Riders disembark from a NICTD train in Michigan City.
Photo by Stephen Sostaric

Chapter II: Transportation

Contents/page

Overview/ 1
Safety/ 2
Congestion Management/ 15
Intelligent Transportation Systems/ 27
Public Transportation/ 28
Non-Motorized Transportation/ 36
Environmental Justice/ 41
Transportation Improvement Program Guidance / 45
Financial Capacity & Projections/ 50
Functional Classification/ 63

Overview

The Northwest Indiana transportation network comprises a vast array of travel modes, and thus places the region in a unique geographic advantage. The location of Lake Michigan and the City of Chicago have meant a number of regional and national transportation routes traverse the region. The routes support an economic engine that sustains the region's quality of life.

The 2040 CRP addresses the myriad of transportation modes in great detail, and their collective impact on the Northwest Indiana area. A key CRP vision theme is accessibility – connecting people with opportunities – and a sustainable transportation network strongly fosters this vision. Although there are strains to the network, most notably traffic congestion and diminished mobility, significant opportunities to modify our transportation options exist, so as to create efficiencies that aid with wise land use choices that advance regional connections for all residents, no matter their age or physical ability.

Transportation Goals & Objectives

The CRP Update Companion touches on several areas of transportation that have experienced change over the last four years, and are noted within this chapter. Carrying forward throughout are the goals expressed in the 2040 CRP which address the "Accessible Region" theme:

An accessible region: *Our people are connected to each other and to equal opportunities for working, playing, living and learning.*

Four main goals and their related objectives provided the framework for further action. These goals include the following:

- ***A safe and secure transportation system***
- ***Increased mobility, accessibility and transportation options for people and freight***
- ***Adequate transportation funding and efficient use of resources***
- ***A transportation system that supports the health of all people***

US 30 in Hobart. Photo by Stephen Sostaric

Safety

The original 2040 Comprehensive Regional Plan (CRP) contained data for the years 2005-2009. As part of this CRP Update Companion, crash data for Lake, Porter, and La Porte Counties was obtained for the years 2010-2014.

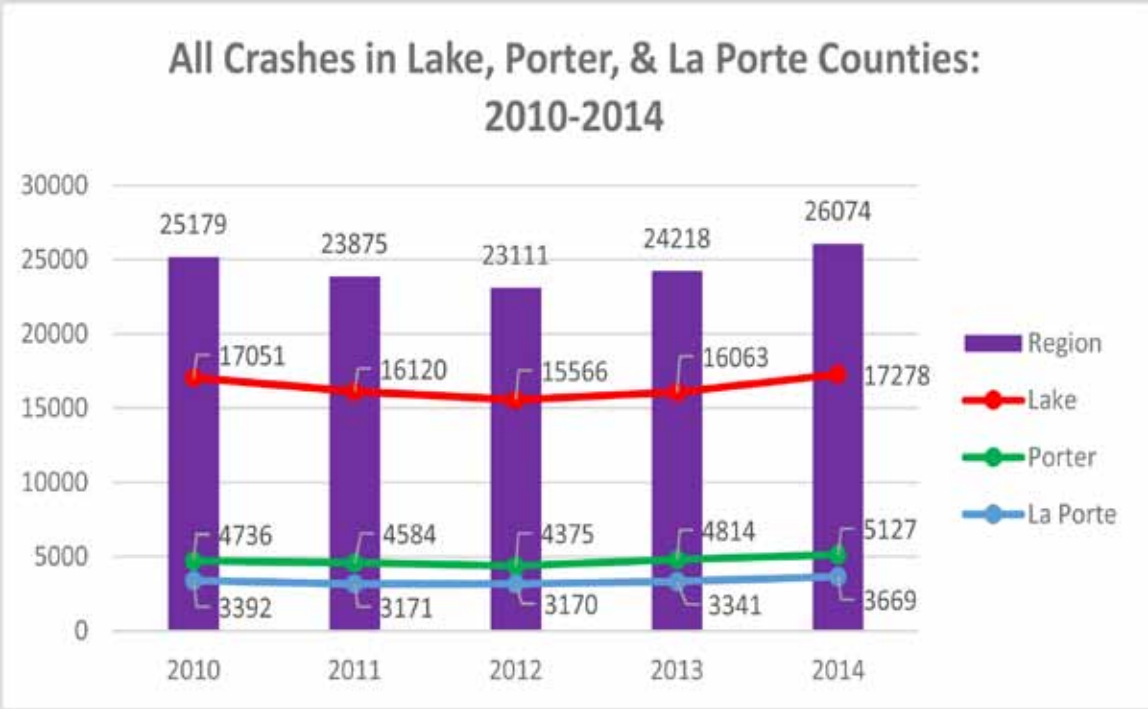
As with the CRP, crash data was derived from the Indiana State Police's Automated Reporting Information Exchange System (ARIES), which provides source data for all road crashes. For railroad crossing crashes, NIRPC obtained Federal Railroad Administration (FRA) data from INDOT's Rail Office. This data was then analyzed in Excel and NIRPC's geographic information system (GIS) software to provide the following updated tables, graphs, and maps.

The analysis of the 2010-2014 crash data for the three counties in the NIRPC region shows an average of 24,491 crashes per year. This is a reduction from the 2005-2009 average of 26,337 per year. In each of the five years studied, crashes occurring in Lake County accounted for approximately two-thirds of all crashes. A further examination of the types of crashes in the region can provide a clearer picture of the crashes listed here. Four categories of crashes are examined:

- Vehicular crashes with non-motorized vehicles
- Crashes involving trucks
- Crashes involving buses
- Crashes occurring at railroad crossings

Traffic crashes from 2010-2014 in Northwest Indiana saw a 3.5% increase, from 25,179 in 2010 to 26,074 in 2014. The number of fatalities, however, saw a 14% decrease from 95 in 2010 to 81 in 2014.

The total crashes in the three counties saw an increase of 3.5% between 2010 and 2014, while the fatality rate continued its decline, which started after 2005. Encouragingly, even as travel increased following the dramatic decrease as a result of the economic recession of 2007, the number of crashes in the region continued to decline until 2012. The increases of 2013 and 2014, however, are most likely attributable to the uncharacteristically severe winter of 2013-2014, and probably show nothing more than the impacts of the extremely hazardous conditions the region experienced.



Tabel II-1: Regional Vehicular Crash Breakdown in Northwest Indiana 2010-2014

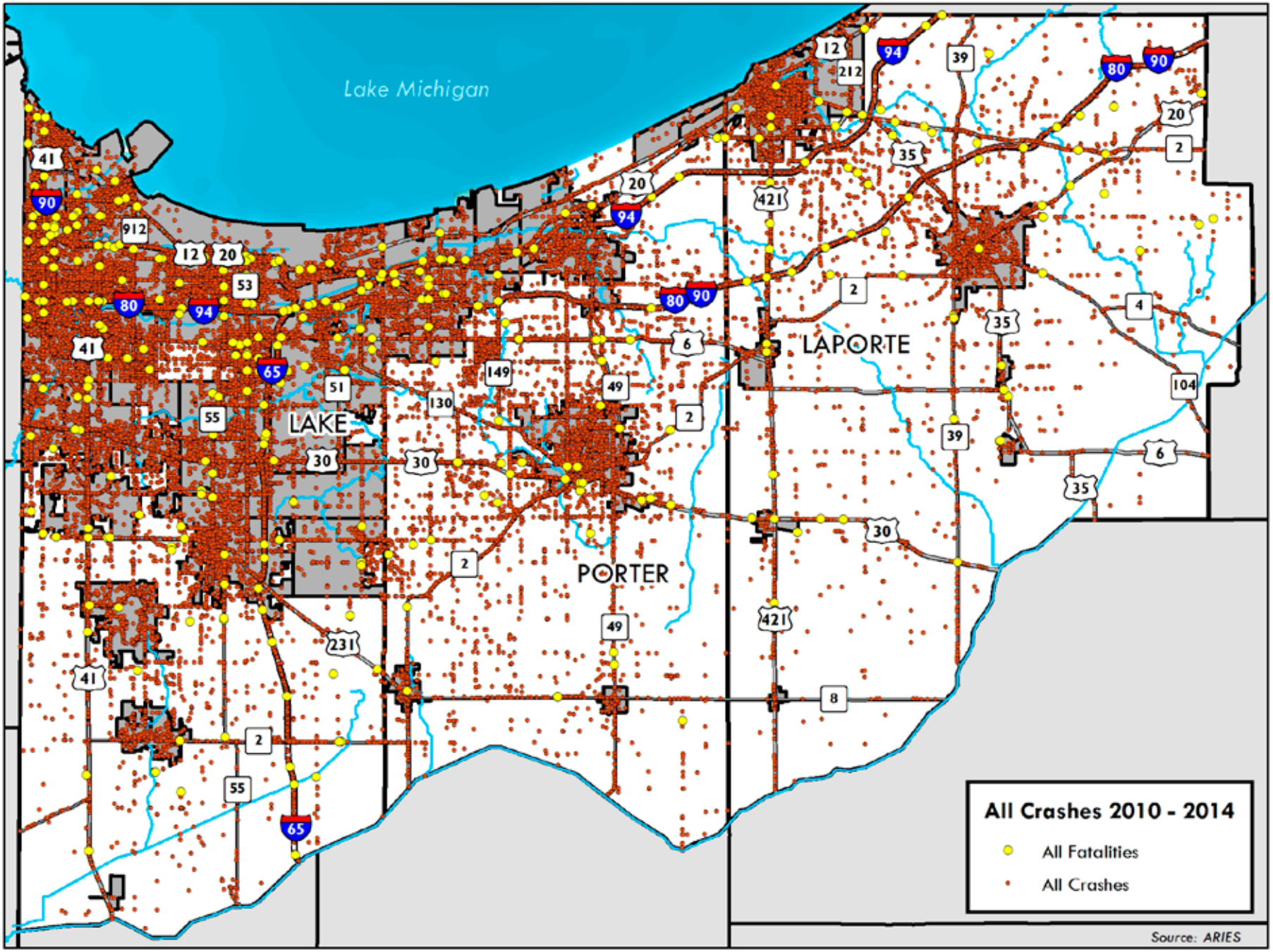


Figure II-2: Crash Locator Map

Crashes	2010	2011	2012	2013	2014	Total
Total Crashes	25179	23875	23111	24218	26074	122457
Fatal Crashes	86	74	68	78	74	380
% of Crashes with Fatality	0.34%	0.30%	0.28%	0.32%	0.28%	0.31%
Crashes with Injury	4606	4428	4385	4339	4476	22234
% of Crashes with Injuries	18%	19%	19%	18%	17%	18%
Total Fatalities	**95**	**77**	**71**	**88**	**81**	**412**
Total Injuries	**6426**	**6045**	**6024**	**6048**	**6096**	**30639**

Figure II-1: All crashes in the NIRPC Region 2010-2014

The percentage of crashes that resulted in a fatality was .31% for the five-year period from 2010 to 2014, a decrease from the .43% for the five year period from 2005 to 2009. Based on the five years of traffic crash data, there are 67 traffic crashes per day and one fatality crash every five days in Northwest Indiana. This is an improvement from one fatality every three days for the five year period of 2005 to 2009.

Crash Rate

The crash rate was calculated for each of the 25 corridors with the most crashes for each county. The Average Annual Daily Traffic (AADT) within the corridor boundaries indicated on the table was then determined using data from INDOT. By dividing this amount by the number of crashes, the crash rate was determined. As a result, a more accurate picture can be obtained, because the crash rate shows the relation of the number of crashes to the amount of traffic on the road. For example, in Lake County, I-80/94 between the state line and the I-90 merge is ranked first in number of crashes, but ninth in terms of crash rate. The following tables show the results for the top 25 corridors for crashes for each of the counties in the NIRPC region. The source of the information is found in the Indiana State Police's Automated Reporting Information Exchange System.

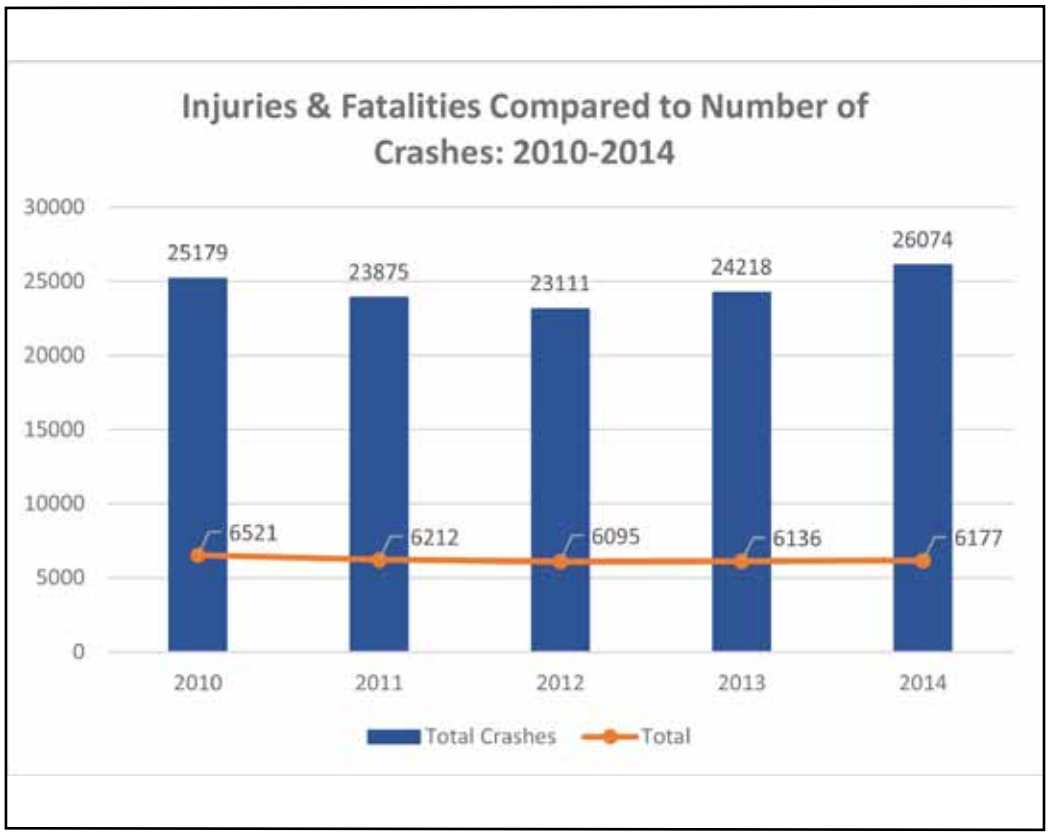


Figure II-3: Injuries & Fatalities Crash Ratio 2010-2014

Top 25 Corridors for Crashes in Lake County					
Name	**Corridor Endpoints**	**Crash Rate Rank**	**Crash Rate**	**Crash Count**	**Crash Rank**
US 41	Main St / US 30	1	40.66	970	8
Columbus Dr	Cline Ave / McCook Ave	2	39.24	393	25
Ripley St	US 20 / 37th Ave	3	37.85	558	17
Calumet Ave	Ridge Rd / US 30	4	35.39	420	23
I-90	149th St/ I-94 Merge	5	35.31	854	9
Main St (Crown Pt)	93rd St / US 231	6	33.39	456	21
Taft St	61st Ave / 91st Ave	7	32.86	590	15
5th Ave	Cline Ave/ Broadway	8	29.52	477	19
I-80/94	State Line/ I-90 Merge	9	27.02	5993	1
Grant St	4th Ave / Ridge Rd	10	24.23	558	18
Wicker Ave	77th St / Newton County Line	11	21.95	792	11
Main St	Calumet Ave / Kennedy Ave	12	20.89	456	22
I-65	Begin/ Newton County Line	13	17.52	3228	3
73rd Ave	Burr St / Broadway	14	17.43	460	20
45th St	Indianapolis Blvd/ Cline Ave	15	16.31	584	16
Indianapolis Blvd	State Line/ Main St	16	15.00	1652	5
173rd St	Hohman / Kennedy Ave	17	14.66	411	24
Hohman Ave	Ridge Rd / 137th	18	14.11	811	10
US 30	State Line/County Line	19	13.12	3523	2
Broadway	US 12/20 / US 30	20	13.10	1384	6
Ridge Rd	Calumet Ave/ Broadway	21	12.32	1297	7
Columbia Ave	141st St / 45th St	22	12.23	593	14
165th St	State Line/ Kennedy	23	11.13	654	13
Calumet Ave	Indianapolis Blvd/ Ridge Rd	24	10.90	1799	4
169th St	Calumet Ave/ Cline Ave	25	8.39	662	12

Table II-2: Top 25 Crash Corridors in Lake County

Top 25 Corridors for Crashes in Porter County					
Name	Corridor Endpoints	Crash Rate Rank	Crash Rate	Crash Count	Crash Count
US 30	County Line / Joliet Rd	1	110.91	234	14
US 20	CR 100E / Golf Wood Rd	2	95.78	112	25
Laporte Ave	Sturdy Rd / Rigg Rd	3	84.66	144	20
SR 49	US 30 / SR 8	4	82.40	138	21
SR 2	CR 400E / County Line	5	61.83	120	23
Roosevelt Rd	Calumet Ave / Lincolnway	6	60.83	150	18
Sturdy Rd	US 30 / Lincolnway	7	56.98	160	17
SR 130	County Line / SR 149	8	47.94	208	16
US 6	County Line / Worthington Ave	9	45.91	353	8
SR 2	200 S / US 30	10	42.65	309	10
I-80/90	County Line / County Line	11	41.96	746	2
Indian Boundary Rd	Calumet Rd / Brummitt	12	37.76	301	11
I-94	County Line / County Line	13	34.21	1846	1
Central Ave	County Line / Samuelson Rd	14	34.03	337	9
Calumet Ave	CR 1100N / Voyage	15	33.38	116	24
N 475 W	US 30 / SR 130	16	30.05	138	22
Campbell St	600 N / US 30	17	29.93	245	13
Willowcreek Rd	Old Porter Rd / US 6	18	28.33	401	6
SR 149	Old Porter Rd / SR 130	19	27.76	372	7
Silhavy Rd	Burlington Beach Rd / SR 2	20	25.70	213	15
Melton Rd (US 20)	County Line / Waverly Rd	21	20.05	666	4
US 6	Willowcreek Rd / County Line	22	17.48	728	3
Calumet Ave	SR 49 / SR 49	23	15.34	254	12
Calumet Ave	Poplar St / Edgewater Beach St	24	13.40	581	5
N 400 W	700 N / I-80/90	25	12.25	150	19

Table II-3: Top 25 Corridors in Porter County

Top 25 Corridors for Crashes in La Porte County					
Name	**Corridor Endpoints**	**Crash Rate Rank**	**Crash Rate**	**Crash Count**	**Crash Count**
US 421	400 N / Snyder Rd	1	141.61	128	12
W 400 N	US 421 / I-94	2	119.62	87	25
US 30	Porter Co. Line / Starke Co. Line	3	117.04	114	18
US 20	Range Rd SR 2	4	109.60	126	14
SR 2	150 E / St. Joseph Co. Line	5	109.34	99	23
US 35	SR 39 / Pine Lake Center Dr	6	90.78	248	8
Indiana Ave	Pine Lake Ave / Kingsbury Ave	7	84.88	182	10
US 35	US 20 / Severs Rd	8	78.21	108	21
SR 2	500 W / 6th St	9	74.40	116	16
US 12	Michigan Blvd / Meer Rd	10	69.59	120	15
Lincolnway	1st St / Fail Rd	11	67.69	292	5
Coolspring Ave	Franklin St / Johnson Rd	12	67.14	102	22
SR 212	Michigan Blvd / US 12	13	59.03	111	20
I-94	County Line / State Line	14	57.59	770	3
Monroe St	Lincolnway / 150 E	15	53.77	115	17
Woodland Ave	Michigan Blvd / Pahs Rd	16	53.50	128	13
Michigan Blvd	US 12 / I-94	17	52.05	279	7
Johnson Rd	350 N / Admore Rd	18	50.88	113	19
Boyd Blvd	SR 2 / US 35	19	49.98	161	11
SR 39	State Line / Severs Rd	20	36.46	207	9
I-80/90	Porter Co. Line / St. Joseph Co. Line	21	31.52	820	2
US 20	Porter Co. Line / I-94	22	29.40	529	4
US 421	Stark Co. Line / I-80/90	23	27.82	281	6
SR 39	400 S / Starke Co. Line	24	22.76	94	24
Franklin St	9th St / 400 N	25	18.53	1233	1

Table II-4: Top 25 Corridors in La Porte County

Non-Motorized Transportation

Crashes involving vehicles and non-motorized transportation (i.e. pedestrians and bicyclists) are of great concern as they directly reflect the livability of our centers and influence the willingness of our residents to use alternative transportation. As the road network is made more bicycle- and pedestrian-friendly and the region's trail network is expanded, safety for those users becomes an ever-larger concern. While non-motorized transportation is growing within the region, both as a means of recreation and active transportation, data for non-motorized crashes for the region for the five year period between 2005 and 2009 showed a significant increase in the number of crashes. After peaking at 444 in 2010, the number of crashes began to decline (from 444 in 2010 to 372 in 2014), resulting in a 16% decline during the five year period.

Non-motorized crashes represent 1.7% of all crashes in Northwest Indiana. Despite the initial increase from the 2005-2009 time period, the decrease could reflect a growth in not only facilities, policies, and programs (such as trail crossing grade separations, NIRPC's Complete Streets Policy, and the Safe Routes to School Program), but also a greater awareness of, and road users who are more accustomed to the presence of, non-motorized traffic. As projects are implemented and other programs like NIRPC's Creating Livable Communities program come online, this reduction should hopefully be a trend that continues. As always, continued education of how to share the road and proper safety education will play an important role.

