr. Total Exp./Passenger**
						1.6331	Avr Multiplier

Notes for Table 4.2 are in Appendix 8.5

The direct expenditure of money in a community has a multiplier effect that results in additional induced expenditures in a community. The research team obtained multipliers generated by the RIMS II model based on the Bureau of Economic Analysis (BEA) statistics for 2006 at the county level. Different multiplier sets were obtained for five different regions in Michigan served by Amtrak. Each set contained a multiplier for retail type expenditures and one for rail related expenditures. The retail multipliers ranged from 1.4265 to 1.5817. The rail related multipliers ranged from 1.5591 to 1.8081. This issue is explained in greater detail in Appendix 8.3.

The application of these multiplier values to local business expenditures in each station community resulted in indirect and induced expenditures statewide of $25,674,544.

4.3 Benefits from Direct Amtrak Expenditures

Amtrak operates all of the passenger rail services in Michigan. As such, Amtrak expends considerable amounts of money in Michigan for employee wages, supplies, and stations. These expenditures provide benefits to the local communities where employees live and work or where stations are located.

4.31 Procedure. Information was obtained from Amtrak on employee residence locations and procurement expenses in Michigan. Employees were assigned to station locations based on discussions with Amtrak officials and material submitted to the research team by Amtrak. Some estimates were necessary but overall employee numbers and wages correlated closely with statewide totals shown on the Amtrak website. Procurement expenditures were assigned to stations if they had a relationship to a particular station. Amtrak purchases from Michigan vendors that were intended to support system operations on a nationwide basis were <u>not</u> considered. For example, Amtrak purchased $5.7 million in goods or services from Michigan vendors in 2007 and $13.6 million in 2008. Examples include over $1

million in computer software services and over $1 million in shoe purchases. Many of these vendors are not located near a Michigan station and the procurement has little or nothing to do with Amtrak's service at an individual Michigan station. The test for inclusion in the calculations was that the expenditure must relate substantially and directly to Amtrak services in Michigan.

4.311 Employee Wages. In 2008, Amtrak employed 115 employees in Michigan. These employees fall into three categories:

- Operating employees including engineers, conductors, assistant conductors, and train maintenance personnel. These employees are primarily based in Pontiac, Port Huron, and Grand Rapids. There are 48 employees in this category.
- Station services include selling tickets, cleaning and providing information and security. Amtrak station agents are located in 10 Michigan stations. Some stations have a single agent on a single shift while others have several agents on several shifts. There are 27 employees in this category.
- Engineering department employees that maintain track and signal systems on the Amtrak owned 97-mile rail line between Kalamazoo and Porter, Indiana. There are 40 employees in this category.

4.312. Other Amtrak expenditures. As stated previously many of Amtrak's procurements have little to do with Michigan stations and services and were not included. However, one major purchase was $6 million in fuel purchased from a Pontiac fuel vendor. This is used to fuel locomotives assigned to trains 352 and 354 that overnight in Pontiac. Approximately 4,000 gallons per day of diesel fuel is consumed. This study assigned only an estimate of the cost of direct labor and vendor profit to the Pontiac station for this procurement. Costs for landscaping services, station maintenance, office supplies, trash pickup, and other costs that could be directly tied to an Amtrak station were estimated and included in the calculations. In addition, Amtrak expenditures for crew layover costs (e.g., taxi,

hotel, meals) were estimated for each station. A major cost element was also supplies and materials related to the Amtrak owned line between Kalamazoo and Porter, Indiana. Approximately 40 employees utilize everything from rail to ties to gasoline to maintain this line.

4.313 Results. This process resulted in the assignment of over $9 million in direct Amtrak expenditures to individual stations. Direct expenditures as shown in Table 4.3 are as follows:

- $7,150,000 in direct employee wages (note: Amtrak's website shows Michigan wages of $6.6 million in 2007 and $7.5 million in 2008)
- $242,000 in employee layover costs for taxis, hotels and meals
- $300,000 for miscellaneous expenses such as office supplies, trash pickup, train toilet waste disposal, train supplies etc.
- $700,000 for Pontiac refueling costs direct vendor labor and profit
- $485,000 for Amtrak line (Kalamazoo-Porter) equipment and materials
- $150,000 for Amtrak owned station operations (includes utilities & maintenance)

These values are subject to economic multipliers, as the expenditures will flow throughout the community (see appendix 8.3). The addition of these multipliers, ranging between 1.5591-1.8081 depending on the station, results in $13.6 million of Amtrak direct and induced expenditures in Michigan.

Table 4.3
Michigan Amtrak
Estimated Employment, Wages and Other Expenditures

				Typical	Total	Other	Layover	Station
			Employee	Wages	Wages	Costs1/	Expenses	Total
Port Huron						(See below)	(See below)	
	Engineers		3	$ 90,000	$ 270,000			
	Conductor/asst conductor		6	$ 70,000	$ 420,000			
	Equipment maintenance (contract)		4	$ 45,000	$ 180,000			
	Agent		1.5	$ 50,000	$ 75,000			
			14.5		$ 945,000	$ 125,000	$ 18,600	**$ 1,088,600**
Pontiac								
	Engineers		10	$ 90,000	$ 900,000			
	Conductor/asst. cond		12	$ 70,000	$ 840,000			
	Student engineer		1	$ 70,000	$ 70,000			
	Student conductor		1	$ 50,000	$ 50,000			
	Secretary		1	$ 40,000	$ 40,000			
	Equipment maintenance (contract)		3	$ 60,000	$ 180,000			
	Road foreman of engines		1	$100,000	$ 100,000			
			29		$ 2,180,000	$ 800,000	$ 111,700	**$ 3,091,700**
Battle Creek								
	Engineer		1	$ 90,000	$ 90,000			
	Agent		2.5	$ 50,000	$ 125,000			
	Road foreman of engines		1	$100,000	$ 100,000			
			4.5		$ 315,000		$ 37,200	**$ 352,200**
Grand Rapids								
	Equipment maintenance (contract)		4	$ 45,000	$ 180,000	$100,000	$ 74,500	**$ 354,500**
Niles								
	Station agent		1.5	$ 50,000	$ 75,000	$ 25,000		
	Track and signal maintenance		40	$ 60,000	$ 2,400,000	$ 485,000		
			41.5		$ 2,475,000	$ 510,000		**$ 2,985,000**
Detroit	Station agent		4	$ 50,000	$ 200,000			
Detroit	Security		2	$ 40,000	$ 80,000	$ 25,000		**$ 305,000**
Dearborn	Station agent		4	$ 50,000	$ 200,000	$ 25,000		**$ 225,000**
Ann Arbor	Station agent		4	$ 50,000	$ 200,000	$ 25,000		**$ 225,000**
Jackson	Station agent		1.5	$ 50,000	$ 75,000	$ 25,000		**$ 100,000**
Kalamazoo	Station agent		3	$ 50,000	$ 150,000			**$ 150,000**
Flint	Station agent		1.5	$ 50,000	$ 75,000			**$ 75,000**
East Lansi	Station agent		1.5	$ 50,000	$ 75,000			**$ 75,000**
Grand Total Direct Expenditures			**115**		$ 7,150,000	$1,635,000	$ 242,000	**$ 9,027,000**
Grand Total Direct & Indirect Expenditures (Includes station specific multipliers of 1.4265-1.5817)								**$ 13,633,680**
Note: Wage total of $7.15 million compares to Amtrak website of $6.6m in 2007 & $7.5m in 2008.								
Amtrak Crew Layover Expenditures (Values Shown Below Included in Above Totals)								
Hotel and meal expenditures			Rooms/Da	Hotel	Taxi RT	Meals	Total/day	Total/Year
Battle Creek			2	$40	$5	$6	$102	$37,230
Port Huron (LSA layover)			1	$40	$5	$6	$51	$18,615
Grand Rapids (Chicago base crew + LSA)			4	$40	$5	$6	$204	$74,460
Pontiac (Chicago base crews for 350/354)			6	$40	$5	$6	$306	$111,690
								$241,995
Other costs (Values Shown Below Included in Above Totals)								
Pontiac	Fuel of $6m+/- in 2008. Assume equiv of 2 jobs +10% profit=100k+600K=$700K							$ 700,000
Pontiac	Misc expenses (office supplies, trash, train toilet waste, train supplies) for 350&354 turn							$ 100,000
Port Huron	Misc expenses (office supplies, trash, train toilet waste, train supplies) for 364 turn							$ 100,000
Grand Rap	Misc expenses (office supplies, trash, train toilet waste, train supplies) for 370 turn							$ 100,000
Niles	Track and signal maintenance supplies: 97 miles@$5K/mile							$ 485,000
GRR&PTH estimated contract labor =$180K each(1 lead mechanic @$60K & 3 laborers/cleaners@$40K)								
1/Includes "Other Costs" above+$25,000 each annual operating & maintenance costs for								
ARB,DBN,JXN,DET,PTH,NLS.			Source: GVSU estimates based on Amtrak interviews and mate					3/9/2009

4.4 Local Community Expenditures.

Many benefits may be assigned to communities that have Amtrak service. At the same time, these communities incur certain costs. Direct community costs vary widely but generally include the following:

- Staff time to coordinate with Amtrak, MDOT or others involved with the station. This sometimes involves grant applications and project management for new stations or station rehabilitation. It may also involve planning for new stations.
- Staff time to coordinate local volunteers or to arrange for necessary maintenance.
- Routine station operating costs when that responsibility resides with the local community. This may include utilities, landscaping, snow removal, and cleaning.

Only six of 22 Amtrak stations are owned by Amtrak. The balance are the responsibility of the local community—the city, the transit agency or some other entity. Estimates of local community expenditures were developed, based in part, on discussions with local community representatives. Local expenditures were estimated to range from $10,000 annually to $60,000 annually depending on station size and ownership responsibility.

Total local community expenditures for Amtrak stations in Michigan are estimated at $510,000. Amtrak also expends approximately $150,000 annually on stations that they own. The Amtrak value has been included in the Amtrak expenditure discussion.

4.5 Summary of quantifiable community benefits.

The 22 Michigan communities with Amtrak stations receive $62.0 million annually in quantifiable benefits attributable to passenger rail service. These benefits are summarized in Table 4.5 for each of the three corridors. As might be expected, benefits are highest for the Detroit-Chicago “Wolverine Corridor” which has the most service and ridership and the greatest population. The Wolverine Corridor receives $45 million

annually in benefits, the Blue Water Corridor receives $9.7 million, and the Pere Marquette Corridor receives $7.3 million. It is important to state that these represent quantifiable benefits attributable only to the local communities. Additional benefits more difficult to quantify relate to how the existence of passenger rail service in a community enhances its image as a place to live and do business. Significant additional benefits also accrue to the entire state related to traffic congestion relief, energy conservation, and air quality improvement. It is important to emphasize that these and other macro level benefits should be considered in any consideration of the overall value of Amtrak service.

Table 4.5

Summary of Quantifiable Community Benefits

	Pere Marq. Corridor	Blue Water Corridor	Wolverine Corridor	Total Statewide
Traveler savings	$2,808,380	$4,283,972	$12,872,105	$19,964,456
Non-traveler savings	$345,737	$545,449	$1,848,575	$2,739,761
Local business benefits	$3,572,199	$2,942,865	$19,159,480	$25,674,544
Amtrak expenditures	$551,035	$1,949,089	$11,133,556	$13,633,680
Total Community Benefits	$7,277,351	$9,721,374	$45,013,716	$62,012,441

Note: Values taken from Excel spreadsheet Table 8.6 and subject to rounding.

4.6 Intermodal stations and coordinated Amtrak bus services.

A number of Amtrak stations are also served by local transit agencies and/or intercity buses. In some cases, such as Kalamazoo, a major multi-modal transportation center provides a wide range of services and facilities for transit, intercity bus, and passenger rail users. Intermodal stations allow for the easy transfer of passengers between the different modes for both local and intercity travel. There are three Michigan services where Amtrak and intercity bus services are coordinated:

- Flint, East Lansing, and Battle Creek. Indian Trails buses on a regular route will pick up Amtrak passengers at Flint and East Lansing and drop them at Battle

Creek where they can board an Amtrak train traveling between Detroit and Chicago. This twice-daily service in each direction supplements the single daily Amtrak round trip. It greatly expands the travel opportunities for those passengers who are unable to utilize the limited Amtrak schedule.

- Kalamazoo, Grand Rapids, and northern Michigan. Indian Trails buses serve Amtrak passengers at Kalamazoo and transport them to and from Grand Rapids and northern Michigan points such as Traverse City, Petoskey, and St. Ignace. This daily round trip allows an Amtrak passenger to travel to Kalamazoo on an Amtrak train and connect with an intercity bus to northern Michigan. This service also provides increased travel opportunities for Grand Rapids passengers between Grand Rapids and Chicago that cannot use the single daily Amtrak round trip.
- East Lansing, Ann Arbor, Detroit, and Toledo. Amtrak operates a dedicated daily intercity bus service between East Lansing and Toledo with intermediate stops in Ann Arbor, Dearborn, and Detroit. This service is only available for Amtrak passengers traveling on Amtrak trains to and from eastern points such as New York City, Boston, or Washington DC. Connections are made at Toledo for these points. This service is well utilized even though connecting times in Toledo are in the middle of the night and this service does not connect directly with any Michigan Amtrak trains.

Ridership on these “Thruway” services is generally quite low compared to overall Amtrak ridership in Michigan. Specific information was not readily available to the research team but it is estimated that, on average, about 100 persons daily or 36,500 passengers annually use these services, predominantly on the Toledo connecting bus service. The availability of Amtrak connecting services does result in benefits to the local Michigan community where the trip originates or terminates. Those Michigan passengers using the Battle Creek or Kalamazoo connection are already included in the estimates. This area could be further investigated.

As a general statement, no significant amount of benefit accrues to the station community where a simple transfer between modes occurs. The passenger may purchase a meal, drinks, or other incidentals but typically will be in the area for only an hour or so. The greater benefit may be that the coverage of the passenger rail service is increased. The ease of transfer results in additional connecting services, which increases the number of persons traveling to or from the local community where the intermodal terminal is located. One could speculate that the development of a Midwest high-speed rail system with fast and frequent trains would greatly increase the demand for connecting services to and from those communities that are located on the high-speed line. This would benefit travelers using the high-speed service and would greatly increase the accessibility of the local community for others as well.

