# Transportation Summary Report NIRCC

Fiscal Year 2014



Produced by the Northeastern Indiana Regional Coordinating Council



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#### **INTRODUCTION**

The Northeastern Indiana Regional Coordinating Council (NIRCC) is designated as the metropolitan planning organization (MPO) responsible for conducting transportation planning in the Fort Wayne-New Haven-Allen County Metropolitan Planning Area. Working with other public and private agencies, NIRCC strives to implement a transportation system that assures healthy growth and orderly development in the region. One of the main goals of NIRCC is working to develop a well-coordinated, multimodal, and functional transportation system to satisfy existing and future travel demands.

NIRCC and its staff work to provide a complete transportation system, one which will enhance the efficient movement of goods and people, while promoting greater safety and maintaining a conscious regard for the quality of life. For this goal to become a reality, constant monitoring of the existing system must occur. Staff is continually collecting data on the existing system to support the short-range planning process and to identify the challenges and opportunities of the future.

This Transportation Summary Report highlights and visually illustrates some of the transportation planning activities conducted and the products produced by NIRCC during Fiscal Year 2014. The primary purpose of this report is to familiarize the reader with the techniques used by NIRCC and the resulting products to promote a better understanding of the transportation planning process in our community. Included in this report is a summary of the traffic surveillance activities, intersection and arterial analyses, corridor studies, travel time and delay studies, Fiscal Year 2015-2018 Transportation Improvement Program (TIP) Projects for the Fort Wayne-New Haven-Allen County Metropolitan Planning Area, quarterly review, ADA transition plans, Safety Management System (SMS) activities, congestion management, bicycle/pedestrian planning activities, Red Flag Investigation (RFI) studies, and transit planning.

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#### TRAFFIC SURVEILLANCE

Traffic counting provides an important base for short- and long-range transportation planning in an area. NIRCC is responsible for collecting and recording traffic count data for more than 2,000 traffic count links just within Allen County, as illustrated in figure 1. The majority of these links are located within the Metropolitan Planning Area and are shown in red. The yellow links are collected as part of our rural traffic count program. The data is collected on a rotational basis, which varies from link to link. NIRCC employs three types of counts, weekly, temporary ground counts, and classification counts.

The first type of counts are weekly counts. These are done at eight permanent local counting stations, also illustrated in figure 1. The permanent weekly counts are in locations that represent arterials and collectors in four different planning



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areas of Fort Wayne and Allen County. The Indiana Department of Transportation (INDOT) maintains permanent counting stations on Interstate 69 and State Road 930. The data from these stations, collected each month, is used to develop monthly count factors. Monthly count factors are important because traffic volumes vary from one season to



#### Figure 2

another for various reasons. Weather conditions, construction, economic activities and school/work schedules are just a few of the variables that cause seasonal variations in traffic flow. Traffic count data collected in November may be very different than traffic count data collected in July. Because of these differences, traffic counts throughout the year must be adjusted with these factors depending on the month and season if they are to be accurately compared. These factors are what adjust the raw traffic count data into the Average Annual Daily Traffic (AADT) volumes.

The second type of counts are temporary ground counts. In Count Year 2013 (April - November), data was collected at 600 locations, as illustrated in figure 2. All of these counts are forty-eight hour, weekday counts that are conducted

region-wide and adjusted for vehicle axle variability and seasonal variability. These counts fulfill three main objectives: 1) sample locations to estimate vehicle miles of travel, 2) sample highway performance monitoring system locations, and 3) collect coverage and special counts for planning and analysis purposes.

The last type of traffic counts are traffic classifications. Classification counts are conducted at selected locations to determine the frequency of various vehicle types. This data is collected, summarized, and then recorded as a component of the transportation characteristic file. The amount of truck traffic at a sampled location is the critical information collected by classification counts. The information is used for general system monitoring and for augmenting the data needs of Highway Performance Monitoring System (HPMS) sections and several management systems.

**Traffic Volumes** 24 HR Volume Counts 500 and Under 501 - 1,000 1,001 - 2,500 2,501 - 5,000 5,001 - 10,000 10,001 - 20,000 20,001 - 40,000 **US 30** 40,001 - 75,000  $US_{24}$ SR 114 60 1469

Figure 3 provides the range of traffic volumes present throughout Allen County. Some of the traffic count links shown

Figure 3

in figure 1 and figure 3 exhibit links that may look unconnected or isolated. These links appear this way because they are usually part of the local road type samples or the railroad inventory count locations. Since most of the links are not functionally classified, they do not illustrate the continuity that the other links reveal.

# Vehicle Miles of Travel

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#### VEHICLE MILES OF TRAVEL

The purpose of the vehicle miles of travel (VMT) estimate is to provide a measurement of regional traffic growth. The VMT estimate incorporates several factors that influence quality of travel within a region including traffic volume, length and type of roadway facility, seasonal traffic variations, and vehicle types. The VMT estimate has been published annually for the region beginning in Fiscal Year 1986. With each annual estimate, NIRCC staff has attempted to improve its sampling and analytical skills to produce the most reliable estimate possible. Region wide, vehicle miles of travel decreased from 7,234,999 million in 2012 to 7,214,635 million in 2013. This represents a decrease of -0.28 percent. The VMT decreased on arterial streets (-0.55%), decreased on collector streets (-0.28%), increased on expressways (4.36%), and decreased on Freeways (-0.31%) from 2012. The VMT is illustrated for 2013 in figure 4.



#### Vehicle Miles of Travel

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The changes in VMT from year to year can be attributed to a number of possibilities. The most evident reason for VMT changes can be accredited to the increase or decrease in the amount of travel. Other factors that can affect the increase or decrease in VMT can include the price of gasoline, unemployment rates, automobile operating costs, and weather.

The bar chart shown in figure 5 displays the annual VMT estimates for the ten year time period spanning from 2003 to 2013 for the Fort Wayne-New Haven-Allen County Metropolitan Planning Area. It also provides a benchmark for VMT displaying the first estimate done in 1986. These VMT estimates do not include the number of vehicle miles traveled on the local streets. The amount of local samples NIRCC collects is not sufficient to calculate a reliable VMT estimate. For the most part, the general trend shown on the chart shows only slight changes in total VMT throughout the ten year period but a significant increase since the inception of VMT in 1986. The VMT is anticipated to level out or continue to slightly increase. Even though gas prices and economic hardships may slightly change the growth patterns of VMT, there still seems to be factors that will continue to keep the VMT increasing a little even though some years experienced a slight decrease. These factors include an increase in automobile ownership per family, the spread of development, suburb to suburb travel, a rise in the percentage of two-income families, and other lifestyle changes.



#### Vehicle Miles of Travel

Collector

Figure 6 presents three pie charts that represent the proportions of VMT by street classification for the years 1986,

2003, and 2013. As you can see, the proportions of traffic in 1986 are different compared to the proportions of traffic

in 2003 and 2013. Freeway traffic increased significantly while Arterial usage decreased. The main reason for these changes can be attributed to the opening of Interstate 469. The first year that Interstate 469 was included in the VMT estimates was in 1996. The addition of Interstate 469 caused a large shift of traffic from the arterial streets to the new freeway system.



The VMT is also broken down to show the annual average VMT for passenger vehicles and trucks. The pie charts contained in figure 7 illustrate the VMT for 1986 and 2013. The proportion of truck traffic compared to passenger vehicle traffic is almost identical in 1986 and 2013. A further breakdown of the proportionate usage of passenger vehicles versus trucks on the different road classifications shows some interesting differences between 1986 and 2013. Even though the proportion of truck traffic compared to passenger vehicle traffic is nearly the same for these two years, the distribution of traffic on arterials and freeways are much different. As previously mentioned, the traffic distributions between arterials and freeways changed significantly when Interstate 469 was included into the VMT estimates. The most significant change in traffic distribution between 1986 and 2013 came from the Annual Average weekday VMT totals for trucks. The pie charts show how much of an impact Interstate 469 has made between 1986 and 2013. The utilization of the freeway system has alleviated a significant amount of truck traffic from the arterials.

The pie charts contained in figure 8 illustrate the proportion of passenger vehicle traffic versus truck traffic for each type of road classification. Even though the amounts of truck traffic and passenger vehicle traffic significantly changed



for some of the road classifications, the proportions of passenger vehicles and trucks for each road classification remained very similar between 1986 and 2013.



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# **Intersection and Arterial Analysis**

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#### **INTERSECTION AND ARTERIAL ANALYSIS**

NIRCC also conducts intersection and arterial analyses. Staff studies intersections within Allen County and examines their performance characteristics. These studies are conducted based on requests from the City of Fort Wayne, the City of New Haven, the Allen County Highway Department, and the Indiana Department of Transportation to evaluate problems and concerns with specific intersections. Figure 9 illustrates all the intersections that have been studied by NIRCC in the past. In Fiscal Year 2014, NIRCC evaluated 35 intersections which are listed in the table contained in figure 10. Out of these 35 intersections, 22 were signalized and 13 were unsignalized.



#### **Intersection and Arterial Analysis**

The targeted measures of effectiveness for intersections are delay and capacity. The level of service (LOS) of an intersection is defined alphabetically A through F, A being the best LOS and F being the worst. The LOS is based on the average delay (measured in seconds) experienced at an intersection. Level of service cannot be calculated when the volume to capacity ratio (V/C) exceeds 1.2 for an individual group. The level of service for each of the intersections counted in Fiscal Year 2014 are illustrated in figures 11 through 14 for each approach. These levels of service are only based on the peak hour for each intersection.

In order to qualify for a traffic signal, intersections must meet one or more of the primary volume signal warrants or both all-way stop warrants as described in the Manual on Uniform Traffic Control Devices 2009 Edition. The intersections reviewed for signal warrants along with other types of intersection analyses in Fiscal Year 2014 are illustrated in figure 15.

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#### Figure 10

#### **Signalized Intersections**

• Auburn Rd / Clinton St • Bass Rd / Hillegas Rd • Butler Rd / Hillegas Rd • Coliseum Blvd / Goshen Rd • Coliseum Blvd / Hillegas Rd • Cook Rd / Huguenard Rd • Gateway Plaza / Goshen Rd • Goshen Rd / Harris Rd • Goshen Rd / Independence Dr • Goshen Rd / Sherman Blvd • Goshen Rd / State Blvd • Hadley Rd / SR 14 • Hillegas Rd / Illinois Rd • Hillegas Rd / Independence Dr • Hillegas Rd / State Blvd • Huguenard Rd / Washington Cntr Rd • Lahmeyer Rd / State Blvd • Maplecrest Rd / State Blvd • Maplecrest Rd / Trier Rd • Maysville Rd / Meijer Dr • Reed Rd / State Blvd • US 33 / Washington Cntr Rd **Unsignalized Intersections** • Airport Expressway / Aviation Dr • Ardmore Ave / Sand Point Rd • Ardmore Ave / Three Oaks Dr • Butler Rd / Goshen Rd • California Rd / Hillegas Rd • Cook Rd / US 33 • CR 900 S / West County Line Rd • Goshen Rd / Hillegas Rd • Huguenard Rd / Ludwig Rd • Huguenard Rd / Wallen Rd • W Jefferson Blvd / Office Park • Liberty Mills Rd / West County Line Rd • Maplecrest Rd / Vance Ave



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\* These levels of service are only based on the peak hour for each intersection.



\* These levels of service are only based on the peak hour for each intersection.



# **Corridor Studies**

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#### **CORRIDOR STUDIES**

Another activity conducted by NIRCC is the study of corridors throughout Allen County. There are two types of studies that are used to evaluate different aspects of the corridors: corridor and impact analysis studies and corridor protection studies and plans. Figure 16 illustrates the corridor studies that have been completed by NIRCC.

The main purpose of a corridor and impact analysis is to evaluate traffic impacts of future developments on an existing corridor, as well as locations that are in need of current or future infrastructure improvements. The corridor analysis estimates the number of new trips from anticipated developments that will be added to an existing facility to examine the changes of service level. When service levels fall below acceptable levels, recommendations are tested to



accommodate future traffic and relieve anticipated congestion problems along the corridor. Information provided by a corridor and impact analysis helps in developing a corridor protection plan that can be an efficient tool for mitigating potential congestion.