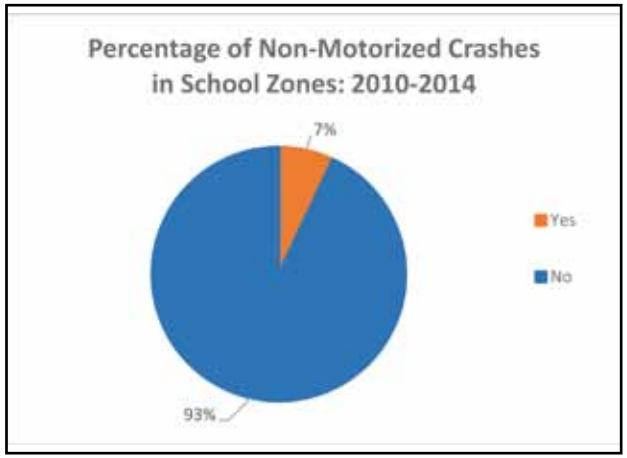


Figure II-6: Non-Motorized Crashes in School Zones

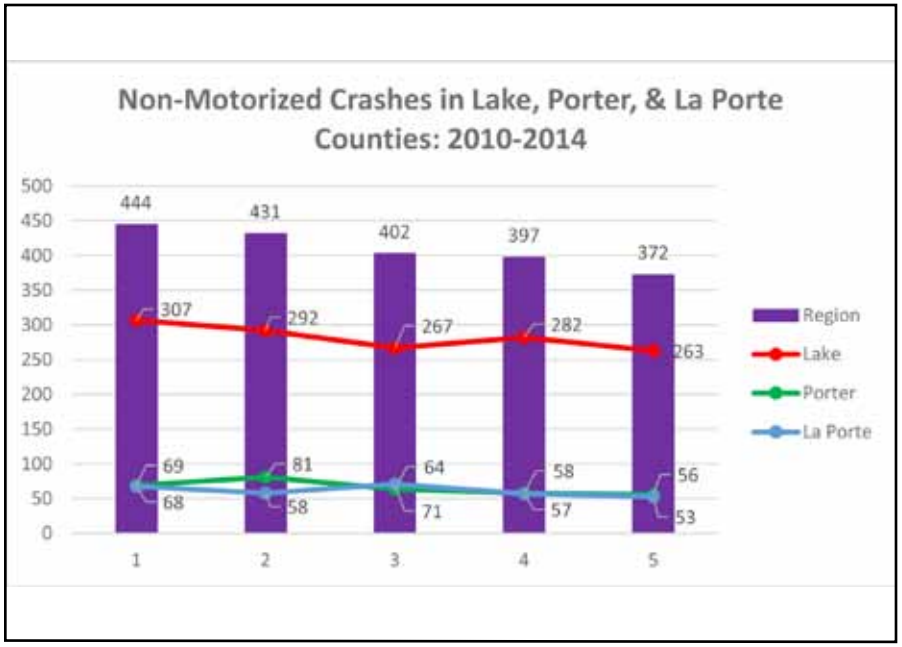


Figure II-5: Non-Motorized Crashes in NIRPC Region 2010-2014

County	Name	Crash Count
Lake	Calumet Ave	35
La Porte	Franklin St	34
Lake	Indianapolis Blvd	31
Lake	Hohman Ave	27
Lake	169th St	26
Lake	Broadway	25
Lake	Columbia Ave	21
Lake	I-80	18
Lake	165th St	17
Lake	Sibley St	15

Table II-5: Top Regional Non-Motorized Crash Locations

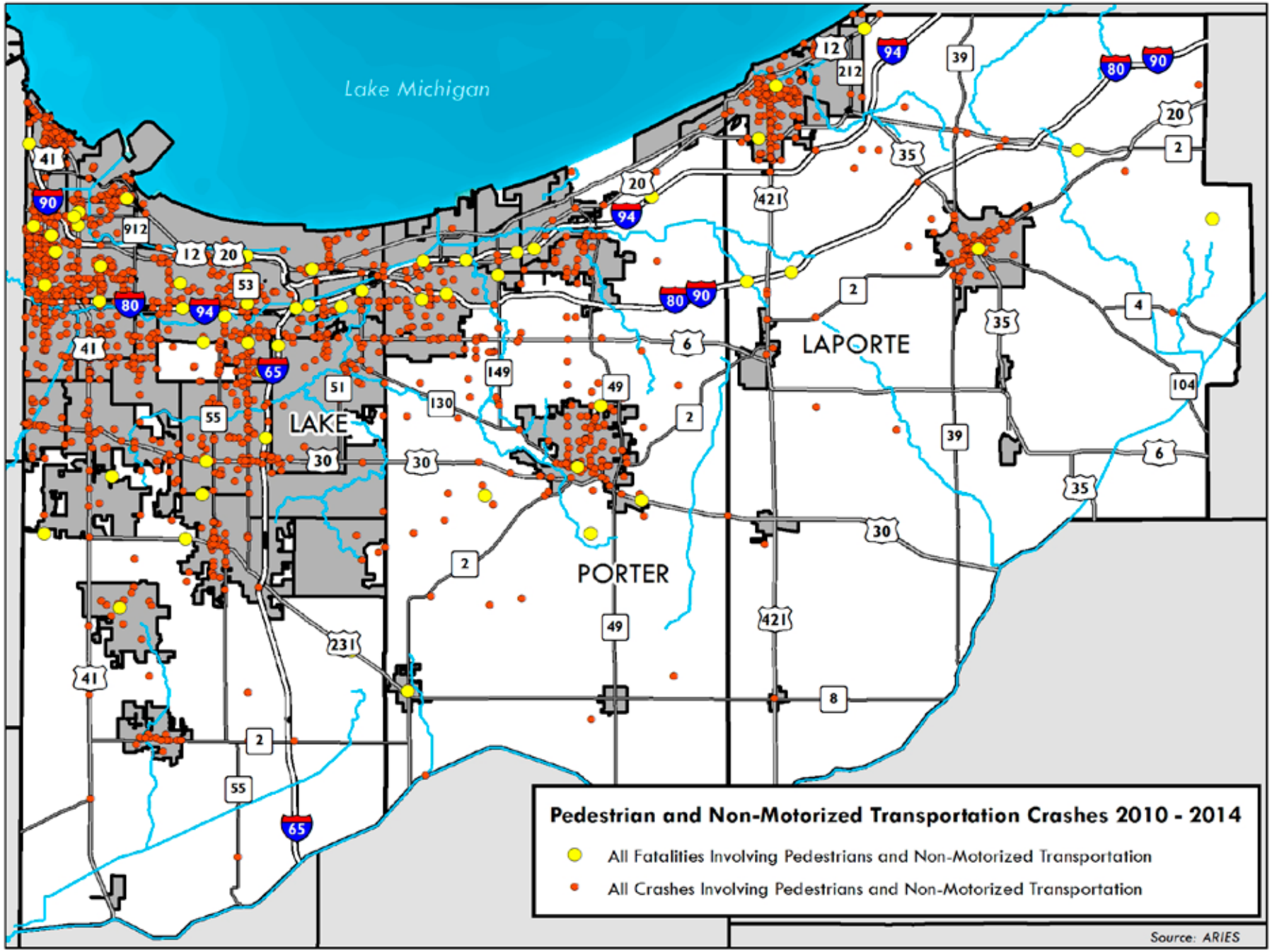


Figure II-4: Non-Motorized Transportation Crashes Map

Truck Crashes

Northwest Indiana contains a dense freight network due to the confluence of interstates and the region's port facilities. This network relies largely on trucks for movement of cargo, and because of the larger size and heavier weight of these vehicles, the resulting crashes are usually much more severe. Therefore, this category warrants special attention. Between 2010 and 2014, crashes involving trucks averaged 2,046 crashes per year. Most truck crashes in Northwest Indiana occur on interstate highways. The truck crashes data reflects the general trend shown in the "All Crashes" data of a decline from 2010 to 2012, with increases in 2013 and 2014. Again, this most likely reflects the especially severe winter of 2013-2014 and the resulting higher number of crashes. Additionally, after a decrease due to the dramatic reduction in traffic due to the economic recession in 2009, numbers experienced an increase in 2010. Even with the overall increase from 2010 to 2014, the 2014 number of crashes (2,417) is still lower than the 2005 number (2,842). Since the amount of traffic is tied to the health of the economy, it will still be important to monitor this number as the economy continues to improve.

Truck crashes represent 8.3% of all crashes in Northwest Indiana from 2010-2014. The fatality rate is 0.7%. When large trucks are involved in crashes, it is generally more severe than other motor vehicle crashes. Special attention should be given to commercial motor vehicle crashes, particularly as a large number of trucks pass through the region everyday because of a concentration of industrial sites and the amount of freight traffic that goes through Chicago.

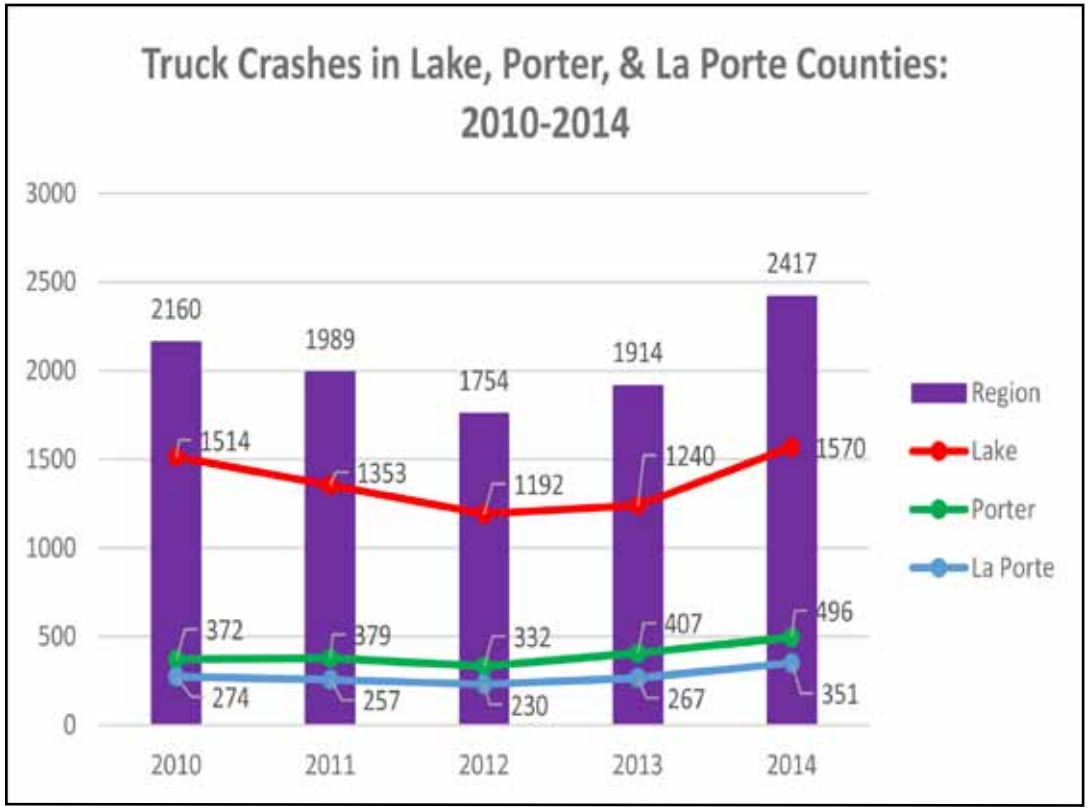


Figure II-7: Truck Crashes 2010-2014

County	Name	Corridor	Crash Count
Lake	I-80	Lake County	1830
Lake	I-65		594
Porter	I-94	Porter County	477
Porter	I-80	Porter County	251
La Porte	I-94	La Porte County	186
Lake	I-90	Lake County	166
La Porte	I-80/90	La Porte County (West of US 20)	151
Lake	Ripley St		147
Lake	Calumet Ave		139
La Porte	I-80/90	La Porte County (East of US 20)	122

Table II-6: Top Regional Truck Crash Locations

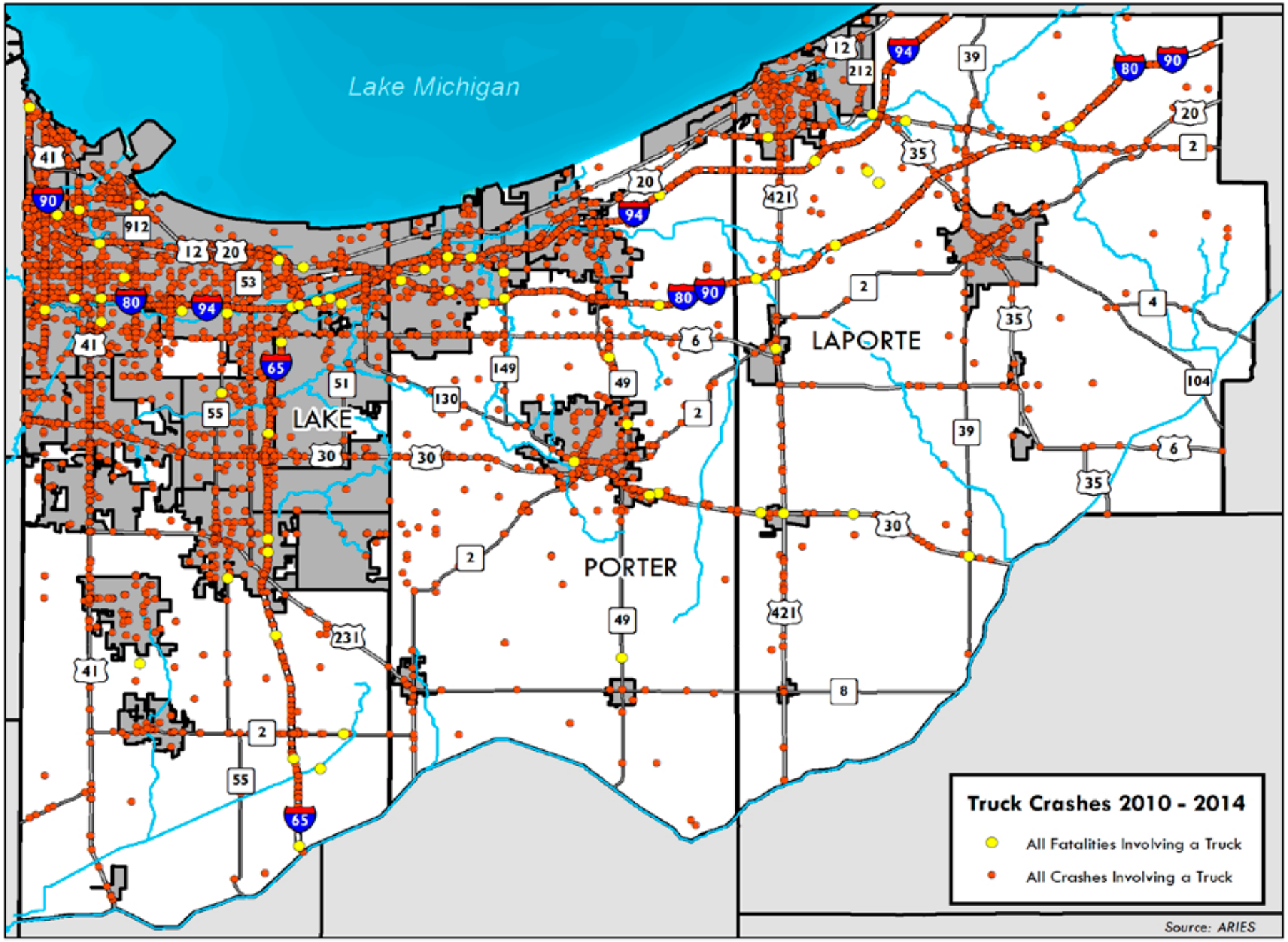


Figure II-7: Truck Crashes in NIRPC Region 2010-2014

Bus Crashes

According to the National Safety Council, bus riding is the safest form of surface transportation. Between 2010 and 2014, an average of 213 bus crashes occurred in Northwest Indiana each year. In urban areas, the concern for bus safety is even greater: 73% of all bus crashes occurring between 2010 and 2014 took place in Lake County, the most urbanized of the three counties and therefore the one with the most extensive use of both transit and school buses. Whether it is transit, school, or private buses, efforts must be continually made to ensure the safety of all passengers, especially those in urban centers where bus service is most concentrated.

County	Name	Crash Count
Lake	Indianapolis Blvd	21
Lake	I-80	19
Lake	I-90	14
Lake	Broadway	12
Lake	I-65	12
La Porte	Franklin St	12
Lake	Hohman Ave	10
Lake	5th Ave	10
Lake	7th Ave	10
Lake	Calumet Ave	8

Table II-7: Top Regional Bus Crash Locations

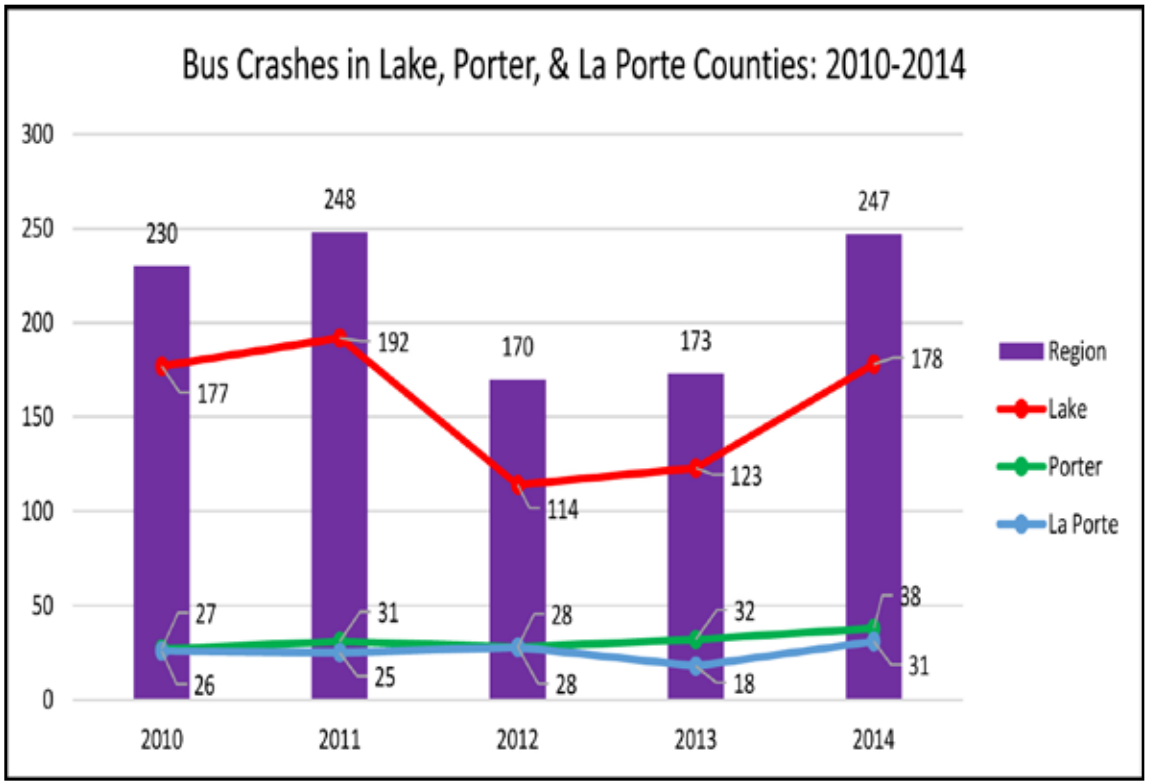


Figure II-9: Bus Crash Locations in NIRPC Region 2010-2014

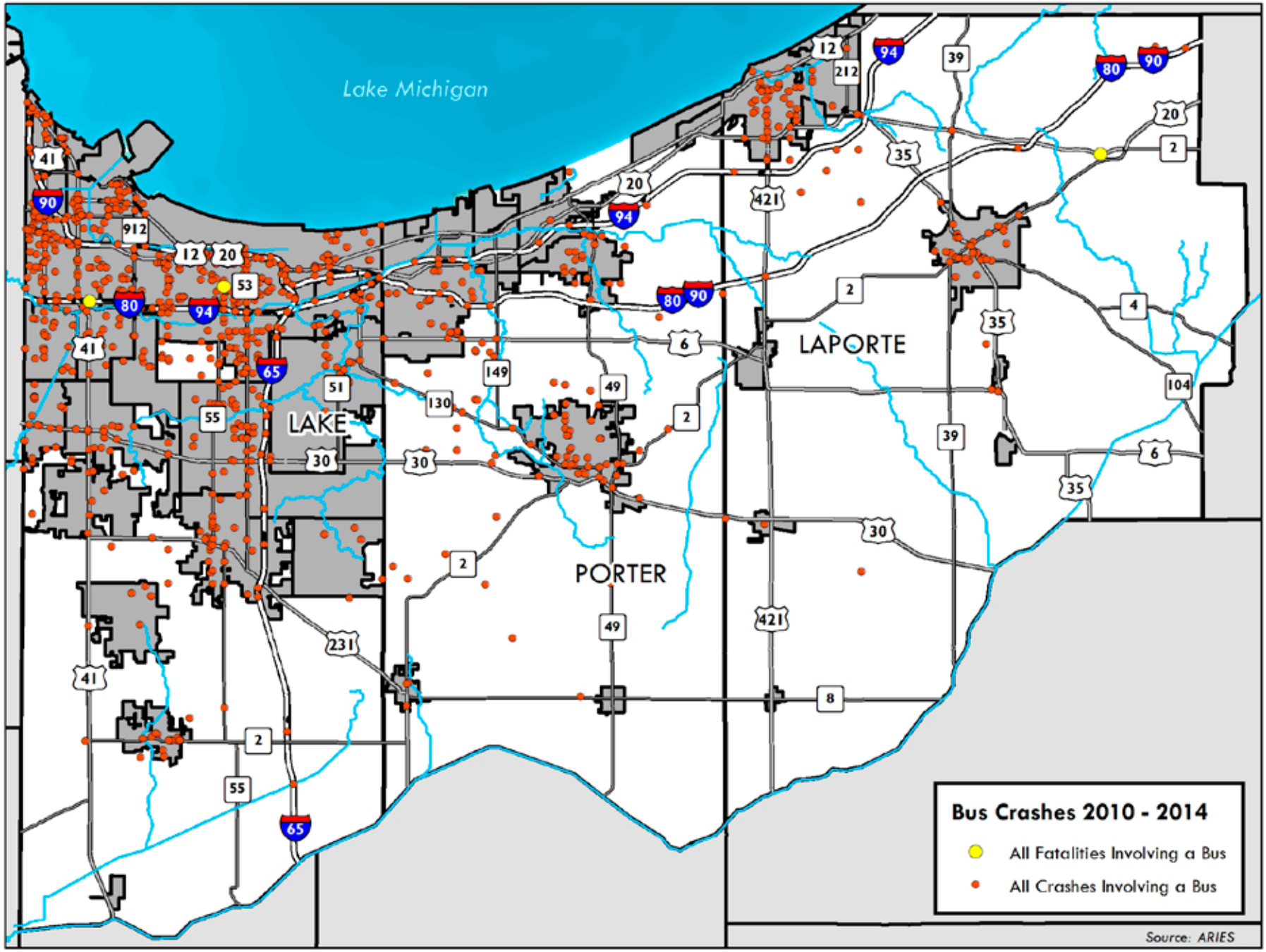


Figure II-10: Bus Crash Locations in NIRPC Region 2010-2014

Railroad Crossing Crashes

On average, there are 27 vehicle-train crashes each year. While the instances of crashes occurring at railroad crossings are considerably lower than other types of crashes in the region, this type of crash has a much greater potential to be fatal due to the weight and speeds of the vehicles involved. Further, the number of rail lines passing through an urbanized area is directly related to the number of crashes. As a result, Lake County, with its more urbanized geography, has the highest number of railroad crossing crashes not only of the three counties, but of all counties in the state in each year from 2010-2014 according to Federal Railroad Administration (FRA) data obtained from INDOT. In addition to the high fatality rates for crashes of this kind, the 2040 CRP's focus on the revitalization of urban centers and the creation of livable centers makes it necessary to prioritize safety improvements to reduce crashes at railroad crossings. NIRPC has already been working toward this through its efforts with the Northwest Indiana Rail VISION work group and Purdue University Calumet. Its purpose is to identify crossings that would make effective candidates for grade separation to remove the point of conflict.

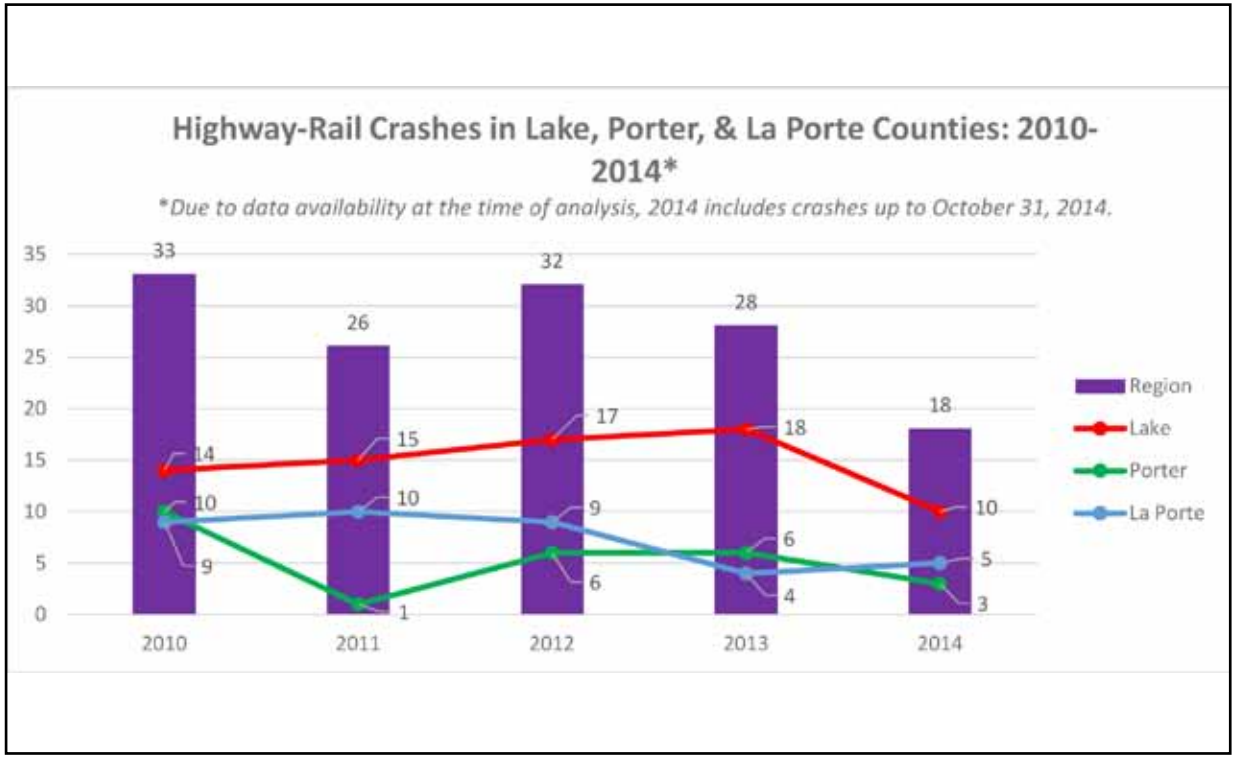


Figure II-11: Highway-Rail Crashes in NIRPC Region 2010-2014

Freight train in Whiting. Photo by Stephen Sostaric.

Congestion Management

The NIRPC Congestion Management Process, adopted by the Transportation Policy Committee (TPC) on June 14, 2011, remains effective. The only major difference is that in 2012, the Congestion Management Subcommittee of the TPC dissolved. Now the TPC and NIRPC Commission directly makes decisions about the Congestion Management Process. There are also some minor differences that help inform staff and the TPC. Newly available information and data will enhance the Congestion Management Process to make decisions recommended by staff more informed. In calculating the Level of Service for corridors as explained on pages C-81 and C-82 of the CRP appendix, the "V/C Ratio" and "Model Average Speed/Posted Speed" metrics will be measured using now available 2012 data instead of 2008. Also, probe data from the National Performance Measure Research Data Set as well as survey results from NIRPC's newly launched Regional Corridor Study provide NIRPC with more information with which to make findings and decisions.