4.7 Benefit estimates for new stations or services

The community benefit calculation spreadsheet process may be used to estimate benefits for new services. This could be a new station or enhanced services at an existing station. The important caveat is that ridership estimates must be provided as an input as well as certain other information. Ridership is the most important driver of station benefits. Ridership estimation is a complex process typically involving computer models that use origin/destination data for auto and other modal travel. These models also consider passenger rail characteristics such as service frequency, travel time, pricing (i.e., fare structure), on-board amenities and other factors. The ridership estimation model will provide the number of individual passenger rail trips for the different city pairs served by the proposed station.

The benefit estimation process involves the substitution of new ridership data into the spreadsheet. Passenger fares are obtained and multiplied by the number of one-way trips via rail to derive total user travel costs. Alternate travel mode information must also be obtained for auto, air and intercity bus. It may be necessary to develop modal split estimates if this information is not available from surveys or the ridership forecasting model. Working through the spreadsheet will provide an estimate of total

savings for passenger rail travelers at the subject station. Non-traveler savings will be automatically calculated.

Local business revenues are calculated by multiplying total ridership by spreadsheet default values of $15, $20 or $25 depending on the classification of the community (see Section 4.23). A different value may also be substituted based on specific community level information. Amtrak expenditure information, if any, may be added to the table. In many cases, this may only be expenditures related to station staff employed by Amtrak.

Multipliers specific to the location of the station must also be added (see Section 8.33 for appropriate current multipliers). The spreadsheet will automatically calculate the total community benefits associated with the proposed new station. It is important to emphasize that this process is designed for intercity passenger rail travel, to estimate benefits associated with those traveling longer distances (e.g., from Detroit to Chicago). The intercity traveler often stays overnight, eats at restaurants, visits friends or family, shops, and uses taxis. The process is not appropriate for commuter rail passengers since these travelers have very different characteristics.

5.0 Case Studies of Station Development

There are numerous direct and indirect benefits to communities resulting from the passenger rail service provided at existing stations. However, these benefits can be enhanced and expanded through the investment in a new or relocated station. These benefits are discussed in more detail in the next chapter of the report. Summarized here are some current local efforts to increase the value of a station to its community and to enhance the transportation service it provides. Each situation is unique based on the characteristics of the station, the community, and the resources available for the project.

5.1 Dearborn: Relocation to access major attractions

The City of Dearborn is planning to relocate the existing Amtrak station and replace it with a new multi-modal facility that better serves many of the major attractors of the city. The location of the current station resulted from an effort to locate public facilities between the two traditional downtown areas of Dearborn. Thus, the police headquarters, library, and cultural center are in the complex where the station is located and there is plenty of free parking available. However, the current location is isolated from most retail services, so there are few businesses that benefit from the station's present location and it is isolated from other major community assets.

The proposed new location is at Michigan Avenue (U.S.-12) and Elm Street. At this new location, the station can become a community focal point and provide an opportunity for new commercial and residential development. The new location will be more accessible to the major centers of the west downtown, including the shopping and restaurant district, the Henry Ford/Greenfield Village complex, and the Dearborn U of M campus.

Partnerships are being formed with local businesses and developers as part of the development process. Ford Motor Company is donating the land for the new station. The Chamber of Commerce is a strong supporter of the project and plans to eventually have its office in the new station building. The new multi-modal facility will include space for exhibits by the Henry Ford Museum and other attractions as well as the Chamber offices. Pedestrian connections to the downtown and U of M campus will be provided. The city is anticipating significant Transit Oriented Development around the site.

Conceptual plans, engineering, and rail studies have been completed by a consultant. The estimated costs for the new station project have been split into phases. The initial phase would be construction of a temporary station at the new site with minor site improvements and work on the rail infrastructure. The cost of the first phase is

estimated to be approximately $1 million. Construction of the new multi-modal station, other site improvements, and additional rail infrastructure would cost an estimated $21.4 million. Specific funding sources for the project have not yet been identified. The Environmental Assessment study for the project was completed late in 2008. Both Suburban Mobility Authority for Regional Transit (SMART) and the Detroit Department of Transportation (DDOT) have agreed to serve the new location. The current loading platform at Greenfield Village would be consolidated into the new station.

Implementation of additional commuter rail service, currently under consideration, is a key component in development of the new station. The proposed plan being coordinated by the Southeast Michigan Council of Governments (SEMCOG) would begin commuter train service between Ann Arbor and Detroit by October of 2010. Opening of a temporary station at the new site would coincide with the beginning of this service. If ridership levels prove the viability of the increased service, the full new station development would begin by 2013. The new station would also be a key beneficiary of new high-speed rail services that are being proposed for the Detroit-Chicago corridor.

5.2 Birmingham-Troy: A joint community effort in an urban suburb

The cities of Birmingham and Troy are joint sponsors of a plan for the relocation of the current Amtrak station in Birmingham to a site in Troy that would have a multi-modal transportation terminal serving both communities. The current station is a shelter located on the west side of the tracks in Birmingham amidst a new loft development with virtually no onsite parking.

The proposed site for the new station is a 3.5-acre parcel of land located in the City of Troy adjacent to and east of the railroad tracks at the rear of the Midtown Square Shopping Center. As part of a consent judgment associated with the development of the mall by Grand Sakwa Properties in 2000, the city was given a ten-year option to use

the parcel for development of a transit center. If the development does not occur by 2010 then the land reverts to Grand Sakwa or must be purchased for $1.5 million.

A strategic plan for development of the site has been prepared by U of M's Taubman College of Architecture and Urban Planning. It analyzed the transportation, demographic, and economic characteristics of the communities and presented development scenarios. The scenarios suggest that the new transportation center could be associated with as much as 300,000 square feet of new retail space and as many as 290 new attached residential units. The mix of retail and residential varies by option.

On September 22, 2008, the two cities voted to create a joint planning commission to oversee development of the project and to hire a project manager. The current estimated cost for the new facility is approximately $5.6 million which includes the station and a tunnel under the tracks for passenger access.

5.3 Detroit: Accessibility for the region's core

The current Detroit Amtrak station is located adjacent to Woodward Avenue in the Detroit New Center area. The station is about 3 miles north of the central business district and the office, sports, cultural and other venues in the downtown area. The current station is located in a temporary building on the north side of the CN/CR elevated railroad right-of-way and has very limited parking. MDOT and Amtrak have, for many years, been planning a new station building on the south side of the railroad from the existing station. The new station would have more parking and be designed to serve commuter as well as intercity trains. The land has been acquired. The existing and proposed new sites both have the advantage of being located on Woodward Avenue, which is a major north-south route in the region. Two plans for new light rail service on Woodward Avenue have been proposed by the Detroit Department of Transportation and by a privately funded group. Either of these plans would allow rail

passengers the opportunity to transfer to a light rail system to travel to the downtown area.

The layout of the Detroit area rail system is the major reason for the location of the existing and proposed station site. It has significant advantages in terms of rail operations and regional connectivity for existing and future services. A location closer to the downtown area would be desirable but does not seem feasible given the rail system configuration. A concern with the current location, especially for commuters, is that a transfer to another mode will be required to access the downtown area. While this is possible today by bus and possibly by light rail in the future, it does cause additional travel time, cost and inconvenience to travelers.

5.4 St. Joseph: A possible tourist destination

There are major expansion plans around the station area that will be funded mostly from private sources, with some state\local funding. These plans focus on increasing St. Joseph's reputation as a tourist and recreational center and include:

Silver Beach Memory Project ($20 million) which will include a Curious Kids Museum, a carrousel, an interpretive fountain, and a miniature convention center. Harbor Shores Project within walking distance will be an ambitious project that will have an 18 hole Jack Nicholas Signature golf course, boutique hotel, and 850 housing units with mid-size condo towers. The golf course is expected to open soon but the other parts of the project may take five to seven years.

The major expansion projects around the station area, along with walking access to the beach, should make it a more viable tourist destination, especially on weekends.

5.5 New Buffalo: A retirement\vacation homes complex

Since the inception of the Pere Marquette Service in 1984, New Buffalo has been served by one round trip daily, utilizing a bus shelter facility on the edge of an abandoned rail yard, about ¾ mile south of the community's downtown and marina district. Amtrak's Wolverine corridor runs through the marina district, but no passenger trains have made stops there in a number of decades. A real estate developer is now constructing a replacement station in the marina district, and Amtrak indicates at least two Wolverine Service round trips will be accommodating New Buffalo passengers. Existing service on the Pere Marquette line will be terminated when the new platform is operational and Wolverine service begins.

With the new train station, extensive real estate development, and a golf course, there is a good chance that New Buffalo could be a major focal point for retirement homes or second homes, with relatively quick access to Chicago.

Most of the shops\restaurants are within walking distance of the new station. There are an estimated 3000 housing units that will cluster around the New Buffalo area and all of these residences would benefit from the train access to and from Chicago—62 miles away. These residences are mostly condominiums and town homes -- many of them with lake and golf course views.

Most of the funding for the proposed station site and around the station has been from private funds. Besides relocating the station closer to the lake and the new condominium developments, there are some projects to re-vitalize the downtown area. One of them is the Fountain Square Project across from the proposed station site that will help to increase activity close to the station.

The key issue for the success of the new station would be the density of mixed housing around the area. The developer indicated that he is obtaining considerable interest from Chicago clients on these new homes\condos.

5.6 Kalamazoo: A broad multi-modal network

The station is truly multi-modal with strong connections to local transit and Indian Trails and Greyhound intercity bus services. The plans are to expand the multi-modal framework beyond the City of Kalamazoo to a larger part of the county with the establishment of a countywide transit entity. The existing multi-modal transportation center is adjacent to the Kalamazoo downtown area and has bus bays for local transit as well as intercity buses. The former train station has been renovated to provide indoor waiting, restroom, convenience shopping and other facilities for both bus and rail passengers. The transportation center is owned by the City of Kalamazoo and managed by Metro Transit. This transportation center provides an excellent example of a multi-modal facility designed to meet the needs of the different modes. The perceived benefits are many in terms of making the downtown area more connected and vibrant. The goal is to link the train service with other modes of transportation. Without the train service anchor, this would not be possible.

It should be emphasized that this station is able to develop a multi-modal framework because it has sufficient population density/commercial activity around the station in downtown Kalamazoo and one of highest levels of intercity train and bus activity in Michigan.

Metro Transit is a large organization employing about 130 persons. They have an administrative and maintenance facility adjacent to the station. Total operational expenditures for the station are approximately $180,000 annually. The tickets for Indian Trails and Greyhound are sold by Metro transit ticket agents on a commission basis. This commission revenue is about $80,000. Other sources of revenue include concession stand lease income.

Kalamazoo represents a good model for a wide multi-modal framework that increases the economic vibrancy of a broader region.

6.0 Community Benefits of New Station Development

In situations where a new Amtrak station is to be developed, there is the opportunity for numerous economic benefits to the community. These benefits may take many forms including local job creation, increased property values, new residential and commercial construction, and creation of new businesses in the areas surrounding the station development.

The primary analysis of economic benefits from new station development/redevelopment has been through studies of Transportation Oriented Developments (TODs) throughout the US. These studies generally focus on commuter rail service in densely developed corridors. However, many of the same types of benefits could accrue to Michigan Amtrak stations and could be enhanced by improvements to the station locations and levels of service.

Types of economic benefits:

6.1 Increased employment from station construction.

The construction or redevelopment of a station provides direct construction jobs and results in the creation of spin off jobs in the local economy. A station construction cost of $10,000,000 will result in the creation of an estimated 90-140 new jobs and $5,000,000 in additional spending in the local economy. These are much more conservative values compared to APTA values shown in Chapter 7. The difference is that this research only includes direct construction impacts and does not include future developments based on business stimulation.

6.2 Increased property values.

Estimates from TOD studies throughout the country indicate a wide variation in property value increases for property within ¼ mile of the station development. The

range for residential property is 2% to 45% and for office/retail 1% to 167%.[1] The situation for Amtrak stations is somewhat different from many urban light rail systems since Amtrak generally operates on rail freight lines. This may make residential proximity somewhat less desirable. However, creative land use planning and an increase in the level of public transportation services to a site can increase the desirability and value of adjacent property.

6.3 New development of adjacent land.

Creating a transportation focal point can be a stimulus for new development of various types. The location of a station and its surrounding land use is key. A site that is surrounded by public land has the potential for development by the municipality or by the municipality in conjunction with a private developer. Stations with little available vacant land or with incompatible surrounding land uses have limited potential. Municipalities working with local developers throughout the station development process can insure that the benefits of the new location are maximized. Estimates from the Birmingham/Troy station relocation currently under study suggest that the proposed multi modal station development under optimal conditions could generate up to 300,000 square feet of retail development and 290 new residential units.

6.4 Increases to the local tax base.

As property values increase around a station development, additional property tax revenue will be generated. These increases can be leveraged by local governments through the use of assessment districts, Tax Increment Financing (TIF), development fees, and leveraging public land value through joint development projects with the private sector.

6.5 Factors affecting development:

Although the above are potential benefits for all station developments, the extent to which they are realized can be increased or limited by the following:

[1] "Capturing the Value of Transit" by Reconnecting America's Center for TOD. 2008

6.51 Overall regional economic strategy

The literature on the economic impact of train stations demonstrates that ambitious station plans are necessary but not sufficient by themselves to make a major difference in a region. There has to be an overall economic strategy for the region that is based on some kind of comparative advantage or "hook" the region can develop to increase ridership and commercial activity. The critical component is effective long-term station area planning within the context of an overall regional economic plan for developing a viable TOD.[2]

6.52 Surrounding land use.

As in other real estate related situations, location is a primary consideration. Adjacent land uses can severely limit development potential because of either incompatible uses, or the lack of vacant land for new development. New commercial or residential development is also enhanced by proximity to existing centers of urban activity such as restaurants, shopping, and housing. The current locations of Michigan's Amtrak stations are the result of a variety of factors such as historical location and availability of land and were not always the result of coordinated local planning, thus some locations are not optimal.

6.53 Frequency of passenger rail service.

As discussed in Chapter III, new development is driven by increased activity in and around the station site. As already noted, successful TOD occurs where frequent passenger service generates large numbers of users. Currently this is a significant issue for Amtrak stations, many of which have only one round trip per day. The proposed relocation of the Dearborn station, which currently has three round trip trains per day, is predicated on the implementation of additional commuter service that would

[2] Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects, TCRP Report 102, Transportation Research Board, 2004.

bring daily usage up to about 1,000 passengers per day by the addition of several additional daily round trips between Ann Arbor and Detroit.