Corridor protection studies and plans evaluate and identify optimal access points along corridors for future developments and improvements. The adoptions of these plans facilitate efforts to resolve existing congestion and mitigate future problems. The recommendations from the plans aid local officials, planners, and developers during future development by protecting the integrity of the corridor from detrimental access.

Besides the traditional corridor studies which often only analyze one corridor or set of continuous corridors, NIRCC also performs a study called a sub-area analysis. A sub-area analysis analyzes a number of corridors within a given area or development. Information and materials produced by this type of analysis provide local policy-makers with an additional tool for assessing the impacts of new and expanding development to an area. The analysis focuses on assessing the current and future operating characteristics of the corridors and develops alternative strategies to improve safety and mitigate congestion. Staff looks at highway, transit, pedestrian and bicycle access as the major components of the analysis. Staff also evaluates how facilities, both within and outside of the analysis area, interact with each other and impact the current and future traffic patterns.

In Fiscal Year 2014, NIRCC completed one Corridor Analysis study shown in figure 17. This study is described on pages 28 through 34. Staff did review and evaluate several corridor projects but since the development of the 2035 Transportation Plan required the majority of time this past fiscal year there were no other major corridor studies completed.

#### **Corridor Studies**

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#### <u>Corridor and Impact Analysis Study</u> Huguenard Road / Hillegas Road Corridor and Impact Analysis

The main purpose of this corridor and impact analysis is to evaluate traffic impacts of proposed roadway projects and future developments on an existing corridor. The study of Huguenard Road / Hillegas Road was initiated by NIRCC in FY14 due to the number of existing and potential developments along the corridor. Also, Huguenard Road / Hillegas Road is recommended to be expanded to 4-lanes between 2021-2030 as part of the 2035 Transportation Plan. The plan recommends sidewalks and bike lanes as part of any future widening project as well. The analysis for this study



Northeastern Indiana Regional Coordinating Council
#### **Corridor Studies**

calculated and examined the existing and estimated future changes to the levels of service (LOS) based on current and projected traffic volumes and with the planned future improvements.

Figure 19



The Huguenard

this corridor vary from 4,600 vehicles per day all the way up to 22,800 vehicles per day (figure 19). The corridor was split into three sections for the study. Figure 18 shows the entire corridor along with the three sections the study focused on.

LOS is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. LOS is based upon the average stopped delay per vehicle for various movements within the intersection. LOS "A" describes operations with very low delays; most vehicles do not stop at all. LOS "C" describes operations with longer delays; stopping vehicles are significant but many still pass without stopping. LOS "F" describes operations with delays unacceptable to most drivers; the intersection is exceeding capacity. When service levels fall below acceptable levels, recommendations are tested to accommodate future traffic and relieve anticipated congestion problems along the corridor. These studies also identify problem areas and develop recommendations for roadway improvements.

Road and Hillegas Road corridor was studied from Till Road to Illinois Rd. It is classified as an arterial and is a north/south corridor on the west side of the City of Fort Wayne. Traffic volumes along



#### **Corridor Studies**

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The study examines the following scenarios:

- Scenario 1: Existing Traffic Volumes
- Scenario 2: Existing volumes + traffic generated by the proposed developments(Phase I)
- Scenario 3: Existing volumes + traffic generated by the proposed developments(Phase I) + traffic generated by the areas with a potential for development (Phase II)

Section 1 (figure 20) is from Till Road to Ludwig Road. There is potential for a number of developments along this section and in the surrounding area. Figure 21 shows

Figure 22

the proposed and potential developments that may occur in phase I and II for this section. These developments, along with an estimated 2 percent annual growth rate, will increase the average annual daily traffic (AADT).



Figure 21

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Figure 24



Section 2 (figure 24) is from Ludwig Road to Independence Road. The distribution of the population within the area, the characteristics of the roadway system, and degree of congestion on the corresponding roadway affect the directional distribution of site-generated traffic. The trip distributions for this study area were determined by examining the existing traffic counts, and by evaluating the major traffic generators in the vicinity of the study For this section the study focused on four unsignalized intersections (Bethel Rd @ Till Rd, Huguenard Rd @ Till Rd, Huguenard Rd @ Wallen Rd, and Huguenard Rd @ Ludwig Rd) and one signalized intersection (Huguenard Rd @ Cook Rd). One intersection in particular looked at a planned project that will realign Huguenard Rd with Bethel Rd and create a roundabout. You can see the before and after images for this planned project in figures 22 and 23.



area. The average annual growth rate of the AADT was estimated to be approximately 0.5 percent along the corridor. Figure 25 shows the proposed and potential developments that may occur in phase I and II for this section. The study focused on three signalized intersections (Hillegas Rd @ Washington Center Rd, Hillegas Rd @ Coliseum Blvd, and Hillegas Rd @ Independence Dr) and one one-way stop intersection (Hillegas Rd @ California Rd).

#### **Corridor Studies**

Section 3 (figure 26) is from Independence Road to Illinois Road. Figure 27 shows the proposed and potential developments that may occur in phase I and II for this section. By examining the current population, development patterns, roadway characteristics, degree of congestion , and trip distributions from major traffic generators along this section NIRCC estimates that the average annual growth rate for AADT is approximately 0.5 percent. For this section the study focused on four signalized intersections (Hillegas Rd @ Butler Rd, Hillegas Rd @ State Blvd, Hillegas Rd @ Bass Rd, and Hillegas Rd @ Illinois Rd).





Figure 26

In order to give an example of one of the intersections studied in this Corridor Analysis this report will show the results of the Hillegas Road and State Boulevard intersection for the PM Peak time period. The three scenarios analysed consist of the following:

#### Scenario 1: - Existing Conditions

Hillegas Road and State Boulevard are both 2-lane facilities. Figure 28 shows the existing lane configurations at this intersection along with the current PM peak volumes. The intersection analysis indicates that this intersection is currently operating at a Level of Service (LOS) "D" during the PM peak hour.

#### **Scenario 2: - Proposed Development Recommendations**

The analysis indicates that after signal optimization, the Hillegas Road and State Boulevard intersection will operate at a LOS "C" for the PM peak hour with the added trips of phase I. Therefore, no additional intersection improvements are recommended at this time. See figure 29.

#### **Scenario 3: - Potential Development Recommendations**

The analysis indicates that the Hillegas Road and State Boulevard intersection will operate at a LOS "F" with the added trips of phase II during the peak hours with an added turn lane. The intersection can be improved to a LOS "D" during the PM peak hours with the proposed Huguenard Road/Hillegas Road added travel lanes project as listed in the 2035 Transportation Plan. See figures 30 and 31.



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The following gives a summary of the recommended improvements from the corridor analysis. If you would like any additional information about this corridor analysis or would like to see the full report please contact NIRCC.

### The recommended improvements are listed below based on Phase II traffic flow projections:

- 1. The Huguenard Road / Till Road and Bethel Road / Till Road intersections: Huguenard Road will be rerouted and brought into the Bethel Road / Till Road intersection. The new intersection will be a roundabout. The west approach of Till Road will be "T'd" into Huguenard Road.
- 2. The Huguenard Road / Wallen Road intersection improvements: Signalization.
- 3. The Huguenard Road / Cook Road intersection improvements: Add exclusive right turn lanes on the north, south, and west approaches.
- 4. The Huguenard Road / Ludwig Road intersection improvements: Signalization, addition of exclusive right turn lane on the south and east approaches.
- 5. The Huguenard Road / Washington Center Road intersection improvement: Add exclusive right turn lanes on the northbound, and southbound approaches, along with the proposed Huguenard Road and Washington Center Road added travel lane projects as listed in the 2035 Transportation Plan.
- 6. The Hillegas Road / California Road intersection improvement: Signalization, added northbound exclusive left turn lane, and the proposed Hillegas Road added travel lane project listed in the 2035 Transportation Plan.
- 7. The Hillegas Road / Coliseum Boulevard intersection improvement: Add an exclusive northbound left turn lane and the proposed Hillegas Road added travel lanes project as listed in the 2035 Transportation Plan.
- 8. The Hillegas Road / Independence Drive Road intersection improvement: The proposed Huguenard Road added travel lanes project as listed in the 2035 Transportation Plan.
- 9. The Hillegas Road / Butler Road intersection improvement: The proposed Hillegas Road added travel lanes project as listed in the 2035 Transportation Plan.
- 10. The Hillegas Road / State Boulevard intersection improvement: The proposed Hillegas Road added travel lanes project as listed in the 2035 Transportation Plan.
- 11. The Hillegas Road / Bass Road intersection improvement: Add an exclusive eastbound, and westbound right turn lanes and the proposed Hillegas Road added travel lanes project as listed in the 2035 Transportation Plan.
- 12. The Hillegas Road / Illinois Road intersection improvement: Add an exclusive southbound and eastbound right turn lanes and an additional exclusive eastbound left turn lane.

Studies completed by the Northeastern Indiana Regional Coordinating Council

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#### **TRAVEL TIME & DELAY STUDIES**

Another activity conducted by NIRCC is the travel time and delay studies. Figure 32 illustrates the travel time and delay studies that have been completed since Fiscal Year 1999. Travel time is one method to measure the congestion in the transportation system. It is essential for proper evaluation of the system because time is one of the most compelling and accurate yardsticks of the efficiency of street and highway service. Travel time is defined as the total time for a vehicle to complete a designated trip over a section of the road or from a specific origin to a specific destination. The studies conducted by NIRCC use the "average speed" method to obtain the travel time and delay data.

The following lists some of the uses that travel time data provide.

- Identification of problem locations on facilities by virtue of high travel times and delay.
- Measurement of arterial level of service.
- Input into transportation planning models.
- Evaluations of route improvements.
- Input to economic analysis of transportation alternatives.



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NIRCC studied six (6) corridors during Fiscal Year 2014 including: 1) Goshen Road / US 33 from State Boulevard to Johnson Road, 2) Clinton Street / Lafayette Street / US 27 from Jefferson Boulevard to Bostick Road, 3) Clinton Street / Tonkel Road from Dunnwood Drive to Union Chapel Road, 4) Auburn Road from Clinton Street to Union Chapel Road, 5) Jefferson Boulevard / US 24 West from Main Street to Homestead Road, and 6) Reed Road from Lake Avenue to Evard Road. The travel time studies completed during Fiscal Year 2014 are illustrated in Figure 33.



In order to calculate average travel times for a corridor, six runs are completed in each direction for three different time periods; morning peak travel (AM peak), evening peak travel (PM peak), and daytime travel (OFF peak). Traffic count information for each link in a corridor is examined to determine the peak hours.

In fiscal year 2007, NIRCC began using GPS (Global Positioning System) technology to conduct travel time and delay studies. The GPS software computes travel times by recording latitude and longitude coordinates every second during the travel time. The software takes this data and computes speed and time. This information can then be exported to create maps of every point taken by the software. We take the point data from the AM and PM peak time periods and create density maps. As the travel time vehicle slows down or stops, a mass of points are taken in a smaller area compared to the vehicle traveling at faster speeds resulting in more spacing between the points taken. The density maps shown in Figures 34 - 49 give the results of this data. You will see on the maps that as the travel time vehicle slows down or stops multiple times at any given point the areas are shown in red. The blue areas indicate the vehicle is traveling at faster speeds.

The following pages present a summary along with density maps of the six corridors studied in Fiscal Year 2014. Some of the density maps show only sections of the entire travel time while others show the entire corridor. The density maps provided in this report only show the AM and PM peak time periods in each direction. Red boxes around any of the density maps reveal that they are the travel time with the greatest amount of delay for that corridor. Green boxes around any of the density maps reveal that they are the time period with the least amount of delay for that corridor. If an Off peak time period experienced either the greatest or least amount of delay it will not be provided as a density map.

Bar graphs are also included on each page. Two of the bar charts display the average time that NIRCC staff actually encountered from the beginning to the end of the travel time corridor during the time period with the greatest amount of delay, shown in red, and the time period with the least amount of delay, shown in green. These two bar charts also display, in blue, what the travel time would be if there were no delays along the corridor. This time is reflective to what a person would experience if he or she were able to travel along this corridor at the posted speed limit without having to stop or slow down for traffic control devices and traffic congestion.