National Performance Measure Research Data Set (NPMRDS)

The NPMRDS is a massive probe travel time data set released each month since 2012 by HERE (corporation that provides map data), under contract with the FHWA Office of Freight Management and Operations. It is a probe dataset in that the sources of the data are "probes" (in-vehicle GPS units or Bluetooth-enabled devices including cell phones) that automatically ping the telecommunications network that HERE has access to at 5-minute intervals. The contract between HERE and the FHWA Office of Freight Management and Operations allows FHWA to release the data free to all state departments of transportation and metropolitan planning organizations, including NIRPC. NIRPC has been able to access and analyze the NPMRDS for Northwest Indiana for the six-month period from July to December 2014. Specifically, NIRPC analyzed the travel network

Photo by Washington State Dept. of Transportation via Flickr, CC BY-NC-ND 2.0 License.

in Northwest Indiana for which NPMRDS data was available on four congestion performance measures: Delay, Speed Ratio, Travel Time Index, and Travel Time Reliability. While the coverage of the NPMRDS data is limited to roads on the National Highway System (Interstates, U.S. Highways, and some State Roads and Other Principal Arterials), the analysis shows the daily experience of congestion in Northwest Indiana. It is also important to note that this analysis is limited to vehicles included in the NPMRDS dataset, which includes both cars and trucks. Research on congestion statistics suggests that even as little as three percent of the traffic stream being sampled is sufficient to decipher performance measures, and the NPMRDS data easily meets this threshold.

Delay

Delay is a measure of time spent experiencing congestion. While the experience of congestion differs by road user, delay is defined here as number of hours per month spent traversing a road under its posted speed limit.

Delay is not typically expressed on a per capita basis but rather a sum total of all hours of delay, so it is sensitive to the number of samples in the dataset. That explains why the segment of US-30 between Valparaiso and Wanatah appears very congested (Figure II-12), even though common local knowledge suggests otherwise. Also, the fact that the Borman Expressway (I-80/94 in Lake County) appears to have absolutely no delay may be attributed to the fact that traffic routinely exceeds its low 55 mile per hour speed limit. The same applies to I-65 north of US-30. Despite these and a few other exceptions, the Delay analysis shows pockets of congestion around major activity clusters (i.e. Southlake Mall on US-30) and in areas with a high density of intersections and driveways (i.e. Indianapolis Blvd in the Whiting/East Chicago area).

Speed Ratio

Speed Ratio is a measure of what percentage the experienced speed of vehicles on a road segment is below the road segment's posted speed. This analysis breaks down Speed Ratio into three time segments: 24-Hour typical weekday (typical weekday is Tuesday, Wednesday, and Thursday excluding holidays), the AM Peak Period typical weekday between 6 AM and 9 AM, and the PM Peak Period typical weekday between 3 PM and 6 PM.

In general, the Speed Ratio is significantly higher (more below the posted speed limit) on surface arterials than on Interstates in Northwest Indiana. Ridge Rd/US-6, Broadway (SR-53), US-12 in the Gary-Ogden Dunes corridor, and US-231 in the St. John-Crown Point corridor appear to have the highest Speed Ratios. Also, the PM Peak Period Speed Ratios are much higher in general than the AM Peak Period Speed Ratios.

Photo by Kelly Wilson. Copyright 2015, American Planning Association.

Delay Measure of Congestion

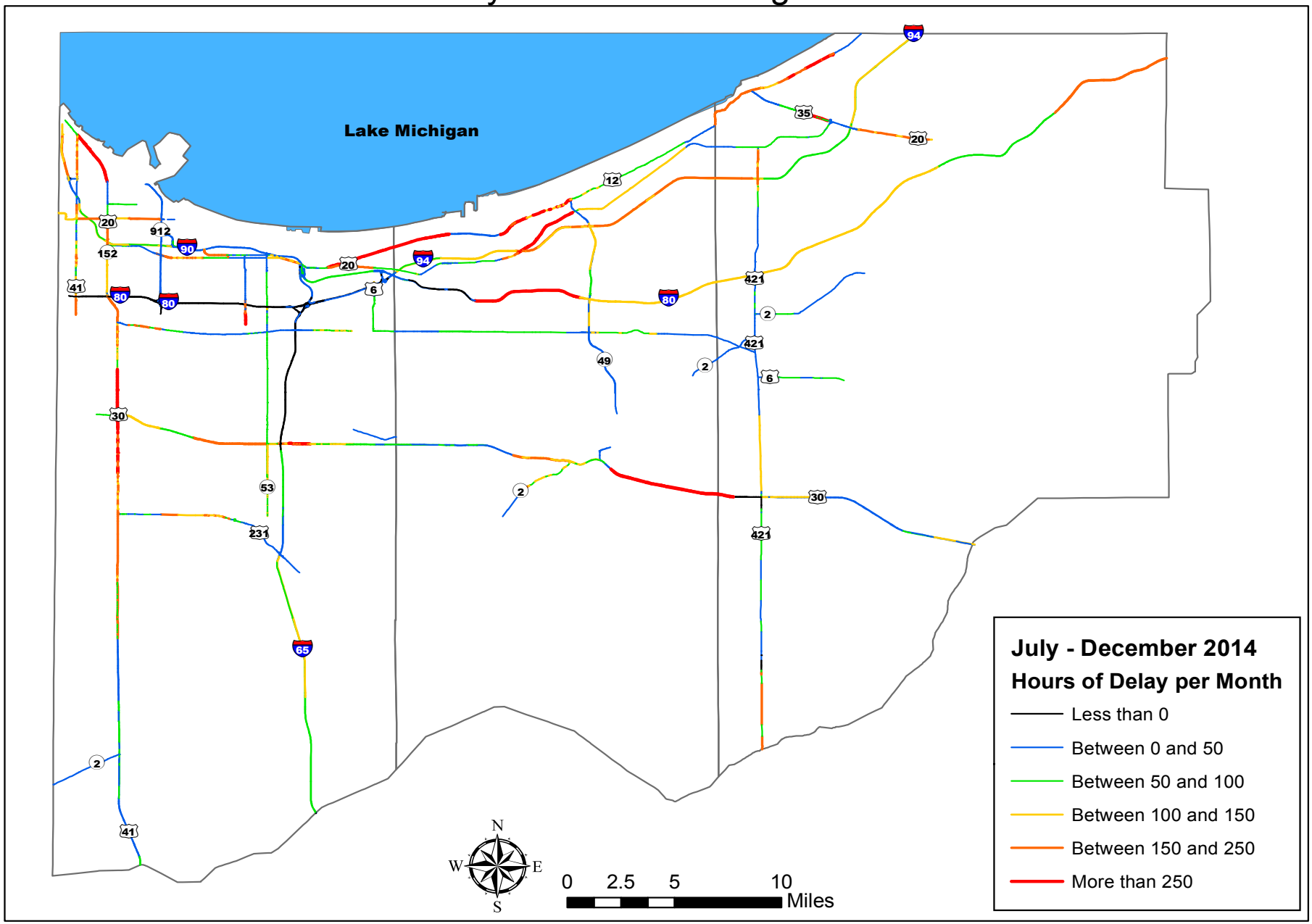


Figure II-12: Delay Measure of Congestion

24-Hour Speed Ratio Measure of Congestion

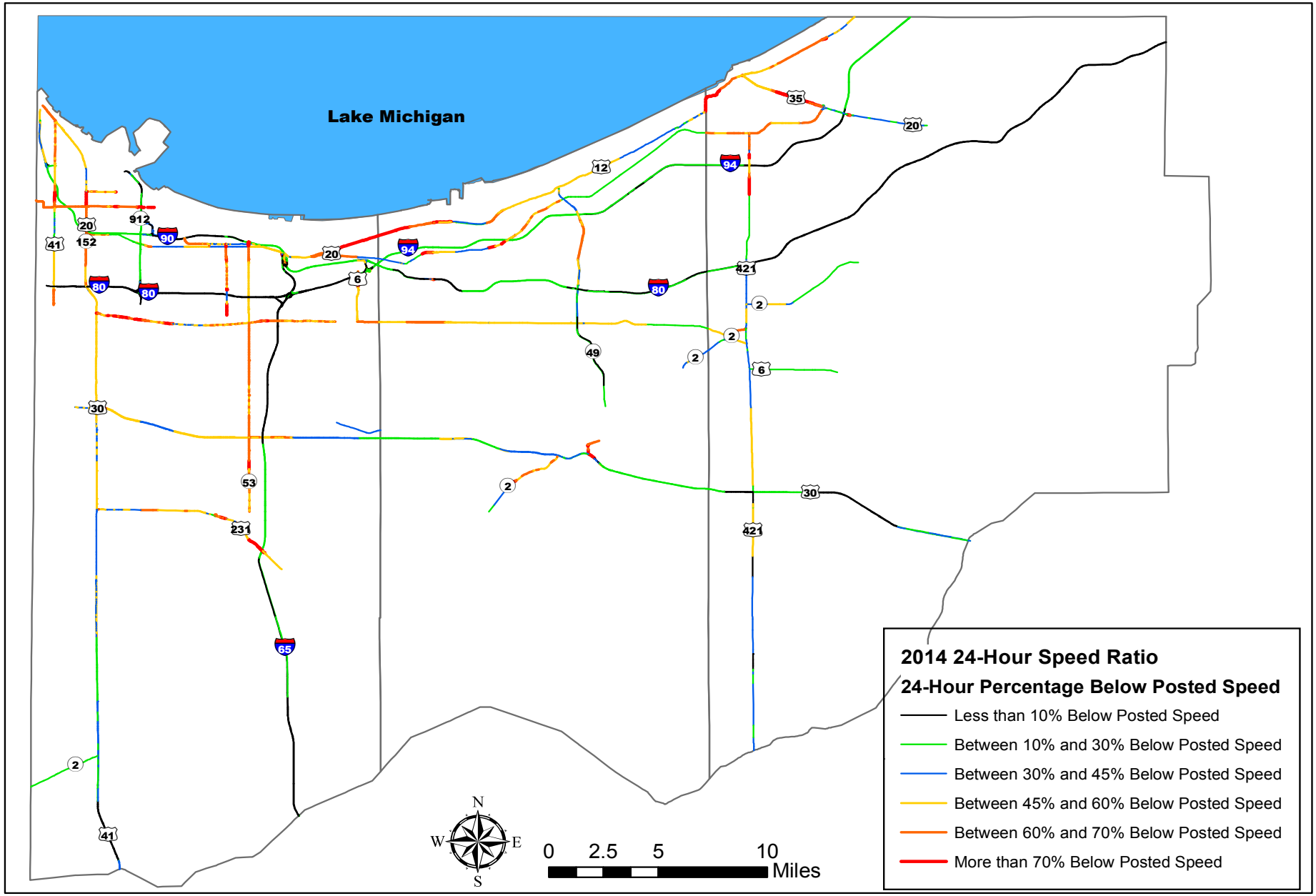


Figure II-13: 24-Hour Speed Ratio Measure of Congestion

AM Peak Period Speed Ratio Measure of Congestion

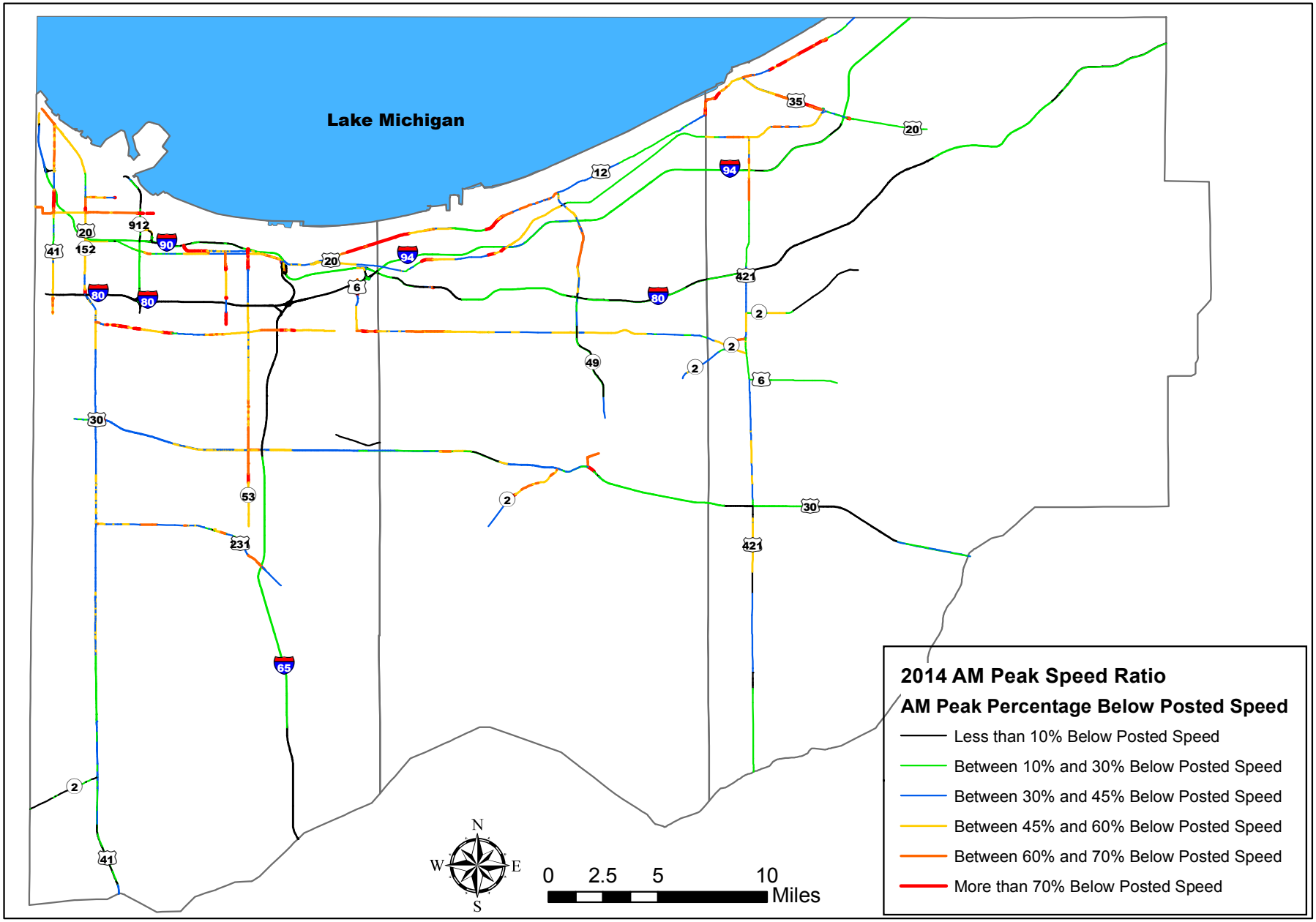


Figure II-14: AM Peak Period Speed Ratio Measure of Congestion

PM Peak Period Speed Ratio Measure of Congestion

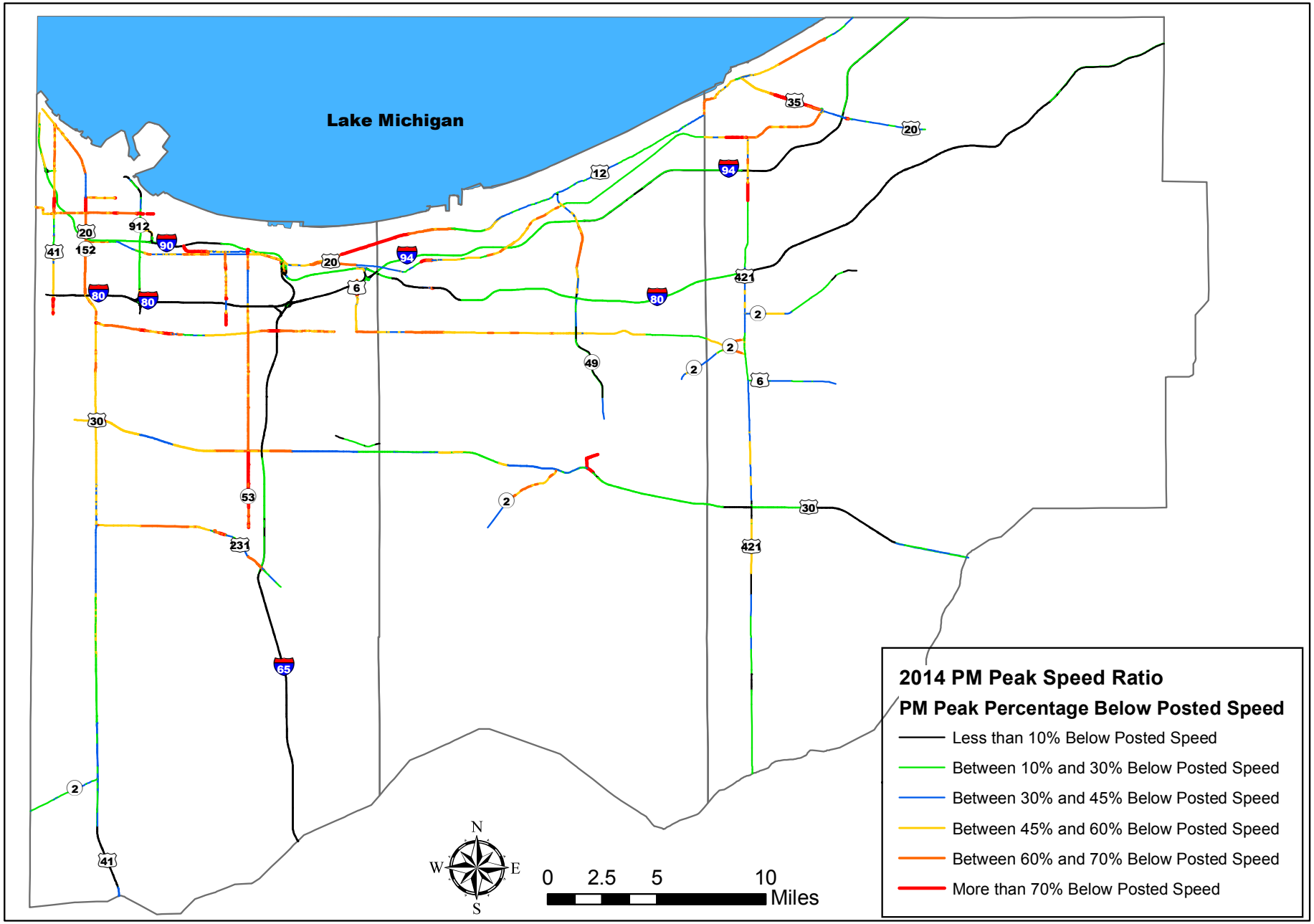


Figure II-15: PM Peak Period Speed Ratio Measure of Congestion

Travel Time Index

Travel Time Index (TTI) is a road segment's peak period travel time divided by its free flow travel time. It is a measure of how much affect there is on congestion from peak period travel.

In general, the surface arterials experience higher TTI than Interstates in Northwest Indiana. Cline Ave, SR-49 in the Porter-Chesterton corridor, Indianapolis Blvd in the Whiting-East Chicago corridor, US-30 in Schererville, and US-231 in the St. John-Crown Point corridor have the highest TTI. Overall, TTI is low in Northwest Indiana, meaning most of the congestion experienced by road users is not due to recurring peak period travel. This suggests that most of the congestion experienced in Northwest Indiana is instead non-recurring congestion, meaning obstacles like road construction, inclement weather, traffic incidents, seasonal shopping and leisure travel, etcetera are better explanations for congestion than weekday work trips.

Travel Time Reliability

Travel Time Reliability is a measure of how much variation in travel time there is on a road segment. It is measured by taking the standard deviation of all travel times in the NPMRDS dataset for each road segment and dividing it by the road segment's length. A lower value indicates more reliable travel (less uncertainty for a road user about how long it will take to traverse the road segment) while a higher value indicates less reliable travel.

It is clear that the Interstates in Northwest Indiana are very reliable compared to most of the surface arterials. Not surprisingly, Broadway (SR-53) and Ridge Road appear to have the highest values because these roads have a high density of intersections and driveway access. The Michigan City area has a high value. This may be because Michigan City is heavily influenced by a seasonal traffic flow, weekend casino events, and outlet mall shopping.

Rush hour on the Borman Expressway. Photo by Stephen Sostaric.

Travel Time Index (TTI) Measure of Congestion

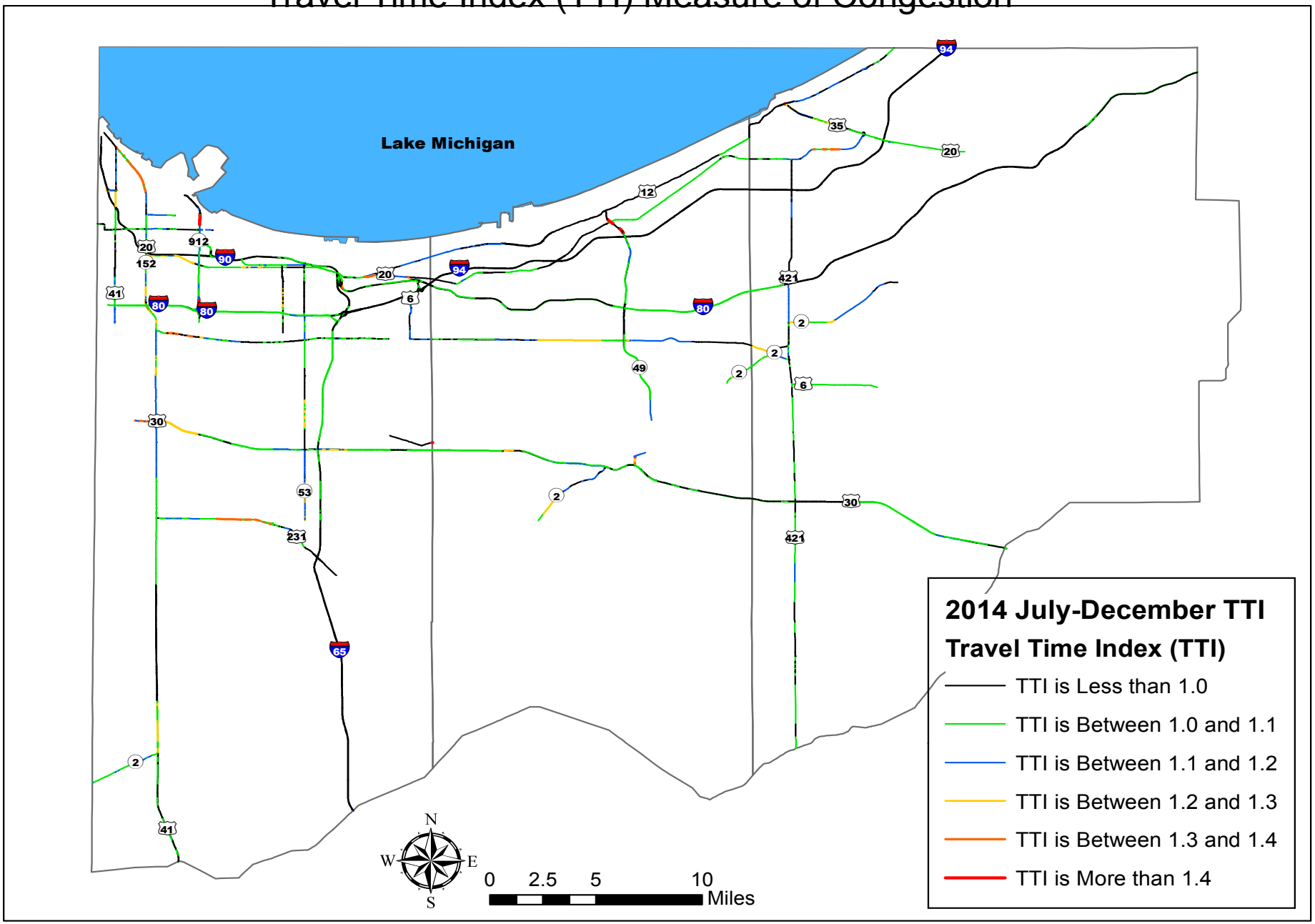


Figure II-16: Travel Time Index (TTI) Measure of Congestion

Travel Time Reliability Measure of Congestion

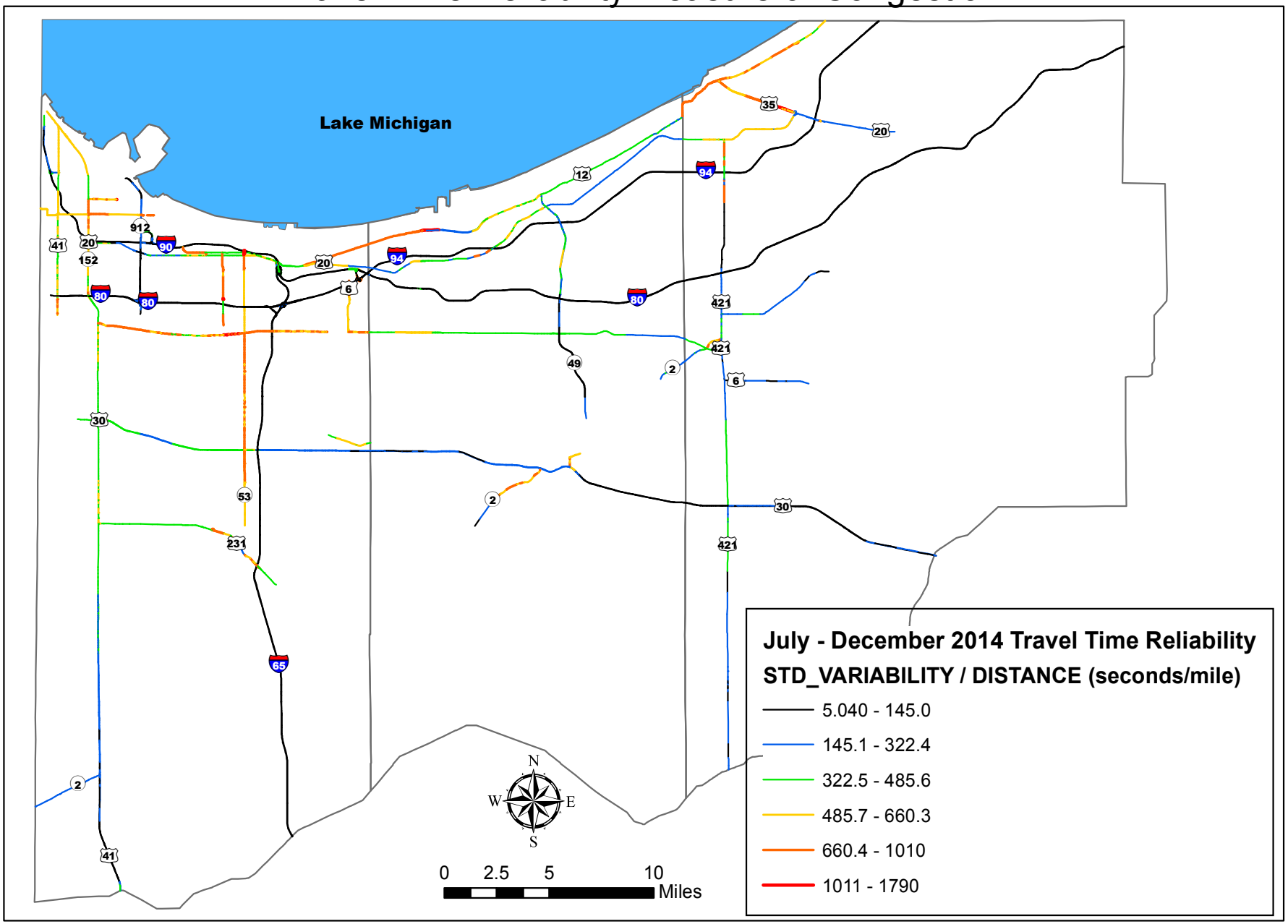


Figure II-17: Travel Time Reliability Measure of Congestion

Regional Corridor Study

The Regional Corridor Study is a project launched in NIRPC's 2015-2016 Unified Planning Work Program aimed at improving regional mobility and accessibility through enhanced connectivity. NIRPC sent out a survey to users of the transportation network throughout Northwest Indiana and received 300 responses. A few questions in particular on the survey are very helpful to NIRPC's Congestion Management Process: Question 6: What major roads do you travel to reach your main destination? Question 7: Do you experience delay/congestion during your main travel? Explain Where?; and Question 8: What alternate routes do you use when your primary route is congested, if any?