6.54 Access to the station.

Another way to increase ridership and station activity is to insure there is easy access to the station for potential users. This includes coordination with local and regional bus services in terms of schedules and physical access to the station for boarding and unloading passengers. The walkability of the adjacent community can provide a better opportunity to integrate the station development with the community. This should include safe, convenient access to the station area for pedestrians and bicycles. Roads providing direct access to the station should be kept in good condition and adequate directional signing provided within the community.

7.0 Literature Review of Economic Impacts

An analysis of past studies on train stations and transport linkages reveals that most of the literature falls in two broad categories.

The first category includes analysis of transport corridors in *high-density areas* and how that leads to a wide variety of economic and social benefits. This type of high-density analysis has been termed Transit-Oriented Development (TOD) by the national Transportation Research Board (TRB).

Although the investigation of the economic impact of 22 Amtrak stations in Michigan clearly does not fall in this category, it is useful to catalogue the benefits and the policy lessons from these investigations since they focus on the economies of scale and scope that can *eventually accrue in the long run if a critical mass of development takes place around the station areas.* Moreover, the policy implications that are analyzed in these studies are relevant even for lower density transit systems in order to achieve the next higher level development and traffic density.

The second category of studies is about proposed and existing transportation systems that involve less density and smaller regional development areas. This type of analysis would be more in line with the present study of 22 Amtrak stations in Michigan. These types of studies, for lack of a better term, can be termed Community Impact Studies (CIS). It has been important to review these studies to glean different methodological insights that can be employed for the present investigation.

One other methodological issue needs to be discussed. It is difficult to analytically separate the projected benefits that may accrue because of the rail stations per se and the benefits that involve higher ridership levels. The studies discussed in this section tend to estimate the benefits that accrue to the transit system without making an explicit distinction between rail stations and ridership.

7.1 Lessons from Major Transit Oriented Development (TOD)

The most authoritative analysis of high-density transportation corridors has been performed by the *Transit Cooperative Research Program* of the Transportation Research Board (TRB, TCRP Report 102, 2004). This more than 500 page report analyzes different aspects of major TOD projects. Topics discussed include the policy environment that promotes TOD, how to finance and remove barriers, the direct and indirect benefits, and case studies of major transportation systems. The detailed case studies relate to ten major high-density transportation areas: Boston, New Jersey's transit villages, Washington D.C., Miami-Dade County, Chicago, Dallas, Mountain West Colorado, Portland, San Francisco Bay Area, and Southern California. The discussion in this section is based primarily on the TCRP Report 102.

The TRB catalogues the benefits of TOD as follows:

Primary Public Sector Benefits

- More ridership and fare revenues

- Economies of scope between rail, air and bus opportunities
- Resurgence of economic growth in neighborhoods
- Broad based economic development

Primary Private Sector Benefits

- Appreciation of land values and real estate improvement
- Better housing opportunities for mixed income

Secondary Public Sector Benefits

- Reduced traffic congestion, fuel use and pollution
- Higher property\sales tax revenues
- Limiting sprawl and conserving open areas
- Lower road and infrastructure expenditures
- Less crime, more social capital and public engagement

Secondary Private Sector Benefits

- Higher retail sales
- Better access to more integrated labor supply
- Lower parking expenditures
- More physically active lifestyles

There is obviously significant overlap between these benefits and one could argue that some of the benefits classified as primary are actually secondary. However, what the detailed analysis of many high density transportation corridors makes clear is that these benefits are significant and substantial. In fact, any regional transportation system needs to analyze the policy imperatives of how a higher density development can take advantage of this extended list of benefits that tend to progressively accumulate because of economies of scale and scope.

7.2 Policy Implications and lessons of the TRB report

Most respondents in the TCRP report point out that local area governments need to resolve specific development obstacles in order to encourage working with private sector stakeholders. These obstacles typically include an agreement about the appropriate mix of land uses around rail stops, parking standards, and developing joint plans that capitalize on the synergy between rail, city, and regional bus systems.

The TCRP report emphases that one critical piece is *effective long-term station area planning within the context of an overall regional economic plan for developing a viable TOD.* The general development plans have to be supported by *station area plans* that typically try to increase customers by:

- Promoting interdependent land uses by mixed zoning
- Identifying open space and pedestrian walkways that are conducive to development
- Developing growth oriented building and parking code policies
- Providing synergies with other non-rail transportation opportunities such as city buses, intercity buses, and taxis.

Previous investigations indicate that people who reside near large rail stations are typically 5 to 6 times more likely to use the rail system compared to those who reside far away. For this reason, it is essential to focus on the following:

- Creating the conditions that allow more *self-selection* is critical. Persons typically choose to live close to stations for life style reasons. Typically, self-selection can explain up to 40% of the increased ridership around a TOD.
- In order to provide opportunities for self-selection, one increasing trend is the conversion of park-and-ride lots to mixed-use, moderately dense housing developments. The TCRP report indicates that 20% of the properties around transit areas are planning to move in this direction.

- It is important to improve access to stations by the creation of walk-friendly designs that are aesthetically pleasing.
- It has been shown that promoting more office\retail projects around rail stations significantly increases rail boardings and alightings. Some of the models for the Arlington County (Virginia) region demonstrate that every 100,000 sq. ft of additional office\retail space during the 1985-2002 period resulted in an increase of approximately 50 boardings\alightings per day.

One of the major impediments of developing a viable TOD is a lack of consensus among the major stakeholders due to conflicting expectations. It is important to arrive at a public-private sector consensus and understanding on a fair share of the projected risks and rewards for the major participants. The reason why this is difficult is that different stakeholders tend to have somewhat conflicting goals and motivations for a TOD. Typically, transit authorities are drawn to TOD mainly to increase public sector revenue so that the project can be funded for the long term. Other public stakeholders involved in TOD, such as state and city officials, tend to focus on the broader benefits that may accrue. These benefits include reducing sprawl, increasing growth opportunities, a wider set of housing choices, and creating employment opportunities. On the other hand, private stakeholders are typically interested in a viable rate of return on their financial investments. Ensuring that the matrix of the risk\return payoffs is perceived as equitable and viable for the different stakeholders is an ongoing major issue. In neighborhoods that are facing significant economic challenges, a lack of consensus about the distribution of risks and return payoffs can often be a major impediment.

There is a widespread consensus that TOD is primarily a “bottom-up” enterprise. Regional governments are in the best position to bring projects to a successful conclusion because of their ability to raise funds. Transit authorities can best aid the development of TOD by providing reliable quality rail and bus service. An important component of the “bottom-up” approach is to have a viable network of financiers and developers. There was uniform consensus among stakeholders that state and federal

governments need to provide a nurturing and effective financial, legislative, and institutional framework for TOD to achieve a critical mass.

7.3 APTA report about economic impact

A report undertaken by Cambridge Systematics, Inc. for the American Public Transportation Association (APTA, 1999) made a comprehensive economic benefit analysis of the national public transportation system. Their major findings were:

- An investment of $10 million in *transit capital investment* would create 314 jobs, business sales of $30 million, and a saving in transportation expenditures of $15 million which includes fuel savings and less congestion.
- An investment of $10 million in *transit expenditures* related *to operations* will generate 570 jobs and $32 million in sales.
- Transit investment typically accumulates significant positive business impact over the years. A continued and sustained $10 million transit program investment will create $2 million in business output and $0.8 million in personal income annually even in the short run.

Although these broad-brush national averages typically apply to high traffic density areas, they indicate that the benefits can be substantial. The extent of these impacts will also be correlated with the amount of traffic density. There are also spillover effects from one region to another because of the inter-dependence between regions in an integrated economy. Consequently, the national profile estimates tend to incorporate not only the benefits of higher density but also the regional spillover effects from the adjacent areas.

One thing these national studies make clear is that the impact of a TOD depends critically on the economic base that it serves and seeks to extend to the next level. It is difficult to analyze the economic impact of train stations without taking into account the economic conditions around the region. These economic conditions include overall

performance measures such as income per capita, job opportunities, and the skills of labor force.

7.4 Community Impact Studies (CIS)

There have been several regional studies on train systems that are less well known at the national level. Most of these studies are limited by the availability of regional data. A community impact study of the Kenosha-Racine-Milwaukee (KRM) Commuter Rail Project (2007) was performed by the University of Wisconsin, Milwaukee. The study found that the impact of the KRM commuter rail would be substantial. Initially, it included the creation of 4,700 jobs with a $560 million impact during construction. During the project operation and maintenance phase, the impact was more modest: 126 jobs and $24 million annual impact. The project anticipated a significant increase of tourism from northeastern Illinois to southeastern Wisconsin. A significant increase in property values in the range of 4% to 20% was also expected. The indirect impact was calculated by using the Bureau of Economic Analysis RIMS II final demand multipliers.

Of particular note was the expected Transit Oriented Development (TOD) within half a mile of the nine KRM stations. This included:

- Approximately 23,000 units for living
- An increase in retail space of 7.6 million square feet
- An increase of 4.7 million square feet of office space
- 71,000 employment opportunities
- An appreciation of property values by $7.9 billion

It was anticipated that 20 to 50 percent of this development\expansion would not take place in the absence of KRM commuter rail. However, this broad estimate of the indirect economic impact is based on the national profile of the APTA report discussed above and a case study of the San Diego Area. Although, the range of expected

benefits are quite wide, it is not entirely clear how applicable the APTA national baseline estimates may be for a regional transportation system with lower traffic density.

The KRM study is based on a previous, more comprehensive analysis performed by HLB Decision Economics for the Wisconsin Department of Transportation (2003). An important methodological insight of this study was to analyze the benefits of transit services by the purpose of the visit. This study found:

- Largest proportion of the trips was related to work (48%) which resulted in a total savings of $333 million. Most of these savings came from a reduction in transportation costs and reduction in public assistance programs.
- About 23% of the trips were related to education, resulting in a savings of $91.3 million.
- About 10.5% of the trips were related to health care which resulted in a savings of $193 million. Most of this saving was in transportation costs, although there were significant reductions in home health care costs of about $59 million that are included in the total.
- Approximately 18% of the ridership was for shopping, recreation, and tourism. The total savings attributed to this category was $113 million.

The main methodological improvement in this study is to attribute an opportunity cost value to the trips that would *not be made* in the absence of the transit services for each trip purpose.

The percentage of commuters that would not have made the trip varied depending upon the purpose of the trip:

Work related:	18.5%
Medical purposes:	13.7%
Education:	12.6%
Recreation\shopping**:**	11.7%

It is not surprising that the lowest percentage of forgone trips is for recreation and the highest is related to work and medical purposes. The opportunity costs of foregone travel are divided into two components. One is to estimate the cost of the lost trips that are not made for specific purposes such as work, health care, or education. The second indirect impact is on the quality of life that has general societal benefits. These sector specific overall costs of foregone trips are significant.

An economic impact study of Amtrak's Downeaster service prepared by the Economic Development Research Institute for Maine DOT (2005) estimated that the overall economic benefits to Maine and New Hampshire would amount to approximately $15 million dollars annually. This overall increase had the following components:

Visitor Spending:	$3.5 million
Economic Development Impact:	$4.4 million
Savings by using Downeaster:	$0.7 million
Spin-off activities:	$6.5 million

These benefits were expected to generate 240 jobs and personal income of $4.7 million. One time construction benefits of $1.3 million were estimated. It was expected that the projected benefits by 2015 would exceed $100 million a year.

The authors of the study emphasized that in 2005 the Downeaster rail service did not have the attributes of a commuter rail system. By 2008, the rail line had a more frequent service (such as 5 daily round trips from Boston and Portland) and another study was conducted by the Center for Neighborhood Technology (CNT) in 2008 to estimate the Transit Oriented Development potential. It noted that Downeaster ridership had increased significantly by 32% in 2006, 5% in 2007, and 20% in 2008. Several significant hotel and office developments had taken place. Based on recent trends in the area and an optimistic prediction that by the year 2030 approximately 27% of the population in the Maine counties would be located in TODs around the rail stations, the

study projects that this will result in the approximately $244 million transportation cost savings per year.
It also projects the following benefits accumulated over 22 years:

- Construction investment of around $7.2 billion
- Creation of 17,800 employment opportunities

It should be noted that these optimistic projections are based on the *national projection* that approximately 27.4% of the population that moves into metropolitan areas in the U.S. served by *small but growing public transit systems*, tend to cluster around the TOD areas. These projections are likely to be quite sensitive to this underlying assumption. It is not entirely clear whether this ambitious program would be realized.

7.5 Implication of previous empirical investigations

There are several methodological implications for our analysis that flow from these recent empirical studies that have been reviewed:

1. The direct and indirect benefits are sensitive to the traffic density of the rail stations. Stations that have a significantly larger volume of passengers tend to generate a wider array of benefits because of economics of scale and scope.
2. Long-term benefits of train stations are tied ultimately to the comprehensive regional development around the area. In particular, trends such as population density, employment, commercial developments, and availability of mixed housing around the stations tend to impact long-term benefits.
3. In the absence of reliable regional estimates, many studies have relied on the national profile estimates. Our analysis of the economic impact of Michigan's 22 Amtrak stations employs regional data as much as possible.
4. Empirical studies on projected benefits are based on different methodological frameworks that measure opportunity costs in different ways. However, the more comprehensive studies tend to estimate the *benefits foregone for passengers*

that would not make the trip in the absence of the rail stations. It is important to take into account the opportunity costs of foregone trips.

5. The projected benefits of these studies are, at best, broad estimates at a point in time. These estimates are sensitive to the underlying assumptions such as the demographic and economic profile of the regions, the prices of fuel, labor and other antecedent costs. Consequently, it is desirable to eschew point estimates and generate estimates that are associated with different confidence levels.

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8.0 Appendices

8.1 Station development perspectives

A brief description and photograph of each of the stations is provided to give the reader a sense for potential development opportunities.

Port Huron. This Amtrak owned station was built in the 1970's. It is somewhat isolated from the community in an industrial area and is unlikely to be much of a catalyst for development at its present location.

Flint. This is a modern station housing both Amtrak and intercity bus service providers. It is owned and operated by the Flint MTA. The station building is located in the MTA compound and has ample parking and security. The potential for adjacent development is limited because of the isolation of its present location.

Lapeer. This restored station, originally built in 1900, is located in a commercial/industrial area. The station was recently painted and improved and has a community meeting room. It represents a good example of a small town depot that meets the needs of a smaller community.