The other two bar charts display the average speed that NIRCC staff actually encountered from the beginning to the end of the travel time corridor during the time period with the greatest amount of delay, shown in red, and the time period with the least amount of delay, shown in green. These two bar charts also display, in blue, what the average speed would be if there were no delays along the corridor. This speed is reflective to what a person would experience if he or she was able to travel along this corridor at the posted speed limit without having to stop or slow down for traffic control devices and traffic congestion.

# <u>Travel Time and Delay Summary Section</u> <u>for Fiscal Year 2014</u>

#### Figure 34 Goshen Road / US 33 AM Peak Eastbound



Figure 35 Goshen Road / US 33 AM Peak Westbound



<u>Travel Time</u> with the <u>Least</u> <u>Amount</u> of delay

> \*Off Peak Travel Times are not shown graphically.







<u>Travel Speed</u> with the <u>Least</u> <u>Amount</u> of delay

> \*Off Peak Travel Times are not shown graphically.



#### Figure 36 Goshen Road / US 33 PM Peak Eastbound



Figure 37 Goshen Road / US 33 PM Peak Westbound



<u>Travel Time</u> with the <u>Greatest Amount</u> of delay







# <u>Travel Speed</u> with the <u>Greatest</u> <u>Amount</u> of delay



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Figure 38 Jefferson Blvd / US 24 AM Peak Eastbound



Figure 39 Jefferson Blvd / US 24 AM Peak Westbound



<u>Travel Time</u> with the <u>Least</u> <u>Amount</u> of delay







<u>Travel Speed</u> with the <u>Least</u> <u>Amount</u> of delay



Figure 40 Jefferson Blvd / US 24 PM Peak Eastbound



Figure 41 Jefferson Blvd / US 24 PM Peak Westbound



# <u>Travel Time</u> with the <u>Greatest Amount</u> of delay







# <u>Travel Speed</u> with the <u>Greatest</u> <u>Amount</u> of delay



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Figure 42

Clinton Street / Tonkel Road AM Peak

# <u>Travel Time</u> with the <u>Least</u> <u>Amount</u> of delay



# <u>Travel Speed</u> with the <u>Least</u> <u>Amount</u> of delay







### Summary FY 14

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Figure 43

Clinton Street / Tonkel Road PM Peak

# <u>Travel Time</u> with the <u>Greatest Amount</u> of delay



PM peak SB

E\

<u>Travel Speed</u> with the <u>Greatest Amount</u> of delay



Figure 44

Clinton Street / Lafayette Street / US 27 AM Peak

# <u>Travel Time</u> with the <u>Least</u> <u>Amount</u> of delay



\*Off Peak Travel Times are not shown graphically.

# <u>Travel Speed</u> with the <u>Least</u> <u>Amount</u> of delay







# Figure 45

Clinton Street / Lafayette Street / US 27 PM Peak

# <u>Travel Time</u> with the <u>Greatest Amount</u> of delay



<u>Travel Speed</u> with the <u>Greatest Amount</u> of delay



# Summary FY 14



OFF peak NB



# Summary FY 14



Figure 47 Auburn Road PM Peak

# <u>Travel Time</u> with the <u>Greatest Amount</u> of delay



AM peak SB

<u>Travel Speed</u> with the <u>Greatest Amount</u> of delay



#### Summary FY 14



# Summary FY 14



# **Transportation Improvement Program**

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2014

#### **TRANSPORTATION IMPROVEMENT PROGRAM (TIP) PROJECTS**

NIRCC prepared the Fiscal Year 2015-2018 Transportation Improvement Program. NIRCC has published a Transportation Improvement Program each year since 1977. The TIP is a multi-year capital improvements program documenting highway and transit projects, which will serve the needs of the Fort Wayne-New Haven-Allen County Metropolitan Planning Area. The TIP is updated yearly and is used to guide the expenditure of federal funds in our area. Short range and long range (2035) transportation plans including the Indiana Department of Transportation's Capital Improvements Program are used to formulate the TIP. The TIP includes commitments of the City of Fort Wayne, Fort





\*Approved Amendments are not Reflected on Map

#### **Transportation Improvement Program**

Wayne Public Transportation Corporation, City of New Haven, and Allen County to utilize and match federal funds. The Indiana Department of Transportation projects listed in the TIP represents commitments that the State makes to improve the transportation system in the Metropolitan Planning Area.

Each project typically goes through three different phases before construction completion. These phases include preliminary engineering (PE), right-of-way engineering and acquisition (RW), and construction (CN). The preliminary engineering includes



Figure 51

development of construction plans. Right-of-way engineering and acquisition includes the determination and actual purchase of the right-of-way needed for the project. The construction stage is the actual construction of the project. Each of the projects listed will go through one or more of the phases during the four-year period.



Figure 50 shows the locations of local TIP projects throughout the Metropolitan Planning Area. The local TIP map identifies projects that fit into two different categories. The projects that are colored blue identify projects that utilize only local funds whether it is City of Fort Wayne, City of New Haven, or Allen County. The projects colored red identify projects that utilize matching local funds with federal aid funds. Figures 51 and 52 provide aerial views to show examples of a project utilizing federal aid and a locally funded project. The following pages provide a listing of projects for each fiscal year and the

phase for each project. Highway projects are listed on pages 63 through 65, and transit funding is listed on page 66.

# **TRANSPORTATION IMPROVEMENT PROGRAM (TIP) PROJECTS LISTED**

# **FUNDING CLASSIFICATIONS**

CMAQ - Congestion Mitigation and Air Quality HES - Hazard Elimination and Safety HSIP - Highway Safety Improvement Program JARC – Job Access Reverse Commute BR - Bridge Funds RTP - Recreation Trails Program SRTS - Safe Routes to School STP - Surface Transportation Program TE - Transportation Enhancement TAP - Transportation Alternatives Program

#### **PHASE CLASSIFICATIONS**

PE - Preliminary Engineering CN - Construction RW - Right of Way

# **AGENCY CLASSIFICATIONS**

AC - Allen County GR - Grabill NH - New Haven FW - Fort Wayne HT - Huntertown FWT - Fort Wayne Trails

# FY 2015 TIP Federally and Locally Funded Projects

Project	Phase	Improvement Type
2nd Street - Shoal Ln to Main St	CN	Road Reconstruction
Bass Rd & Hadley Rd	CN	Intersection Improvements
Bethel Rd / Huguenard Rd / Till Rd	CN	Intersection Realignment
Broadway, Landin Rd and Rose Ave Intersection	PE	Intersection Improvements
Clinton St - Left-Turn Lane Alignment Package	PE	Intersection Improvements
Dupont Rd - Lima Rd (SR 3) to Coldwater Rd	RW	Added Travel Lanes/Ped Underpass
Gump Rd - SR 3 to Coldwater Rd	CN	Road Reconstruction
Landin Rd - North River Rd to Maysville Rd	CN	Road Reconstruction/Realignment
Maplecrest Rd - Lake Ave to State Blvd	CN	Road Reconstruction
Minnich Rd and Tillman Rd	PE	Intersection Improvements
State Blvd - Spy Run Ave to Clinton St	RW	Added Travel Lanes
Traffic Signal Upgrade	CN	Signal Upgrades
Washington Center Rd - Bridge over Spy Run Creek	PE	Bridge Reconstruction

Project	Phase	Improvement Type
Allen County Bridges	PE	Bridge Inspections
Bass Rd - Clifty Parkway to Thomas Rd	RW	Road Reconstruction
Carroll Rd - Preserve Blvd to Bethel Rd	CN	Road Reconstruction
Covington Rd Trail: Beal-Taylor Ditch to West Hamilton Rd	CN	New Trail Construction
Liberty Mills Rd & County Line Rd	RW	Intersection Improvements
Maplecrest Rd - State Blvd to Stellhorn Rd	RW	Road Reconstruction
Minnich Rd and Tillman Rd	RW	Intersection Improvements
Pufferbelly Trail - Fourth St to Fernhill Ave	CN	New Trail Construction
Six Mile Creek Trail	CN	New Trail Construction
St Joseph Ctr Rd - Clinton St to Campus Ct	RW	Center-Left Turn Lane
Washington Center Rd - Bridge over Spy Run Creek	RW	Bridge Reconstruction

# FY 2017 TIP Federally and Locally Funded Projects

Project	Phase	Improvement Type
Bass Rd - Shakespeare Blvd to Clifty Parkway	CN	Road Reconstruction
Bass Rd - Thomas Rd to Hillegas Rd	RW	Road Reconstruction
Broadway, Landin Rd and Rose Ave Intersection	RW	Intersection Improvements
Clinton St - Left-Turn Lane Alignment Package	CN	Intersection Improvements
Dupont Rd - Lima Rd (SR 3) to Coldwater Rd	CN	Added Travel Lanes/Ped Underpass
Ryan Rd/Bruick Rd: Dawkins Rd to Harper Rd	CN	Road Reconstruction
State Blvd - Spy Run Ave to Clinton St	CN	Added Travel Lanes

# FY 2018 TIP Federally and Locally Funded Projects

Project	Phase	Improvement Type				
Liberty Mills Rd & County Line Rd	CN	Intersection Improvements				
Minnich Rd and Tillman Rd	CN	Intersection Improvements				
St Joseph Ctr Rd - Clinton St to Campus Ct	CN	Center-Left Turn Lane				
State Blvd - Clinton St to Cass St (Phase 2)	CN	Added Travel Ln/Bridge/Ped Bridge				
Washington Center Rd - Bridge over Spy Run Creek	CN	Bridge Reconstruction				
Project	Phase	Improvement Type				
--	-------	----------------------------------	--	--	--	--
Auburn Rd & Wallen Rd	CN	Intersection Improvements				
Belle Vista Blvd - Bridge #502 over Fairfield Ditch	CN	New Bridge Construction				
Ellison Rd: Bridge #228 over McCulloch Ditch	RW	New Bridge Construction				
Landin Rd/Maysville Rd/Trier Rd	CN	Roundabout				
Johnny Appleseed Trail - California Rd to St Joe Center Rd	CN	New Trail Construction				
Maysville Rd - Stellhorn Rd to Meijer Dr	RW	Road Widening				
Maysville Rd: Bridge #528 over the Bullerman	CN	Bridge Rehabilitation & Widening				
Ryan Rd/Bruick Rd - Dawkins Rd to US 24	RW	Road Reconstruction				
State St Bridge: Bridge #319 over the Bullerman Ditch	CN	New Bridge Construction				
West Hamilton Rd: Bridge #221 over Beal-Taylor Ditch	CN	New Bridge Construction				
		-				

Project	Phase	Improvement Type
Maysville Rd - Stellhorn Rd to Meijer Dr	CN	Road Widening
Johnny Appleseed Trail - California Rd to St Joe Center Rd	CN	New Trail Construction

FY 2017 TIP Locally	Funded Projects
---------------------	-----------------

Project Leesburg Rd Ext. - Main St to West Jefferson Blvd Ludwig Rd at Coldwater Rd

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I		
	I	Γ

### Improvement Type New Road Construction Intersection Improvements

## FY 2018 TIP Locally Funded Projects

Project	Phase	Improvement Type
Goshen Ave - State Blvd to Coliseum Blvd	CN	Road Reconstruction/Roundabout

#### **Transportation Improvement Program**

### FY 2015 Fort Wayne Public Transportation Corporation

One (1) Heavy Duty Replacement Hybrid Buses One (1) Replacement Minibus (Body on Chassis) ACCESS

Three (3) Replacement Minibus (Body on Chassis) FLEX Route

Computer/Office Equipment

AVL/Communication Hardware/Subscription Cost Other Maintenance Equipment JARC - Low incomeTransportation to and from work Capitalization of Maintenance Costs Complimentary Paratransit Costs 5307 Special Rule Operations

## FY 2016 Fort Wayne Public Transportation Corporation

Three (3) replacement light-duty transit vehicles One (1) Heavy Duty Replacement Hybrid Buses

One (1) replacement minbus (body on chassis) FLEX Route

Computer/Office Equipment

AVL/Communication Hardware/Subscription Cost

Other Maintenance Equipment Transit Enhancements CMAQ - Transit Awareness Capitalization of Maintenance Costs Complimentary Paratransit Costs

## FY 2017 Fort Wayne Public Transportation Corporation

Four (4) Replacement Minibus (Body on Chassis) ACCESS

Two (2) Heavy Duty Replacement Hybrid Buses One (1) Replacement Minibus (Body on Chassis) FLEX Route

Computer/Office Equipment

AVL/Communication Hardware/Subscription Cost Other Maintenance Equipment JARC - Low income Transportation to/from work Capitalization of Maintenance Costs Complimentary Paratransit Costs

## FY 2018 Fort Wayne Public Transportation Corporation

Four (4) Replacement Minibus (Body on Chassis) ACCESS

Computer/Office Equipment

AVL/Communication Hardware/Subscription Cost

Other Maintenance Equipment CMAQ - Transit Awareness Capitalization of Maintenance Costs Complimentary Paratransit Costs

## FY 2014 Human Services Agencies (2013 Funding Cycle)

**Community Transportation Network** One (1) Medium Transit Vehicle **Community Transportation Network** One (1) Large Transit Vehicle

#### Summary FY 14

## **Quarterly Review Meetings**

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2014

#### **QUARTERLY REVIEW MEETINGS**

Each quarter the Northeastern Indiana Regional Coordinating Council (NIRCC) schedules a quarterly review meeting for all federally funded Local Public Agency (LPA) projects in our Transportation Improvement Program (TIP). The Indiana Department of Transportation's (INDOT) quarterly report is due the 20th of the month following the end of the quarter. NIRCC's quarterly review meeting is scheduled typically 2 weeks after the INDOT date.