Major Roads in Northwest Indiana Traveled by Regional Corridor Study Survey Repondents

Figure II-18 shows the major roads in Northwest Indiana that respondents of the Regional Corridor Study reported using most often. Clearly I-80/94 was the predominant road of choice for the respon-

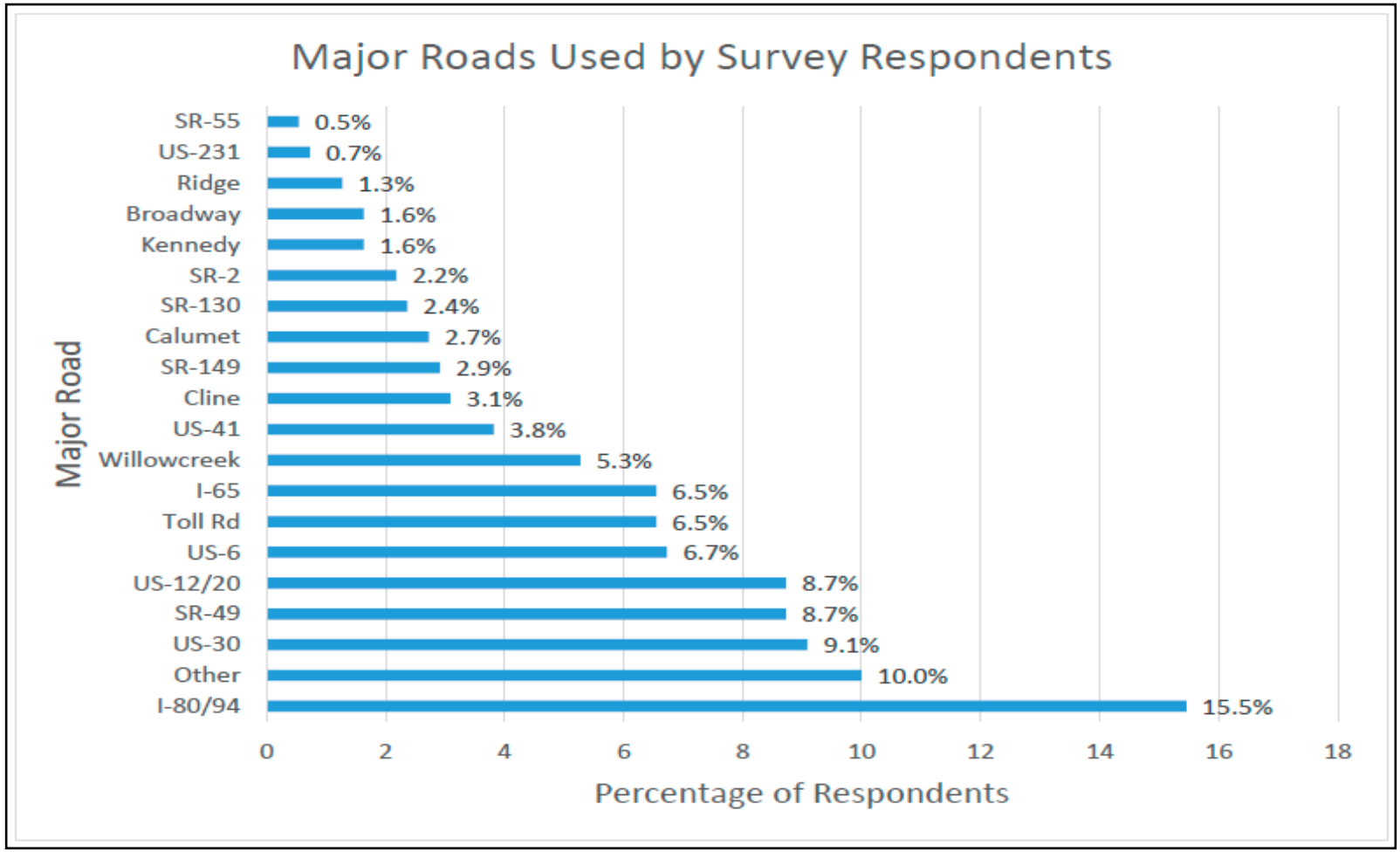


Figure II-18: Major Roads Used by Survey Respondents

dents. It is somewhat surprising from the results that the surface arterials US-30, SR-49, US-12/20, and US-6 were used more by the respondents than the other Interstates I-65 and the Toll Road (I-80/90). This can be partially explained by the fact that the survey received the greatest amount of response from Porter County residents.

Congestion Experienced by Regional Corridor Study Survey Respondents

Overall, 53.5 percent of the Regional Corridor Study Survey respondents reported experiencing congestion during their normal driving, while 46.5 percent did not report experiencing congestion. This is significant since it suggests that congestion is experienced by a majority of drivers in Northwest Indiana at some point during their normal driving. The survey question also asked respondents to specify where they experienced congestion. Figure II-19 shows the results.

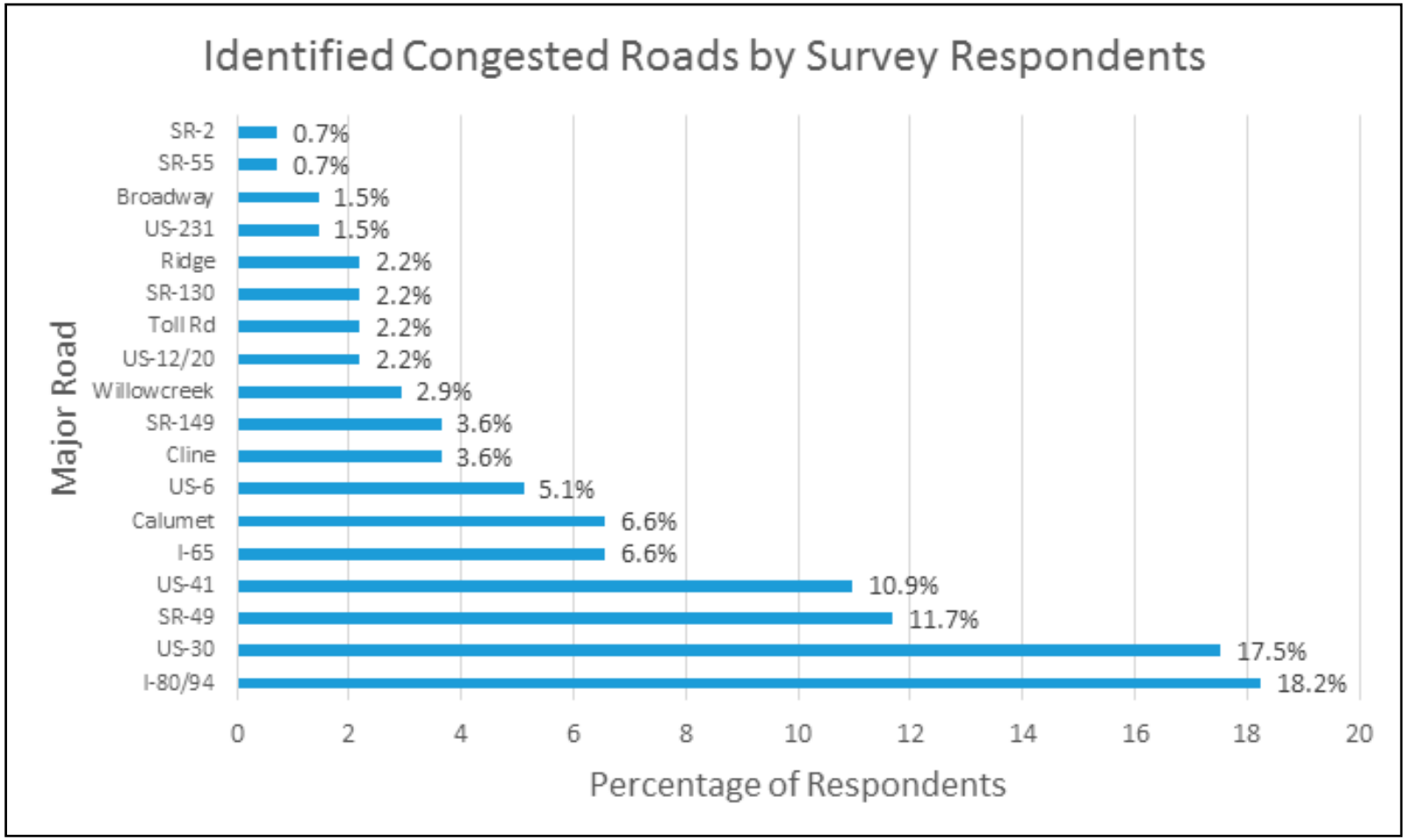


Figure II-19: Identified Congested Roads by Survey Respondents

Alternate Routes Taken by Regional Corridor Study Survey Respondents When Primary Route is Congested

Finally, the Regional Corridor Study Survey asked respondents to specify what alternate route, if any, they took when their primary route was congested. NIRPC categorized the results by the major roads reportedly used in Question 6 (what major roads respondents used) and then indicated the alternate routes for those major roads. Table II-8 explains the results.

The alternatives marked with an asterisk (*) indicate that the alternative was mentioned by several respondents as an alternate and therefore NIRPC highlights as an especially important alternative. Noteworthy about these results as seen in the table is that there is rarely if ever an obvious alternative for each of the major roads. Instead, it appears that drivers who experience congestion on these major roads are confronted with multiple choices of alternatives. It is also interesting that of the 14 major roads in the above table, 11 are identified as congested in the NIRPC Congestion Management Process Regionally Significant Congested Corridors tables on pages C-28 – C-29. Moreover, of the 70 alternatives in the above table, 43 are identified as congested.

Major Road	Percentage Used	Functional Classification	Alternatives
I-80/94	15.5%	Interstate	Ridge Rd* US-12/20* Toll Road* 173rd St 45th Ave US-30 Kennedy Ave to Alternate Cline Ave to Alternate Burr St to Alternate
US-30	9.1%	Principal Arterial	77th Ave* 73rd Ave* US-231* Main St* US-6* 93rd Ave SR-8 Hart Rd to Alternate Kennedy Ave to Alternate Broadway to Alternate
SR-49	8.7%	Principal Arterial	Meridian Rd* SR-149* I-65 US-20 to Alternate US-30 to Alternate
US-12/20	8.7%	Principal Arterial	US-20/12 I-94 15th Ave
US-6	6.7%	Principal Arterial	1050 N I-94 Central Ave 700 N
Toll Road	6.5%	Interstate	I-80/94* US-12/20 US-6 US-30 US-41 to Alternate
I-65	6.5%	Interstate	Broadway* Cline Ave SR-49 US-41 SR-51/Grand Blvd County Line Rd US-30 to Alternate Toll Road to Alternate
Willowcreek Rd/SR-249	5.3%	Principal Arterial	County Line Rd US-20 to Alternate
US-41/Indianapolis Blvd	3.8%	Principal Arterial	Kennedy Ave* Cline Ave* Calumet Ave Hohman Ave Hart Rd Broad St I-65 US-231 Ridge Rd to Alternate
Cline Ave	3.1%	Other Freeway/Expressway	Kennedy Ave US-41 Broadway
SR-149	2.9%	Principal Arterial	Willocreek Rd 450 W SR-49
Calumet Ave	2.7%	Principal Arterial	Sheffield Ave Columbia Ave Kennedy Ave Indianapolis Blvd/US-41 Burnham Ave (IL)
SR-130	2.4%	Principal Arterial	SR-49 US-6
Broadway	1.6%	Principal Arterial	US-231 SR-55

Table II-8: Major Road Alternatives Based on Survey Results

Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) are arrangements of electronic and communications technologies that are used to help manage and operate the highway and transit systems in the most efficient and safest way possible. The purpose of using ITS technologies is to help make the highways and transit systems safer and to move people, goods and vehicles more efficiently. Federal metropolitan planning legislation also requires regions with over 200,000 people to develop a regional ITS architecture to ensure that ITS technologies are coordinated and interoperable with the National ITS Architecture.

NIRPC, in conjunction with several stakeholders, developed the Northwest Indiana Regional Intelligent Transportation Systems Architecture 2015 Update. This update, after being vetted through the NIRPC Transportation Policy Committee, was formally adopted by NIRPC on January 15, 2015, by Resolution 15-06. The Indiana Division of the Federal Highway Administration (FHWA) found the updated regional ITS architecture for Northwest Indiana to satisfy the federal requirements of a regional ITS architecture.

Sections of the Northwest Indiana Regional ITS Architecture 2015 Update

- Introduction
- Development of the Regional Architecture
- Description of the Region and Definition of Scope (and Systems Engineering Analysis)
- Stakeholder Identification
- Operational Concept
- Element Inventory
- Functional Requirements of the Elements
- ITS Services
- Information Flows of the ITS Services
- ITS Standards
- ITS Agreements
- ITS Projects
- Use of the ITS Architecture
- Maintenance Plan of the ITS Architecture

Example of an electronic alert sign on westbound Borman Expressway. Photo from INDOT.

Public Transportation

System Changes since CRP 2040 Adoption

Throughout the 2040 planning process, participants supported the concepts of Livable Centers, urban revitalization, sustainable communities and in-fill development as the preferred scenario for future growth and development in Northwest Indiana. Linking existing communities, regional employment and activity centers, and recreational amenities was recognized as essential to achieving the 2040 vision of a vibrant, revitalized, accessible, and united region. This is reflected in the CRP goals of creating livable urban, suburban and rural centers, furthering a safe and secure transportation system, establishing adequate transportation funding and efficiently using resources.

In the four years since the CRP was adopted, several changes have taken place in the system. Some of the changes have been beneficial, increasing the areas covered by transit and opportunities for connectivity among providers. Following are improvements by fixed route and demand response providers.

1. Gary Public Transit Corporation – GPTC has been very successful in establishing new services in the city of Hammond. The loss of the Regional Bus Authority service in 2012 left one of the region's major cities without fixed route transit. Under its own initiative, GPTC has worked to fill the gap in service in a very vital part of the urbanized area of north Lake County. Continued expansion in Hammond and Whiting has been planned, but local funding is lacking.

2. The North Township Trustee Dial-A-Ride was successful in obtaining a CMAQ grant to expand their demand response service to help replace some of the service lost with the demise of the RBA. The ridership grew in the first year of operation of the expansion from 12,000 to almost 34,000.

South Lake County Community Services Vehicle.
NIRPC photo.

3. GPTC has also extended service to connect Merrillville and parts of Hobart to the system. While not covering both communities entirely, opportunities now exist to access the GPTC system thereby gaining access to all of north Lake County.

4. South Lake County Community Services has completed three successful years of expanded transit for the disability community. Through a partnership with The ARC of Northwest Indiana, the agency has more than doubled the number of its trips, increasing access to employment and support services for the disabled.

5. The regional dispatch service shared by three of the demand response operators was recently upgraded. The shared service improves the scheduling efficiency of each provider thereby increasing capacities in both Lake and Porter Counties. Participants in the service are the North Township Dial-A-Ride, South Lake County, and Porter County Aging and Community Services. South Lake County serves as the lead agency for the program.

6. Both Porter County and Opportunity Enterprises (OE) have extended their service areas to include St. Mary's Hospital in Hobart. OE now goes as far west as Broadway, and goes as far south as 109th Avenue. Crossing county lines remains one of the most desired improvements to the regional system and these two demand response operators have taken a giant step towards improving that important connection.

7. The Valparaiso transit services of the V-Line and Chicago Dash commuter bus continue to grow at impressive rates. A fourth bus was added to the commuter service which has already outgrown the original station and parking lot. Ridership on the deviated fixed route service continues to grow. The City is reviewing its new Route Study recommendations to determine its future expansions and/or changes to address the service's large growth in ridership.

8. In LaPorte County, the long planned-for Triangle Transit Service connecting Michigan City, LaPorte and Purdue North Central in Westville started its first week of service in February of 2015. This service has been talked about, planned for and anxiously awaited by people in LaPorte County for almost twenty years. A partnership was formed among the cities, university and county officials committed to sharing the cost of the local match for a Congestion Mitigation Air Quality Demonstration Grant to get the service started. The service is operated as a commuter bus with three round trips per day on each leg of the route. The project sponsors are committed to working together to create a permanent source of local match.

9. In the commuter rail service area, the Northern Indiana Commuter Transportation District (NICTD) recently announced the addition of an express service with limited stops to improve travel time to Chicago from South Bend. Express trains will lessen travel times.

10. NICTD was also successful in obtaining commitments from the Lake County local and county governments for the matching funds for the expansion of commuter rail down the west side of Lake County.

11. As can be seen in Figures II-20 through II-23, ridership across the entire system and all modes has been growing or at least remained stable since the CRP was adopted. This speaks to continued and growing need for public transit in northwest Indiana. As the services are improving their coordination and connectedness, more of the region's citizens are trying them out and discovering that one can travel from one city to another.

12. Also underway is a GPTC-sponsored Broadway Corridor study that potentially could lead to bus rapid transit-type improvements to service the corridor from downtown Gary to Crown Point. The study is looking at land uses as well and will include recommendations on increasing the densities in the study area. The intent is to truly develop the corridor as the backbone of a regional system. More information on the Broadway Corridor project is contained in the Growth and Conservation chapter.

13. At the time of adoption of this update, two of the region's larger cities have opted to explore the feasibility of establishing citywide public transit in their respective communities. The mayors of Hobart and Portage have committed to the local match and NIRPC is facilitating the hiring of consultants to conduct the transit studies. The studies will be completed in early 2016. Opportunities exist in both communities to work with existing operators to provide new services.

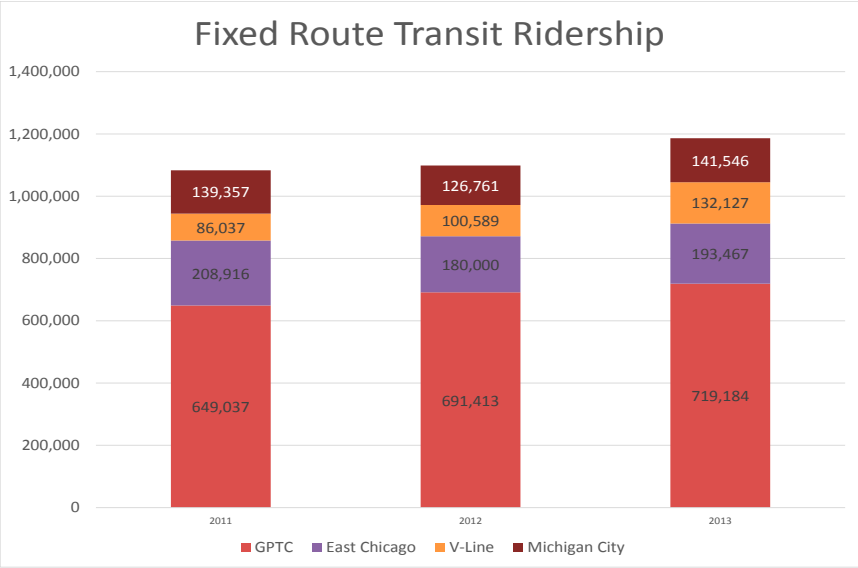


Figure II-20: Fixed Route Transit Ridership

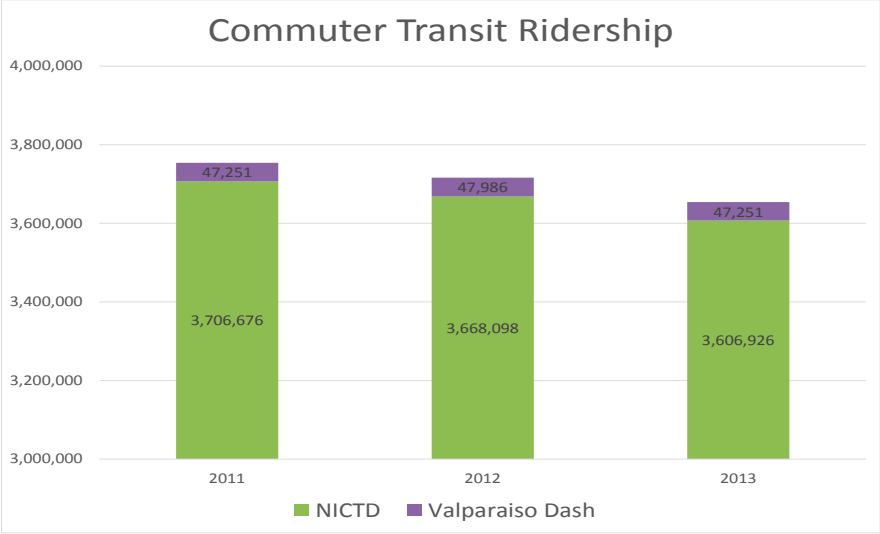


Figure II-22: Commuter Transit Ridership

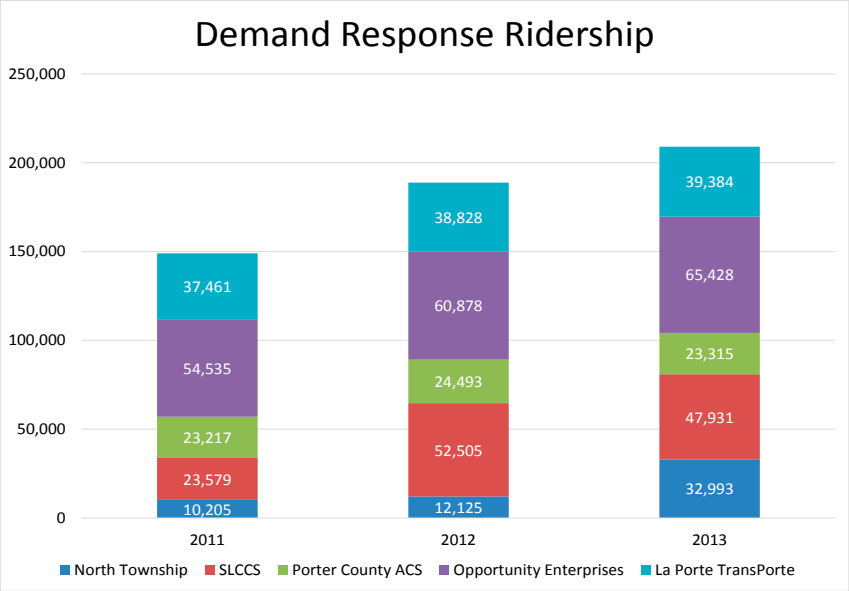


Figure II-21: Demand Response Ridership

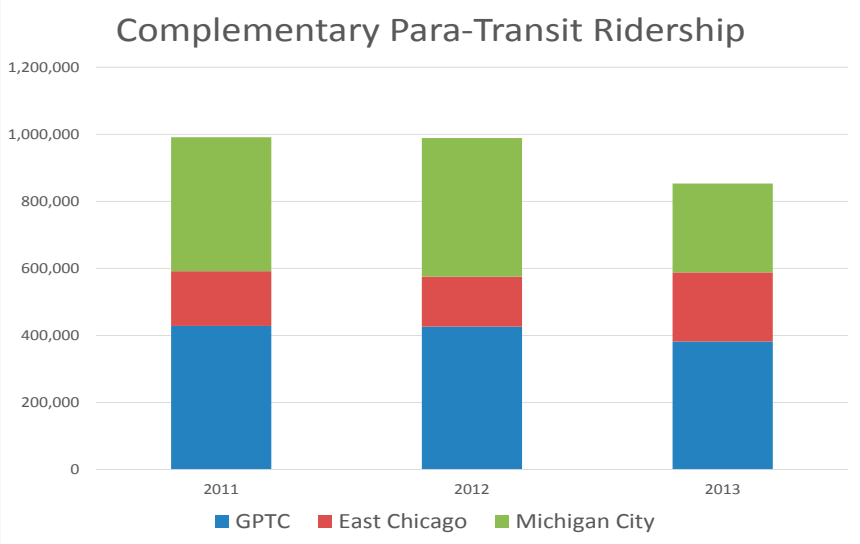


Figure II-23: Complementary Paratransit Ridership

Issues and Challenges

Local Funding

While ridership is going up and connectivity has improved, it is still too difficult to traverse the region via public transit. The recommendation to have a regional organization to operate a regional transit system was identified in many major studies since the first regional transit study was produced in the late 1970's. While transit ridership has been increasing, there is still significant unmet need. The need for transit has been documented repeatedly and there has been little difference between recommendations except to show increasing needs based on the aging of the population and growing traffic congestion. The projected costs for a regional system, whether it be a two-county or three-county system, have of course escalated, much like the cost of living since 1978. As was noted in the CRP document, without bold leadership and management the RBA was at risk. The region is now back where it started, with multiple providers struggling to meet the needs and interests of the riding public.