Durand. This large historic brick structure was built in 1905 to serve the needs of a railroad-oriented community. Durand was a major railroad junction point and the building housed railroad offices as well as serving the needs of the many passenger trains. This station is owned by the City of Durand and contains a railroad museum as well as space for Amtrak passengers. It is located on a large parcel of land but is somewhat isolated from the downtown area by very active rail lines that require a circuitous route to gain access to the station area.

East Lansing. The station is located in a former warehouse owned by Michigan State University. The area surrounding the station is very congested with busy rail lines and heavy street traffic that causes access problems and limits development potential. The station is located near the Trowbridge Road/US-127 interchange and adjacent to Michigan State University.

Grand Rapids. This station is located in a small building that was renovated in 2008 by a state grant to the West Train organization. It is located on a small parcel of land with somewhat limited on-site parking but with a satellite parking lot nearby. The immediate area is industrial/heavy commercial with heavy traffic and a layout that results in streets blockages when trains are loading and unloading.

Holland. The Padnos Transportation Center represents a fine example of a restored older station. It is the community's intermodal facility for the local transit agency and Indian Trails as well as Amtrak. The overall environment and the condition of the station make this a pleasant place to board or deboard the train.

Bangor. The City of Bangor recently renovated this station originally constructed in 1926, and in addition to an Amtrak waiting room, it contains offices and a coffee shop. The station is about a block from the downtown area.

St. Joseph. Built in 1913, the former Pere Marquette railroad station is used as both a restaurant and a waiting room for Amtrak passengers. It is immediately adjacent to downtown St. Joseph at the bottom of a hill. The immediate area is experiencing condominium and other development activities. Several tourist attractions are nearby.

New Buffalo. A new station is being built in 2009 on the Wolverine line by a private developer. It is located immediately adjacent to downtown as well as a marina and several large condominium projects. The developer expects to attract sales from Chicago residents because of the short commute to and from Chicago.

Pontiac. The former intermodal center building has been removed and an interim modular building is currently being used for intercity bus and Amtrak passengers. A new station building is planned. The general area is relatively close to downtown Pontiac and adjacent office buildings.

Birmingham. A new bus stop type shelter was constructed in 2008 as well as new walkways. This station is located immediately adjacent to a new loft-condominium project and commercial developments, but lacks on-site parking. A major new intermodal station serving Troy and Birmingham is being planned to serve the area and will be coupled with transit oriented development.

Royal Oak. This is a bus stop shelter type station immediately adjacent to the downtown area. Indoor waiting room facilities and an Amtrak ticket machine are nearby in the SMART bus station. Pay parking is available.

Detroit. This is a modular building constructed in the 1990's. It is located on Woodward Avenue, a major north-south thoroughfare in the region. It is about three miles from downtown Detroit but is adjacent to the Detroit New Center, a major office/commercial area that was formerly the world headquarters of General Motors Corporation. There is long-term parking available in adjacent parking ramps. There have been plans for many years to replace this station with a new facility immediately south across the railroad tracks.

Dearborn. The current station was constructed as an Amtrak facility in an area surrounded by other city municipal buildings. There is ample short and long-term parking but the station is isolated from the downtown business areas of the city. The City has plans to relocate the station to a site adjacent to both the western downtown area of the city and the Henry Ford-Greenfield Village complex and to eventually construct a multimodal station.

Ann Arbor. The current station was constructed as an Amtrak facility and is located on the edge of the downtown area. There is a large long term parking facility that is separated from the station by the rail tracks requiring a walk over a nearby bridge to access the station. There are several bars/restaurants nearby.

Albion. This restored 1882 brick train station is also used by Greyhound and is owned by the city and sub-leased to a private business. It is located in a mixed industrial/commercial area.

Jackson. Built in 1873, this is Michigan's oldest train station still in active service. It has been renovated several times but its Italianate architecture is from an earlier era. It is located in a commercial area near downtown Jackson. Recent federal grants have been secured for rehabilitation of the existing station buildings and long-term plans completed for conversion of the facility to a multi-modal center.

Battle Creek. This modern station was built in the 1980's near downtown Battle Creek. It serves local and intercity buses as well as Amtrak.

Kalamazoo. The Kalamazoo Transportation Center is located in a renovated and greatly expanded historic station on the edge of downtown. It is an excellent example of a true multi-modal facility with space for local transit, intercity buses, and Amtrak.

Dowagiac. This restored 1903 brick passenger station is located immediately adjacent to the central business district and has ample parking and facilities.

Niles. Another restored historic station with outstanding Romanesque architecture, built in 1892. The building also serves as a base for Amtrak track and signal employees responsible for the Amtrak owned line between Kalamazoo and Porter, Indiana.

8.2 Integration with MDOT's Transportation Management System (TMS)

MDOT was originally interested in the integration of a local benefit assessment process with their Transportation Management System. Because of budget constraints this effort was eliminated from the current project with the thought that it could possibly be done later if resources were available.

Direct integration of the "Community Benefit Summary" process may be possible. The current Excel spreadsheet approach utilized station specific ridership managed in TMS. It was manually taken from the TMS and inserted in the spreadsheet. It served as the main driver for the calculations for each station. A computerized process to directly transfer ridership from the TMS file to a spreadsheet file may be feasible.

Experience with the spreadsheet approach also suggested that there might be ways to simplify and automate the other calculations as well. Manual review of on-board survey data was required for our process. This could be simplified by assuming that shifts to alternative modes would be the same in communities with similar demographics and modal service characteristics. The fare structures for bus and air also created challenges and problems given the wide variance in fares between city pairs. This could possibly be simplified and adjusted up or down on an annual basis dependent on overall trends. These adjustments would generate good estimates that should generally be adequate. A more in-depth review of assumptions could occur every few years based on new on-board surveys or significant changes in travel habits. A streamlined process integrated directly with the TMS could likely be developed.

8.3 Induced multiplier effects of Amtrak Station related expenditures

8.31 Introduction.

To estimate the ultimate impact of expenditures on Amtrak stations, the over all direct and induced expenditures must be combined. The induced effects happen because the expenditures for Amtrak operations in Michigan and the expenditures by passengers traveling on trains stimulate other industries. Typically, these induced effects arise because of backward and forward linkages between industries. For instance, Amtrak expenditures on materials to maintain their facilities stimulate other industries that provide the materials. Some induced effects are changes in local spending that occur because the Amtrak expenditures generate incomes for others that results in subsequently more expenditures.

However, there are significant leakages from these induced effects. If Amtrak purchases goods that are imported into Michigan, what ultimately accrues to the state will be only the retail, wholesale, or transportation margins. Part of the money received as income may actually be spent out of state or saved. Consequently, the ultimate multiplier impact of Amtrak expenditures will be muted to some degree.

8.32 Types of Regional Multipliers

There are three major sources of regional multipliers.

1. The RIMS II model is based on detailed input-output tables from the Bureau of Economic Analysis (BEA) of more than 500 industries and utilizes the BEA regional economic accounts.
2. The REMI model includes not only an input-output model but also a simulation process with econometric equations. In addition to BEA data, the REMI model uses County Business Patterns (CBP) database to create a detailed regional model.

3. IMPLAN builds a detailed input-output analysis based on BEA and County Business Pattern data. It builds its linkages from the top (national) to the bottom (local) levels based on a value added methodology.

Multipliers generated by these three models have two significant components:

1. The amount of demand and supply that is assumed satisfied within the region or state. This is represented by the regional purchase components (RPCs)
2. The in-built linkages between one industry and another. This is represented by an input-output matrix known as the national "A" matrix.

Typically, the way these two components are operationalized leads to significant differences in multiplier estimates. The amount of goods made within the region (location production columns in these input output models) decline as we move from state to metro to rural areas. Consequently, statewide multipliers are typically larger, followed by metro multipliers. The regional multipliers are smallest in rural areas because the economy is less diversified and there are fewer linkages with other sectors.

An interesting article has compared the ultimate economic impact of transportation expenditures utilizing three major regional economic models: RIMS II, REMI, and IMPLAN, Lynch (2000). This article finds that an expenditure of $55.23 million on rail transit results ultimately in a significantly larger impact based on the multiplier effects. The ultimate overall impact on output generated by the different models is as follows:

RIMS II	$90.7 million
IMPLAN	$79.47 million
REMI	$93.46 million

This controlled example of rail transit expenditures indicates that for this sector IMPLAN generates the most conservative estimates compared to the other major regional model

methodologies. This study utilized the RIMS multipliers which are typically smaller than the REMI multipliers.

In the public transportation sector, the IMPLAN model typically comes up with total sales impact multipliers as follows:

Public Transportation Multipliers

Rural area	1.32
Metro area	1.47
Statewide	1.61

8.33 Multipliers for the MDOT study. This investigation employed the multiplier generated by the RIMS model based on Bureau of Economic Analysis (BEA) data for 2006 at the county level. These multipliers are specifically for the rail transit sector. County level data was put into *economically similar groups* to generate five regional Type II multipliers .

Berrien, Kalamazoo, Cass and Van Buren counties:

New Buffalo, St. Joseph, Kalamazoo, Dowagiac, Niles, Bangor

Ingham, Calhoun, Jackson and Washtenaw counties:

East Lansing, Albion, Battle Creek, Jackson, Ann Arbor

Ottawa and Kent counties:

Holland, Grand Rapids

Lapeer, St. Clair, Shiawassee, Oakland and Genesee counties:

Lapeer, Port Huron, Durand, Royal Oak, Birmingham, Pontiac, and Flint

Wayne County:

Detroit, Dearborn

Station	Multiplier Retail	Multiplier Rail
New Buffalo	1.6082	1.4265
St. Joseph	1.6082	1.4265
Kalamazoo	1.6082	1.4265
Dowagiac	1.6082	1.4265
Niles	1.6082	1.4265
Bangor	1.6082	1.4265
Holland	1.7543	1.5544
Grand Rapids	1.7543	1.5544
Lansing	1.5591	1.4483
Albion	1.5591	1.4483
Battle Creek	1.5591	1.4483
Jackson	1.5591	1.4483
Ann Arbor	1.5591	1.4483
Detroit	1.5998	1.4916
Dearborn	1.5998	1.4916
Royal Oak	1.8081	1.5817
Birmingham	1.8081	1.5817
Pontiac	1.8081	1.5817
Lapeer	1.8081	1.5817
Port Huron	1.8081	1.5817
Durand	1.8081	1.5817
Flint	1.8081	1.5817

References for this section:

Lynch, Tim, Oct. 2000, “Analyzing the Economic Impact of Transportation Projects using RIMSII, IMPLAN, and REMI” Office of Research and Special Programs, U.S. Department of Transportation, Washington, D.C.

https://www.msu.edu/course/prr/840/econimpact/michigan/MImults.htm

8.4 Local Community Survey Form

Michigan Passenger Rail Station Community Benefits Study

Survey of Community Benefits Associated with Passenger Rail Service

Community:
Name of person interviewed:
Position:
Date of interview: Interviewer:

Could you describe the degree of support for passenger rail service in your community? Are there any official relationships between the station and any business or civic groups such as the Chamber of Commerce, service clubs, rail/historical society, etc.

What are some of the perceived benefits to having service available to the community.

Do you feel your community has greater opportunity for growth and development than a similar community without passenger rail service?

Can you describe any specific businesses that benefit from having passenger rail service in the community (restaurants, lodging, taxis, gas stations, conference centers, retail stores.

Have there been any recent expenditures on the station using state or local funding or any other funding source?

Is your community planning to upgrade or relocate your station to better serve the community? If so, please describe in detail what these plans are and how they are being coordinated with overall community economic development. Are partnerships being formed with local businesses and/or developers as part of this process?

To what degree are local services used by Amtrak customers; such things as rental cars, taxi services, etc.

Does the availability of passenger rail service provide mobility benefits to minority, low income or no-car households in your community?

Is there any other person or organization that you would recommend we contact regarding the role of the Amtrak station in the community?

Other Notes from the interview:

8.5 Notes from Table 4.2

1. Pg 16. 2000 Survey. There are differences between pg 44, pg 16 & later cross-tab table without page number. Value used represents a conservative approach.
2. Pg 39 of 2000 Survey. 70.9% travel between 0-15 minutes. 14.2% between 15-30 minutes. Assume 0-15 minutes =7.5 min average trip=about 5 miles at 45mph. Add longer trips for average of 10 miles. 10 miles x $.505=$5.05/1.8 occupants=$2.80/passenger. These people may purchase gas, insurance, new cars, etc. in the station community area.
3. Percentage total is less then 100% since some walk, bike or use bus to station.
4. Pg 7. 2000 Survey. 26.5% of passengers are non-Michigan residents. Assume only non-residents will use Michigan hotels. Assume 28% of travelers will use hotels (pg 15 assume 3% for convention, 10% for vacation, 5% for shopping, 7% for business, 3% for personal business). Thus 28% times 26.5%= 7.42% of travelers will use Michigan hotels. Use state rates for "select" cities. This is $65/ night for lodging at 4 nights=$260 and $38.50 at 4 days =$154 for meals. These are considered to be conservative values. Trip universe assumed to be half of total ridership (i.e., a person will travel by train to Michigan, stay in a hotel and return home by train--thus, two train trips for each hotel stay).
5. Page 15 indicates 19% of travelers have shopping as a primary trip purpose. Many trips are destined for Chicago. This assessment assumes 5 % of trips are shopping trips in Michigan. This is justified as 19% x 26.5%=5.04%. The value of $100 may be very conservative for a person that declares shopping as the primary trip purpose. Trip universe assumed to be half of total ridership (a person travels by train and returns by train for each shopping trip).
6. Travelers sometimes may eat meals or otherwise spend money in the station community prior to boarding or deboarding the train. Individuals waiting to pick-up passengers may also do this especially if the train is delayed. Ann Arbor is a good example of this. This assumes that the equivalent of 10% of travelers will eat meals in station community restaurants.
7. Station specific multipliers of 1.5591-1.8081 from RIMS II model. 4/30/2009

8.6 Statewide Community Benefit Summary Table

STATEWIDE COMMUNITY BENEFITS SUMMARY TABLE

Summary of Community Benefits for Pere Marquette Corridor

	NBM	SJM	BAM	HOM	GRR	Total
Total Savings for Pere Marquette travelers	$27,166	$216,870	$40,503	$1,101,237	$1,422,603	$2,808,380
Non-traveler Savings	$187	$15,717	$11,029	$87,494	$231,310	$345,737
Local Business Revenues	$58,715	$246,569	$88,966	$1,310,778	$1,867,171	$3,572,199
Amtrak Expenditures in Local Community	$0	$0	$0	$0	$551,035	$551,035
Total Community Benefits for Pere Marquette Corridor	**$86,069**	**$479,156**	**$140,498**	**$2,499,509**	**$4,072,118**	**$7,277,351**