The INDOT quarterly report is filled out by the LPA. Once the LPA submits the report it is then sent to NIRCC for approval. After NIRCC approves the report it is sent back to the LPA, who then submits it to INDOT. The entire process is completed through INDOT's Technical Applications Pathway (ITAP).

Information from the INDOT quarterly report is reviewed by NIRCC staff and then entered into the NIRCC quarterly review sheet. NIRCC's review sheet is a condensed version of the INDOT report. Some additional information is also included on NIRCC's review sheet, most notably being the funding information from the TIP. See an example of NIRCC's quarterly review sheet in figure 53 on the next page.

At the quarterly review meeting each project is allotted 15 minutes for review. The LPA and consultant are requested to attend the meeting. If the consultant is located outside of Fort Wayne they are able to call into the meeting rather than attending.

In addition to the LPA and consultant attending the meeting, others invited include INDOT representatives with Planning and Programming, Right of Way representatives from INDOT, and Federal Highway Administration (FHWA) representatives. We have an excellent turnout and feel this really increases communication and understanding of the project.

Important information to review at the meetings include cost totals, federal funding and LPA match funds, permits needed, right of way parcels needed, schedule updates, items completed and any potential problems. Many issues are resolved at the quarterly review meeting thus saving time and money.

The information received at the quarterly review meetings allows staff to determine if projects are progressing on schedule and on budget. This information is then used to help program the projects in the Transportation Improvement Program.

DES # 0500695							
	Project	Estimated		Federal	State	Local	
TIP	Phase	Cost	Year	Share	Share	Share	
2014-2017	PE*	656,193	2010	524,954	0	131,239	*SA
STP	RW	500,000	2013	400,000	0	100,000	
STP	CN	4,600,000	2014	3,680,000	0	920,000	
	Total	5,756,193		4,604,954	0	1,151,239	
		Initial		Previous	Current	Current	Overall
		Report		Report	Report	Change	Change
Project Cost		Apr-10	]	Jan-14	Apr-14		
a. Preliminary Engin	eering	\$541,255		\$644,825	\$656,193	\$11,368	\$114,93
b. Right of Way Acq	cost	\$o		\$500,000	\$500,000	\$o	\$500,00
c. Reimbursable Util	ity cost	n/a		n/a	n/a		
d. Construction cost		\$4,000,000	]	\$4,000,000	\$4,000,000	\$o	\$
e. Constr. Eng & Insp	pect. cost	\$600,000		\$600,000	\$600,000	\$o	\$
f. Total cost		\$5,141,255	]	\$5,744,825	\$5,756,193	\$11,368	\$614,93
chedule		Apr-10		Jan-14	Apr-14		
Ready for contract	s date	2/1/2012		2/26/2014	4/30/2014	•	
Invironmental docur	nent						
Type: F	ed CE level2	est. complet	ion date	:	9/15/2012		
	1/22/2014			Jan-1/	Apr-14	1	
and acquisition	Total #	# secured		# secured	# secured	mostly temi	os
parcels	<b>27</b>	27		24	27		
ita	,	,	401		, Duainaga Bud	Dula =	DND
ernnts	noodod		401	404	Draillage Bru	Kule 5	DINK
	approved.					$\frac{yes}{8/12/12}$	
	approved.	<i>a</i> 1 <i>a</i>	1	Q 110 111	<u> </u>	0/12/13	
	A:	Shan Gunawar	rdena	Certified thru:	6/11/2015		
Consulta	Int:	Adron Ott	-	Certified thru:	5/10/2014		
filestones	A	ctual		LPA			
	Start	Completion	Actual	Initiative	Percent Co	omplete/Cor	nment
<b>D</b>	Date	Date	Days	Days		1 /	
Project Authorized 6/2/05		9/2/05	92	180		100%	
Start Plan Develop 7/16/09		3/21/10	248	30		100%	
	Stage 1 Design 3/23/10		266	90		100%	
Stage 1 Design	Stage & Design 10/11/10					100%	
Stage 1 Design Prelim Field Check	19/14/10	12/1/11	352	215		100%	
Stage 1 Design Prelim Field Check Stage 2 Design	12/14/10	9/15/12	505	305		700%	
Stage 1 Design Prelim Field Check Stage 2 Design Environmental Doc.	4/29/11	4/00/14	010	100		/070	
Stage 1 Design Prelim Field Check Stage 2 Design Environmental Doc. RW Clear Stage 2 Design	$\frac{\frac{12}{14}}{\frac{4}{29}}$	4/22/14	810	190		100%	
Stage 1 Design Prelim Field Check Stage 2 Design Environmental Doc. RW Clear Stage 3 Design Ready for Contracts	$     \begin{array}{r}         12/14/10 \\         4/29/11 \\         2/2/12 \\         8/1/12 \\         10/17/12         \end{array} $	$\frac{4/22/14}{11/22/13}$	810 478	180		100%	
Stage 1 Design Prelim Field Check Stage 2 Design Environmental Doc. RW Clear Stage 3 Design Ready for Contracts	12/14/10           4/29/11           2/2/12           8/1/12           10/17/12	$     \frac{3}{4/22/14}     \frac{11/22/13}{4/30/14}     7/0/14   $	810 478 560	180 60		100% 0%	

Acquisition team is continuing to complete the buying activities and secure the RW.

Stage 3 plans were submitted to INDOT on 3-1-13 and are under review.

## ADA (Americans with Disabilities Act) Transition Plans

Studies completed by the Northeastern Indiana Regional Coordinating Council

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#### ADA (AMERICANS WITH DISABILITIES ACT) TRANSITION PLANS

The Americans with Disabilities Act (ADA) of 1990 is a civil rights statute that prohibits discrimination against people who have disabilities. There are five separate Titles (sections) of this Act relating to different aspects of potential discrimination. Title II of this Act specifically addresses the subject of making public services and public transportation accessible to those with disabilities. With the advent of ADA, designing and constructing facilities for public use that are not accessible by people with disabilities constitutes discrimination.

ADA applies to all facilities, including both facilities built before and after 1990. As a result LPAs (Local Public Agencies) are required to perform self-evaluations of their current facilities relative to the accessibility requirements of the ADA. The agencies are then required to develop a Program Access Plan, or Transition Plan, to address any deficiencies. The Plan is intended to achieve the following:

- Identify physical obstacles that limit the accessibility of facilities to individuals with disabilities,
- Describe the methods to be used to make the facilities accessible,
- Provide a schedule for making the access modifications, and
- Identify the public officials responsible for implementation of the Transition Plan.

The requirements of the ADA apply to all public entities or agencies, no matter the size. The transition plan formal procedures as outlined in 28 C.F.R. Section 35.150 only govern those public entities with more than 50 employees but the obligation to have some planning method to make facilities ADA-accessible is required for all public entities. The Plan is required to be updated periodically until all accessibility barriers are removed. These requirements must be met by LPAs to be eligible for federal assistance and grants.

During FY 2012 the Northeastern Indiana Regional Coordinating Council (NIRCC) reached out to help LPAs (Local Public Agencies) become familiar with ADA requirements and assisted them with creating ADA Transition Plans. To remain eligible for federal transportation funding, LPAs were reminded that they need to be in compliance and have updated their transition plans. The goal was to ensure that LPAs had a specific plan of action and had reviewed and completed their updated ADA transition plans.

To accomplish this NIRCC researched and collected information on current ADA standards and procedures. NIRCC continued to assist LPAs with ADA requirements. Local Public Agencies that were assisted in FY 2014 included the City of Fort Wayne, Allen County, DeKalb County, Wells County, and the Town of Leo-Cedarville. Additionally information
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was also provided through phone and email conversations with many LPAs throughout FY 2014. Communities where sidewalk and ramp inventories were collected and processed included Leo-Cedarville. Transition Plans were then created and included the inventories collected from each community.

Figures 54 - 56 give examples of some of the inventories created for the transition plans and how grades were given for compliance of ADA standards.

Figure 54

CR 11A									
Ramps					А	ssessment			Compliance
CR 11A	Grad	e Location	Description	Pts for Rating	Ped Destinations	Public Interest	Local Priority	Total	Date
1 A	B	CR 11A & CR 23	Ramp leads pedestrians into the middle of the intersection	1	1	0	2	4	
2 G	F	CR 11A ramp across from Auburn Auction Park	Completely broken up and falling apart	3	1	0	2	6	
Sidewalk	S				A	ssessment			Compliance
CR 11A	Grad	e Location	Description	Pts for Rating	Ped Destinations	Public Interest	Local Priority	Total	Date
1 N	A	North side of CR 11A from I-69 to 200' West of CR 23							
2	В	North side of CR 11A from 200' West of CR 23 to CR 23	Cross slope 2.25%-2.95%	1	1	0	2	4	

1

1

0

2

4

Cross slope 2.25%-3.6%

#### **DeKalb County Bridges**

South side of CR 11A from

I-69 to CR 23

Sidewalks					A	ssessment			Compliance					
Bridge	Grade	Location	Description	Pts for Rating	Ped Destinations	Public Interest	Local Priority	Total	Date					
1 N	В	Bridge #16 near intersection	Cross slope 2.1%-3%	1	0	0	0	1						
		of CR 23 & Auburn Rd		1	0	0	0	1						
2 N	Α	North side of Bridge #502 on												
		1st St in Auburn												
2 S	Α	South side of Bridge #502 on												
		1st St in Auburn												
3 N	С	North side of Bridge #501 on	Width 3.3', Vertical	2	2	2	2	2	, Vertical	1	0	0	2	
		9th St in Auburn	displacements >0.5"		1	0	0	3						
3 S	С	South side of Bridge #501 on	Width 3.3', Vertical	2	2	2	2	1	0	0	3			
		9th St in Auburn	displacements >0.5"		1	0	0	5						
4 N	Α	North side of Bridge #18 on												
		E 19th St in Auburn												
4 S	Α	South side of Bridge #18 on												
		E 19th St in Auburn												

#### ADA (Americans with Disabilities Act) Transition Plans

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Examples of Sidewalk Grade Ratings





Grade C – Major Deficiency: For instance, the sidewalk shown here is too narrow and has joint displacements making it complicated to navigate by wheelchair, though still passable for someone walking.

Grade D – Multiple Major Deficiencies: For instance, the sidewalks shown here are too narrow, they have joint displacements, rough/cracked surfaces, and gaps making it likely impassable by wheelchair, though a fit walker could still navigate the sidewalk.



 $Grade \ F-Not \ present, \ broken, \ and/or \ impassable.$ 



#### ADA (Americans with Disabilities Act) Transition Plans

## Summary FY 14



Examples of Curb Ramp Grade Ratings



Grade B – Minor Deficiency: The ramp shown on the left has a cross slope greater than 2% and the one on the right is dirt covered and has no detectable warning.





Grade C – Major Deficiency: The ramp shown here is too narrow, doesn't have a detectable warning, and has a joint displacement.