Additional studies have advocated for more connectivity and coordination between existing agencies. In one example from Arizona cited by the Northwestern Indiana Regional Development Authority (RDA), a single oversight agency manages independently-owned and operated transit agencies that demonstrate unified, cooperative service by operating under a single brand: Valley Metro. This could be a model for cooperative transit in northwest Indiana.

The lack of a dedicated local source of funding to support public transportation remains as the acknowledged number one problem for transit in northwest Indiana. New sources of local matching funds are critical to creating a more seamless, efficient system that serves and connects all of northwest Indiana.

Aging Population

As noted in the demographics analysis, northwest Indiana continues to be older than the U.S. and Indiana as a whole. The median age of the three-county area is 38.6, compared to 37.9 in 2010. In comparison, the U. S. median age changed from 37.2 to 37.6. As the population ages, the region must improve its services such as more public transit and a heightened sensitivity and commitment to improving mobility for the elderly, the disabled community and all who do not drive.

South Shore train in Michigan City. Photo by Stephen Sostaric.

The Future of Commuter Rail

In order to unlock the full economic potential of northwest Indiana, NICTD adopted a 20-year strategic plan that calls for a multi-million dollar series of investments to improve access and reduce overall travel time from its four-county service area to Chicago. Besides keeping the South Shore in a state of good repair, the plan includes expanding commuter rail from the South Shore Line through Hammond to Munster/Dyer along the former Monon Corridor. Partnering with the Northwestern Indiana Regional Development Authority, NICTD is currently preparing a draft environmental impact statement for the West Lake Corridor.

Over the past 25 years NICTD has concentrated its resources on rebuilding the South Shore commuter service following decades of disinvestment. The strategic plan establishes a new, more aggressive vision for the South Shore by identifying investments to reduce travel time and increase service frequency, including: installation of federally mandated positive train control; double tracking the railroad between Gary and Michigan City; installing "high-level" (floor level) platforms in Gary, Portage/Ogden Dunes and Michigan City; track realignment, station consolidation and double tracking through Michigan City; purchasing new cars to replace older cars built from 1982 to 1992; improving terminal facilities at Millennium Station in Chicago to allow for better on-time performance, expanded South Shore service, and future West Lake service; and realigning the route at the west side of the South Bend Airport. Expanding South Shore service will require additional rail cars and a new car storage and light maintenance facility planned in the Town of Pines. The NICTD 20 Year Strategic Business Plan can be seen at nictd.com.

Uncertain Future for Intercity Passenger Rail

The fate of the intercity passenger rail service operated by Amtrak was decided by INDOT in March of 2015 when it announced that the Hoosier State passenger rail line, which operates four days per week between Indianapolis and Chicago, would have its last day of service on April 1st.

The service of fragmented areas occurs at the expense of employers, businesses, job seekers and others. An organization with members who have credibility, expertise and authority to make decisions is critical to meeting the challenges of funding and providing the regional transportation that will assure northwest Indiana's future success.

Amtrak intercity passenger train. Photo by Stephen Sostaric.

Recommendation: A Regional Transit Framework

The update to the CRP included nine public meetings in the fall of 2014, offering opportunities to comment on and suggest improvements to the plan update. Additionally, two meetings were held for the specific purpose of obtaining public input into the transit planning process. The consensus of the public discussion was that people wanted a transit system that afforded them access across the region, not just limited to one or two towns. Connectivity from residential areas to regional employment, shopping, health, and entertainment centers was overwhelmingly cited as the greatest need. Improvements in capacity for demand response services was also a high priority. Other needs noted in the discussions were for travel training to improve riders' knowledge of the existing systems and improved access to transit stops including sidewalks, ramps and bike/hike trails.

A regional Transit Framework was prepared for the original 2040 Plan, providing a vision of how a transit investment program could support the Livable Centers strategy that is key to realizing NIRPC's 2040 CRP (Figure II-24). The vision synthesizes information from several recent planning efforts (including the Midwest Regional Rail Initiative, INDOT Rail Plan, NICTD West Lake Corridor Study, RBA Strategic Plan, and Marquette Plan), the locations of the Livable Centers identified in the CRP, the alignments of existing and proposed transit services, multimodal connection opportunities, and the major corridors and focal points identified in CRP workshops.

Key Concepts of the Transit Framework Include:

1. A focus on high capacity transit services that have the ability to support desirable development patterns, including high speed rail, commuter rail and regional bus service. Supportive fixed route, demand response, and other local transit services are to be provided. While some examples are shown, the specific characteristics of these supporting services are considered to be a subject for future study.

2. The vision draws extensively on projects that have already received some level of planning scrutiny. It assumes that the south-of-the-lake high speed rail improvements are completed in the Norfolk-Southern corridor currently used by Amtrak for its Michi¬gan and Ohio services, that both legs of the West Lake corridor are implemented to extend NICTD commuter rail service to Lowell and Valparaiso, and that the local and regional bus services in the RBA Strategic Plan are fully implemented.

3. The Gary/Chicago International Airport is identified as an opportunity for a major regional multi-modal transit hub. This facility, at the nexus of high-speed rail, NICTD, and bus services, as well as a connection with the lakefront trail, could attract new airline service to the airport as part of Chicago's airport system, link important regional and national transportation services, and help to organize and stimulate the redevelopment of part of Gary.

4. The implementation of high speed rail also appears to provide some good opportunities to advance the West Lake Corridor concept, in particular if the southern route via Fort Wayne is selected to replace the current Amtrak alignment through South Bend.

5. There is potential for Bus Rapid Transit (BRT) in northwest Indiana, including transit corridors identified in the former Regional Bus Authority Strategic Plan. BRT is a mode of bus transit that includes concepts such as higher bus frequencies and/or bus speeds, more visible transit stations, and road treatments that prioritize transit (signalization, bus lanes, etc.). In addition to increasing transit capacity and attractiveness as well as promoting sustainable, pedestrian-friendly development patterns, BRT-infused transit corridors offer opportunity to expand local and feeder service into areas in need of new transit.

6. These potential BRT corridors also provide the backbone of a network of services connecting rail stations and other activity centers. Elements of BRT are already being explored for Broadway in Gary, Merrillville, and Crown Point, connecting up to four livable centers on the corridor and promoting a "toolbox" of land use recommendations that complement transit. A seventh route has been proposed as a circumferential route between Ogden Dunes and Merrillville via Portage and Hobart.

7. Adequate intermodal connectivity is critical for regional public transportation. Many South Shore stations are served by fixed route bus routes, particularly the Gary Metro Center and East Chicago stations. A "seamless" transportation network removes barriers to travel and feeder bus service should be an integral part of planning for the West Lake commuter rail corridor.

8. The vision provides high quality transit services to, or near, each of the metro, large, and medium centers identified in the planning process. Over the long term it will be worthwhile to study whether La Porte could be added to the system, if the level of demand for a high intensity service type between La Porte and Michigan City and/or Valparaiso increases over time.

9. New local bus services in areas where the population density would support it will be critical to connecting the livable centers with each other and the regional employment, shopping and services centers. Likely areas of such service include Schererville, Dyer and St. John; 45th Avenue corridor on the west side of Lake County; Hobart, Lake Station and New Chicago; Portage and South Haven; Chesterton, Burns Harbor and Porter; and a service corridor that encompasses Michigan City, La Porte and Westville.

10. Expanded capacity for public demand response paratransit in areas not served by fixed-route bus is a critical component of the regional system. Added capacity and increased coverage is especially important in all of La Porte and Porter Counties, and south Lake County.

The Transit Framework will require additional study and refinement, including objective and quantitative information on travel patterns, road and rail right-of-way availability, traffic conflicts, and capital and operating cost estimates. More extensive feasibility studies and alternatives analysis should be performed to refine the alignment, operating concepts, and other features that this vision may suggest for each element of the system. To support the Transit Framework and transit in Northwest Indiana in general, the 2040 plan offers policies including:

- Support and promote the creation of a local source of funding to be dedicated to public mass transit
- Support and promote a consolidated structure for the efficient and effective provision of public mass transit
- Support and promote transit-friendly land use practices
- Support and promote public transit services that connect the region with jobs, neighborhoods, shopping, medical, entertainment, recreational and educational facilities
- Support and promote increased capacity of public demand response services where fixed route is not feasible and/or available
- Support and promote increased accessibility for those who do not drive

If Northwest Indiana is to realize the vision of a vibrant, revitalized, accessible and united region, a dedicated source of long-term local funding must be created to support the types of services that will help achieve it. To achieve the regional vision and ensure the viability and longevity of a regional transit system, strong leadership and coalition building is necessary. The dialogue on the need for regional transit and a local dedicated funding source needs to be elevated beyond local politics and parochial interests and communicated to the state with one cohesive voice so that the needs of the entire region are met.

Northwest Indiana must have a regional transit service delivery mechanism. Maintaining multiple local operators has resulted in services responding to only localized needs at the expense of broader regional mobility needs. The success of regional public transit is dependent upon the participation of the entire region. The fragmentaion of service occurs at the expense of employers, businesses, job seekers and others. An organization with members who have credibility, expertise and authority to make decisions is critical to meeting the challenges of funding and providing the regional transportation that will assure northwest Indiana's future success.

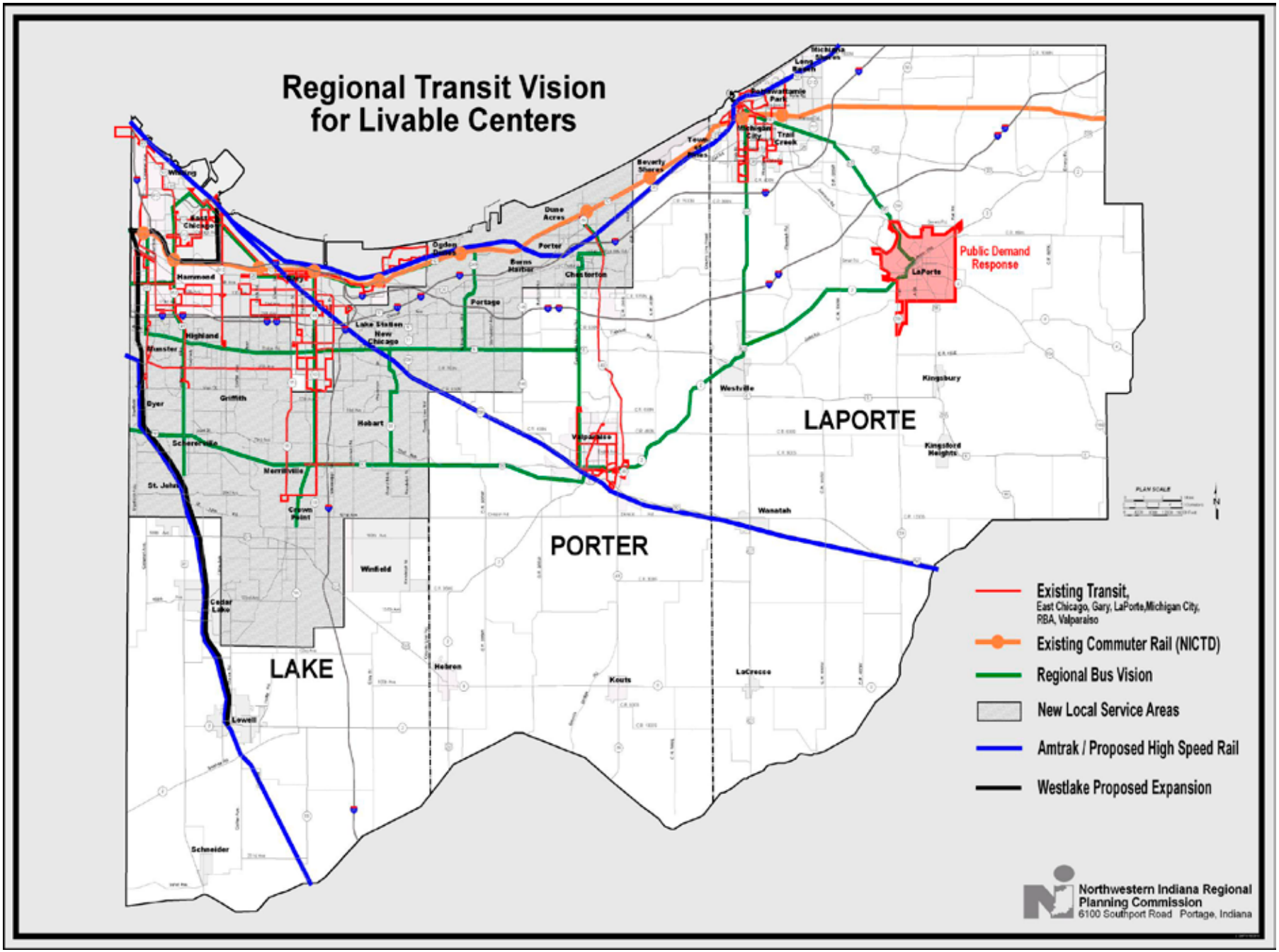


Figure II-24: Regional Transit Vision for Livable Centers

Non-Motorized Transportation

Major progress continues to take place regarding the development of routes and policies accommodating pedestrian, bicycle and canoe/kayak travel throughout all of Northwestern Indiana. Since the adoption of the CRP, several more off-road trail miles have been constructed, as well as new bike lanes installed on a number of region roadways. Coordination with neighboring regions in Illinois and Michigan continue to be fruitful with significant progress achieved on interstate trail routes. On a number of fronts, NIRPC continues to champion non-motorized transportation options towards the quality of life benefit for all region residents and visitors alike.

Land-Based Routes

Since the adoption of the CRP in 2011, nearly 40 miles of off-road, multi-purpose trails have been constructed, primarily in Lake and Porter Counties. Combined, the NIRPC region now boasts over 130 miles of trail, which traverse through 19 municipalities. Of these, the largest route is the Erie-Lackawanna (EL) Trail, which runs contiguously for 17 miles from downtown Hammond south to downtown Crown Point. Major segments of the EL Trail were completed over the last four years, including an underpass at U.S. 41 between Highland and Wicker Park, and a route around the Cabela's store in Hammond. In 2014, Hammond also installed a new pedestrian and bicycle bridge over 167th and Columbia Avenues, with future plans to include another bridge over Calumet Avenue near downtown.

Another major non-motorized addition in Hammond involved the construction of the Monon Trail from Douglas Street south to the Little Calumet River. The Monon connects with the EL Trail at Douglas, and a new bridge was constructed over the Little Calumet River in 2014, linking it to the existing Monon Trail segment in Munster. The bridge was built in partnership with the Little Calumet River Basin Commission, and opens up a contiguous five-mile trail between the two communities.

Another major facility experiencing growth was the Pennsy Greenway in both Munster and Schererville. In 2012, Schererville opened up a 2-mile segment in the heart of their community from Redar Park to Rohrman Park, which took advantage of an existing box culvert structure under US 30. The route has provided a traditionally disconnected community the opportunity to safely traverse between local destinations and several residential subdivisions. In Munster, the long-awaited connection of the Pennsy into Lansing, Illinois took place in 2013 during a "Golden Spoke" ceremony involving officials in both states. This connection became the first off-road trail connection between Indiana and a neighboring state.

The Oak Savannah (OS) Trail in north-central Lake County also experienced growth with the completion of the route through Hobart. For years a critical gap existed between the east and west segments of the OS, which is a Lake County Parks and Recreation-managed trail on either side of Hobart. The city took the initiative to finish the OS, and opened the final leg on the east side in late 2014.

In the Town of Porter, a major connection between the Prairie-Duneland Trail and Calumet Trail was completed in 2013. Named the Porter Brickyard Trail, this facility provides a critical link between a large trail corridor and the Indiana Dunes. The Brickyard Trail runs for nearly three miles, and includes two new pedestrian and bicycle bridges over US 12 and US 20, and utilizes an underpass at I-94. The Brickyard was developed in cooperation with the Indiana Dunes National Lakeshore who helped fund a portion of the route.

Figure II-21 shows an updated Priority and Regional Trails and Corridors map which highlights 34 corridors for potential trail development within the three counties.

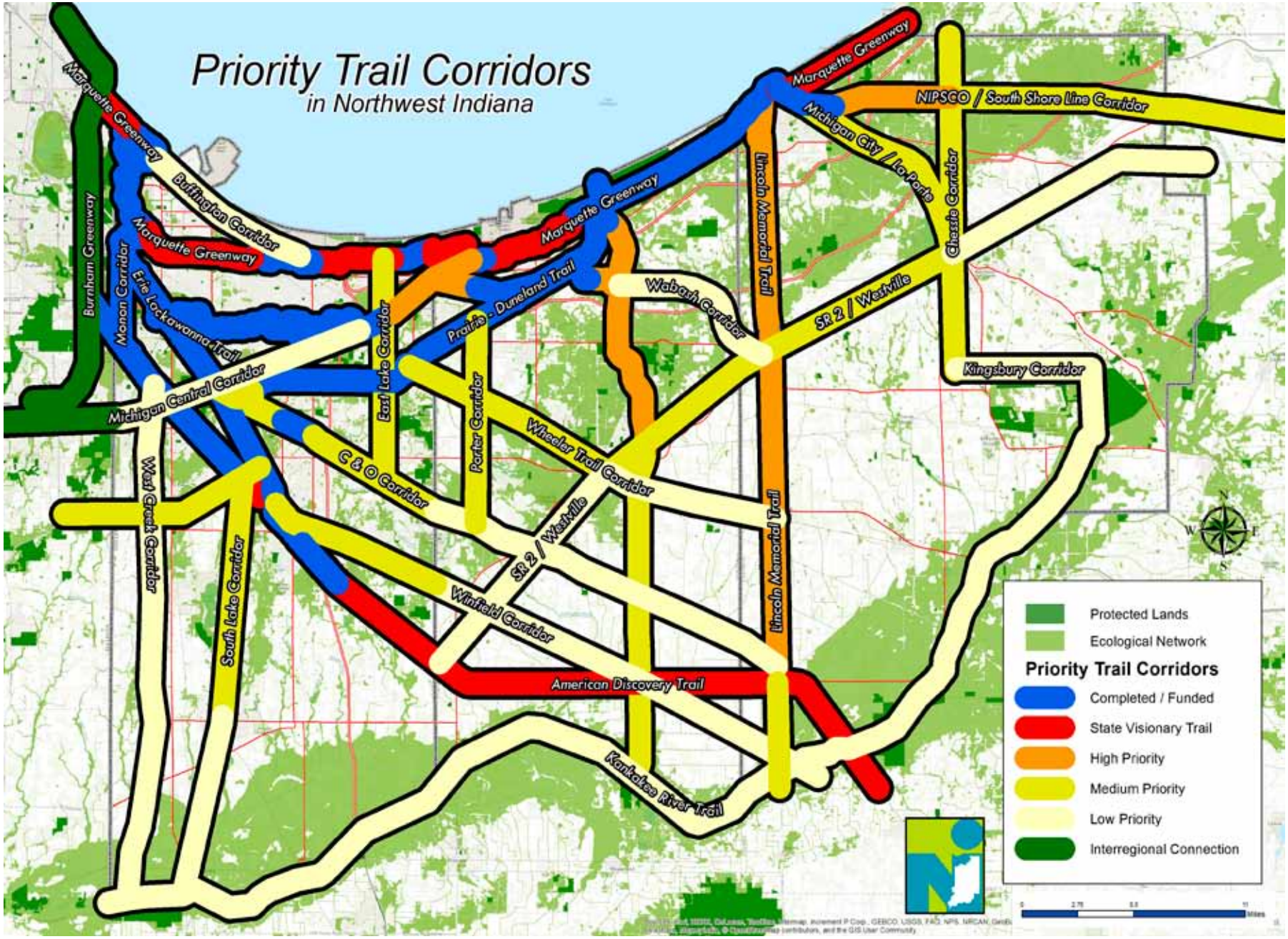


Figure II-21: Priority Trail Corridors in Northwest Indiana

Regional Development Authority (RDA) Investments

The Northwest Indiana Regional Development Authority (RDA) was created in 2005 by the Indiana General Assembly to invest in the infrastructure and assets of Northwest Indiana, with a particular focus on shoreline redevelopment. Since its creation, the RDA has invested well over $100 million towards a number of brick and mortar projects in both Lake and Porter Counties near Lake Michigan. A major element of many of these projects have included off-road trails.

Since the 2040 CRP adoption, four major RDA-funded projects have been constructed that include significant trail mileage. These include the following examples:

- Wolf Lake Trail: A five-mile loop facility that rings around the Hammond side of Wolf Lake. The trail was included as an element of the redevelopment of Wolf Lake and Forsythe Parks. A landmark feature of the route includes a 1000-foot concrete boardwalk bridge over Wolf Lake near the Indiana Toll Road. The trail also includes a connection west into Illinois, and the nearby Burnham Greenway.

Wolf Lake Bridge in Hammond. Photo by Mitch Barloga.

George Lake Bridge. Photo by Mitch Barloga.

- George Lake Bridge: An iconic trail bridge between Hammond and Whiting was opened over U.S. 41 and New York Avenue. The George Lake Bridge provides a safe crossing at a dangerous intersection, with the added benefit of aesthetic enhancements. These include planters alongside the path on the bridge, and a steel lattice structure over each road crossed. Parking is also provided at the base of the bridge.

- Dunes Kankakee Trail: The first major section of the Dunes-Kankakee Trail, a facility which will connect the Indiana Dunes to the Kankakee River, was completed in 2015 between the Indiana Dunes State Park and the Indiana Dunes Visitors Center. A connection from the Dunes Park South Shore Line Station north to the State Park entrance was completed in 2013, and has proven extremely popular to visitors.

- Marquette Park Trail: In 2009 the RDA awarded the City of Gary funds to restore their Marquette Park facility as a modern attraction for residents and visitors alike. Part of the renovation included nearly two miles of newly installed trails, helping to connect the adjacent neighborhoods to amenities in the park proper.

Marquette Greenway Progress

In 2009, NIRPC released the *Marquette Greenway - National Lakeshore Connection Poster Plan* as part of the Centennial Anniversary of Daniel Burnham's landmark 1909 *Plan of Chicago*. The poster plan presented the first detailed route analysis of the Marquette Greenway between Calumet Park in Chicago, east into New Buffalo, Michigan – a grand total of approximately 50 miles. This tri-state route has been the visionary goal of leaders in all three regions, and picked up considerable momentum with the 2005 release of the Marquette Plan – Lakefront Reinvestment Strategy document, which highlighted the trail and detailed the proposed route.