Summary of Community Benefits for Blue Water Modified Corridor

	LAN	DRD	FLN	LPE	PTH	Total
Total Savings for Blue Water Modified travelers	$1,743,049	$440,157	$1,337,782	$338,831	$424,152	$4,283,972
Non-traveler Savings	$258,474	$49,804	$152,880	$33,703	$50,588	$545,449
Local Business Revenues	$1,386,289	$217,731	$794,118	$165,712	$379,014	$2,942,865
Amtrak Expenditures in Local Community	$108,623	$0	$118,628	$0	$1,721,839	$1,949,089
Total Community Benefits for Blue Water Modified Corridor	**$3,496,435**	**$707,692**	**$2,403,407**	**$538,247**	**$2,575,593**	**$9,721,374**

Summary of Community Benefits for Wolverine Modified Corridor

	NLS	DOA	KAL	BTL	ALI	JXN
Total Savings for Wolverine Modified travelers	$146,933	$21,977	$2,819,277	$1,924,423	$18,418	$897,968
Non-traveler Savings	$33,009	$4,862	$264,868	$209,825	$4,000	$98,199
Local Business Revenues	$534,123	$52,275	$3,687,160	$1,877,936	$28,836	$951,986
Amtrak Expenditures in Local Community	$4,258,103	$0	$213,975	$510,091	$0	$144,830
Total Community Benefits	**$4,972,168**	**$79,114**	**$6,985,281**	**$4,522,275**	**$51,253**	**$2,092,983**

	ARB	DER	DET	ROY	BMM	PNT	Total
Total Savings for Wolverine Modified travelers	$3,118,922	$1,779,739	$875,716	$515,533	$486,989	$266,209	$12,872,105
Non-traveler Savings	$586,582	$225,521	$202,470	$81,007	$57,359	$80,874	$1,848,575
Local Business Revenues	$4,990,835	$2,613,713	$1,989,591	$1,027,182	$754,791	$651,052	$19,159,480
Amtrak Expenditures in Local Community	$325,868	$335,610	$454,938	$0	$0	$4,890,142	$11,133,556
Total Community Benefits	**$9,022,206**	**$4,954,583**	**$3,522,715**	**$1,623,722**	**$1,299,139**	**$5,888,277**	**$45,013,716**

Summary of Community Benefits for All Michigan Served Communities

	Pere Marquette	Blue Water	Wolverine	Total
Savings for Michigan Amtrak travelers	$2,808,380	$4,283,972	$12,872,105	**$19,964,456**
Non-traveler Savings	$345,737	$545,449	$1,848,575	**$2,739,761**
Local Business Revenues	$3,572,199	$2,942,865	$19,159,480	**$25,674,544**
Amtrak Expenditures in Local Communities	$551,035	$1,949,089	$11,133,556	**$13,633,680**
Total Community Benefits for All Michigan Served Communities	**$7,277,351**	**$9,721,374**	**$45,013,716**	**$62,012,441**

8.7 Individual Community Benefit Sheets

Albion Community Benefits Summary

	Traveler Savings Derived from Albion Amtrak Station				
	2007 Rail Passenger Trips for Albion:				
		To/from Chicago	Other ALI Originations	Total*	
2007 one-way train trips		920	313	1,233	
Typical one-way train fare		$28.91	$12.65		
Total train costs to users		$26,594	$3,961	$30,555	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other ALI Originations	Total	
Intercity Bus		-	-	-	
Air		-	-	-	
Auto		641	218	860	
Would make trip by alternative mode		641	218	860	
Would not make trip		279	95	373	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other ALI Originations	Total	
Total one-way train trips		641	218	10,733	
Typical one-way train fare		$28.91	$12.65		
Total train costs to alternative mode users		$18,541	$2,761	$21,303	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other ALI Originations	Total	
Intercity Bus					
Total one-way bus trips		-	-	-	
Typical one-way bus fare w/ground costs		-	-	-	
Total cost to users		-	-	-	
Air					
Total one-way air trips		-	-	-	
Typical one-way air fare w/ground costs		-	-	-	
Total cost to users		-	-	-	
Auto					
Total vehicle trips @1.79 occupancy		358	122	480	
Cost for trip/vehicle		$97.01	$40.68		
Cost for trip/occupant		$54.19	$22.72		
Total costs @1.79 occupancy		$34,762	$4,959	$39,720	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other ALI Originations	Total	
Total costs by alternative mode		$34,762	$4,959	$39,720	
Total train costs to alternative mode users		$18,541	$2,761	$21,303	
Total Savings for Albion travelers		$16,220	$2,198	**$18,418**	
Non-traveler Savings		$3,522	$477	**$4,000**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Albion travelers			**$18,418**	1.00	**$18,418**
Non-traveler Savings			**$4,000**	1.00	**$4,000**
Local Business Revenues			**$18,495**	1.56	**$28,836**
Amtrak Expenditures in Local Community			**$0**	1.45	**$0**
	Total Community Benefits for Albion				**$51,253**
* The total number of passengers using the Albion station in 2007 was 1,529; to avoid double counting, the					
traveler benefits of 296 passengers detraining at Albion were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Ann Arbor Community Benefits Summary

	Traveler Savings Derived from Ann Arbor Amtrak Station				
	2007 Rail Passenger Trips for Ann Arbor:				
		To/from Chicago	To Kalamazoo	Other ARB Originations	Total*
2007 one-way train trips		114,705	4,220	9,119	128,044
Typical one-way train fare		$38.17	$16.28	$11.83	
Total train costs to users		$4,378,128	$68,681	$107,843	$4,554,652
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	To Kalamazoo	Other ARB Originations	Total
Intercity Bus		7,826	788	-	8,614
Air		30,675	197	-	30,872
Auto		50,269	985	6,358	57,611
Would make trip by alternative mode		88,770	1,969	6,358	97,097
Would not make trip		25,935	2,251	2,761	30,947
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	To Kalamazoo	Other ARB Originations	Total
Total one-way train trips		88,770	1,969	6,358	97,097
Typical one-way train fare		$38.16	$16.28	$11.83	
Total train costs to alternative mode users		$3,387,706	$32,051	$75,188	$3,494,945
	Costs for Alternative Mode Travel:				
		To/from Chicago	To Kalamazoo	Other ARB Originations	Total
Intercity Bus					
Total one-way bus trips		7,826	788	-	8,614
Typical one-way bus fare w/ground costs		$33.48	$21.49	-	
Total cost to users		$261,997	$16,931	-	$278,927
Air					
Total one-way air trips		30,675	197	-	30,872
Typical one-way air fare w/ground costs		$83.64	$209.88	-	
Total cost to users		$2,565,660	$41,333	-	$2,606,993
Auto					
Total vehicle trips @1.79 occupancy		28,083	550	3,552	32,185
Cost for trip/vehicle		$126.96	$50.00	$38.01	
Cost for trip/occupant		$81.38	$27.93	$21.24	
Total costs @1.79 occupancy		$3,565,431	$27,502	$135,014	$3,727,947
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	To Kalamazoo	Other ARB Originations	Total
Total costs by alternative mode		$6,393,088	$85,766	$135,014	$6,613,867
Total train costs to alternative mode users		$3,387,706	$32,051	$75,188	$3,494,945
Total Savings for Ann Arbor travelers		$3,005,382	$53,715	$59,825	**$3,118,922**
Non-traveler Savings		$560,475	$13,116	$12,991	**$586,582**
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Ann Arbor travelers			**$3,118,922**	1.00	**$3,118,922**
Non-traveler Savings			**$586,582**	1.00	**$586,582**
Local Business Revenues			**$3,201,100**	1.56	**$4,990,835**
Amtrak Expenditures in Local Community			**$225,000**	1.45	**$325,868**
	Total Community Benefits for Ann Arbor				**$9,022,206**
* The total number of passengers using the Ann Arbor station in 2007 was 141,558; to avoid double counting, the					
traveler benefits of 13,514 passengers detraining at Ann Arbor were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Battle Creek Community Benefits Summary

	Traveler Savings Derived from Battle Creek Amtrak Station				
	2007 Rail Passenger Trips for Battle Creek:				
		To/from Chicago	Other BTL Originations	Total*	
2007 one-way train trips		42,717	5,463	48,180	
Typical one-way train fare		$27.97	$12.24		
Total train costs to users		$1,194,840	$66,891	$1,261,731	
	Alternative Mode Trips if No Passenger Train Service:				
				Total	
Intercity Bus		7,935	-	-	
Air		9,606	-	-	
Auto		11,835	3,744	15,579	
Would make trip by alternative mode		29,376	3,744	33,120	
Would not make trip		13,341	1,719	15,060	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other BTL Originations	Total	
Total one-way train trips		29,376	3,744	33,120	
Typical one-way train fare		$27.97	$12.24		
Total train costs to alternative mode users		$821,706	$45,846	$867,552	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other BTL Originations	Total	
Intercity Bus					
Total one-way bus trips		7,935	-	-	
Typical one-way bus fare w/ground costs		$24.50	-	-	
Total cost to users		$194,406	-	-	
Air					
Total one-way air trips		9,606	-	-	
Typical one-way air fare w/ground costs		$199.19	-	-	
Total cost to users		$1,913,453	-	-	
Auto					
Total vehicle trips@1.79/1.56 occupancy		6,612	2,133	8,745	
Cost for trip/vehicle		$90.60	$39.90		
Cost for trip/occupant		$58.08	$22.73		
Total costs @1.79/1.56 occupancy		$599,013	$85,104	$684,116	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other BTL Originations	Total	
Total costs by alternative mode		$2,706,872	$85,104	$2,791,976	
Total train costs to alternative mode users		$821,706	$45,846	$867,552	
Total Savings for Battle Creek travelers		$1,885,166	$39,258	$1,924,423	
Non-traveler Savings		$200,814	$9,010	$209,825	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Battle Creek travelers			**$1,924,423**	1.00	**$1,924,423**
Non-traveler Savings			**$209,825**	1.00	**$209,825**
Local Business Revenues			**$1,204,500**	1.56	**$1,877,936**
Amtrak Expenditures in Local Community			**$352,200**	1.45	**$510,091**
	Total Community Benefits for Battle Creek				**$4,522,275**
* The total number of passengers using the Battle Creek station in 2007 was 53,425; to avoid double counting, the					
traveler benefits of 5,245 passengers detraining at Battle Creek were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Birmingham Community Benefits Summary

	Traveler Savings Derived from Birmingham Amtrak Station				
	2007 Rail Passenger Trips for Birmingham:				
		To/from Chicago	Other BMM Originations	Total*	
2007 one-way train trips		15,024	1,674	16,698	
Typical one-way train fare		$46.50	$20.55		
Total train costs to users		$698,686	$34,395	$733,081	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other BMM Originations	Total	
Intercity Bus		719	-	719	
Air		4,972	-	4,972	
Auto		7,274	1,167	8,441	
Would make trip by alternative mode		12,965	1,167	14,132	
Would not make trip		2,059	507	2,566	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other BMM Originations	Total	
Total one-way train trips		12,965	1,167	14,132	
Typical one-way train fare		$46.52	$20.55		
Total train costs to alternative mode users		$603,158	$23,980	$627,139	
	Costs for Alternative Mode Travel				
		To/from Chicago	Other BMM Originations	Total	
Intercity Bus					
Total one-way bus trips		719	-	719	
Typical one-way bus fare w/ground costs		$39.41	-		
Total cost to users		$28,333	-	$28,333	
Air					
Total one-way air trips		4,972	-	4,972	
Typical one-way air fare w/ground costs		$84.49	-		
Total cost to users		$420,099	-	$420,099	
Auto					
Total vehicle trips @1.79 occupancy		4,064	652	4,716	
Cost for trip/vehicle		$153.22	$66.04		
Cost for trip/occupant		$98.22	$36.90		
Total costs @1.79 occupancy		$622,636	$43,061	$665,697	
	Cost Summary for Rail and Alternative Modes				
		To/from Chicago	Other BMM Originations	Total	
Total costs by alternative mode		$1,071,067	$43,061	$1,114,128	
Total train costs to alternative mode users		$603,158	$23,980	$627,139	
Total Savings for Birmingham travelers		$467,909	$19,081	**$486,989**	
Non-traveler Savings		$53,215	$4,143	**$57,359**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Birmingham travelers			**$486,989**	1.00	**$486,989**
Non-traveler Savings			**$57,359**	1.00	**$57,359**
Local Business Revenues			**$417,450**	1.81	**$754,791**
Amtrak Expenditures in Local Community			**$0**	1.58	**$0**
	Total Community Benefits for Birmingham				**$1,299,139**
* The total number of passengers using the Birmingham station in 2007 was 18,687; to avoid double counting, the					
traveler benefits of 1,989 passengers detraining at Birmingham were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Dearborn Community Benefits Summary

	Traveler Savings Derived from Dearborn Amtrak Station				
	2007 Rail Passenger Trips for Dearborn:				
		To/from Chicago	Other DER Originations	Total*	
2007 one-way train trips		57,769	7,582	65,351	
Typical one-way train fare		$42.87	$18.80		
Total train costs to users		$2,476,594	$142,542	$2,619,136	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other DER Originations	Total	
Intercity Bus		3,519	-	3,519	
Air		19,783	-	19,783	
Auto		26,109	5,286	31,395	
Would make trip by alternative mode		49,410	5,286	54,697	
Would not make trip		8,359	2,296	10,654	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other DER Originations	Total	
Total one-way train trips		49,410	5,286	54,697	
Typical one-way train fare		$42.86	$18.80		
Total train costs to alternative mode users		$2,117,817	$99,380	$2,217,197	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other DER Originations	Total	
Intercity Bus					
Total one-way bus trips		3,519	-	3,519	
Typical one-way bus fare w/ground costs		$36.03	-		
Total cost to users		$126,773	-	$126,773	
Air					
Total one-way air trips		19,783	-	19,783	
Typical one-way air fare w/ground costs		$79.97	-		
Total cost to users		$1,582,074	-	$1,582,074	
Auto					
Total vehicle trips @1.79 occupancy		14,586	2,953	17,539	
Cost for trip/vehicle		$144.64	$60.43		
Cost for trip/occupant		$92.71	$33.76		
Total costs @1.79 occupancy		$2,109,635	$178,454	$2,288,089	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other DER Originations	Total	
Total costs by alternative mode		$3,818,482	$178,454	$3,996,935	
Total train costs to alternative mode users		$2,117,817	$99,380	$2,217,197	
Total Savings for Dearborn travelers		$1,700,665	$79,074	**$1,779,739**	
Non-traveler Savings		$208,350	$17,171	**$225,521**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Dearborn travelers			**$1,779,739**	1.00	**$1,779,739**
Non-traveler Savings			**$225,521**	1.00	**$225,521**
Local Business Revenues			**$1,633,775**	1.60	**$2,613,713**
Amtrak Expenditures in Local Community			**$225,000**	1.49	**$335,610**
	Total Community Benefits for Dearborn				**$4,954,583**
* The total number of passengers using the Dearborn station in 2007 was 72,254; to avoid double counting, the					
traveler benefits of 6,903 passengers detraining at Dearborn were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Detroit Community Benefits Summary