Grade D – Multiple Major Deficiencies: The ramps shown here are too narrow, they have joint displacements, bad cross slopes, and no detectable warnings.





Northeastern Indiana Regional Coordinating Council

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2014

#### SAFETY MANAGEMENT SYSTEM

NIRCC maintains a Safety Management System (SMS) for the entire Allen County Area. A SMS is a systematic process that has the goal of reducing the number and severity of traffic accidents by ensuring that all opportunities to improve safety (i.e. highway planning, design, construction, maintenance, and operation) are identified, considered, implemented where appropriate, and evaluated.

Safety in transportation planning and project development is a high priority. The increase in available funds for safety improvements supports the importance of safety projects. Improved crash information sources and new analytical tools have created better evaluation tools to identify problematic areas. NIRCC is responding to these changes with additional resources applied to crash data analysis and GIS applications. The goal for transportation planners is to find where the problems exist, make recommendations for improvements and seek funding to implement projects. The first step is often the most difficult, which is to identify what locations are most hazardous within the community.

In Fiscal Year 2014 NIRCC obtained all crash records that occurred in Allen County during 2013. The data was extracted from the Indiana State Police database ARIES (Automated Reporting Information Exchange System). Staff worked to "code" each crash location with like descriptions to ensure that all crashes occurring at a specific site were grouped together. Crash descriptions were reviewed for spelling and alphabetical order resulting in a listing of crashes that could be summarized to identify a total number of crashes at various geographical points. All crash information is included in the database to aid in various types of analysis. The final summary for each year is provided to local technical representatives to aid in review of locations and to respond to citizen requests for improvements at a location for safety reasons. Officials can review the data provided to determine the crash experience and other variables that may be present.

Once staff completed the "coding" process for the 2013 crash data and included it in the crash database, NIRCC combined the 2013 crash data with the 2011 and 2012 crash data to create a three year comparison. These crashes were also input into mapping software to be used with GIS (Geographical Information Systems). Figures 57, 58, and 59 display the densities of crash frequencies for the Fort Wayne, New Haven, and the Allen County area.

#### **Annual Summary and Listing of Crash Locations**

The annual crash record database is first used to provide an annual crash summary report for local jurisdictions (Allen County - all cities and towns, Fort Wayne, and Allen County - outside incorporated areas). The summaries include statistical data that focuses on detailed crash information from the crash reports. The information provides engineers,
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planners and law enforcement with a summary of information from the crash reports. The information includes specific data about the circumstances involved with crashes including environmental circumstances, driver information, vehicle information and other important data for all the annual crashes.

The second product from annual crash data is a summary or listing of the hazardous crash locations from the previous year. Every year staff utilizes two procedures to identify crash locations with a higher frequency of crashes and another



for locations with a lower crash frequency. Identification of crash frequency is provided through use of GIS software that creates buffers around intersection crash locations. The buffers are created using a 250 foot radius around each crash location and grouping all crashes within itself. This process resulted in crash locations that reflect crashes that occurred at approaches to intersections in addition to crashes within an intersection.

High frequency crash locations were defined as those with an annual crash frequency greater than or equal to seven (7).



Figure 58 - 2012 Crash Data

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Locations identified with this frequency are listed and traffic volumes are applied to each of the locations to determine the RMV (rate per million entering vehicles). The RMV value is then used to sort locations. Locations that have a RMV greater than or equal to 2.00 for one year remain in the listing for further review. Additional locations are also added to the listing of crashes with a frequency greater than or equal to seven (7) if they are locations with a high crash severity or result in a high percentage of injuries or fatalities.

Frequency of Crashes High Low 1469 68<sup>23</sup> COOK RD **US**30 STELLHORN RD LAKEAVE BASSRD SR 930 DAWKINS US 30 COVINGTONIRD NTERRD TILLMANRD AIRPORTEXPRESSWAY

Figure 59 - 2011 Crash Data

Staff reviewed crash locations and recorded the total number of crashes that resulted in injury or fatality. This information was used to determine the percentage of total crashes at each location that were property damage only and the percentage that resulted in injury or fatality. Staff and the Transportation Technical Committee agreed to include any location that experienced an injury or fatality percentage greater than 66% in the annual list for further review.

A process to review crash locations with a lower crash frequency was also established to ensure that locations with a low volume of traffic are not experiencing a consistently high percentage of crashes based on the number of vehicles using a location. The lower crash frequency crashes were also included where the percentage of injury or fatal crashes was higher. Crash locations with an annual crash frequency of 6, 5, 4, or 3 were included in the annual listing of locations for further review if the rate per million entering vehicles was greater than or equal to 1.00 and the percentage of injuries and fatalities exceeded the following thresholds:

the following unconoids,
Percentage of I/F
100% to 33 %
100% to 40%
100% to 50%
100 % to 66%

#### **Hazardous Location Identification**

In Fiscal Year 2014 staff reviewed all the crash location listings created for 2011, 2012, and 2013 based on the approved process described above. In the past, staff worked with TTC to determine the most accurate manner to identify hazardous locations from data collected for a three year period. TTC members and staff agreed that crash locations identified annually were not necessarily hazardous unless the location experienced similar patterns over the previous two years. Staff created a listing of locations that met the hazardous criteria for 2011, 2012, and 2013. These locations were then reviewed using crash rates and HAT (Hazard Analysis Tool) software developed by the Indiana Department of Transportation and Purdue University.

HAT software considers the total number of crashes, traffic volume, total number of injury/fatal crashes, facility type and location type (US Route, State Route, Rural or Urban). The software was developed to compare the number of crashes and severity of the crashes at a location being reviewed to other locations that are similar throughout the state. A crash frequency index and crash cost index is determined with the software to determine if a location is operating above or below what is anticipated. Locations with an index greater than or equal to 1.00 are considered to be operating below an acceptable level.

The final step in identifying the hazardous locations was to determine how to select locations from the listing for further review. Representatives from TTC provided input to staff on methods to screen the final listing of the three years.

Staff will review the locations selected to determine the cause of all the crashes and provide collision diagrams to TTC to determine what course of action to take to mitigate crashes at each location. The listing of locations will continue to be updated annually to review trends and previously identified hazardous locations. Additional locations that meet the approved criteria will also be added.

#### **Traffic Incident Management (TIM)**

In 2007 the Indiana Quick Clearance Working Group was created to research and develop Quick Clearance practices in the State of Indiana. In 2008 the In-TIME initiative was implemented and in 2009 the Indiana Quick Clearance Working Group was changed to IN-TIME (Indiana Traffic Incident Management Effort). The purpose of the INdiana-Traffic Incident Management Effort (IN-TIME) is to have first responders, from all disciplines follow agreed upon multi-lateral policies and procedures focusing on an "Open Roads Philosophy". The Open Roads Philosophy is "Having all



First Responders, after ensuring their own personal safety and the safety and security of any incident victims, to have as their top priority reducing congestion and the increased risks of secondary incidents for public/motorist safety". The IN-TIME group also works to provide a common framework for development of traffic incident management (TIM) policies and training programs for the various responder disciplines. TIM is a planned and coordinated program process to detect, respond to, and remove traffic incidents and restore traffic capacity as safety and quickly as possible.

In 2013 the Northeastern Indiana Regional Coordinating Council (NIRCC) assisted in forming a committee of local

representatives to implement Traffic Incident Management (TIM) strategies in Northeast Indiana called the Northeast Indiana Traffic Incident Management Committee (NE IN TIM). NIRCC identified local public and private sector stakeholders that were interested in the concepts and fundamental mission of the initiative. The purpose of the committee is to develop and recommend policy and operational protocols for the safe and efficient mitigation of traffic incidents through training and education of all first responders.





The committee is currently comprised of 33 representatives from multiple disciplines that include both public and private agencies. Disciplines represented on the committee include:

- 911 Communications/Dispatch
- Law Enforcement
- Safety & Environmental Affairs
- Fire Departments
- Coroner's Office
- Environmental Clean Up
- Health Department
- Tow Operator
- Homeland Security
- Paramedic / Medical Transport
- Prosecutors Office
- Department of Transportation
- Transportation Planning

The NE IN TIM Committee has 7 local representatives certified to conduct training to first responders. The individuals are from various disciplines: two tow operators; two firefighters; and three law enforcement officers. On December 3, 2013, the NE IN TIM Committee held their first four-hour TIM training which was well attended by local responders. The interest was so great that the committee limited registration to ensure an appropriate class size. There were 46 attendees at the December training that primarily included high level command for public agencies and owners, supervisors, or managers

for private agencies. The response from those that attended the initial training was very positive and initiated additional interest from those in attendance. During FY 14 NIRCC assisted with five TIM training sessions. The graph to the right shows a breakdown of the 173 responders who have participated so far in all the TIM training sessions.



#### **Bicycle and Pedestrian Crash Summary Report (2009 through 2013)**

In Fiscal Year 2014 the Northeastern Indiana Regional Coordinating Council completed an analysis of all crashes involving a motor vehicle with a pedestrian or bicycle within Allen County over the past five years. In recent years Allen County has significantly increased its bicycle and pedestrian infrastructure. As bicycle and pedestrian facilities continue to be constructed and added to our transportation network the interaction between motor vehicles and bicyclists/ pedestrians continues to increase as well.

Bicyclists and pedestrians are often referred to as "vulnerable road users" because of the severe disadvantage of protection in the event of a collision with a motor vehicle. For planners and engineers it is important to determine how to address existing issues to ensure that bicyclists and pedestrians can safely coexist on public roadways within our community. This overview highlights some of the data that NIRCC included in the Bicycle and Pedestrian Crash Summary Report. The crash data used to conduct this analysis included years 2009 through 2013.

In figure 61 you can get an idea about Allen County's total number of collisions per year and how many collisions involving a motor vehicle with a bicycle or pedestrian occur per year. For the analysis conducted, NIRCC only uses collisions that involve a pedestrian or bicyclist that are in the "public roadway or public right of way". After removing collisions that were on private property the number of collisions drop to the numbers indicated in figure 62. Many of

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#### Safety Management System



these private property collisions that are not included in the analysis occurred in parking lots, people's driveways or yards, and in some instances included people who have been hit inside of a home after a motor vehicle has collided with a house. For planning purposes NIRCC is mostly interested in how collisions occur within Allen County's transportation network and not on private property.

One of the reasons NIRCC is analyzing bicycle and pedestrian collision data is because these crashes involve "vulnerable road users". In figure 63 you can see pie charts that show how many injuries and fatalities result from collisions with motor vehicles (uses total collisions reported). It is very likely that if a bicyclist or pedestrian is involved in a collision with a motor vehicle that it will lead to a serious injury. The majority of collisions between two motor vehicles results in property damage rather than injury or fatality.

To help plan safe facilities for bicyclists and pedestrians it's important to realize why the collisions are happening and where they are occurring. NIRCC analyses each crash to see what actions caused each of the collisions and who







was the one with the primary fault. The results show that it is almost equal for total bicyclists or pedestrians at fault compared with drivers of motor vehicles being at fault. One thing that is not clear from the collision reports though is what the primary cause for pedestrians being at-fault in the collision may be. In the collision reports when a pedestrian is at fault it is just noted as a "Pedestrian Action" which means it was the pedestrian action that caused the collision.

One of the main reasons for motorists being at fault in collisions with pedestrians is "Driver Inattention" followed by "Failure to Yield". These are also the 2 main reasons for motorists being involved in collisions with bicyclists. It seems that when bicyclists are at fault, most of them are traveling in the street with no protected bicycle facility (like

bike lanes) followed by the high occurrence of being struck in crosswalks. For pedestrians "Mid-Block Crossings" with no crosswalks are where most collisions with motor vehicles occur. Another word for this type of pedestrian action would be "Jay Walking". Figures 64 and 65 give you an idea of where the most crashes occurred for pedestrian and bicycle related crashes each year.



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There is much more data included in the Bicycle and Pedestrian Crash Summary Report (2009-2013) then what has been summarized here. Figures 66-68 give a few more examples of data that is tracked for bicycle and pedestrian crashes. Each year NIRCC intends to generate a new summary report with the same type of data so that this information will continue to be tracked. As a result, this data will be valuable as our community moves forward with creating a more bicycle and pedestrian friendly transportation system.