The poster plan identified 20 planning segments of the Greenway that broke down largely along municipal boundaries. As of early 2015, over half of the route has either been built, or funded. All but one segment has been planned for future funding as well, including a stretch between Michigan City and New Buffalo that was the focus of several stakeholder meetings during 2014. NIRPC will continue to work with all relevant stakeholders – both public and private – bringing to fruition this major regional initiative.

COMPLETE STREETS
Northwestern Indiana Regional Planning Commission

Complete Streets Policy

In the summer of 2010, the NIRPC Board adopted a Complete Streets Policy and Guidelines for all projects attributable to NIRPC programmed federal funds. Complete Streets is a national movement to assure all roads safely accommodate all intended users of the corridor. These users include pedestrians, bicycles, transit, along with cars, trucks and buses. As part of the policy adoption, NIRPC staff incorporated Complete Streets standards into application forms for all federally-funded programs. Further cooperation with INDOT La Porte District staff assured compliance with policy standards to the most practicable extent possible by project sponsors.

NIRPC also promotes Complete Streets to all member communities and encourages them to adopt similar policies for local road projects. In 2014, the Town of Lowell became the first such NIRPC community to adopt a Complete Streets ordinance on the local level, with additional communities considering a policy for adoption within the year.

Water-Based Routes

NIRPC continues to partner with members of the Northwest Indiana Paddling Association (NWIPA) on expanding recreational opportunities for water trail enjoyment. NWIPA has become a regional leader in promoting water trail development throughout the entire NIRPC three-county region, and has accomplished a number of successful ventures over the last few years.

Of prime note includes opening up water trail routes along the Little Calumet River in the Town of Porter and through the Indiana Dunes National Lakeshore. Working with these entities along with the Shirley Heinz Land Trust, NWIPA aims to open up a 16-mile segment of river from the Burns Waterway in Portage nearly all the way to the Heron Rookery near Pines. This scenic stretch of river passes through some of the most bio-diverse regions in this country, and NWIPA hopes to make this a showcase for recreational use of our waterways and an example of what dedicated volunteers can do to improve the region.

NWIPA has also achieved success along the historic Kankakee River with the establishment of the first campground for paddlers in 2013. Current efforts are now underway to designate a 133-mile stretch of the river as a National Water Trail, which would run from South Bend west to the Illinois River. This would be in line with NWIPA's successful work in designating Lake Michigan as a National Recreational Trail in 2011.

Apart from the large regional visions of NWIPA, a number of municipalities have begun plans to open up their local waterways to canoes and kayaks. These include Trail Creek in Michigan City, where NWIPA is working on installing the first ADA-accessible ramp for disabled users, and Lowell, where Cedar Creek runs clear of major obstructions through the center of town.

Greenways+Blueways 2020

In 2015 NIRPC staff, with public input, began preparing updates to both the 2007 Greenways and Blueways Plan and the 2010 Ped and Pedal Plan. Entitled Greenways + Blueways 2020, NIRPC will combine aspects from both planning documents into a cohesive relationship along the major topics of conservation, recreation and transportation. The plan will incorporate elements of natural habitat preservation, with water and surface trails, and their relationship with non-motorized transportation uses. The ambitious goal will be to present a unified vision that uses off-road surface trails as a backbone of planning for both conservation and transportation uses that enhance both the physical environment, and personal health.

Paddlers on Lake Michigan. Photo by NWIPA.

Environmental Justice

The maps in this section update and enhance the Environmental Justice (EJ) section from the original 2040 Comprehensive Regional Plan. These include:

- An updated base map
- EJ Communities and Transportation Improvement Program (TIP) projects map
- EJ Communities and Livable Centers map

These reflect new developments since 2014, such as the new Creating Livable Communities (CLC) grant program and updated information such as changes in transit throughout the region and current TIP projects.

Environmental Justice Areas

Figure II-26 provides a basic representation of many of the inputs used in the analysis. For example, it does not show the entire EJ population, but it shows the areas with the greatest concentration of EJ populations in the yellow, blue, and green areas. It also shows the major destinations used for the proximity performance measures, along with major public transit and major roads that are in the Travel Demand Model (TDM). The analysis is based on the 455 Traffic Analysis Zones (TAZs) used in the TDM. The map does not show the total population or total employment of each TAZ, both of which were used in the analysis. The next section describes performance measures in detail.

Importantly, this map reflects the changes which have occurred in transit service since the adoption of the original 2040 CRP in 2011. In 2012, the City of Hammond lost its fixed route bus service after the Regional Bus Authority ceased operations there. Initially, nearly the entire City of Hammond was without fixed route transit service, but South Hammond (along with Munster and Highland) is now served by Gary Public Transportation Corporation's Lakeshore South fixed route service. Additionally, in La Porte County the new Triangle Service between Michigan City, LaPorte, and Purdue North Central in Westville is expanding opportunities for access to jobs, education, and resources there. This map could change again depending on the progress of current proposals for transit in North Hammond, Hobart, and Portage.

EJ & Transportation Projects

NIRPC's EJ analysis is based heavily on transportation. Figure II-27 shows the projects in NIRPC's current Transportation Improvement Program (TIP) as of December, 2014 in relation to Northwest Indiana's EJ communities. Projects are distributed throughout the region in both EJ and non-EJ communities, especially where there are centers of population. Clusters of projects also exist in areas where EJ populations are found.

EJ & Creating Livable Centers Program

In 2013, NIRPC, working with municipal representatives, conceptually defined livable centers in 40 of the 41 established municipalities in Northwest Indiana. These livable centers vary widely in scale, use, mix, and purpose within each community today, but all represent areas of regional significance. Some of these locations already exhibit many of the desirable features of livable centers, while others are works in progress. In 2014, seven communities were awarded the first grants under NIRPC's Creating Livable Communities (CLC) program. Of these seven communities in Lake and Porter Counties, two contain EJ communities: East Chicago and Gary.

Figure II-28 shows the livable centers defined under the CLC program. Each community has at least one main center, with larger cities and towns also having neighborhood centers. The EJ communities defined on the map overlap with several of these main and neighborhood centers, showing that the basic elements for livable centers exist. As work continues on the CLC, both EJ and non-EJ communities are positioned to benefit.

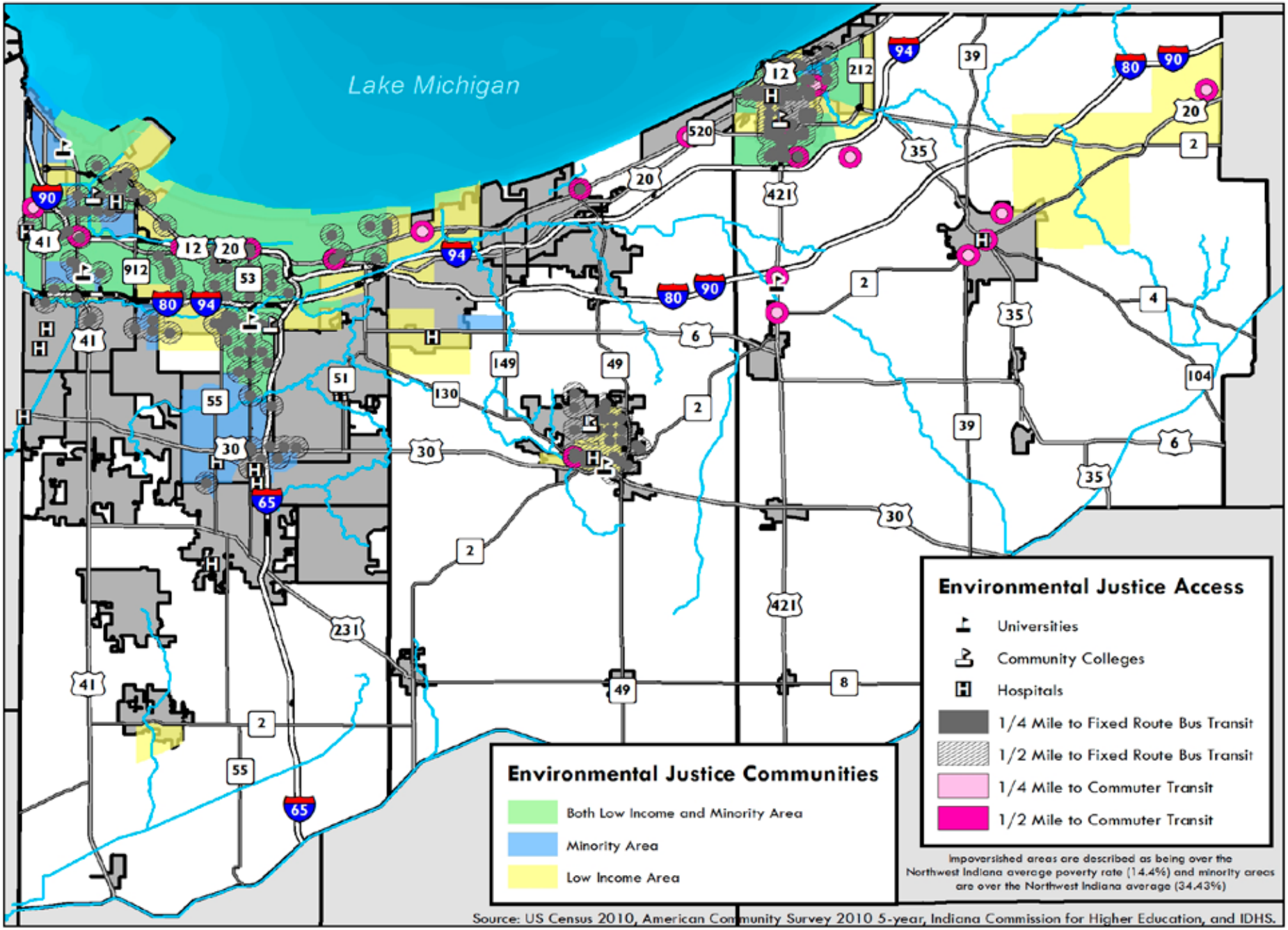


Figure II-26: Environmental Justice Base Map

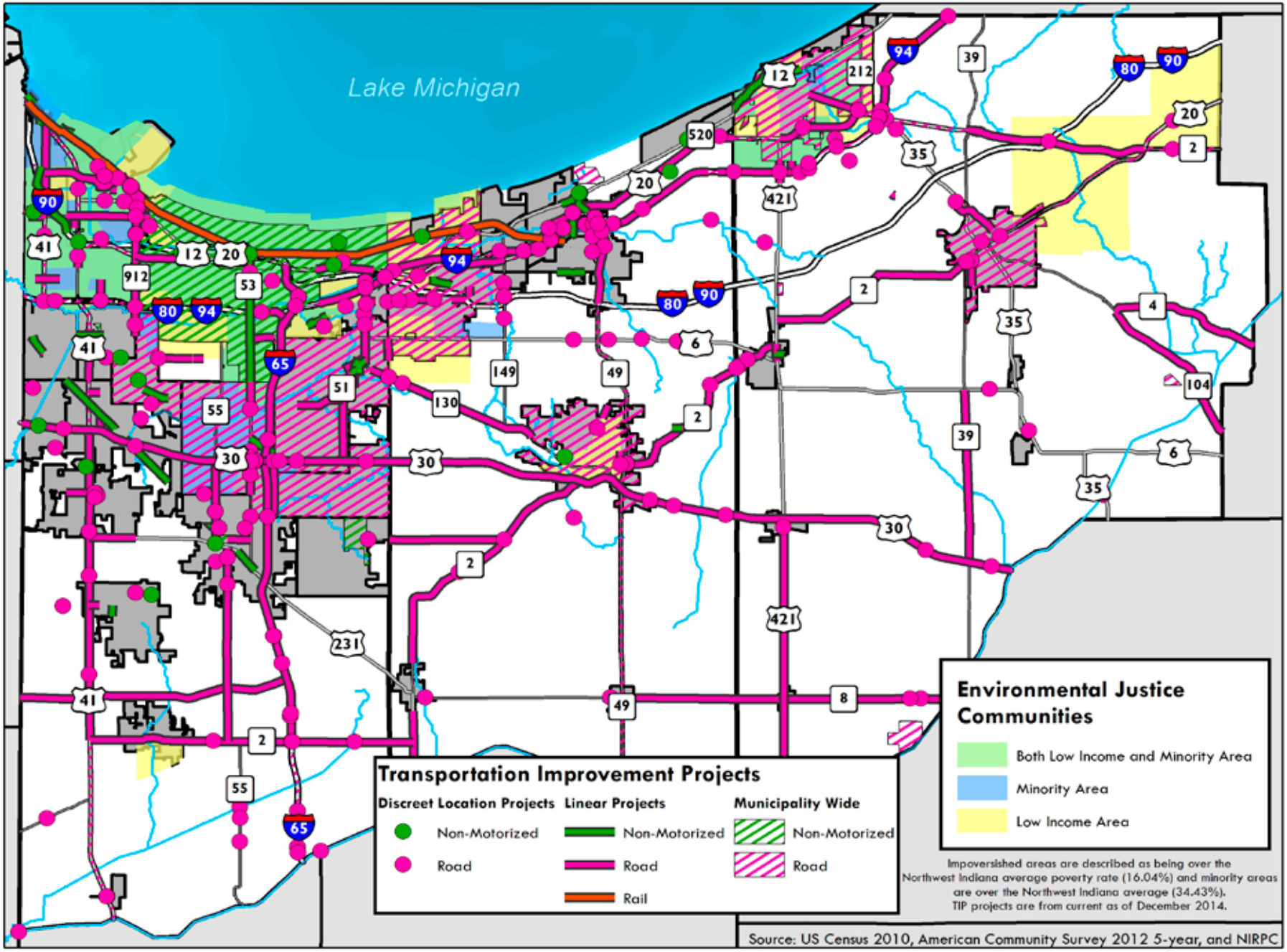


Figure II-27: EJ Communities and TIP Projects

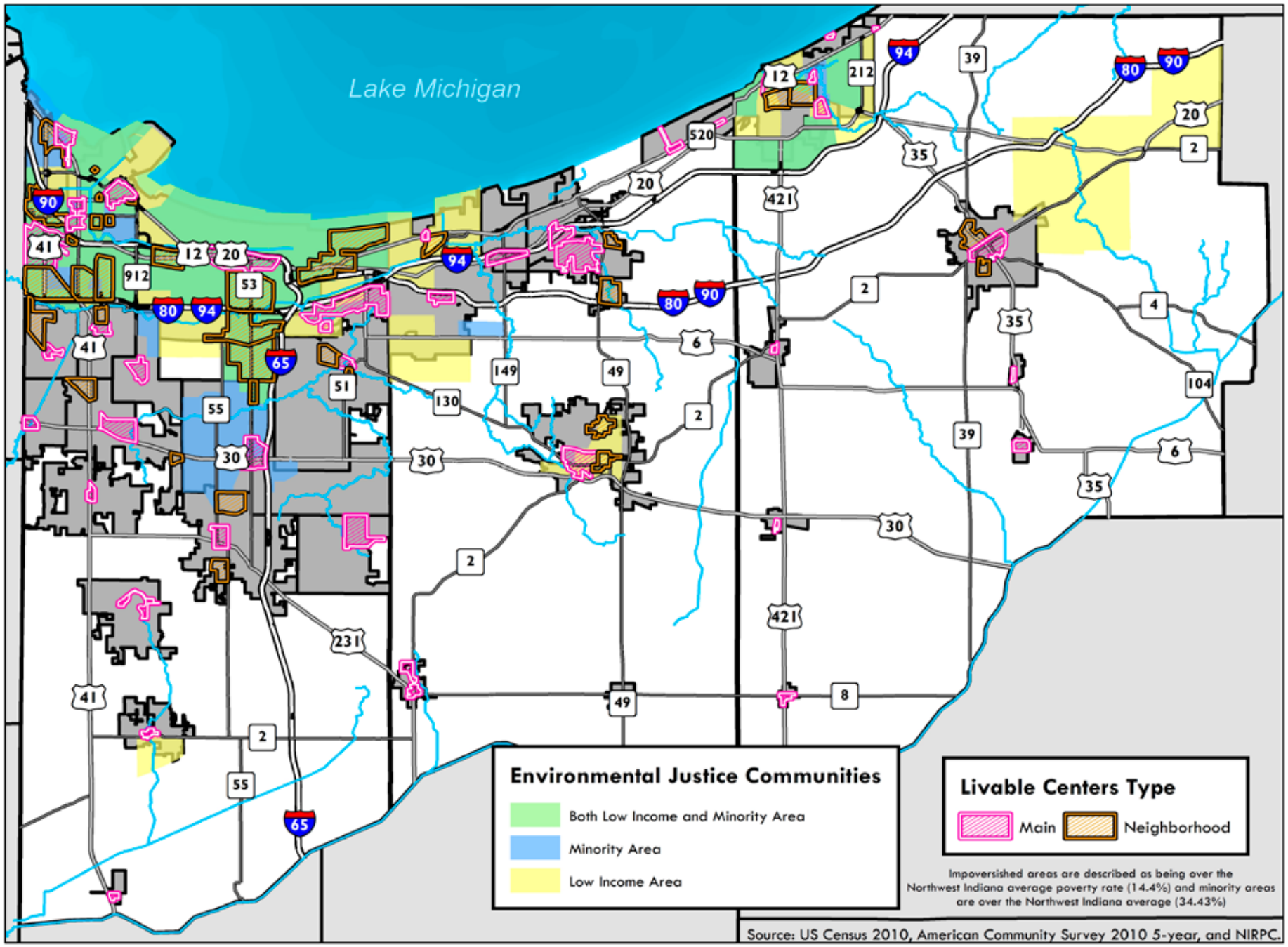


Figure II-28: EJ Communities and Livable Centers

Transportation Improvement Program Guidance (TIP)

Background

Each year Congress appropriates federal funds for surface transportation projects to two parts of the U.S. Department of Transportation. Highway-oriented funds are assigned to the U.S. Federal Highway Administration (FHWA) and public transit-related funds are appropriated to the U.S. Federal Transit Administration (FTA).

FHWA distributes their funds to each of the 50 states. The states, in turn, sub-allocate a portion of these funds to the Urbanized Areas[1] (UZA's) within the state. In Indiana, the Indiana Department of Transportation (INDOT) sub-allocates 25% of its total annual federal surface transportation highway funds to urbanized areas and other units of government in the state with surface transportation operations and maintenance responsibilities. The FTA allocates funds directly to urbanized areas.

MPO-Allocated Federal Funds 2016-2019			
Annual Allocations by Urbanized Area and Type (2015 Base Year)			
Program	Chicago UZA	Michigan City-LaPorte UZA	Total
FHWA Surface Transportation Program	$ 10,545,025	$ 981,988	$ 11,527,013
FHWA Highway Safety Improvement	2,752,256	308,261	3,060,517
FHWA Congestion Mitigation/Air Quality	3,345,842	587,952	3,933,794
FHWA Transportation Alternatives	961,809	93,608	1,055,417
Subtotal FHWA	$ 17,604,932	$ 1,971,809	$ 19,576,741
FTA Sec 5307 Urban Area Formula Grants	11,510,760	900,010	12,410,770
FTA Sec 5337 State of Good Repair	15,078,820	-	15,078,820
FTA Sec 5310 Seniors & Persons with Disabilities	431,993	-	431,993
FTA Sec 5339 Bus Capital	448,756	-	448,756
Subtotal FTA	$ 27,470,329	$ 900,010	$ 28,370,339
Total	$ 45,075,261	$ 2,871,819	$ 47,947,080
*INDOT Prior Year Balance (PYB) Funds**	*23,431,537*	*2,603,847*	*26,035,384*

** Non-Recurring--One Time Only.*

Table II-9: MPO-Allocated Federal Funds

In order to spend these federal funds, they must be assigned to individual projects and published in a Transportation Improvement Program (TIP) document. Northwest Indiana has two urbanized areas: Portions of Lake and Porter Counties lie within the Chicago, IL/IN urbanized area. Northwestern LaPorte County (and extreme northeastern Porter County) is within the Indiana portion of the Michigan City/LaPorte, IN/MI urbanized area. NIRPC develops a TIP that shows how these federal surface transportation funds are to be spent.

1 Areas of concentrated development with a population of 50,000 or more persons.

What is a Transportation Improvement Program?

A Transportation Improvement Program (TIP) is a short-term (four-year) list of federally funded surface transportation investment projects in a metropolitan planning area[2]. Surface transportation projects include those for public transit, local and state highways, and bicycle/pedestrian projects. (The entire three-county area constitutes the metropolitan planning area.) A TIP will also include all regionally significant[3] surface transportation projects funded with or without federal funds. All projects contained in a TIP must be consistent with the current regional transportation plan (included in NIRPC's CRP). Additionally, all capacity-increasing projects (such as added travel lanes projects or regionally significant new roadways) must be specifically identified in both the long range regional transportation plan and its accompanying Air Quality Conformity Determination. In summary, the TIP is the short range program of projects derived from the long range list of transportation improvements recommended in the transportation plan. Both the plan and TIP must conform to the State Implementation Plan for Air Quality.

Who Develops the TIP?

Regulations of the U.S. Department of Transportation require that Metropolitan Planning Organizations (MPOs), in cooperation with the State and affected transit operators, develop a transportation improvement program (TIP) for a designated metropolitan area. The Northwestern Indiana Regional Planning Commission (NIRPC) is the designated MPO for Northwest Indiana and is responsible for developing the TIP. There is an MPO in every metropolitan area of the country, including 14 in Indiana. Each MPO, however organized and governed, is responsible for developing a long-range plan and short-range program, which is a TIP.

2 A metropolitan planning area is the land mass that is expected to become urbanized over a period of time.

3 NIRPC adopted policy defining Regionally Significant transportation projects.

Stakeholder Involvement in TIP Development

Eligibility to Receive Federal Surface Transportation Funds

Most federal surface transportation funds identified in a TIP are for either state highway projects, local highway or bicycle/pedestrian projects undertaken by units of government with surface transportation operations and maintenance responsibilities, and public transit operators. In some rare instances, when permitted by the federal funding program, there are projects for miscellaneous public entities (e.g., state universities, local school districts, park boards, etc.) or private sector interests.

Stakeholder Committees

For those federal funds that are assigned to the urbanized areas (either directly by FTA or indirectly by INDOT), the TIP development process is largely carried out by groups of stakeholder committees. Because NIRPC's metropolitan planning area includes two urbanized areas (one with a population over 1,000,000 and the other with a population under 200,000), there are two separate allocations of federal funds. Until very recently, NIRPC maintained separate stakeholder committees and project selection systems for each federal-aid category (e.g., highways, transit, highway safety, and Congestion Mitigation and Air Quality or CMAQ, and Transportation Alternatives). FHWA Transportation Alternatives (TAP) funds are separately allocated to each urbanized area but are combined into a single pool of funds (there is a single stakeholder committee instead of two).

Each stakeholder-level committee reviews and reaches consensus upon the project selection criteria and relevant selection policies to be used in the selection process. Each stakeholder committee reviews results of their project solicitation process and recommends a list of projects to be selected for funding. Projects are currently selected competitively under each funding category.

INDOT maintains its own separate project development processes for those highway and transit funds that it sub-allocates to local projects.

Transportation Policy Committee

Stakeholder committees report to the Transportation Policy Committee (TPC). The general purpose of the Transportation Policy Committee (TPC) is to oversee the development of a multi-modal system of transportation in Lake, Porter and LaPorte Counties. This is primarily done through TPC actions on regional transportation plans, transportation improvement programs, studies, analyses, planning work programs, and other special programs. The TPC functions primarily as a technical committee—it hears recommendations from transportation stakeholder committees and makes recommendations for official action to the Commission or Executive Board.

Functions of the metropolitan area transportation planning process of particular interest to the TPC are:

- Identifying and analyzing transportation problems
- Developing and recommending solutions
- Fostering the development of projects, monitoring progress
- Allocating available federal funds
- Selecting and prioritizing projects of regional significance
- Coordinating activities and projects among local units of government within northwest Indiana with adjacent areas and with state and federal agencies.

Comprehensive Regional Plan (CRP) Impact on TIP Project Selection

The CRP establishes one vision statement, 14 goal statements, and 94 objectives. These were adopted by the Commission in December 2010 and are found in an appendix to the plan. Many, but not all of the objectives offer specific guidance pertaining to the investment of U.S. Department of Transportation funds.

Following the December 2010 solicitation for capacity increasing projects, a project selection process was developed around a core set of 30 indicators that measured the impact of each project in relation to the plan's 94 objectives. These 30 indicators (also called criteria elements) were divided into five broad thematic areas. Evaluation criteria were established for each. The same five thematic areas used in the 2011 process for the Plan (including the 30 indicators) were overlaid onto the existing project selection systems within each funding category.