	Traveler Savings Derived from Detroit Amtrak Station				
	2007 Rail Passenger trips for Detroit:				
		To/from Chicago	Other DET Originations	Total*	
2007 one-way train trips		42,589	7,157	49,746	
Typical one-way train fare		$45.79	$18.80		
Total train costs to users		$1,950,349	$134,552	$2,084,900	
	Alternative Mode trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other DET Originations	Total	
Intercity Bus		9,930	-	9,930	
Air		11,626	-	11,626	
Auto		13,507	4,990	18,497	
Would make trip by alternative mode		35,063	4,990	40,053	
Would not make trip		7,526	2,167	9,693	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other DET Originations	Total	
Total one-way train trips		35,063	4,990	40,053	
Typical one-way train fare		$45.81	$18.80		
Total train costs to alternative mode users		$1,606,146	$93,809	$1,699,956	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other DET Originations	Total	
Intercity Bus					
Total one-way bus trips		9,930	-	9,930	
Typical one-way bus fare w/ground costs		$33.50	-		
Total cost to users		$332,656	-	$332,656	
Air					
Total one-way air trips		11,626	-	11,626	
Typical one-way air fare w/ground costs		$81.95	-		
Total cost to users		$952,714	-	$952,714	
Auto					
Total vehicle trips @1.79 occupancy		7,546	2,788	10,333	
Cost for trip/vehicle		$148.68	$60.43		
Cost for trip/occupant		$95.30	$33.76		
Total costs @1.79 occupancy		$1,121,851	$168,451	$1,290,302	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other DET Originations	Total	
Total costs by alternative mode		$2,407,221	$168,451	$2,575,672	
Total train costs to alternative mode users		$1,606,146	$93,809	$1,699,956	
Total Savings for Detroit travelers		$801,074	$74,641	**$875,716**	
Non-traveler Savings		$186,261	$16,209	**$202,470**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Detroit travelers			**$875,716**	1.00	**$875,716**
Non-traveler Savings			**$202,470**	1.00	**$202,470**
Local Business Revenues			**$1,243,650**	1.60	**$1,989,591**
Amtrak Expenditures in Local Community			**$305,000**	1.49	**$454,938**
	Total Community Benefits for Detroit				**$3,522,715**
* The total number of passengers using the Detroit station in 2007 was 56,494; to avoid double counting, the					
traveler benefits of 6,748 passengers detraining at Detroit were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Dowagiac Community Benefits Summary

	Traveler Savings Derived from Dowagiac Amtrak Station				
	2007 Rail Passenger Trips for Dowagiac:				
		To/from Chicago	Other DOA Originations	Total*	
2007 one-way train trips		1,591	576	2,167	
Typical one-way train fare		$16.02	$15.25		
Total train costs to users		$25,495	$8,782	$34,276	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other DOA Originations	Total	
Intercity Bus		-	-	-	
Air		-	-	-	
Auto		1,109	392	1,502	
Would make trip by alternative mode		1,109	392	1,502	
Would not make trip		482	184	665	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other DOA Originations	Total	
Total one-way train trips		1,109	392	1,502	
Typical one-way train fare		$16.02	$15.25		
Total train costs to alternative mode users		$17,775	$5,982	$23,757	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other DOA Originations	Total	
Intercity Bus					
Total one-way bus trips		-	-	-	
Typical one-way bus fare w/ground costs		-	-	-	
Total cost to users		-	-	-	
Air					
Total one-way air trips		-	-	-	
Typical one-way air fare w/ground costs		-	-	-	
Total cost to users		-	-	-	
Auto					
Total vehicle trips@1.79/1.56 occupancy		620	225	845	
Cost for trip/vehicle		$55.60	$50.11		
Cost for trip/occupant		$31.06	$28.75		
Total costs @1.79/1.56 occupancy		$34,453	$11,280	$45,734	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other DOA Originations	Total	
Total costs by alternative mode		$34,453	$11,280	$45,734	
Total train costs to alternative mode users		$17,775	$5,982	$23,757	
Total Savings for Dowagiac travelers		$16,679	$5,299	**$21,977**	
Non-traveler Savings		$3,622	$1,240	**$4,862**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Dowagiac travelers			**$21,977**	1.00	**$21,977**
Non-traveler Savings			**$4,862**	1.00	**$4,862**
Local Business Revenues			**$32,505**	1.61	**$52,275**
Amtrak Expenditures in Local Community			**$0**	1.43	**$0**
	Total Community Benefits for Dowagiac				**$79,114**
* The total number of passengers using the Dowagiac station in 2007 was 2,782; to avoid double counting, the					
traveler benefits of 615 passengers detraining at Dowagiac were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Jackson Community Benefits Summary

	Traveler Savings Derived from Jackson Amtrak Station				
	2007 Rail Passenger Trips for Jackson:				
		To/from Chicago	Other JXN Originations	Total*	
2007 one-way train trips		22,186	2,238	24,424	
Typical one-way train fare		$32.20	$10.66		
Total train costs to users		714,363	23,861	$738,224	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other JXN Originations	Total	
Intercity Bus		2,147	-	2,147	
Air		5,131	-	5,131	
Auto		9,992	1,560	11,552	
Would make trip by alternative mode		17,270	1,560	18,831	
Would not make trip		4,916	678	5,593	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other JXN Originations	Total	
Total one-way train trips		17,270	1,560	18,831	
Typical one-way train fare		$32.24	$10.66		
Total train costs to alternative mode users		$556,824	$16,636	$573,460	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other JXN Originations	Total	
Intercity Bus					
Total one-way bus trips		2,147	-	2,147	
Typical one-way bus fare w/ground costs		$37.49	-		
Total cost to users		$80,517	-	$80,517	
Air					
Total one-way air trips		5,131	-	5,131	
Typical one-way air fare w/ground costs		$144.71	-		
Total cost to users		$742,562	-	$742,562	
Auto					
Total vehicle trips @1.79 occupancy		5,582	872	6,454	
Cost for trip/vehicle		$110.80	$34.27		
Cost for trip/occupant		$71.03	$19.14		
Total costs @1.79 occupancy		$618,477	$29,872	$648,349	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other JXN Originations	Total	
Total costs by alternative mode		$1,441,556	$29,872	$1,471,428	
Total train costs to alternative mode users		$556,824	$16,636	$573,460	
Total Savings for Jackson travelers		$884,731	$13,237	**$897,968**	
Non-traveler Savings		$95,325	$2,874	**$98,199**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Jackson travelers			**$897,968**	1.00	**$897,968**
Non-traveler Savings			**$98,199**	1.00	**$98,199**
Local Business Revenues			**$610,600**	1.56	**$951,986**
Amtrak Expenditures in Local Community			**$100,000**	1.45	**$144,830**
	Total Community Benefits for Jackson				**$2,092,983**
* The total number of passengers using the Jackson station in 2007 was 26,932; to avoid double counting, the					
traveler benefits of 2,508 passengers detraining at Jackson were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Kalamazoo Community Benefits Summary

	Traveler Savings Derived from Kalamazoo Amtrak Savings					
	2007 Rail Passenger Trips for Kalamazoo:					
		To/from Chicago	To Ann Arbor	To E. Lansing	Other KAL Originations	Total*
2007 one-way train trips		74,109	4,390	1,675	11,535	91,709
Typical one-way train fare		$23.75	$16.72	$10.21	$19.65	
Total train costs to users		$1,760,039	$73,383	$17,095	$226,631	$2,077,149
	Alternative Mode Trips if No Rail Passenger Service Existed:					
		To/from Chicago	To Ann Arbor	To E. Lansing	Other KAL Originations	Total
Intercity Bus		8,649	690	403	-	9,742
Air		11,594	99	0	-	11,692
Auto		32,717	1,478	806	7,898	42,899
Would make trip by alternative mode		52,960	2,266	1,210	7,898	64,333
Would not make trip		21,149	2,124	465	3,637	27,376
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:					
		To/from Chicago	To Ann Arbor	To E. Lansing	Other KAL Originations	Total
Total one-way train trips		52,960	2,266	1,210	7,898	64,333
Typical one-way train fare		$23.75	$16.72	$10.21	$19.65	
Total train costs to alternative mode users		$1,257,688	$37,875	$12,346	$155,172	$1,463,082
	Costs for Alternative Mode Travel:					
		To/from Chicago	To Ann Arbor	To E. Lansing	Other KAL Originations	Total
Intercity Bus						
Total one-way bus trips		8,649	690	403	-	9,742
Typical one-way bus fare w/ground costs		$24.50	$21.49	$16.20	-	
Total cost to users		$211,868	$14,821	$6,533	-	$233,222
Air						
Total one-way air trips		11,594	99	-	-	11,692
Typical one-way air fare w/ground costs		$191.85	$212.28	-	-	
Total cost to users		$2,224,266	$20,913	-	-	$2,245,179
Auto						
Total vehicle trips @1.79 occupancy		18,278	826	517	4,504	24,125
Cost for trip/vehicle		$79.49	$50.00	$41.92	$63.96	
Cost for trip/occupant		$44.41	$27.93	$26.87	$36.48	
Total costs @1.79 occupancy		$1,452,897	$41,272	$21,669	$288,120	$1,803,958
	Cost Summary for Rail and Alternative Modes:					
		To/from Chicago	To Ann Arbor	To E. Lansing	Other KAL Originations	Total
Total costs by alternative mode		$3,889,030	$77,007	$28,202	$288,120	$4,282,359
Total train costs to alternative mode users		$1,257,688	$37,875	$12,346	$155,172	$1,463,082
Total Savings for Kalamazoo travelers		$2,631,342	$39,131	$15,856	$132,948	**$2,819,277**
Non-traveler Savings		$218,469	$11,911	$3,876	$30,612	**$264,868**
		Summary of Community Benefits				
					Multiplier	Total
Total Savings for Kalamazoo travelers				**$2,819,277**	1.00	**$2,819,277**
Non-traveler Savings				**$264,868**	1.00	**$264,868**
Local Business Revenues				**$2,292,725**	1.61	**$3,687,160**
Amtrak Expenditures in Local Community				**$150,000**	1.43	**$213,975**
	Total Community Benefits for Kalamazoo					**$6,985,281**
* The total number of passengers using the Kalamazoo station in 2007 was 107,819; to avoid double counting, the						
traveler benefits of 16,110 passengers detraining at Kalamazoo were assigned to their Michigan originating station.						
(All calculations subject to rounding)						

Niles Community Benefits Summary

	Traveler Savings Derived from Niles Amtrak Station				
	2007 Rail Passenger Trips for Niles:				
		To/from Chicago	Other NLS Originations	Total*	
2007 one-way train trips		7,917	5,368	13,285	
Typical one-way train fare		$13.98	$23.01		
Total train costs to users		$110,695	$123,508	$234,203	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other NLS Originations	Total	
Intercity Bus		-	-	-	
Air		-	-	-	
Auto		5,520	3,665	9,185	
Would make trip by alternative mode		5,520	3,665	9,185	
Would not make trip		2,397	1,703	4,100	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other NLS Originations	Total	
Total one-way train trips		5,520	3,665	9,185	
Typical one-way train fare		$13.98	$23.01		
Total train costs to alternative mode users		$77,176	$84,334	$161,510	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other NLS Originations	Total	
Intercity Bus					
Total one-way bus trips		-	-	-	
Typical one-way bus fare w/ground costs		-	-	-	
Total cost to users		-	-	-	
Air					
Total one-way air trips		-	-	-	
Typical one-way air fare w/ground costs		-	-	-	
Total cost to users		-	-	-	
Auto					
Total vehicle trips@1.79/1.56 occupancy		3,084	2,097	5,181	
Cost for trip/vehicle		$49.03	$74.98		
Cost for trip/occupant		$27.39	$42.90		
Total costs @1.79/1.56 occupancy		$151,200	$157,243	$308,443	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other NLS Originations	Total	
Total costs by alternative mode		$151,200	$157,243	$308,443	
Total train costs to alternative mode users		$77,176	$84,334	$161,510	
Total Savings for Niles travelers		$74,024	$72,909	**$146,933**	
Non-traveler Savings		$16,075	$16,934	**$33,009**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Niles travelers			**$146,933**	1.00	**$146,933**
Non-traveler Savings			**$33,009**	1.00	**$33,009**
Local Business Revenues			**$332,125**	1.61	**$534,123**
Amtrak Expenditures in Local Community			**$2,985,000**	1.43	**$4,258,103**
	Total Community Benefits for Niles				**$4,972,168**
* The total number of passengers using the Niles station in 2007 was 18,479; to avoid double counting, the					
traveler benefits of 5,194 passengers detraining at Niles were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Pontiac Community Benefits Summary