#### Figure 67

Pedestrian Collisions by Time of Day 2009-2013



### Figure 68

Bicycle and Pedestrian Collisions by Month 2009-2013



## **Congestion Management Process**

Studies completed by the Northeastern Indiana Regional Coordinating Council

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#### **CONGESTION MANAGEMENT PROCESS**

In December 1993, final interim guidelines were developed which established general requirements for the Congestion Management Process - CMP (previously known as the Congestion Management System - CMS) and identified deadlines for work plan submission and for the CMP to become operational. In August 1994, Purdue University, INDOT and FHWA published the draft final report for development of a prototype congestion management system for the State of Indiana as a Joint Highway Research Project. The study delineated a comprehensive set of guidelines and a nine-element work plan to be undertaken in developing the CMP in a consistent manner statewide.

NIRCC developed the initial CMP by following the guidelines provided by the Congestion Management Process Work Plan developed for the State of Indiana. That plan specified that each CMP include the following elements:

- Define CMP Network
- Establish Performance Measures
- Establish System Performance Standards
- Establish Data Collection and Monitoring Program
- · Identify Roadway and Transit System Deficiencies
- Analyze and Evaluate Congestion Mitigation Strategies
- Implement Strategies
- Evaluate the Effectiveness of Implemented Strategies
- Establish CMP Update Process

NIRCC's original Congestion Management Process Work Plan was completed in May 1995 and adopted by the Urban Transportation Advisory Board at its June 6, 1995 meeting. The work plan was submitted to the Indiana Department of Transportation, and an updated work plan was submitted at the conclusion of Fiscal Year 1996 and adopted in Fiscal Year 1997. The Fiscal Year 2014 CMP continues to utilize the work plan elements listed above to ensure all federal requirements are met.

The Fort Wayne / New Haven / Allen County Metropolitan Planning Area or Transportation Management Area boundaries were established as the geographic study area for the Congestion Management Process. Urban areas with populations over 200,000 have been directed to use the Metropolitan Planning Area boundaries for the Congestion Management Network. The current congestion management network is displayed in figure 69.

The CMP is designed to be a dynamic process. As new information on the transportation system is collected, analyzed, and reviewed, strategies are developed and evaluated for mitigating congestion. Implemented strategies are evaluated providing feedback on their success at reducing congestion. This information is documented in annual updates to the CMP report. Comprehensive reviews of the CMP takes place in conjunction with the scheduled update of the Transportation Plan.

The implementation of congestion mitigation strategies occurs within the TMA through a number of different agencies and programs. NIRCC attempts to include all projects and policies involved with congestion mitigation strategies in the transportation planning process. These projects and policies are, and will continue to be documented in the





Transportation Plan. These projects and policies will continue to be included in future Transportation Plan updates.

The transportation planning process has routinely reviewed existing congestion and projected travel demands to assess the potential for future congestion on the transportation system. Strategies, including both transit and highway projects and policies, have been developed, implemented, and evaluated. These strategies have been identified and documented in Transportation Plans and Transportation System Management Programs.

Additional projects and policies implemented to help mitigate congestion and improve overall mobility on the transportation system include Access Management, Transit Improvements, ITS/Signalization Improvements, Incident Management, Safety Management, and Pedestrian/Bicycle Access Improvements. Many of these items are described throughout the Transportation Summary Report as many of the elements summarized are used in conjunction with the CMP and utilize these elements.

NIRCC also has an extensive traffic monitoring program which collects: traffic volume and vehicle classification information; intersection turning movements and geometrics; signal phasing and timing information; travel time and delay data; crash data; and other types of traffic characteristic data. NIRCC also maintains a roadway characteristic database, which includes traffic volumes, length, number of lanes, indicates transit routes, facility classifications, and much more for specified road segments within the TMA. Data is collected annually for these programs in accordance with the Overall Work Program (OWP).

When analyzing the highway system for roads classified as collector or higher, the traffic monitoring program provides the majority of the data needed for a macro analysis. Existing traffic count data for all links within the study area is analyzed according to lane capacities. Roadway volume to capacity (V/C) ratios were calculated using morning and evening peak hour volumes. Actual directional peak hour volumes were used if available. When directional data was not available, average daily traffic (ADT) volumes, and default "D" and "K" factors were used to determine volume to capacity ratios for peak periods. Based upon the recommended benchmark V/C ratios, staff identified which road segments exhibited V/C ratios above the acceptable limits.

The volume to capacity ratio is a key indicator of the degree to which the highway system is being utilized, and is somewhat sensitive to demand responsive strategies. The vehicle miles of travel (VMT) estimate is used primarily as a weighting factor across hours and geographic areas. Total VMT is primarily a base to which changes in the percent VMT can be referenced. If the total VMT increases significantly, but the percent VMT at a given V/C ratio remains constant, the system is accommodating increases in travel demand without increased congestion.

All road segments in the TMA with V/C ratios greater than 0.80 (the most restrictive ratio) were identified, mapped, and color-coded according to levels of congestion (0.80 - 0.89; 0.90 - 0.99; 1.0 +). The macro-level analysis identified some road segments not included on the congestion management network. As a result of the analysis, all roadways in the TMA exhibiting V/C ratios exceeding 0.80 were considered as additional components of the congestion management network. The roadways with AM and PM V/C ratios exceeding 0.80 of their respective lane capacities based upon the macro analysis are displayed in figures 70 and 71. Segments that have V/C ratios greater than 0.80; 0.90; and 1.0 have been separated by color.

In evaluating changes in congestion over time, it is important that each hour be evaluated, not just the peak hour. In locations where the V/C threshold has been exceeded, congestion generally worsens through the spreading of the peak. If hourly information is not provided, the ability to evaluate changes in congestion over time is lost. An analysis was



#### **Congestion Management Process**

completed to identify the duration of the congestion beyond the peak hours. Several corridors within the congestion management network were identified for experiencing high levels of congestion (V/C ratios greater than 0.90) an extended number of hours (figures 72 and 73). Corridors where V/C ratios were found for multiple hours were reviewed to determine the number of continuous hours. These corridors have been designated as "high risk" for congestion issues and will be monitored closely. Micro-level analysis will be performed on these corridors when warranted.

#### **Intelligent Transportation Systems**

Another part of the Congestion Management Process is updating Allen County's Regional ITS (Intelligent Transportation Systems) architecture. ITS is the use of communications, electronics and information processing to help improve the efficiency and safety of surface transportation systems. Due to the nature of information technology being most effective when systems are integrated and interoperable the USDOT developed the National ITS Architecture. When





referring to architecture, it is best described as a tool that assists in organizing complex entities and relationships. It helps identify system functions and informational flows, and guides development of functional requirements for new systems and improvements.

The National ITS Architecture is designed to provide a common structure for which ITS projects could be based on.

#### **Congestion Management Process**



The National Architecture specifies what type of interface could exist between the many different components of ITS and also to show the different types of information exchanged. Processes and data flows are grouped to form particular transportation management functions and are represented graphically by data flow diagrams, or bubble charts, which decompose into several levels of detail. In these diagrams, processes are represented as bubbles and data flows as arrows.

#### **Congestion Management Process**

The Allen County Regional ITS Architecture details the communications and interactions between 10 primary systems (centers) over a 10year period (2012-2022). These systems are associated with traffic management, emergency management, maintenance and construction management, transit management, or data management. Each system is associated with a specific stakeholder (anyone with a



vested interest or "stake" in the regional ITS architecture) or group of stakeholders

The original Allen County Regional ITS architecture was completed in March 2005 to meet the requirements of TEA-21. There was an update to the architecture 2008 so that it would meet the requirements outlined in SAFETEA-LU, as well as changes in technologies that had occurred in those three years.

In 2012 the architecture was once again updated to the most current version of the national architecture. This update saw the removal of all elements which involved personnel at all agencies. FHWA did not see a reason to have them in the architecture anymore because they were the users of the technology and the architecture represents only technology. NIRCC staff updated any flows that changed between 2008 and 2012.

The ITS architecture is continually monitored for updates by NIRCC Staff. In FY 2014 input data was collected and noted for future updates ITS architecture.
Studies completed by the Northeastern Indiana Regional Coordinating Council

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#### **BICYCLE AND PEDESTRIAN PLANNING**

NIRCC has a significant involvement in area bicycle and pedestrian planning activities. The need and desire for bicycle and pedestrian facilities has dramatically increased over recent years. The four county region represented by NIRCC has many individuals and organizations advocating improvements to the existing bicycle and pedestrian transportation system as well as expanding the system in the future. The Fort Wayne, New Haven, and Allen County area has been at the forefront for local advocacy groups to begin their planning efforts. Local government has began taking a more active role in their planning efforts to include bicycle and pedestrian amenities.

To better coordinate local efforts, NIRCC began sponsoring the Northeastern Indiana Regional Bicycle and Pedestrian Forum which met from 2002 to 2007. This forum represented a task force comprised of governmental parks, planning and highway agencies, advocacy groups, and special project organizations. The forum increased the communication and coordination between these groups. In addition, the forum played an integral part in developing and completing the Allen County Comprehensive Bicycle-Pedestrian Transportation Plan in 2006. Since 2007 NIRCC has relied on the Greenway Coalition for guidance as well as governmental and public input towards bicycle and pedestrian planning. The coalition is also made up of governmental parks, planning and highway agencies, advocacy groups, and special project organizations. The coalition has been meeting since April of 2005.

Since the adoption of the Comprehensive Bicycle and Pedestrian Plan in 2006, NIRCC has continued to update and improve the plan as needed. In 2007 NIRCC incorporated the "Regional Bicycle and Pedestrian Plan for Northeast Indiana" (figure 74). Through the years following 2007 recommendations were incorporated into the plan which included the needs expressed by public input and local advocacy groups such as Aboite New Trails, the Greenway Consortium, Little River Wetlands, Northwest Allen Trails, and Fort Wayne Trails Inc. Other plans and recommendations from Allen County, Fort Wayne, New Haven, Leo-Cedarville, and Woodburn have provided input or have been included in the plan as well.

Throughout the year NIRCC periodically updates the Comprehensive Bicycle and Pedestrian Transportation Plan for Allen County as well as the Northeast Indiana Regional Bicycle and Pedestrian Plan. Local trail groups are continually planning and completing their trail projects. Also, new opportunities develop and some corridors may need to slightly shift their priorities to create the most practical options for developing a realistic and cost effective bicycle and pedestrian system.



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2035 Long Range Transportation Plan update. To create a more usable and detailed plan this latest update to the Comprehensive Bicycle-Pedestrian Transportation Plan took what used to be one map, which included all bicycle and pedestrian infrastructure, and separated it into three individual maps. These three maps consist of a bike plan (figure 75) which includes trails and on-street bike infrastructure, a trail plan (figure 76), and a sidewalk plan (figure 77). The combination of these three maps must be used to find out what is planned, proposed, or already exists for each corridor or alignment identified. For example, some corridors may only include proposed sidewalks while others may propose bike lanes in the street, a sidewalk on one side, and a trail on the other. Some corridors in the plan also identify which side of the street sidewalks and/or trails are proposed for.



#### Figure 75 Bicycle-Pedestrian Transportation Plan: Bike and Trail Plan

The Bike and Trail Plan (figure 75) is really intended to show an overall bike network along with the trails plan. Since bicyclists use a combination of on-street infrastructure and trails this map includes both to show how the entire network works together. This map displays a wide range of proposed and existing infrastructure for bicycling. The

proposed and existing facilities displayed include bike lanes, widened outside curb lanes, shoulder lanes, sharrows, bike routes, and trails.





The Trails Plan (figure 76) shows the entire existing trail system for Allen County as well as how it will tie in with what is planned to occur over the next several years and into the future. The trails identified as "Planned" are facilities that are being built along with road projects or are standalone projects that have all or most of their funding and we are confident they will be constructed in the near future. The trails identified as "Proposed" vary in their stages of development. These trails may be very conceptual or may currently be in some stage of development but lack the funds to really push them forward to construction.