- Mobility Improvements: Six (6) Criteria Elements (9 Points)
- Transportation & Land Use: Four (4) Criteria Elements (6 Points)
- Highway Safety: Two (2) Criteria Elements (3 Points)
- Environmental: Seven (7) Criteria Elements (9 Points)
- Quality of Life: 11 Criteria Elements (13 Points)

The one key difference between the original process criteria and that used in the selection of new projects for the TIP in 2011 and 2013 was the elimination of the weighting mechanism that gave higher priority to some geographic areas over others. NIRPC's experience with STP Group I solicitations in 2011 and 2013, and with Congestion Mitigation and Air Quality (CMAQ), Highway Safety Improvement Program (HSIP), and Transportation Alternatives Program (TAP) solicitations in 2014, was that the system did not perform as intended. The most significant issue was that the 30 indicators did not function well as anticipated in evaluation or scoring mechanisms. In some cases these criteria elements were anecdotal and not data-driven. There were few distinguishing differences between projects submitted. Additionally, prioritizations of certain safety, congestion relief, and Livable Centers projects made in separate sections of the plan were not retrofitted into the various project selection systems.

In 2014 INDOT overhauled the MPO funding programs and now permits NIRPC to spend federal aid dollars where they are needed. The long-term goal (for the 2019 Plan update) is to retool the now separate (multiple) project selection systems into a single unified system that directly reflects the Plan's spending priorities in a comprehensive manner.

In 2016 the NIRPC Board will begin implementing a new NIRPC committee structure to improve transparency, accountability, and fiscal control. Over the next several years, the functions of the existing CRP Implementation Committee will be combined with the TPC to enable them to guide the development of the project selection system(s), establish federal-aid spending priorities, and to serve as the last step before Commission endorsement on matters related to interpretation of the Plan. These changes should be in full effect for the 2019 Plan and TIP Update.

General TIP Policies - TIP Updates: Content, Format & Frequency

The 2007 U.S. DOT Transportation Planning regulations require that the metropolitan area TIP's be updated at least every four years. NIRPC will normally update its TIP every other year. TIP updates are always done in written form (i.e., published), exposed to public comment, and acted on by the NIRPC Transportation Policy Committee and NIRPC Board. Each Update will be prepared within a time frame that is consistent with INDOT's normal Indiana State Transportation Improvement Program (INSTIP) development and approval cycle.

Incomplete projects from a prior TIP will be included in the updated TIP as appropriate and listed as an "ongoing" or "carryover" project in Year #1 of the new TIP. The purpose of this will be to maintain current TIP support for such projects in the event that additional funds need to be assigned to the project. Planning projects funded with formula (FHWA STP and FTA Section 5307) funds will appear in the TIP for informational purposes only. The controlling document for these projects is the Unified Planning Work Program (UPWP).

Since the development of the *2020 Transportation Plan* in 1998, funding targets have been developed and used within each category of federal funding. Stakeholders first reach consensus on the funding targets for each category of federal aid and then construct a project selection system beneath each target. For instance, the STP I has six funding targets (Capacity Expansion, Roadway Reconstruction, Signals, Intersection Improvements, Bridges, and Other). Funding targets are intended to be flexible tools for ensuring that each project selection process reflects current needs and demand. They also serve to ensure the submission and selection of a variety of projects across the urbanized area. Stakeholder committees are required to review the funding targets for appropriateness prior to each solicitation for projects. With the changes in the NIRPC committee structure coming in the next few years, it is anticipated that there will be a complete revision of all project selection processes by 2019 to conform to the anticipated new guidance and direction.

The current Plan requires that the existing transportation network be preserved and states that "investment priority" is to be given to projects involving network preservation and maintenance. For the purpose of programming federal funds in the TIP, this means "at a level of funding greater than that provided for network expansion." Functionally, at least 51% of the STP and Section 5307 funds programmed for new projects added to the TIP (during each update) must be for preservation and maintenance purposes.

TIP Update Procedures

Each TIP will encompass a four-year period—identifying projects that will receive federal funding over four State Fiscal Years. Stakeholder committees may recommend that certain projects be placed on an "illustrative list" of projects that is separate from the official TIP. The NIRPC Board will determine the status of these projects (if any) in its resolution adopting the new TIP.

The general process to be followed in performing a TIP Update follows:

- *Stakeholder Review/Modification of Selection Systems*. The stakeholder committees will be responsible for reviewing and updat-

ing each existing project selection system prior to a TIP Update. The purpose of this effort is to ensure that the subject system remains consistent with the Regional Transportation Plan, federal requirements, and local priorities.

- *Solicitation for Projects*. The Transportation Policy Committee (TPC) may review the Project Selection systems and authorize a solicitation for projects prior to a TIP Update. Alternatively, staff may issue the solicitation and inform the TPC afterward. A notice of each solicitation will be posted on the NIRPC website and emailed to stakeholders and other individuals and groups whose e-mail address is on file.

- *NIRPC Staff Review of Applications.* The Notice of Funding Availability (NOFA) document for each solicitation will disclose how NIRPC staff will handle and process the applications received, including procedures to follow when applications are received incomplete or late. Applicants will be afforded an opportunity to correct errors or to supply missing or supplemental information within a time frame made known in the solicitation document or NOFA.

- *Financial Constraint.* Federal regulations require that Transportation Improvement Programs be financially constrained by year and include a financial plan that:

    1. Demonstrates how the approved TIP can be implemented;
    2. Indicates resources from public and private sources that are reasonably expected to be made available to carry out the TIP;
    3. Recommends any additional financing strategies for needed projects and programs.

NIRPC will consult with the public transit operators of record and INDOT in developing projections of available funds for a TIP Update. Federally funded projects included in the first year of the TIP shall not exceed the level of funding actually committed by FTA, FHWA, and other federal agencies. Federally funded projects included in the second through fourth year of the TIP may not exceed levels of funding committed, or reasonably expected to be available.

- *Stakeholder Committee Selection of New Federal-Aid Projects*. Each stakeholder committee charged with the responsibility of reviewing and recommending new federal-aid projects will reach consensus on the list of projects to receive funding and recommend a (draft) program of projects to the Transportation Policy Committee.

- *NIRPC Approval of TIP.* The Transportation Policy Committee (TPC) will be provided a draft version of the updated TIP (including the program of projects or "agreed-to" list) and release it for public comment. The TPC will afterward consider all public comments received, authorize a response to each, and then forward the edited draft TIP and public comments (and responses issued thereto) to the NIRPC Board with a recommendation that it be approved. The Commission (or Executive Board) will take action to adopt the TIP. Alternatively, the TPC may decline or opt to not recommend the draft TIP to the NIRPC Board for adoption. The NIRPC Board may also decline or opt to not adopt the draft TIP pending the resolution of outstanding public comments or for other issues of substance.

- *NIRPC Public Participation Plan*. In 2014 an updated Public Participation Plan was adopted, which identifies three types of TIP amendments: minor, major and emergency-based. Administrative modifications were also identified, which involve changes to air quality-exempt, non-Regionally Significant projects already in the TIP.

Financial Capacity and Projections

The development of reliable funding estimates is essential to the development of a realistic transportation plan that is consistent with the federal requirements for fiscal constraint. Funding for operating, maintaining and improving the transportation system is available from federal, state and local sources. In accordance with the provisions of 23 CFR §450.322, a metropolitan regional transportation plan must demonstrate how the transportation plan is to be implemented:

"System-level estimates of costs and revenue sources that are reasonably expected to be available to adequately operate and maintain Federal-aid highways.

All necessary financial resources from public and private sources that are reasonably expected to be made available to carry out the transportation plan shall be identified.

Revenue/Cost estimates that support the transportation plan must use an inflation rate(s) to reflect year of expenditure dollars."

Federal transportation funding from the U.S Department of Transportation is derived primarily from federal taxes imposed on motor fuels. The State of Indiana derives transportation funding from a motor fuels tax, vehicle license, title and driver license fees, motor carrier surtax, tolls and state general sales and use tax. Local transportation funding is derived from a variety of sources including user fees and fares, local property and income taxes, vehicle registration fees, casino revenues and special purpose bonds.

Routine maintenance of existing local highway infrastructure is typically funded with revenues from those state and local sources permitted by the Indiana General Assembly. These funds are considered to be marginally adequate for maintaining the local highway infrastructure in its current condition with funding for local highway reconstruction, rehabilitation and expansion historically provided from limited state and federal sources. The maintenance of designated Interstate, national and state highways is the jurisdiction of the Indiana Department of Transportation (INDOT).

Annual local revenue for roadways is about $100.5 million per year for local units of government ($80.9 million for operations/maintenance and $19.6 million per year in federal aid). A further $143.5 million is expected per year for state projects. Annual transit revenue of $53.9 million are also forecast. In total, about $297.9 million will be received each year to maintain and operate the entire three-county transportation network, or about $7.5 billion over the life of the plan.

State Sources of Revenue

Resources for operations and maintenance costs for the existing INDOT highway network were most recently quantified in a January 2014 update of their 2014-2017 Statewide Transportation Improvement Program (STIP). The Indiana General Assembly appropriates funds into four expense categories for routine operations and maintenance in the state's biennial budget. Actual budgeted and projected expenses for the 2014-2015 biennium and annual averages are shown in Table II-10.

The portion of INDOT's operations and maintenance expense attributable to Northwest Indiana are estimated. These estimates are based on the percentage of INDOT system miles that are located in Lake, Porter, and LaPorte Counties. The most recent data (from 2007) indicates that about 8.2% of all INDOT road miles are within the region. NIRPC estimates an investment of just over $700 million over the life of the plan for Operations and Maintenance.

NIRPC used the 2014 STIP data and the 8.3% multiplier to project the level of spending on construction projects from 2016-2040. As shown in the Table II-11, NIRPC projects that INDOT will invest just under $2.9 billion in construction projects over the life of the plan.

Total investment by INDOT for Operations, Maintenance, and Construction is projected at $143,500,357 annually and $3,587,508,928 over the life of the plan.

Local Sources of Revenue - Highways

Routine maintenance, operations and improvements of existing local road and highway infrastructure is typically funded with revenues from local sources. For the purpose of the 2040 Plan, the sources of revenue and cost estimates were derived from the 2013 Indiana State Board of Accounts Audit Reports, as reported on Indiana's Gateway for Governmental Units https://gateway.ifionline.org/. Revenue for the period 2016-2040 have been flat-lined with no inflation factor applied. Expense data was inflated at one quarter of one percent (0.025%) per year.

The principal source of funds for local road and street construction and maintenance operations comes from the Motor Vehicle Highway (MVH)

Projected INDOT Investments for Highway Operations and Maintenance 2016-2040				
Fund	2014-2017 Total	Average Per Year (Statewide)	Average per Year (Region)	2016-2040 Total (Region)
Highway Operating				
Personal Services	$ 836,544,996	$ 209,136,249	$ 17,149,172	$ 428,729,310
Other Operating Expense	227,252,424	56,813,106	4,658,675	116,466,867
Highway Vehicle & Road Maintenance Equipment	61,200,000	15,300,000	1,254,600	31,365,000
Highway Maintenance Work Program	268,000,000	67,000,000	5,494,000	137,350,000
Subtotal Highway Operations & Maintenance	$ 1,392,997,420	$ 348,249,355	$ 28,556,447	$ 713,911,178

Table II-10: Projected INDOT Investments for Highway Operations and Maintenance

Projected INDOT Investments for Highway Construction 2016-2040				
Fund	2014-2017 Total	Average Per Year (Statewide)	Average per Year (Region)	2016-2040 Total (Region)
Highway Construction--State Funds	2,963,420,000	740,855,000	60,750,110	1,518,752,750
Highway Construction--Federal Funds	2,643,600,000	660,900,000	54,193,800	1,354,845,000
Subtotal Highway Construction	$ 5,607,020,000	$ 1,401,755,000	$ 114,943,910	$ 2,873,597,750

Table II-11: Projected INDOT Investments for Highway Construction

and Local Road and Street (LRS) Accounts. Under Indiana law, the following accounts serve as the basic local sources of revenue :

Motor Vehicle Highway (MVH)
This accounts for the construction and maintenance of streets, alleys and the operations of street maintenance activities of the public works department. Resources are derived from state motor vehicle (gasoline tax) distributions. It also includes the purchase of materials, labor and/or equipment required in the maintenance and construction of roads and bridges.

Local Road and Street (LRS)
This accounts for the operation and maintenance of the local and county road and street systems. Resources are derived from state gasoline tax distributions. These funds are used for engineering, construction or reconstruction of roads, streets or bridges.

Cumulative Capital Improvement Funds (CCI)
The money from this fund may be used for road construction or improvement, acquisition of land or right-of-way for streets, roads, alleys, sidewalks, thoroughfares and maintenance. CCI is collected from the state cigarette tax.

Cumulative Capital Development Funds (CCD)
This fund provides money for any purpose for which property taxes may be imposed.

Cumulative Bridge Fund
This source of revenue provides funds for the cost of construction, maintenance, and repair of county highway bridges, approaches, and grade separations. County Commissioners may levy a tax in compliance with IC 6-1.1-41 in assessed valuation of all taxable personal and real property within the county.

Expense Transfers from General Fund and Other Sources
Indiana law requires all funds to be balanced at the end of the year. When over-spending has occurred in one or more accounts, a transfer of funds from another account is made so that the account will balance (i.e., expenses will equal revenues).

Local Financial Summary

The 2040 NIRPC projections show that in each year there will be about $77.3 million in revenues and $72.6 million in expenses. For the period of the plan (2012-2040), NIRPC projects revenue approaching $2.1 billion and expenses of $1.8 billion (see Table II-12) With no changes in the funding mechanisms, there is and will likely be sufficient local financial resources to maintain the current rate of expenditure for operations and maintenance.

However, in most cases this funding is less than the minimum needed in order to bring the entire local highway network to a state of good repair and maintain it in that condition. Estimates indicate not more than 15 percent of the total funds expended on local highway maintenance and operations were expended on preventative maintenance work beyond small hole-patching, crack sealing, and other similar low-cost, minimal maintenance methods. In other words, about $13.0 million (of $72.6 million) was being expended each year on local, non-federal aid construction projects. At this rate of expenditure, existing resources would be sufficient to mill and resurface only about half of the region's 5,145 miles of locally owned roadways over a 25-year period.

With no additional sources of revenue it will take at least 50 years to mill and resurface all of the region's roads once. Data supplied to the General Assembly in 2013 indicated that an additional $84.7 million was needed annually for roadway maintenance and an additional $82.1 million was needed for bridge replacement.

(Data does not include sources such as improvements in highway infrastructure made by municipal water and sewer agencies, improvements made with federal funds from either the U.S. Department of Housing and Urban Development (HUD), the U.S. Department of Transportation, U.S. Economic Development Administration (EDA), local Tax Increment Finance (TIF) Districts or other governmental bonding entities.)

Highway Operations and Maintenance: Baseline Annual Financial Data by Fund for Counties and Municipalities
Base Year: 2013

	MVH (Highway)		LRS		CCI		CCD		Cum Bridge		Expense
(For 2012)	Receipt	Disbursement	Receipt	Disbursement	Receipt	Disbursement	Receipt	Disbursement	Receipt	Disbursement	Transfers
Lake County	$ 4,999,855	$ 4,941,171	$ 810,130	$ 762,641	$ -	$ -	$ 9,483,240	$ 8,327,811	$ 3,002,973	$ 1,545,825	$ -
Cedar Lake	338,523	309,514	125,715	104,380	30,661	35,181	181,993	289,707	-	-	61,890
Crown Point	2,495,320	2,096,123	363,629	357,587	76,041	163,359	716,174	1,624,885	-	-	590,790
Dyer	437,357	382,354	158,293	158,355	60,135	-	344,928	559,891	-	-	99,887
East Chicago	818,842	815,624	270,973	300,749	78,767	99,134	-	-	-	-	46,925
Gary	2,403,441	2,263,087	976,258	1,391,271	213,300	242,183	358,972	73,367	-	-	17,937
Griffith	759,681	757,128	163,463	125,061	52,036	16,203	-	-	-	-	-
Hammond	2,612,188	3,471,251	781,255	991,633	214,382	399,469	218,629	12,562	-	-	1,048,461
Highland	960,418	921,838	294,961	358,204	71,474	68,102	623,060	362,819	-	-	-
Hobart	1,316,092	1,345,492	317,529	-	77,071	-	825,232	1,139,899	-	-	-
Lake Station	731,304	651,238	147,575	258,538	33,345	74,951	-	-	-	-	72,503
Lowell	952,482	865,283	88,841	61,035	24,603	26,217	141,373	-	-	-	-
Merrillville	915,507	888,029	369,122	379,686	438,482	369,939	647,565	188,194	-	-	-
Munster	1,654,694	1,633,224	264,668	251,231	67,751	121,888	283,251	252,748	-	-	-
New Chicago	58,759	72,272	25,585	6,497	5,398	12,705	-	-	-	-	1,732
St. John	605,144	540,294	166,691	118,509	39,387	17,467	157,605	261,883	-	-	-
Schererville	1,268,353	1,064,690	283,097	218,858	77,559	69,318	700,441	761,080	-	-	-
Schneider	22,324	15,371	6,175	3,144	735	2,433	-	-	-	-	-
Whiting	136,727	75,397	45,490	59,162	13,254	-	-	-	-	-	-
Winfield	348,582	298,232	58,782	27,865	11,625	11,571	125,056	93,535	-	-	-
Totals	**$ 23,835,593**	**$ 23,407,612**	**$ 5,718,232**	**$ 5,934,406**	**$ 1,586,006**	**$ 1,730,120**	**$ 14,807,519**	**$ 13,948,381**	**$ 3,002,973**	**$ 1,545,825**	**$ 1,940,125**

	MVH (Highway)		LRS		CCI		CCD		Cum Bridge		Expense
(For 2012)	Receipt	Disbursement	Receipt	Disbursement	Receipt	Disbursement	Receipt	Disbursement	Receipt	Disbursement	Transfers
Porter County	$ 3,476,776	$ 4,130,821	$ 963,166	$ 562,317	$ -	$ -	$ 1,706,527	$ 2,129,918	$ 640,789	$ 1,106,752	$ 1,142,550
Beverly Shores	106,041	91,801	25,683	27,588	1,626	614	10,574	3,208	-	-	-
Burns Harbor	152,420	48,995	15,960	1,600	3,066	-	32,438	84,810	-	-	-
Chesterton	861,508	942,542	131,350	70,775	34,670	-	270,731	186,887	-	-	-
Dune Acres	5,934	36,470	5,605	8,594	615	1,012	9,840	11,406	-	-	35,488
Hebron	99,715	96,918	35,429	43,568	9,877	15,256	25,345	32,331	-	-	17,707
Kouts	89,647	76,082	19,665	20,227	4,984	3,088	5,779	8,953	-	-	-
Ogden Dunes	198,591	178,888	18,283	18,304	2,944	1,665	-	-	-	-	-
Portage	2,947,799	3,002,930	353,379	480,880	694,677	597,000	429,944	470,823	-	-	125,834
Porter	539,227	606,862	59,145	5,712	12,885	-	100,651	79,502	-	-	-

Table II-12: Highway Operations and Maintenance - Baseline Data for Counties and Municipalities (Part 1)

(For 2012)	MVH (Highway) Receipt	MVH (Highway) Disbursement	LRS Receipt	LRS Disbursement	CCI Receipt	CCI Disbursement	CCD Receipt	CCD Disbursement	Cum Bridge Receipt	Cum Bridge Disbursement	Expense Transfers
Town of Pines	31,581	20,611	11,379	13,410	1,878	2,630	-	-	-	-	-
Valparaiso	1,412,266	1,562,136	345,217	610,690	84,156	-	281,196	258,400	-	-	308,391
Totals	**$ 9,921,505**	**$ 10,795,056**	**$ 1,984,261**	**$ 1,863,665**	**$ 851,378**	**$ 621,265**	**$ 2,873,025**	**$ 3,266,238**	**$ 640,789**	**$ 1,106,752**	**$ 1,629,970**
LaPorte County	$ 3,447,902	$ 3,060,659	$ 740,934	$ 635,001	$ -	$ -	$ 444,626	$ 110,798	$ 893,869	$ 1,184,990	$ -
Kingsbury	6,466	-	2,733	3,000	642	197	-	-	-	-	-
Kingsford Heights	40,204	33,026	17,195	14,125	3,956	20,000	2,906	-	-	-	2,890
La Crosse	15,075	14,610	7,839	3,151	1,462	-	1,175	-	-	-	-
LaPorte	1,037,388	853,571	205,938	142,526	58,490	6,503	436,036	222,032	-	-	-
Long Beach	485,790	376,385	16,364	-	15,347	-	40,816	-	-	-	-
Michiana Shores	11,184	-	15,619	17,808	8,830	-	3,148	-	-	-	-
Michigan City	2,089,591	1,943,950	299,556	291,904	83,590	102,576	909,014	789,123	-	-	-
Pottawattamie Park	7,469	3,000	5,934	-	-	-	-	-	-	-	-
Trail Creek	92,700	107,771	31,541	49,981	2,878	14,297	10,907	60,000	-	-	94,023
Wanatah	292,951	110,532	11,427	-	2,780	-	14,650	1,714	-	-	-
Westville	149,156	172,626	44,743	46,868	15,524	15,000	19,045	-	-	-	6,026
Totals	**$ 7,675,876**	**$ 6,676,130**	**$ 1,399,823**	**$ 1,204,364**	**$ 193,499**	**$ 158,573**	**$ 1,882,323**	**$ 1,183,667**	**$ 893,869**	**$ 1,184,990**	**$ 102,939**

REVENUES

County	MVH	LRS	CCI	CCD	Cum Bridge	Other	Total Revenues	Expense Transfers	Adjusted Total Revenues	Estimated 2016-2040 Revenue Projection
Lake	$ 23,835,593	$ 5,718,232	$ 1,586,006	$ 14,807,519	$ 3,002,973	$ -	$ 48,950,323	$ 1,940,125	$ 50,890,448	$ 1,272,261,200
Porter	9,921,505	1,984,261	851,378	2,873,025	640,789	-	16,270,958	1,629,970	17,900,928	447,523,200
Laporte	7,675,876	1,399,823	193,499	1,882,323	893,869	-	12,045,390	102,939	12,148,329	303,708,225
Totals	**$ 41,432,974**	**$ 9,102,316**	**$ 2,630,883**	**$ 19,562,867**	**$ 4,537,631**	**$ -**	**$ 77,266,671**	**$ 3,673,034**	**$ 80,939,705**	**$ 2,023,492,625**

COSTS (EXPENSE)

County	MVH	LRS	CCI	CCD	Cum Bridge	Other	Total Costs (Expense)		Estimated 2016-2040 Costs (Expense) Projection
Lake	$ 23,407,612	$ 7,158,029	$ 3,061,050	$ 7,386,014	$ 2,812,369	$ -	$ 43,825,074		$ 1,095,626,844
Porter	10,795,056	1,863,665	621,265	3,266,238	1,800,279	-	18,346,503		458,662,575
Laporte	6,676,130	1,204,364	158,573	1,183,667	1,184,990	-	10,407,724		260,193,100
Totals	**$ 40,878,798**	**$ 10,226,058**	**$ 3,840,888**	**$ 11,835,919**	**$ 5,797,638**	**$ -**	**$ 72,579,301**		**$ 1,814,482,519**

Table II-12: Highway Operations and Maintenance - Baseline Data for Counties and Municipalities (Part 2)

Sources of Revenue - Public Transit

Public transit in Indiana is financed through a variety of funding mechanisms that vary in accordance with the transit operator's organizational structure. Northwest Indiana has five (5) transit operators that are departments of a unit of government, one (1) that is organized under Indiana's Public Transportation Corporation statute, three (3) that are not-for-profit corporations, and (1) one commuter rail operator. Each is governed under a different set of rules. Table II-13 is a summary of projected public transit investments in northwest Indiana over the 25-year life of the plan.

Public transit is financed, in general through a combination of multiple sources of funding—some of which subsidize the service itself and some of which subsidize the service user. Table II-14 shows projected transit revenue by type over the life of the plan.

Expected Federal Aid for Local Projects

NIRPC anticipates that funding in all federal aid categories will be flatlined for the foreseeable future. Amounts shown are reflected in "Year of Expenditure" amounts.

NIRPC predicts that approximately $48 million in federal aid will be received annually under 10 different types of federal aid from the U.S. Department of Transportation. The total funding anticipated over the life of the plan is about $1.2 billion. Of this total, NIRPC projects that about 86% ($1.04 billion) will be used for reconstruction, preservation, and mainte-

Projected Public Transit Operating and Capital Expenses 2016-2040				
Transit Operator	Base Annual Operating Expense (2013)	Base Annual Capital Investment (2013)	Total: Base Annual Operating Expense & Capital Investment	Life of Plan Operating Expense & Capital Investment
East Chicago Transit	$ 1,054,128	$ 250,000	$ 1,304,128	$ 32,603,200
Gary Public Transportation Corporation	5,873,832	3,911,883	9,785,715	244,642,875
Michigan City Transit	1,325,492	394,000	1,719,492	42,987,300
Valparaiso V-Line	1,572,052	233,000	1,805,052	45,126,300
City of LaPorte (TransPorte)	566,417	160,000	726,417	18,160,425
NIRPC Subrecipients*	3,107,562	552,977	3,527,854	88,196,350
NIRPC	484,744	-	484,744	12,118,600
NICTD Commuter Rail	39,554,146	15,175,590	54,729,736	1,368,243,400
LaPorte County Commuter Bus (Triangle)*	393,710	232,000	625,710	15,642,750
Totals	**$ 53,932,083**	**$ 20,909,450**	**$ 74,708,848**	**$ 1,867,721,200**

* Includes North Township Government (Lake County), Opportunity Enterprises, Inc., Porter County Aging & Community Services, Inc., and South Lake County Community Services, Inc..