	Traveler Savings Derived from Pontiac Amtrak Station				
	2007 Rail Passenger Trips for Pontiac:				
		To/from Chicago	Other PNT Originations	Total*	
2007 one-way train trips		12,616	1,787	14,403	
Typical one-way train fare		$47.75	$23.21		
Total train costs to users		$602,396	$41,479	$643,875	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other PNT Originations	Total	
Intercity Bus		2,163	-	2,163	
Air		3,710	-	3,710	
Auto		3,591	1,246	4,837	
Would make trip by alternative mode		9,464	1,246	10,710	
Would not make trip		3,152	541	3,693	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other PNT Originations	Total	
Total one-way train trips		9,464	1,246	10,710	
Typical one-way train fare		$47.80	$23.21		
Total train costs to alternative mode users		$452,417	$28,919	$481,336	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other PNT Originations	Total	
Intercity Bus					
Total one-way bus trips		2,163	-	2,163	
Typical one-way bus fare w/ground costs		$33.49	-		
Total cost to users		$72,442	-	$72,442	
Air					
Total one-way air trips		3,710	-	3,710	
Typical one-way air fare w/ground costs		$87.02	-		
Total cost to users		$322,874	-	$322,874	
Auto					
Total vehicle trips @1.79 occupancy		2,006	696	2,702	
Cost for trip/vehicle		$149.69	$74.61		
Cost for trip/occupant		$95.95	$41.68		
Total costs @1.79 occupancy		$300,301	$51,929	$352,230	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other PNT Originations	Total	
Total costs by alternative mode		$695,616	$51,929	$748,910	
Total train costs to alternative mode users		$452,417	$28,919	$482,096	
Total Savings for Pontiac Travelers		$243,199	$23,010	**$266,209**	
Non-traveler Savings		$75,877	$4,997	**$80,874**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Pontiac travelers			**$266,209**	1.00	**$266,209**
Non-traveler Savings			**$80,874**	1.00	**$80,874**
Local Business Revenues			**$360,075**	1.81	**$651,052**
Amtrak Expenditures in Local Community			**$3,091,700**	1.58	**$4,890,142**
	Total Community Benefits for Pontiac				**$5,888,277**
* The total number of passengers using the Pontiac station in 2007 was 16,248; to avoid double counting, the					
traveler benefits of 1,845 passengers detraining at Pontiac were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Royal Oak Community Benefits Summary

	Traveler Savings Derived from Royal Oak Amtrak Station				
	2007 Rail Passenger Trips for Royal Oak:				
		To/from Chicago	Other ROY Originations	Total*	
2007 one-way train trips		19,751	2,973	22,724	
Typical one-way train fare		$48.31	$20.14		
Total train costs to users		$954,128	$59,890	$1,014,018	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other ROY Originations	Total	
Intercity Bus		1,624	-	1,624	
Air		5,745	-	5,745	
Auto		8,237	2,073	10,310	
Would make trip by alternative mode		15,606	2,073	17,678	
Would not make trip		4,145	900	5,046	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other ROY Originations	Total	
Total one-way train trips		15,606	2073	17678	
Typical one-way train fare		$48.30	$20.14		
Total train costs to alternative mode users		$753,795	$41,755	$795,550	
	Costs for Alternative Mode Travel				
		To/from Chicago	Other ROY Originations	Total	
Intercity Bus					
Total one-way bus trips		1,624	-	1,624	
Typical one-way bus fare w/ground costs		$37.72	-		
Total cost to users		$61,254	-	$61,254	
Air					
Total one-way air trips		5,745	-	5,745	
Typical one-way air fare w/ground costs		$84.20	-		
Total cost to users		$483,745	-	$483,745	
Auto					
Total vehicle trips @1.79 occupancy		4,602	1,158	5,760	
Cost for trip/vehicle		$150.19	$64.75		
Cost for trip/occupant		$83.91	$36.17		
Total costs @1.79 occupancy		$691,106	$74,978	$766,084	
	Cost Summary for Rail and Alternative Modes				
		To/from Chicago	Other ROY Originations	Total	
Total costs by alternative mode		$1,236,105	$74,978	$1,311,083	
Total train costs to alternative mode users		$753,795	$41,755	$795,550	
Total Savings for Royal Oak travelers		$482,310	$33,223	**$515,533**	
Non-traveler Savings		$73,793	$7,215	**$81,007**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Royal Oak travelers			**$515,533**	1.00	**$515,533**
Non-traveler Savings			**$81,007**	1.00	**$81,007**
Local Business Revenues			**$568,100**	1.81	**$1,027,182**
Amtrak Expenditures in Local Community			**$0**	1.58	**$0**
	Total Community Benefits for Royal Oak				**$1,623,722**
* The total number of passengers using the Royal Oak station in 2007 was 25,987; to avoid double counting, the					
traveler benefits of 3,263 passengers detraining at Royal Oak were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Bangor Community Benefits Summary

	Traveler Savings Derived from Bangor Amtrak Station				
	2007 Rail Passenger Trips for Bangor:				
		To/from Chicago	Other BAM Originations	Total*	
2007 one-way train trips		3,510	178	3,688	
Typical one-way train fare		$19.48	$4.85		
Total train costs to users		$68,368	$863	$69,231	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other BAM Originations	Total	
Intercity Bus		678	-	678	
Air		-	-	-	
Auto		1,697	107	1,804	
Would make trip by alternative mode		2,375	107	2,482	
Would not make trip		1,135	71	1,206	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other BAM Originations	Total	
Total one-way train trips		2,375	107	2,482	
Typical one-way train fare		$19.51	$4.85		
Total train costs to alternative mode users		$46,335	$518	$46,853	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other BAM Originations	Total	
Intercity Bus					
Total one-way bus trips		678	-	678	
Typical one-way bus fare w/ground costs		$30.59	-	-	
Total cost to users		$20,740	-	$20,740	
Air					
Total one-way air trips		-	-	-	
Typical one-way air fare w/ground costs		-	-	-	
Total cost to users		-	-	-	
Auto					
Total vehicle trips @1.83 occupancy		928	58	986	
Cost for trip/vehicle		$70.91	$14.58		
Cost for trip/occupant		$38.75	$7.97		
Total costs @1.83 occupancy		65,764.7	850.9	66,615.6	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other BAM Originations	Total	
Total costs by alternative mode		$86,505	$851	$87,355	
Total train costs to alternative mode users		$46,335	$518	$46,853	
Total Savings for Bangor travelers		$40,170	$333	**$40,503**	
Non-traveler Savings		$10,918	$111	**$11,029**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Bangor travelers			**$40,503**	1.00	**$40,503**
Non-traveler Savings			**$11,029**	1.00	**$11,029**
Local Business Revenues			**$55,320**	1.61	**$88,966**
Amtrak Expenditures in Local Community			**$0**	1.43	**$0**
	Total Community Benefits for Bangor				**$140,498**
* The total number of passengers using the Bangor station in 2007 was 3,784; to avoid double counting, the					
traveler benefits of 96 passengers detraining at Bangor were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Grand Rapids Community Benefits Summary

	Traveler Savings Derived from Grand Rapids Amtrak Station				
	2007 Rail Passenger Trips for Grand Rapids:				
		To/from Chicago	Other GRR Originations	Total*	
2007 one-way train trips		52,580	637	53,217	
Typical one-way train fare		$29.55	$7.16		
Total train costs to users		$1,553,578	$4,564	$1,558,141	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other GRR Originations	Total	
Intercity Bus		4,532	-	4,532	
Air		9,205	-	9,205	
Auto		18,542	382	18,924	
Would make trip by alternative mode		32,279	382	32,661	
Would not make trip		20,301	255	20,556	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other GRR Originations	Total	
Total one-way train trips		32279	382	32661	
Typical one-way train fare		$29.54	$7.16		
Total train costs to alternative mode users		$953,448	$2,738	$956,186	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other GRR Originations	Total	
Intercity Bus					
Total one-way bus trips		4,532	-	4,532	
Typical one-way bus fare w/ground costs		$37.05	-		
Total cost to users		$167,936	-	$167,936	
Air					
Total one-way air trips		9,205	-	9,205	
Typical one-way air fare w/ground costs		$134.40	-		
Total cost to users		$1,237,228	-	$1,237,228	
Auto					
Total vehicle trips @1.83 occupancy		10,132	209	10,341	
Cost for trip/vehicle		$95.65	$21.55		
Cost for trip/occupant		$52.27	$11.78		
Total costs @1.83 occupancy		$969,124	$4,501	$973,625	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other GRR Originations	Total	
Total costs by alternative mode		$2,374,287	$4,501	$2,378,788	
Total train costs to alternative mode users		$953,448	$2,738	$956,186	
Total Savings for Grand Rapids travele		$1,420,840	$1,763	**$1,422,603**	
Non-traveler Savings		$230,722	$588	**$231,310**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Grand Rapids travelers			**$1,422,603**	1.00	**$1,422,603**
Non-traveler Savings			**$231,310**	1.00	**$231,310**
Local Business Revenues			**$1,064,340**	1.75	**$1,867,171**
Amtrak Expenditures in Local Community			**$354,500**	1.55	**$551,035**
	Total Community Benefits for Grand Rapids				**$4,072,118**
* The total number of passengers using the Grand Rapids station in 2007 was 53,545; to avoid double counting, the					
traveler benefits of 328 passengers detraining at Grand Rapids were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Holland Community Benefits Summary

	Traveler Savings Derived from Holland Amtrak Station				
	2007 Rail Passenger Trips for Holland:				
		To/from Chicago	Other HOM Originations	Total*	
2007 one-way train trips		36,830	529	37,359	
Typical one-way train fare		$25.35	$8.14		
Total train costs to users		$933,679	$4,308	$937,987	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other HOM Originations	Total	
Intercity Bus		3,250	-	3,250	
Air		6,229	-	6,229	
Auto		18,024	317	18,342	
Would make trip by alternative mode		27,504	317	27,821	
Would not make trip		9,326	212	9,538	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other HOM Originations	Total	
Total one-way train trips		27,504	317	27,821	
Typical one-way train fare		$25.34	$8.14		
Total train costs to alternative mode users		$697,069	$2,585	$699,654	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other HOM Originations	Total	
Intercity Bus					
Total one-way bus trips		3,250	-	3,250	
Typical one-way bus fare w/ground costs		$33.26	-		
Total cost to users		$108,085	-	$108,085	
Air					
Total one-way air trips		6,229	-	6,229	
Typical one-way air fare w/ground costs		$143.79	-		
Total cost to users		$895,687	-	$895,687	
Auto					
Total vehicle trips @1.83 occupancy		9,849	173	10,023	
Cost for trip/vehicle		$80.50	$24.50		
Cost for trip/occupant		$43.99	$13.39		
Total costs @1.83 occupancy		$792,870	$4,249	$797,120	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other HOM Originations	Total	
Total costs by alternative mode		$1,796,642	$4,249	$1,800,891	
Total train costs to alternative mode users		$697,069	$2,585	$699,654	
Total Savings for Holland travelers		1,099,573	1,664	**$1,101,237**	
Non-traveler Savings		86,939	555	**$87,494**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Holland travelers			**$1,101,237**	1.00	**$1,101,237**
Non-traveler Savings			**$87,494**	1.00	**$87,494**
Local Business Revenues			**$747,180**	1.75	**$1,310,778**
Amtrak Expenditures in Local Community			**$0**	1.55	**$0**
	Total Community Benefits for Holland				**$2,499,509**
The total number of passengers using the Holland station in 2007 was 37,915; to avoid double counting, the					
traveler benefits of 556 passengers detraining at Holland were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

New Buffalo Community Benefits Summary

	Traveler Savings Derived from New Buffalo Amtrak Station				
	2007 Rail Passenger Trips for New Buffalo:				
		To/from Chicago	Other NBM Originations	Total*	
2007 one-way train trips		2,336	98	2,434	
Typical one-way train fare		$10.25	$14.85		
Total train costs to users		$23,939	$1,456	$25,395	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other NBM Originations	Total	
Intercity Bus		-	-	-	
Air		-	-	-	
Auto		2,336	59	2,395	
Would make trip by alternative mode		2,336	59	2,395	
Would not make trip		-	39	39	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other NBM Originations	Total	
Total one-way train trips		2,336	59	2,395	
Typical one-way train fare		$10.25	$14.85		
Total train costs to alternative mode users		$23,939	$873	$24,813	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other NBM Originations	Total	
Intercity Bus					
Total one-way bus trips		-	-	-	
Typical one-way bus fare w/ground costs		-	-	-	
Total cost to users		-	-	-	
Air					
Total one-way air trips		-	-	-	
Typical one-way air fare w/ground costs		-	-	-	
Total cost to users		-	-	-	
Auto					
Total vehicle trips @1.83 occupancy		1,277	32	1,309	
Cost for trip/vehicle		$39.60	$44.68		
Cost for trip/occupant		$21.64	$24.42		
Total costs @1.83 occupancy		$50,543	$1,436	$51,979	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other NBM Originations	Total	
Total costs by alternative mode		$50,543	$1,436	$51,979	
Total train costs to alternative mode users		$23,939	$873	$24,813	
Total Savings for New Buffalo travelers		$26,604	$562	**$27,166**	
Non-traveler Savings		-	$187	**$187**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for New Buffalo travelers			**$27,166**	1.00	**$27,166**
Non-traveler Savings			**$187**	1.00	**$187**
Local Business Revenues			**$36,510**	1.61	**$58,715**
Amtrak Expenditures in Local Community			**$0**	1.43	**$0**
	Total Community Benefits for New Buffalo				**$86,069**
* The total number of passengers using the New Buffalo station in 2007 was 2,559; to avoid double counting, the					
traveler benefits of 125 passengers detraining at New Buffalo were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

St. Joseph Community Benefits Summary

	Traveler Savings Derived from St. Joseph Amtrak Station				
	2007 Rail Passenger Trips for St. Joseph:				
		To/from Chicago	Other SJM Originations	Total*	
2007 one-way train trips		7,472	194	7,666	
Typical one-way train fare		$14.94	$11.19		
Total train costs to users		$111,659	$2,170	$113,829	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other SJM Originations	Total	
Intercity Bus		1,564	-	1,564	
Air		832	-	832	
Auto		2,935	116	3,051	
Would make trip by alternative mode		5,331	116	5,447	
Would not make trip		2,141	78	2,219	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other SJM Originations	Total	
Total one-way train trips		5,331	116	5,447	
Typical one-way train fare		$14.94	$11.19		
Total train costs to alternative mode users		$79,661	$1,302	$80,963	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other SJM Originations	Total	
Intercity Bus					
Total one-way bus trips		1,564	-	1,564	
Typical one-way bus fare w/ground costs		$16.00	-		
Total cost to users		$25,025	-	$25,025	
Air					
Total one-way air trips		832	-	832	
Typical one-way air fare w/ground costs		$221.68	-		
Total cost to users		$184,498	-	$184,498	
Auto					
Total vehicle trips @1.83 occupancy		1,604	64	1,667	
Cost for trip/vehicle		$53.74	$33.65		
Cost for trip/occupant		$29.36	$18.39		
Total costs @1.83 occupancy		$86,169	$2,141	$88,310	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other SJM Originations	Total	
Total costs by alternative mode		$295,693	$2,141	$297,833	
Total train costs to alternative mode users		$79,661	$1,302	$80,963	
Total Savings for St. Joseph travelers		$216,032	$838	**$216,870**	
Non-traveler Savings		$15,437	$279	**$15,717**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for St. Joseph travelers			**$216,870**	1.00	**$216,870**
Non-traveler Savings			**$15,717**	1.00	**$15,717**
Local Business Revenues			**$153,320**	1.61	**$246,569**
Amtrak Expenditures in Local Community			**$0**	1.43	**$0**
	Total Community Benefits for St. Joseph				**$479,156**
* The total number of passengers using the St. Joseph station in 2007 was 8,197; to avoid double counting, the					
traveler benefits of 531 passengers detraining at St. Joseph were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Durand Community Benefits Summary