#### Figure 77 Bicycle-Pedestrian Transportation Plan: Sidewalk Plan

The Sidewalk Plan (figure 77) identifies sidewalk needs along all major roadways in the urban area and some outside the urban area. This map displays all existing sidewalks and trails within Allen County and specifically identifies corridors or sections of roadways that need sidewalks on one side or both sides depending on existing features and proposed trails that parallel. The sidewalk needs identified on the map will be used to prioritize sidewalk improvements and identify the need for sidewalks as development spreads throughout the urban area. The map also includes a green shaded area that refers to the sidewalk and bicycle parking recommendations policy included in the 2035 Transportation Plan. Other than what is specifically identified on the map, these areas should always consider sidewalks and bicycle parking amenities as needed depending on development patterns and opportunities that arise.

This past fiscal year NIRCC has also spent a significant amount of time participated in a planning effort lead by the

City of Fort Wayne to develop the Trails Fort Wayne Plan. This 15-year plan will provide guidance on how and where to develop trails within the city of Fort Wayne. The Plan will review the proposed trail network and look for strengths and deficiencies in the proposed system. It will provide the City of Fort Wayne and Fort Wayne Trails, Inc. with a framework for prioritizing trail projects. It will also focus on design guidelines; legislation; funding; reinforcing the public health value of trails; marketing and promotion to increase trail usage; creating maintenance standards and expectations; and creating public awareness of trail benefits.

NIRCC participated in a variety of other bicycle and pedestrian planning activities throughout the fiscal year as well. Some of the common tasks NIRCC participated in or completed for bicycle and pedestrian planning included but are not limited to the following:

- Making updates to the Allen County Bicycle and Pedestrian transportation Plan.
- Making updates to the Allen County Sidewalk Inventory.
- Meeting or talking with citizens about bicycle and pedestrian planning issues.
- Working with local advocacy groups.
- Creating maps and supporting documents or reports for bicycle and pedestrian planning.
- Working with other governmental departments and providing ideas, facts, recommendations or any other information related to bicycle and pedestrian planning upon request.
- Researching bicycle and pedestrian facility design, funding types and availability, educational information, safety information, laws and ordinances concerning bicycle and pedestrian subjects.
- Following local progress on existing bicycle and/or pedestrian projects.
- Tracking progress on bicycle and pedestrian projects throughout the area.
- Reviewing development plans and transportation projects that are underway or in some stage of design to ensure bicycle and pedestrian connectivity and coordination with the Bicycle-Pedestrian Transportation Plan.
- Checking potential trail and sidewalk projects for environmental conflicts.
- Extracting and analyzing bicycle and pedestrian crash data from NIRCC's crash database.
- Making updates to various bicycle and pedestrian related plans.
- Attending meetings for bicycle and pedestrian issues.
- Creating planning documents, reports, or maps for meetings and governmental agencies.

#### **Bicycle and Pedestrian Feasibility Analysis**

In FY14 NIRCC began working on bicycle and pedestrian feasibility analyses along selected corridors. With development occurring and projects being planned there has become a need to study corridors selected from the Bicycle-Pedestrian Transportation Plan to provide a detailed description of what bicycle and pedestrian facilities are needed and where they should be located. The Bicycle-Pedestrian Transportation Plan proposes a variety of bicycle and pedestrian infrastructure along corridors which in some cases are conceptual proposals. The plan sometimes lacks the details about specific alignments and does not always address all the needs of each corridor. The purpose of these bicycle and pedestrian feasibility analyses are to determine several things:

- What bicycle and pedestrian facilities are appropriate for this specific corridor
- What side of the road a trail should be built on and what side of the road a sidewalk should be built on
- Are there specific access points or crossings that are needed
- Are there certain designs or safety features that should be included along this corridor
- What the constructability is along this corridor
- At what time should these facilities be built and who should be responsible

This past fiscal year NIRCC completed a final draft of the Clinton St Bicycle and Pedestrian Feasibility Analysis and began working on a second feasibility analysis along the corridor of Carroll Rd, Corbin Rd, and Union Chapel Rd. Several smaller studies were done for various segments or specific projects throughout the year as well.

The following pages give a brief summary of the final draft completed for the Clinton St Bicycle and Pedestrian Feasibility Analysis:

#### **Clinton St Bicycle and Pedestrian Feasibility Analysis**

The Northeastern Indiana Regional Coordinating Council prepared a draft bicycle and pedestrian feasibility analysis for the Clinton Street corridor from Auburn Road to Diebold Road (figure 78). The Bicycle-Pedestrian Transportation Plan has identified a proposed sidewalk and trail along Clinton Street from Auburn Road to Diebold Road. Also, as part of the bike network, this section of Clinton Street is proposed to have shoulder lanes or bike lanes for on-street bicycle traffic. With the exception of some adjacent subdivision streets with existing sidewalks, there are no bicycle or pedestrian facilities existing along Clinton Street.

The results of the feasibility analysis found that the bicycle and pedestrian facilities along this corridor should include a sidewalk along the west and north side of Clinton Street and a trail along the east and south side of Clinton Street from Auburn Road to Diebold Road. It is recommended that, for this section of Clinton Street, the proposal for shoulder lanes
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(bike lanes if curbed) for on-street bicycle traffic is unnecessary and a trail is an adequate substitution for providing a place for bicyclists to ride. For this reason it is also recommended that the trail be at least 12 feet wide. Also, in order



Figure 79

to ensure the future constructability of these facilities along the Clinton Street corridor and with future road widening projects, it is recommended that any new development constructed adjacent to Clinton Street provides at least 60 feet of clear zone space.

Figures 79 - 81 show the recommendations made for the Clinton St Corridor. Besides displaying recommendations for the trail and sidewalk alignments, the maps also show crossing locations and the recommended need for special design considerations based on safety needs and crossing

intensities. These crossing locations are rated by the following:

1. "Typical" - No special design elements are need; typical crossing designs are adequate for these locations.

2. "Moderate" - May need design elements or safety features beyond the typical crossing design. Examples may include signage, lighting, countdown indicators, piano key crossings, etc.

3. "Complex" - May need "moderate" crossing elements plus added design elements such as signalization, traffic calming design, refuge islands, special ADA considerations, etc.



Figure 80

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#### **Bicycle and Pedestrian Planning**

Further details are provided in the final report for the Clinton St bicycle and pedestrian feasibility analysis. To see a copy of this report please contact NIRCC and ask for a full copy of the draft feasibility analysis or a copy of the draft executive summary.



# **Red Flag Environmental Investigations**

Studies completed by the Northeastern Indiana Regional Coordinating Council

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When federal funds are used for projects, agencies are responsible for complying with certain guidelines and requirements throughout the project process. One of the requirements when there is a federal undertaking is that, by all practicable means, the action taking place will identify and either mitigate or avoid any adverse harm to the natural or cultural environment. The National Environmental Policy Act (NEPA) is what establishes these national environmental policies and goals for the protection, maintenance, and enhancement of the environment and provides a process for implementing these goals.

As part of this process agencies conduct investigations during or before the project development phase to see what kinds of environmental effects may be caused as a result. In order to identify locations and issues of concern, or "red flags", an initial report is completed and referred to as a Red Flag Investigation (RFI). The report identifies these red flags that may require additional study coordination in future steps of the project development process. They may also prompt creative management or design approaches which may increase right of way and construction costs. The report also identifies



Figure 82

any "fatal flaws" in the study area which are locations that must be avoided all together.

In FY 14 NIRCC began working on Red Flag Investigations (RFIs) for Fort Wayne and Allen County. The projects that were completed or started during fiscal year 2014 are shown in figure 82 and include the following:

#### **Red Flag Environmental Investigations**

Maplecrest Rd – State Blvd to Stellhorn Rd (complete)

St Joe Center Rd – Clinton St to Campus Court (complete)

- Liberty Mills Rd/West County Line Rd and County Rd E 900 S/County Rd S 800 E intersections (complete)
- Minnich Rd and Tillman Rd intersection (underway)
- Washington Center Rd Bridge #95 over Spy Run Creek (underway)

These projects were analyzed to find out what types of environmental red flags may be present. To do this NIRCC utilized GIS (Geographical Information Systems) to search areas within half a mile of the project limits to identify

any items that may fall within any of the six main sections of the report. Here is a list of the six sections in the report with examples of what is being identified within each:

1. Infrastructure – Examples include airports, cemeteries, schools, hospitals, parks, utilities, religious facilities, etc.

2. Water Resources – Examples include rivers, streams, special interest waterways, wetlands, floodplain, etc.

3. Mining/Mineral Exploration – Examples include mines, petroleum wells, and petroleum fields.

4. Hazmat Concerns – Examples include underground storage tanks, different types of waste sites, cleanup sites,









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#### **Red Flag Environmental Investigations**

remediation sites, dumps, etc.

5. Ecological Information – Identifies endangered, threatened, or rare species.

6. Cultural Resources – Examples include historic sites and districts, potential historical sites and districts, select and non-select bridges, and properties identified in interim reports.

Besides the sections listed above, NIRCC also completes a section identifying bicycle and pedestrian facilities, existing and proposed, throughout the project area and specific locations that may need special consideration for ADA compliance. For each RFI there are also maps providing visuals of each project's location and individual maps for each section listed above identifying all red flags within the half mile radius.

Figures 83 - 85 give you examples of three maps included in the report completed this past fiscal year for Saint Joe Center Rd. Figure 83 is the map which identifies "Water Resources" near the project area, figure 84 displays "Infrastrucure" items identified in the red flag analysis, and figure 85 shows an example of areas that may need special consideration for protecting bicycle and pedestrian connectivity as well as create better access for transit stops.



Figure 83 Red Flag Investigation - Water Resources Map St Joe Center Road - Clinton St to Campus Ct



#### **Red Flag Environmental Investigations**

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Along with the maps NIRCC also creates a table for each of the six sections. These tables show everything that is considered when conducting the red flag analysis and how many items of each are found within a half mile radius of the project. You will see an example of the "Water Resources" table and "Infrastructure" table from the Saint Joe Center Rd project in figures 86 and 87. Once the tables are complete NIRCC includes a summary of findings for each item with a description in the report that also states whether or not each item will be affected by the project. To find out further information about Red Flag Analysis or detailed information about a specific Red Flag

Figure 85





Analysis already completed please contact NIRCC for assistance.

## Figure 86

#### Water Resources

Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:

NWI - Points	N/A	NWI - Wetlands	12
Karst Springs	N/A	IDEM 303d Listed Lakes	1
Canal Structures – Historic	N/A	Lakes	1
NWI - Lines	1	Floodplain - DFIRM	Yes
IDEM 303d Listed Rivers and Streams (Impaired)	N/A	Cave Entrance Density	N/A
Rivers and Streams	6	Sinkhole Areas N/A	
Canal Routes - Historic	1	Sinking-Stream Basins	N/A
Outstanding Rivers (Special Interest Waterways)	N/A	Line of Protection N/A	
*High Capacity Wells (Wellhead Protection Areas)	N/A	National River Inventory (NRI)	N/A

### Figure 87

#### Infrastructure

Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:

<b>Religious Facilities</b>	7	<b>Recreational Facilities</b>	3
Airports	N/A	Pipelines	1
Cemeteries	1	Railroads	N/A
Hospitals	N/A	Trails	1
Schools	6	Managed Lands	N/A
Museums	N/A		

# **Transit Planning Activities**

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2014

#### **TRANSIT PLANNING ACTIVITIES**

NIRCC has an integral role in the transit planning activities that occur within Allen County. NIRCC has a working relationship with most of the areas transit providers. These providers, along with representatives from local government, social service agencies, and consumers, serve on committees overseen by NIRCC that focus on transit related activities within Allen County.

There are two committees that deal with transit related activities in Allen County, the Transit Planning Committee (TPC) and the Transportation Advisory Committee (TAC). The TPC meets monthly and the TAC meets quarterly. The TPC was established in 1993 as a working committee of the Urban Transportation Advisory Board (UTAB). The main focus of the TPC is to assist in coordinating and facilitating local public transit and para-transit services. The TAC serves as a sub-committee of the TPC focusing mainly on the local transportation issues faced by persons with disabilities and low income individuals. The TPC has been integral in projects such as the Coordinating Development and Transportation Services Guide, the Citilink Transit Development Plan, and the Coordinated Public Transit-Human Services Transportation Plan for Allen County. TPC also takes the lead role in the facilitation and evaluation of the local Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Operational Funding Program. The TAC takes the lead role in the facilitation and evaluation of the local Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Capital Funding Program and is responsible for the maintaining the local Transportation Resource Guide.