Table II-13: Projected Public Transit Operating and Capital Expenses

Projected Public Transit Operating Revenue 2016-2040						
Transit Operator	Farebox Revenue (2013)	Local Assistance (2013)	State Assistance (2013)	Federal Assistance (2013)	Total Annual Revenue	Total Revenue over Life of Plan
East Chicago Transit	$ -	$ 390,525	$ 290,319	$ 373,284	$ 1,054,128	$ 26,353,200
Gary Public Transportation Corporation	772,355	1,287,908	728,603	3,084,966	$ 5,873,832	$ 146,845,800
Michigan City Transit	95,299	374,444	247,144	608,605	$ 1,325,492	$ 33,137,300
Valparaiso V-Line	340,531	775,118	148,693	307,710	$ 1,572,052	$ 39,301,300
City of LaPorte (TransPorte)	101,948	178,852	70,430	215,187	$ 566,417	$ 14,160,425
NIRPC Subrecipients*	500,643	759,630	973,922	873,367	$ 3,107,562	$ 77,689,050
NIRPC Subrecipient Oversight	-	96,949	-	387,795	$ 484,744	$ 12,118,600
NICTD Commuter Rail	19,341,086	3,741,506	11,885,600	4,585,954	$ 39,554,146	$ 988,853,650
LaPorte County Commuter Bus (Triangle)*	-	78,742	-	314,968	$ 393,710	$ 9,842,750
Totals	$ 21,151,862	$ 7,683,674	$ 14,344,711	$ 10,751,836	$ 53,932,083	$ 1,348,302,075

* Includes North Township Government (Lake County), Opportunity Enterprises, Inc., Porter County Aging & Community Services, Inc., and South Lake County Community Services, Inc..

Table II-14: Projected Public Transit Operating Revenue

nance activities and that the balance of $162 million (24%) will be used for capacity expansion projects. Tables II-15 and II-16 show anticipated federal funding.

MPO-Controlled Federal Funds: U.S. Federal Highway Administration (FHWA)

Surface Transportation Program (STP) Group I

STP funds are apportioned to states by a formula embedded in federal law by Congress. This formula also allocates funds to each state's urbanized areas. Portions of Lake and Porter Counties lie within the Chicago Urbanized Area—the third most populous urbanized area in the nation. NIRPC anticipates approximately $10.5 million in STP Group I funds per year over the life of the Plan—or a total of $263 million.

Surface Transportation Program (STP) Group II

STP funds are also allocated by INDOT to the Michigan City/LaPorte Urbanized Area. The population of this urbanized area is under 200,000. NIRPC

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Financial Projections FFY 2016-2040: MPO-Controlled Federal Funds

Source of Funds	Apportioned Federal Funds Only		P&M	Expansion
	Annual New Funds ($$$$)	Total New Funds (2016-2040)	Total over Life of Plan	Total over Life of Plan
Highways				
FHWA STP Group I	$ 10,545,025	$ 263,625,625	$ 197,719,219	$ 65,906,406
CMAQ Large Urban	3,345,842	83,646,050	59,388,696	24,257,355
HSIP Large Urban	2,752,256	68,806,400	68,806,400	-
TAP Large Urban	961,809	24,045,225	6,011,306	18,033,919
FHWA STP Group II	981,988	24,549,700	20,867,245	3,682,455
CMAQ Small Urban	587,952	14,698,800	11,024,100	3,674,700
HSIP Small Urban	308,261	7,706,525	7,706,525	-
TAP Small Urban	93,608	2,340,200	585,050	1,755,150
Subtotals	$ 19,576,741	$ 489,418,525	$ 372,108,541	$ 117,309,985

Table II-15: Financial Projections for MPO-Controlled Federal Funds - Highway

Financial Projections FFY 2016-2040: MPO-Controlled Federal Funds

	Apportioned Federal Funds Only		P&M	Expansion
Transit				
FTA Sec 5307/5340 Large Urban	$ 11,510,760	$ 287,769,000	$ 244,603,650	$ 43,165,350
FTA Sec 5307/5340 Small Urban	900,010	22,500,250	22,500,250	-
FTA Sec 5337 State of Good Repair*	15,078,820	376,970,500	376,970,500	-
FTA Sec 5310 Seniors & People with Disabilities	431,993	10,799,825	9,179,851	1,619,974
FTA Sec 5339 Bus Capital	448,756	11,218,900	11,218,900	-
FTA Sec 5309 New Start (Rail)	-	-	-	-
Subtotal	$ 28,370,339	$ 709,258,475	$ 664,473,151	$ 44,785,324
Grand Total (Transit & Highways)	$ 47,947,080	$ 1,198,677,000	$ 1,036,581,692	$ 162,095,308
** Includes Funds Apportioned to the South Bend Urbanized Area*			86%	14%

Table II-16: Financial Projections for MPO-Controlled Federal Funds - Transit

anticipates receiving just under $1.0 million per year over the life of the Plan for a total of $25.5 million.

Congestion Mitigation/Air Quality (CMAQ) Program
Congestion Mitigation and Air Quality (CMAQ) funds provide a flexible funding source to state and local transportation agencies for transportation projects and programs that contribute to improved air quality. Eligible activities include (among others) traffic signal, signal interconnect, intersection improvements and other direct traffic congestion relief projects, new public transit services, alternative fuel infrastructure, bicycle and pedestrian facilities, and diesel retrofit and repower projects.

CMAQ funding is intended for use in areas that are or were identified as non-attainment of the National Ambient Air Quality Standards (NAAQS), as well as former nonattainment areas that are now in compliance (maintenance areas). Currently all three counties within our metropolitan planning area are classified as maintenance areas.

INDOT makes separate allocations of CMAQ funds to each urbanized area. NIRPC anticipates CMAQ apportionments of about $3.3 million per year in the Lake-Porter County Maintenance Area and about $0.59 million per year in LaPorte County. Over the life of the plan we anticipate new funding of about $83.6 million in the Lake-Porter Area and $14.7 million in LaPorte County is expected.

Highway Safety Improvement Program (HSIP)
This program provides federal funds on an annual basis for highway safety-related projects. Fundable projects are those that are likely to reduce vehicle crashes. The Lake-Porter County area is allocated about $2.7 million per year and LaPorte County receives about $0.3 million per year. NIRPC anticipates that, over the life of the plan, new HSIP funding for Lake and Porter Counties to be about $68 million and $7.7 million for LaPorte County.

Transportation Alternatives Program (TAP)
Congress established the TAP program in 2012 as a replacement for the Transportation Enhancement (TE) Program. TAP-funded activities encompass a broad range of activities, including bicycle/pedestrian recreational trails, streetscaping projects, and similar projects. Since its inception in 1991, transportation enhancement projects were selected competitively by INDOT. This changed in 2008—these projects are now selected by the MPOs, although INDOT does still approve each project for eligibility.

The Lake-Porter County area is allocated about $1.0 million per year in TAP funds and LaPorte County receives just under $0.1 million per year. Over the life of the plan NIRPC expects $24 million for use in Lake-Porter and $2.5 million for use in LaPorte County.

INDOT-Controlled Federal Funds: U.S. Federal Highway Administration (FHWA)

Interstate Maintenance
The State of Indiana has about 135 miles of Interstate highways located in the three-county metropolitan planning area. INDOT anticipates spending an average of $10.3 million per year in Interstate Maintenance funds over the four year period beginning in 2012. NIRPC would anticipate that INDOT would invest a similar amount per year over the life of the plan with a total investment of $283 million.

Oak Savannah Trail - Hobart. Photo by Bob Huffman.

National Highway System (NHS)
In addition to 135 miles of Interstate highway, there are 103 miles of other expressways and principle arterial highways that comprise the NHS in northwest Indiana. INDOT anticipates spending an average of $14.9 million per year in NHS funds over the four year period beginning in 2012. Based upon this current spending, NIRPC anticipates that INDOT will invest a similar amount per year over the life of the plan with a total investment of $419 million.

Surface Transportation Program (STP)
STP funds provide states and local agencies with flexible funding that may be used for projects on any Federal-aid highway facility, including the NHS. As noted earlier, INDOT allocates some STP funds to Indiana's urbanized areas (for use on local projects). It utilizes the balance for its own projects. A wide variety of projects are eligible for STP funding, but INDOT uses these funds primarily for roadway maintenance, bridge rehabilitation and replacement, and safety improvement projects. INDOT anticipates spending an average of $4.1 million per year in STP funds within the three-county area over the four year period beginning in 2012. Based upon this current spending, NIRPC anticipates that they will expend about $115 million in State STP funds over the life of the plan.

INDOT-Selected Local STP Projects
STP Group III funds are apportioned for use in all incorporated areas in Indiana with a population between 5,000 and 49,999. STP Group III funds are not available to cities and towns in the STP Group I and II fund categories (i.e., those within the urbanized areas). STP Group III funds are administered by INDOT and made available to qualifying municipalities on competitive basis. In Northwest Indiana, only the Towns of Lowell and Westville qualify for STP Group III funding.

STP Group IV funds are apportioned for projects in areas where the population does not exceed 5,000 or in unincorporated areas. STP Group IV projects are competitively selected (like those under the Group III program) by INDOT. In Northwest Indiana, Lake County, LaPorte County and Porter County are eligible for STP Group IV funds in addition to incorporated rural communities of Hebron, Kingsbury, Kingsford Heights, Kouts, LaCrosse, Schneider and Wanatah. During the period 2008 through 2011, INDOT selected only one Group III and no Group IV projects for funding in Northwest Indiana. For this reason, NIRPC does not project that there will be any significant sum of money allocated to these types of projects on an ongoing basis.

Bridge (BR) Funds
For the years 2007 through 2010, the three counties in Northwest Indiana have been relatively successful in receiving INDOT-allocated Bridge funds in that funding for five (5) projects has been approved. The total amount of federal funds approved is $8.2 million. NIRPC does anticipate that this assistance will continue to be available and project that about $0.95 million per year will be received over the life of the plan—resulting in the investment of about $26.6 million for bridges.

MPO-Controlled Federal Funds: U.S. Federal Transit Administration (FTA)

Urban Area Formula Grants Sections 5307/5340 Growing States

The FTA Section 5307/5340 formula grant program provides subsidies for public transit service provided within an urbanized area having a population of 50,000 or more. FTA makes grant awards directly to the eligible recipients for each UZA as designated by the Governor. Funds may be used for any eligible mass transportation project contained in Part 53 of Title 49, United States Code. FTA distributes Section 5307 funds to large urbanized areas (i.e., those with a population greater than 200,000) in accordance with a formula that considers population, population density and service statistics reported by transit operators. FTA distributes Section 5307 funds to small UZAs on the basis of population and population density only. Funds are apportioned to individual urbanized areas and not to specific transit providers. Thus, FTA makes separate apportionments to the Chicago urbanized area and the Michigan City urbanized area.

Chicago Urbanized Area

NIRPC, the Regional Transportation Authority of Northeast Illinois (RTA) and the Chicago Metropolitan Agency for Planning (CMAP) maintain a written Letter of Understanding which governs the manner in which the Section 5307/5340 funds allocated to the Chicago urbanized area are divided between Northwest Indiana and Northeast Illinois. The most recent Letter, executed in 2013, allocates these funds on the same basis that FTA uses in allocating them across the nation. It is likely that, when new Letters are executed, this same distribution mechanism will be retained.

There are three (3) FTA Section 5307/5340 grantees in the Indiana portion of the Chicago UZA. These are the Gary Public Transportation Corporation (GPTC), Northern Indiana Commuter Transportation District (NICTD) and NIRPC. NIRPC provides Section 5307 assistance, on a pass-through basis to seven (7) other eligible transit operators: City of East Chicago, Opportunity Enterprises, Inc., the Trustee of Lake County's North Township, South Lake County Community Services, Inc., Porter County Aging & Community Services, Inc., and the City of Valparaiso.

The Indiana portion of the Chicago Urbanized Area is sub-allocated about $10.7 million per year in Section 5307/5340 funds. At this rate of apportionment, this portion of the urbanized area reasonably expects a total of $317 million in FTA Section 5307/5340 funds over the life of the plan.

Michigan City Urbanized Area

The Michigan City urbanized area is under 200,000 in population--therefore, the Section 5307/5340 funds allocated there are apportioned to the Governor, who has designated the City of Michigan City and NIRPC (on behalf of the City of LaPorte) to administer grants for the two transit operators. The urbanized area's two public transit operators desire to maximize their use of their annual apportionment for operating assistance and to seek alternative means of funding capital equipment.

The Michigan City urbanized area receives about $900,000 per year in Section 5307/5340 funds. It is reasonable to expect that a similar sum will continue to be received each year over the life of the plan for a total of $27 million.

FTA Capital Investment Grants - Section 5309 (Rail Modernization)

Rail Modernization funding is intended to support the modernization of urban commuter rail systems throughout the country. By definition, these systems include only facilities that are at least seven years of age. Section 5309(m)(2)(B) funds are apportioned to each UZA with a qualifying commuter rail system.

Chicago Urbanized Area
Like the FTA Section 5307/5340 program within the Chicago UZA, there is a Letter of Understanding between NIRPC and the Regional Transportation Authority of Northeast Illinois (RTA) that governs the distribution of rail modernization funds. The most recent Letter, executed in 2013, allocates 6.29% of the entire Chicago urbanized area's rail modernization apportionment to northwest Indiana. Each preceding Letter (beginning with the first one issued in 1992) has featured this same percentage split. It is thus reasonable to expect that this same distribution formula will be utilized indefinitely and that NW Indiana will receive an average of $10.8 million per year from the Chicago UZA, for a total of $304.5 over the life of the Plan.

South Bend Urbanized Area
The Northern Indiana Commuter Transportation District is also the sole recipient of FTA Section 5309 Rail Modernization funds apportioned to the South Bend urbanized area. Funds from the two urbanized areas are co-mingled into a single FTA grant each year. In FFY 2011, there was $1,127,931 in rail modernization funds apportioned to the South Bend urbanized area. At this rate of apportionment, about $31.6 million would be received over the life of the plan.

Job Access/Reverse Commute Program (Section 5316)
FTA Job Access/Reverse Commute (FTA Section 5316) funds are allocated to the Chicago Urbanized Area and to INDOT for other portions of the three-county area. This grant program provides transit service subsidies targeted to lower income persons for employment-related trips. FTA makes grant awards directly to designated recipients in each large UZA. These funds may be used for either operating, capital, or planning assistance.

The Indiana portion of the Chicago UZA is allocated about $0.4 million per year. Over the life of the plan NIRPC expects to receive $11.2 million.

New Freedom Program (Section 5317)
FTA New Freedom (FTA Section 5317) funds are also apportioned to the Chicago Urbanized Area and to INDOT for other portions of the three-county area. This grant program provides transit service subsidies targeted to enhanced services for persons with disabilities directly to designated recipients in each large UZA and to the state for all other areas. These funds may be used for operating, capital, or planning assistance.

The Indiana portion of the Chicago UZA is allocated about $0.3 million per year. Over the life of the plan NIRPC expects to receive $8.4 million.

Capacity Expansion Projects

Table II-17 represents an updated list of capacity expansion projects that have been selected for inclusion in the plan. Like previous projects selected in the original 2040 CRP, these projects were scored using the project selection criteria and compared with future revenues to maintain financial constraint. The projects were segmented into groups representing the milestone years of implementation for air quality conformity analysis purposes. Table II-17 also includes an illustrative list of projects that are beyond the means of the region to implement, given current identified resources.
Additions to the original project list include the following:

- Illiana Expressway (voted in as a CRP amendment in December of 2013)
- I-65 from US-30 to SR-2 (voted in as a CRP amendment in December of 2013)
- Chicago Avenue in Hammond
- 45th Street Alignment in Munster
- 93rd Avenue in St. John

Projects Complete by 2020	Beginning Point	End Point	Sponsor
Illiana Expressway	I-55 Near Wilmington	I-65 Near Lowell	INDOT/IDOT
I-65 from US-30 to SR-2	US-30	SR-2	INDOT
US-41 from US-231 to 93rd Ave	93rd Ave	US-231	INDOT
SR-912 over Indiana Harbor Canal	Riley Rd	Michigan Ave	East Chicago
45th Street realignment	Calumet Ave	White Oak Ave	Munster
61st Avenue	Arizona St	SR-51	Hobart
Broadway Rapid Transit	Gary Metro Center	US-231	GPTC
Projects Complete by 2025			
Chicago Avenue	Stateline (Gostlin/Sheffield)	White Oak Ave	Hammond
45th Avenue	Whitcomb St	Grant St	Lake County
Mississippi Street	US-30	101st Ave	Merrillville
101st Avenue	SR-53	Mississippi St	Merrillville
Kennedy Avenue	Main St	US-30	Schererville
93rd Avenue	White Oak Ave	US-41	St. John
Projects Complete by 2030			
Main Street Extension	Burnham Ave	Columbia Ave	Munster
Willowcreek Extension	700 N	100 S	Porter County
Vale Park East	Calumet Ave	Silhavy Rd	Valparaiso
Projects Complete by 2040			
Division Road	SR-2	US-30 (E of 450 E)	Valparaiso
Illustrative List of Projects *Projects that are not included in the fiscally-constrained conforming plan*			
Westlake Commuter Lines	Hammond	Lowell	NICTD
Boyd Boulevard Expansion	SR-2	US-35	LaPorte
Economic Development Corridor NE	SR-39 (S of Toll Rd)	SR-2 (at Fail Rd)	LaPorte

Table II-17: List of Capacity Expansion Projects

Functional Classification

As a regional partner in the transportation system, NIRPC has a role in ensuring that the roads across the region are properly classified based on function. This concept is called Functional Classification. Functional Classification plays a role in determining the federal apportionment. MAP-21 requires a 7 classification system down from the 12 classification system used prior. The seven classes are generally divided into 3 categories: Arterials, Collectors, and Local Roads. Arterials are roads that primarily carry through traffic of regional importance, usually at distances that link 2 or more municipalities or across an entire county. Collectors are roads that collect traffic from Local Roads and distribute the traffic to Arterials. Local Roads are roads that provide access to local neighborhoods and specific sites. Table II-18 lists the 7 Functional Classifications by category with examples.

NIRPC launched a holistic process to update the Functional Classification system from the previous 12-classification system to the 7-classification system. NIRPC staff started from scratch and prepared unclassified road maps for each of the 44 jurisdictions (41 municipalities and 3 counties). Staff met individually with staff from the majority of the jurisdictions to ask how the roads in each of their jurisdictions function, marking the draft classifications on the map. For the communities unable to meet in person, NIRPC staff prepared draft classifications and received feedback electronically from those communities. NIRPC staff then met with INDOT and FHWA in Indianapolis on February 13, 2015 and at NIRPC on March 23, 2015 to review the draft classification system from all of the jurisdictions combined. After NIRPC staff revised the draft classification system based on these reviews, staff presented the final proposed Functional Classification system for the region to the NIRPC Transportation Policy Committee at its April 14, 2015 meeting and received approval. A regional map of the Functional Classification system can be found in Figure II-29 and at http://nirpc.org/transportation/functional-class.aspx.

The mileage breakdown of road centerline miles by Functional Classification in the NIRPC Region is shown in Table II-19. The mileage breakdown compares well against the guidance for urban systems from FHWA according to the Highway Functional Classification Concepts, Criteria and Procedures 2013 Edition. That guidance calls for 1% - 2% Interstate, 0% - 2% Other Freeway or Expressway, 4% - 5% Other Principal Arterial, 7% - 12% Minor Arterial, 7% - 13% Major Collector, 7% - 13% Minor Collector, and 67% - 76% Local Roads. The mileage breakdown for the NIRPC region in Table II-19 shows figures that are close to the FHWA guidance.

Category	Classification	Example
Arterials	Interstate Highway	I-80/94
	Other Freeway or Expressway	Cline Ave
	Other Principal Arterial	US-30
	Minor Arterial	Mississippi St
Collectors	Major Collector	Euclid Ave in East Chicago
	Minor Collector	Detroit St in LaPorte
Local Roads	Local Road	Southport Rd in Portage

Table II-18: Functional Classifications by Category with Examples

County	Total	Interstate	%	Other Frwy or Exprswy	%	Other Principal Arterial	%	Minor Arterial	%	Major Collector	%	Minor Collec -tor	%	Local	%
Lake	3233.3	136.5	4%	39.2	1%	186.6	6%	266.7	8%	210.2	7%	267.4	8%	2127.6	66%
LaPorte	1774.7	50.5	3%	0	0%	110.6	6%	194.1	11%	150.5	8%	184	10%	1085.0	61%
Porter	1734.2	40.0	2%	0	0%	124.9	7%	130.5	8%	184.4	11%	158.9	9%	1095.5	63%
Total	6742.2	227.0	3%	39.2	1%	422.2	6%	591.3	9%	545.1	8%	610.3	9%	4308.0	64%

Table II-19: Mileage Breakdown of Road Centerline Miles by Functional Classification in the NIRPC Region

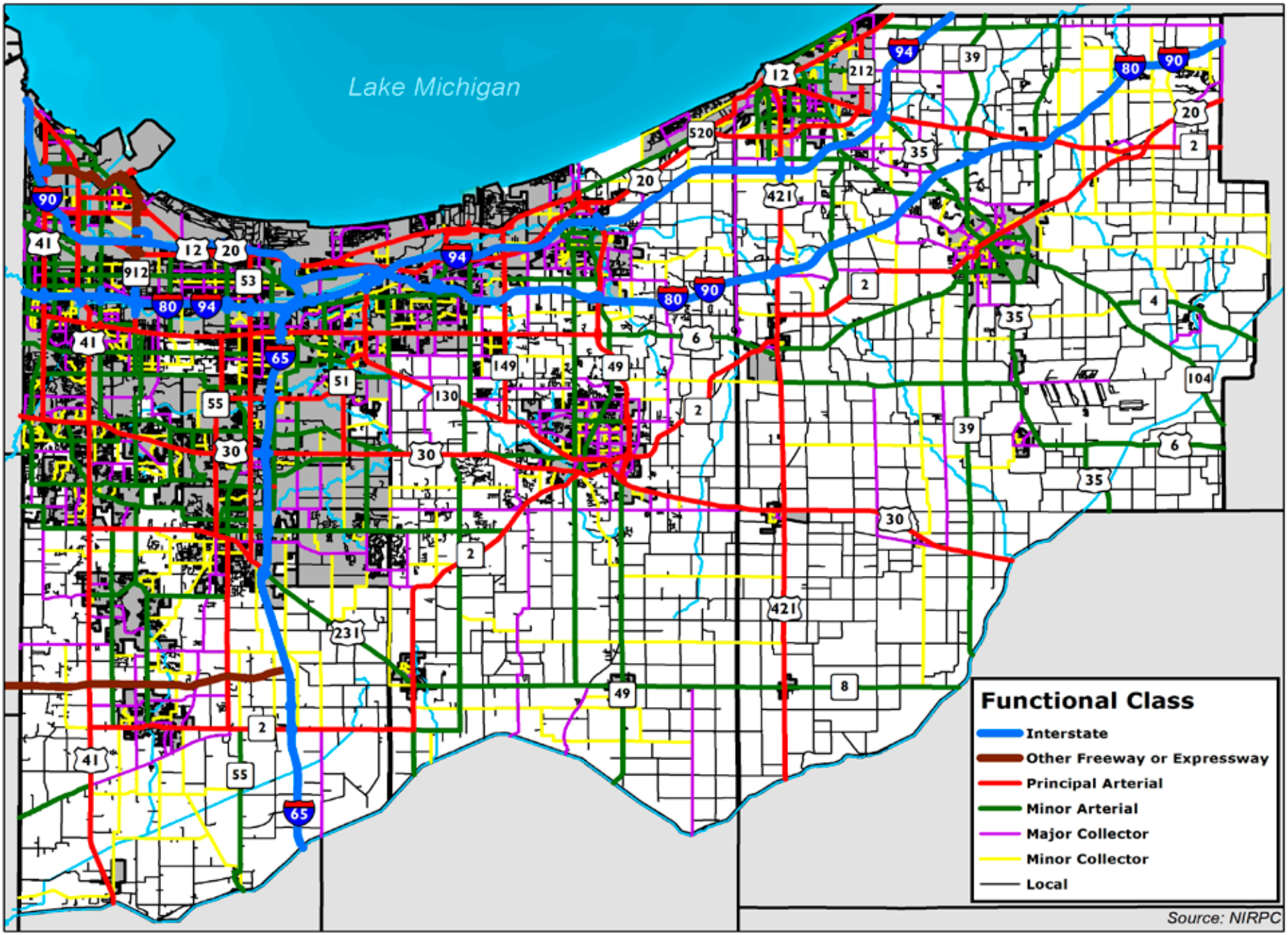

Figure II-29: Functional Classification of Roads in Northwest Indiana