	Traveler Savings Derived from Durand Amtrak Station				
	2007 Rail Passenger Trips for Durand:				
		To/from Chicago	Other DRD Originations	Total*	
2007 one-way train trips		7,724	304	8,028	
Typical one-way train fare		$35.23	$14.62		
Total train costs to users		$272,080	$4,443	$276,523	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other DRD Originations	Total	
Intercity Bus		677	-	677	
Air		1,688	-	1,688	
Auto		3,470	188	3,658	
Would make trip by alternative mode		5,835	188	6,023	
Would not make trip		1,889	116	2,005	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other DRD Originations	Total	
Total one-way train trips		5,835	188	6,023	
Typical one-way train fare		$35.32	$14.62		
Total train costs to alternative mode users		$206,114	$2,744	$208,858	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other DRD Originations	Total	
Intercity Bus					
Total one-way bus trips		677	-	677	
Typical one-way bus fare w/ground costs		$57.16	-		
Total cost to users		$38,722	-	$38,722	
Air					
Total one-way air trips		1,688	-	1,688	
Typical one-way air fare w/ground costs		$179.41	-		
Total cost to users		$302,775	-	$302,775	
Auto					
Total vehicle trips @1.56 occupancy		2,224	120	2,345	
Cost for trip/vehicle		$135.55	$49.87		
Cost for trip/occupant		$86.89	$31.97		
Total costs @1.56 occupancy		$301,516	$6,002	$307,518	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other DRD Originations	Total	
Total costs by alternative mode		$643,013	$6,002	$649,014	
Total train costs to alternative mode users		$206,114	$2,744	$208,858	
Total Savings for Durand travelers		$436,899	$3,258	**$440,157**	
Non-traveler Savings		$48,795	$1,008	**$49,804**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Durand travelers			**$440,157**	1.00	**$440,157**
Non-traveler Savings			**$49,804**	1.00	**$49,804**
Local Business Revenues			**$120,420**	1.81	**$217,731**
Amtrak Expenditures in Local Community			**$0**	1.58	**$0**
	Total Community Benefits for Durand				**$707,692**
* The total number of passengers using the Durand station in 2007 was 8,410; to avoid double counting, the					
traveler benefits of 382 passengers detraining at Durand were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Flint Community Benefits Summary

	Traveler Savings Derived from Flint Amtrak Station				
	2007 Rail Passenger Trips for Flint:				
		To/from Chicago	Other FLN Originations	Total*	
2007 one-way train trips		20,443	1,517	21,960	
Typical one-way train fare		$37.90	$14.40		
Total train costs to users		$774,769	$21,849	$796,618	
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	Other FLN Originations	Total	
Intercity Bus		867	-	867	
Air		6,626	-	6,626	
Auto		7,553	937	8,490	
Would make trip by alternative mode		15,046	937	15,983	
Would not make trip		5,397	580	5,977	
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	Other FLN Originations	Total	
Total one-way train trips		15,046	937	15,983	
Typical one-way train fare		$37.85	$14.40		
Total train costs to alternative mode users		$569,495	$13,494	$582,989	
	Costs for Alternative Mode Travel:				
		To/from Chicago	Other FLN Originations	Total	
Intercity Bus					
Total one-way bus trips		867	-	867	
Typical one-way bus fare w/ground costs		$41.99	-		
Total cost to users		$36,398	-	$36,398	
Air					
Total one-way air trips		6,626	-	6,626	
Typical one-way air fare w/ground costs		$174.23	-		
Total cost to users		$1,154,387	-	$1,154,387	
Auto					
Total vehicle trips @1.56 occupancy		4,842	601	5,442	
Cost for trip/vehicle		$144.64	$49.15		
Cost for trip/occupant		$92.71	$31.50		
Total costs @1.56 occupancy		$700,292	$29,515	$729,807	
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	Other FLN Originations	Total	
Total costs by alternative mode		$1,891,077	$29,694	$1,920,771	
Total train costs to alternative mode users		$569,495	$13,494	$582,989	
Total Savings for Flint travelers		$1,321,582	$16,200	**$1,337,782**	
Non-Traveler Savings		$147,920	$4,960	**$152,880**	
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Flint travelers			**$1,337,782**	1.00	**$1,337,782**
Non-traveler Savings			**$152,880**	1.00	**$152,880**
Local Business Revenues			**$439,200**	1.81	**$794,118**
Amtrak Expenditures in Local Community			**$75,000**	1.58	**$118,628**
	Total Community Benefits for Flint				**$2,403,407**
* The total number of passengers using the Flint station in 2007 was 23,863; to avoid double counting, the					
traveler benefits of 1,903 passengers detraining at Flint were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Lansing Community Benefits Summary

	Traveler Savings Derived from East Lansing Amtrak Station					
	2007 Rail Passenger Trips for East Lansing:					
		To/from Chicago	To Kalamazoo	To Port Huron	Other LNS Originations	Total*
2007 one-way train trips		41,691	936	722	1,109	44,458
Typical one-way train fare		$30.79	$10.51	$16.18	$10.62	
Total train costs to users		$1,283,623	$9,841	$11,685	$11,775	$1,316,924
	Alternative Mode Trips if No Rail Passenger Service Existed:					
		To/from Chicago	To Kalamazoo	To Port Huron	Other LNS Originations	Total
Intercity Bus		4,038	-	80	93	4,211
Air		7,930	-	-	-	7,930
Auto		18,774	312	161	731	19,978
Would make trip by alternative mode		30,741	312	241	824	32,119
Would not make trip		10,950	624	481	285	12,340
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:					
		To/from Chicago	To Kalamazoo	To Port Huron	Other LNS Originations	Total
Total one-way train trips		30,741	312	241	824	32,119
Typical one-way train fare		$30.84	$10.51	$16.18	$10.62	
Total train costs to alternative mode users		$947,998	$3,280	$3,900	$8,750	$963,929
	Costs for Alternative Mode Travel:					
		To/from Chicago	To Kalamazoo	To Port Huron	Other LNS Originations	Total
Intercity Bus						
Total one-way bus trips		4,038	-	80	93	4,211
Typical one-way bus fare w/ground costs		$46.80	-	$34.16	$17.33	
Total cost to users		$188,980	-	$2,732	$1,608	$193,321
Air						
Total one-way air trips		7,930	-	-	-	7,930
Typical one-way air fare w/ground costs		$133.13	-	-	-	
Total cost to users		$1,055,692	-	-	-	$1,055,692
Auto						
Total vehicle trips @1.56 occupancy		12,034	200	103	528	12,866
Cost for trip/vehicle		$118.38	$41.92	$55.55	$36.48	
Cost for trip/occupant		$75.88	$26.87	$35.61	$23.38	
Total costs @1.56 occupancy		$1,424,579	$8,383	$5,733	$19,269	$1,457,964
	Cost Summary for Rail and Alternative Modes:					
		To/from Chicago	To Kalamazoo	To Port Huron	Other LNS Originations	Total
Total costs by alternative mode		$2,669,252	$8,383	$8,465	$20,878	$2,706,978
Total train costs to alternative mode users		$947,998	$3,280	$3,900	$8,750	$963,929
Total Savings for Lansing Area travelers		$1,721,254	$5,103	$4,565	$12,127	**$1,743,049**
Non-travelers Savings		$246,881	$5,103	$4,672	$1,818	**$258,474**
		Summary of Community Benefits				
					Multiplier	Total
Total Savings for Lansing Area travelers				**$1,743,049**	1.00	**$1,743,049**
Non-traveler Savings				**$258,474**	1.00	**$258,474**
Local Business Revenues				**$889,160**	1.56	**$1,386,289**
Amtrak Expenditures in Local Community				**$75,000**	1.45	**$108,623**
	Total Community Benefits for Lansing Area					**$3,496,435**
* The total number of passengers using the East Lansing station in 2007 was 48,025; to avoid double counting, the						
traveler benefits of 3,567 passengers detraining at East Lansing were assigned to their Michigan originating station.						
(All calculations subject to rounding)						

Lapeer Community Benefits Summary

	Traveler Savings Derived from Lapeer Amtrak Station				
	2007 Rail Passenger Trips for Lapeer:				
		To/from Chicago	To E. Lansing	Other LPE Originations	Total*
2007 one-way train trips		5,559	128	423	6,110
Typical one-way train fare		$40.57	$9.91	$19.19	
Total train costs to users		$225,504	$1,269	$8,118	$234,890
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	To E. Lansing	Other LPE Originations	Total
Intercity Bus		679	64	-	743
Air		1,262	-	-	1,262
Auto		2,524	64	261	2,850
Would make trip by alternative mode		4,466	128	261	4,855
Would not make trip		1,093	-	162	1,255
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	To E. Lansing	Other LPE Originations	Total
Total one-way train trips		4,466	128	261	4,855
Typical one-way train fare		$40.42	$9.91	$19.19	
Total train costs to alternative mode users		$180,519	$1,269	$5,013	$186,801
	Costs for Alternative Mode Travel:				
		To/from Chicago	To E. Lansing	Other LPE Originations	Total
Intercity Bus					
Total one-way bus trips		679	64	-	743
Typical one-way bus fare w/ground costs		$47.82	$17.32	-	
Total cost to users		$32,482	$1,109	-	$33,590
Air					
Total one-way air trips		1,262	-	-	1,262
Typical one-way air fare w/ground costs		$182.32	-	-	
Total cost to users		$230,129	-	-	$230,129
Auto					
Total vehicle trips @1.56 occupancy		1,618	41	167	1,827
Cost for trip/vehicle		$154.23	$33.33	$65.48	
Cost for trip/occupant		$98.87	$21.37	$41.97	
Total costs @1.56 occupancy		$249,581	$1,367	$10,965	$261,913
	Cost Summary for Rail and Alternative Modes:				
		To/from Chicago	To E. Lansing	Other LPE Originations	Total
Total costs by alternative mode		$512,191	$2,476	$10,965	$525,632
Total train costs to alternative mode users		$180,519	$1,269	$5,013	$186,801
Total Savings for Lapeer travelers		$331,673	$1,207	$5,952	**$338,831**
Non-traveler Savings		$31,861	-	$1,843	**$33,703**
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Lapeer travelers			**$338,831**	1.00	**$338,831**
Non-traveler Savings			**$33,703**	1.00	**$33,703**
Local Business Revenues			**$91,650**	1.81	**$165,712**
Amtrak Expenditures in Local Community			**$0**	1.58	**$0**
	Total Community Benefits for Lapeer				**$538,247**
* The total number of passengers using the Lapeer station in 2007 was 6,795; to avoid double counting, the					
traveler benefits of 685 passengers detraining at Lapeer were assigned to their Michigan originating station.					
(All calculations subject to rounding)					

Port Huron Community Benefits Summary

	Traveler Savings Derived from Port Huron Amtrak Station				
	2007 Rail Passenger Trips for Port Huron:				
		To/from Chicago	To E. Lansing	Other PTH Originations	Total*
2007 one-way train trips		8,392	747	1,342	10,481
Typical one-way train fare		$47.24	$16.67	$20.39	
Total train costs to users		$396,400	$12,454	$27,363	$436,217
	Alternative Mode Trips if No Rail Passenger Service Existed:				
		To/from Chicago	To E. Lansing	Other PTH Originations	Total
Intercity Bus		752	-	-	752
Air		2,548	-	-	2,548
Auto		3,737	747	829	5,313
Would make trip by alternative mode		7,038	747	829	8,614
Would not make trip		1,354	0	513	1,867
	Cost of Rail Passenger Service for Those Who also Would Travel by Alternative Mode:				
		To/from Chicago	To E. Lansing	Other PTH Originations	Total
Total one-way train trips		7,038	747	829	8,614
Typical one-way train fare		$47.18	$16.67	$20.39	
Total train costs to alternative mode users		$332,033	$12,454	$16,899	$361,387
	Costs for Alternative Mode Travel:				
		To/from Chicago	To E. Lansing	Other PTH Originations	Total
Intercity Bus					
Total one-way bus trips		752	-	-	752
Typical one-way bus fare w/ground costs		$53.24	-	-	
Total cost to users		$40,047	-	-	$40,047
Air					
Total one-way air trips		2,548	-	-	2,548
Typical one-way air fare w/ground costs		$102.19	-	-	
Total cost to users		$260,404	-	-	$260,404
Auto					
Total vehicle trips @1.56 occupancy		2,396	479	531	3,406
Cost for trip/vehicle		$175.95	$55.55	$69.57	
Cost for trip/occupant		$112.79	$35.61	$44.60	
Total costs @1.56 occupancy		$421,526	$26,600	$36,961	$485,088
	Cost Summary for Rail and Alternative Modes				
		To/from Chicago	To E. Lansing	Other PTH Originations	Total
Total costs by alternative mode		$721,978	$26,600	$36,961	$785,539
Total train costs to alternative mode users		$332,033	$12,454	$16,899	$361,387
Total Savings for Port Huron travelers		$389,945	$14,146	$20,062	**$424,152**
Non-Traveler Savings		$44,377	-	$6,211	**$50,588**
		Summary of Community Benefits			
				Multiplier	Total
Total Savings for Port Huron travelers			**$424,152**	1.00	**$424,152**
Non-traveler Savings			**$50,588**	1.00	**$50,588**
Local Business Revenues			**$209,620**	1.81	**$379,014**
Amtrak Expenditures in Local Community			**$1,088,600**	1.58	**$1,721,839**
	Total Community Benefits for Port Huron				**$2,575,593**
* The total number of passengers using the Port Huron station in 2007 was 12,619; to avoid double counting, the					
traveler benefits of 2,138 passengers detraining at Port Huron were assigned to their Michigan originating station.					
(All calculations subject to rounding)					