In Fiscal Year 2014, Transit Planning Activities completed by NIRCC staff included a bus stop inventory, the Section 5310 Local Capital Funding program, and an update of the Coordinating Development and Transportation Services: A Guide for Developers, Engineers, and Planners. A summary of each of these activities is provided below.

#### **Bus Stop Inventory**

This past fiscal year NIRCC completed a bus stop inventory using iPads and GIS (Geographic Information System) applications. Out of the 1,117 bus stop locations inventoried, 790 of them were completed in Fiscal Year 2014 (see figure 88). Every Citilink bus stop throughout Fort Wayne and New Haven was recorded into a GIS database with spatial coordinates so that bus stops could be seen with maps and aerial photography. In figure 89 you can see a snapshot of all the bus stops located in the downtown Fort Wayne area. The inventory data included information about each of the stop locations such as location descriptions, bus route numbers, amenities included at each stop location, ADA information, etc. Staff also took pictures of each site which you can see examples of below (figures 90 and 91). These pictures are tied to each point in the map and are available by the click of a button.

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Federal Transit Administration's Section 5310 Program – Capital Funding

The Federal Transit Administration's (FTA) Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Program provides capital and operating funding to support the provision of transportation services to meet the specific needs of seniors and individuals with disabilities. Transportation providers within the Fort Wayne Allen County Urbanized Area serving the senior and disabled populations utilize Section 5310 funding to purchase vehicles and operate services. The current Federal legislation which authorizes funding for transportation is Moving

Ahead for Progress in the 21st Century, known as MAP-21. MAP-21 requires the establishment of a locally developed, coordinated public transit-human services transportation plan for the Section 5310 program. NIRCC has developed a Coordinated Public Transit-Human Services Transportation Plan for Allen County. All projects selected for funding from this FTA program must be derived from this coordinated plan and be competitively selected.

NIRCC, in coordination with Citilink (designated recipient of the Section 5310 funds for the Fort Wayne Allen County Urbanized Area), has established an application process to select projects to receive capital and operational funding from the Section 5310 Program. Capital and Operational funding rounds are held separately. A Section 5310 Capital funding round is held on an annual basis. While the Section 5310 Operational funding round is held on a semi-annual basis. Any project(s) selected for funding requires the responsible agency / party to enter into a contractual agreement with Citilink (designated recipient).

The annual Section 5310 Capital program awards vehicles to area non-profit agencies providing transportation to seniors and individuals with disabilities. A call for projects is issued in April with awards announced in June. The capital program provides 80% of the total vehicle cost, requiring a 20% local match from the applicant. In Fiscal Year 2014, approximately \$146,000 in Section 5310 funding was awarded to Aging and In-Home Services of Northeast Indiana, Byron Health Center, and the Community Transportation Network to purchase a total of 4 vehicles. All of the awarded vehicles were lift or ramp equipped and had wheelchair tie-downs. A Section 5310 Operational funding round was not held during Fiscal Year 2014.

### <u>Coordinating Development and Transportation Services – A Guide for Developers,</u> <u>Engineers, and Planners - 2014 Revision</u>

The importance of transit service and pedestrian oriented design will continue to increase as our community and population grow. Socioeconomic indicators also tell us some important trends are occurring. We are an aging population that is living longer (see figure 92). In conjunction, the number of people living with a mobility impairment is constantly increasing. These trends will limit the use of the automobile for large segments of the population, increasing our reliance on transit services (see figure 93). In addition, energy costs, air quality and congestion are concerns that can be tempered through an increasing role of transit in meeting our transportation needs. It is beneficial for the residents, businesses, and local government to incorporate transit accessibility into the design of our community.



Source: 1970-2010 Figures from U.S. Census Bureau & 2020 Projection from STATS Indiana

NIRCC, through the assistance of the TPC, has prepared the *Coordinating Development and Transportation Services: A Guide for Developers, Engineers, and Planners* document, to encourage the coordination of land use developments and transit services. The information provided in the guide is intended to help developers, architects, engineers, plan commission members, and planning staffs accommodate transit service in the design of new and existing developments. The guide was originally produced and distributed in 2001. The 2014 revision contains the same principles and elements established in the 2001 version with the addition of new requirements and elements not included in the original document. Since the guide's completion in 2001, several planning documents containing elements related to the issues discussed in this guide have been completed. The guide is intended to compliment and work in tandem with these planning documents, not supersede them.

The development guidelines are intended to promote the incorporation of transit considerations into development plans and redevelopment projects. The development guidelines are not proposed as regulations or specifications, but are presented as recommendations designed to create a more transit and pedestrian oriented environment in an effort to promote transit use and improve mobility. However, local governments are encouraged to consider putting specific recommendations presented in this guide into ordinance form if they feel it would be necessary to have them as a regulation / requirement rather than just a recommendation.

The guide presents design elements considered to be "transit friendly", meaning those elements or design criteria that are necessary for safe and efficient transit service provision. The recommendations are designed to facilitate mobility and enhance transit accessibility and convenience. "Transit" is used to represent several different types of transportation services.

The Fort Wayne Public Transportation Corporation operating as Citilink provides several types of service including

#### **Transit Planning Activities**

#### Summary FY 14

their fixed-route (which includes MedLink and campusLink), point deviation (Flexlink), and Access services. Citilink fixed-route service is the traditional type of transit service operating on a predetermined route with a set schedule. MedLink, connects the Parkview Randalia Campus to the Parkview Regional Medical Center. The campusLink service is a free circulator between the IPFW and Ivy Tech campuses, as well as shopping and residential areas that provides a connection to Citilink fixed route service. The point deviation service is similar to a fixed-route but will deviate, within a limited area, from the established route to pick-up or drop-off passengers by request. Citilink Access is a curb-to-curb transit service for persons with qualifying disabilities that prevent them from using the regular fixed-route service.

Another type of transportation service, commonly referred to as paratransit service, is provided through local organizations such as Aging and In-Home Services of Northeast Indiana, the Community Transportation Network, and private transportation companies. Public, parochial, and private school systems also provide a variety of transportation services throughout the community. For the purposes of this manual, all of these transportation services are embodied in the word "transit".

The Citilink services use various sizes of vehicles. Fixed routes typically utilize 30 to 45-foot (with bicycle racks) large transit busses. Flexlink, campusLink, and Access typically utilize 24 to 29-foot body on chassis transit vehicles. Paratransit services typically utilize mini-vans, large passenger vans, and 21 to 25-foot body on chassis transit vehicles. Virtually all of these vehicles are equipped with wheelchair lifts or ramps to assist in the transportation of individuals with mobility impairments. The operating characteristics of these vehicles, including their length, height, and wheelchair lift deployment requirements, should be considered during development design.

The primary goals of local transit services are to improve accessibility for all residents of the community to employment, housing, shopping, business, and recreational opportunities through the transportation mode of their choice and/or necessity. This can be accomplished by incorporating transit access into the design of new and existing developments. In turn, developments can market the transportation options afforded by such designs to attract additional customers and employees. Transit providers will benefit from the efficiencies achieved through improved accessibility.

Improved access includes the ability of transit vehicles to efficiently reach activity centers as well as the ability of people at these locations to reach the transit vehicles. It is important to consider the relationship between pedestrian access and transit service when designing developments. In addition, bicycle access to transit is also important and increases the marketable service area. Therefore, accessibility to transit is also dependent upon improving pedestrian and bicycle access to the service. Pedestrians and bicycle riders will benefit from these improvements as our society engages the importance of exercise and becomes more energy and environmentally conscious.

Providing transit accessibility to all types of developments is important. Even in areas where fixed route transit service is not currently provided, as the urban area grows, the demand for transit service will gradually extend out to these areas. In addition, other types of transportation services that are currently provided throughout Allen County, such as human service agency paratransit, private paratransit, and school bus service, will all benefit from transit accessible designs. A special emphasis should be placed on land uses that attract a significant amount of transit ridership. Medical facilities, major retail centers, senior housing complexes, and multi-family housing complexes are examples of developments that should incorporate transit access into their design. Inevitably, requests for transit service to these developments will be made from patients, employees, patrons, and residents using these facilities.

Taxpayers, developers, businesses, and transit users all derive direct benefits from efficiently delivered transit services. Developers benefit from the increased compatibility between transit, pedestrian and bicycle trips and the potential to reduce automobile trips. Fewer automobile trips may help reduce parking demand, construction costs, and maintenance costs. Minimizing the space necessary for parking areas provides more developable land. Benefits can also be derived from the increased attractiveness of a site that is accessible to a broader population. Businesses benefit from access to a larger labor pool, the ability to attract more customers, and a reduced demand for employee and customer parking. Transit users benefit from enhanced access to needed services, increased employment opportunities, improved passenger conveniences, and improved mobility through travel alternatives.

Citilink, local governments, and developers are required by law to meet the requirements of the Americans with Disabilities Act (ADA). This is done by following the guidelines found in the Public Rights-of-Way Accessibility Guidelines (PROWAG) and the ADA Accessibility Guidelines (ADAAG). Links to these guidelines can be found in Chapter 1: Introduction and Appendix B. All pedestrian facilities recommended in the subsequent chapters of this Guide must be designed and constructed per PROWAG or ADAAG, whichever is applicable. Local governments have created ADA Transition Plans to inventory, analyze, and provide a plan of action to bring existing pedestrian facilities into ADA compliance. Citilink's stops, shelters, and signage are included within the City of Fort Wayne's ADA Transition Plan. Links to ADA Transition Plans completed by local governments can be found in Appendix B of the Document.

The staffs of NIRCC, the Department of Planning Services, Citilink, and the Community Transportation Network will assist those who are interested in creating developments that are accessible to the various types of transit services. The staffs will work with plan commissions, developers, businesses, and local governments to integrate transit design features in development plans and to identify viable transit service options. The guide is available at <u>www.nircc.com</u>.

# **SUMMARY**

The Transportation Summary Report provides an overview of some of the transportation planning activities performed by the Northeastern Indiana Regional Coordinating Council (NIRCC) during Fiscal Year 2014. The Summary Report highlights a majority of the transportation planning activities conducted and the products produced by NIRCC during Fiscal Year 2014. The document provides a basic overview of the transportation planning activities, data and products produced as part of the transportation planning process. Various types of traffic data integral to the planning process are collected and processed. Traffic volume and classification data are two examples of this basic information. The vehicle miles of travel provides a mechanism for assessing travel demand growth within the region.

Traffic studies help monitor the transportation system, identify problem areas and assist in the development of viable solutions. Crash analyses, intersection analyses, and different types of corridor studies serve to improve safety and efficiency. Through a cooperative and coordinated process the cities of Fort Wayne and New Haven, Allen County, Citilink, and the State of Indiana review the information and recommend improvements. The multimodal nature of the planning process includes public transit, para-transit, bicycle and pedestrian travel. The projects listed in the Fiscal Year 2015-2018 Transportation Improvement Program (TIP) represent the improvements selected for implementation. The Fiscal Year 2015-2018 TIP can be found on NIRCC's website

The staff of the Northeastern Indiana Regional Coordinating Council will continue to monitor the transportation system striving to provide a complete transportation system. A system that enhances efficiency, promotes safety, and maintains a conscious regard for the quality of life. For this goal to become a reality, constant monitoring of the existing system must occur. Staff is continually collecting data on the existing system to support the short-range planning process and to identify the challenges and opportunities of the future.

The primary purpose of this report is to familiarize the readers with the techniques used by NIRCC and the resulting products to promote a more functional transportation process in our community. However, this report only provides a summary of the wide variety of activities conducted by NIRCC and its staff. NIRCC is constantly striving to provide relevant information to the public and communities it serves to support a decision-making process that improves the transportation system.

If you would like additional information concerning the studies and reports referenced in this document or have questions regarding the transportation planning process, please contact NIRCC staff at (260) 449-7309. NIRCC also maintains a website that contains many of the transportation planning documents and products at www.nircc.com. The site also contains an amended Transportation Improvement Program (TIP), 2035 Transportation Plan, and many other documents and staff contact information.

# **Transportation Summary Report Fiscal Year 2014**

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2014

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