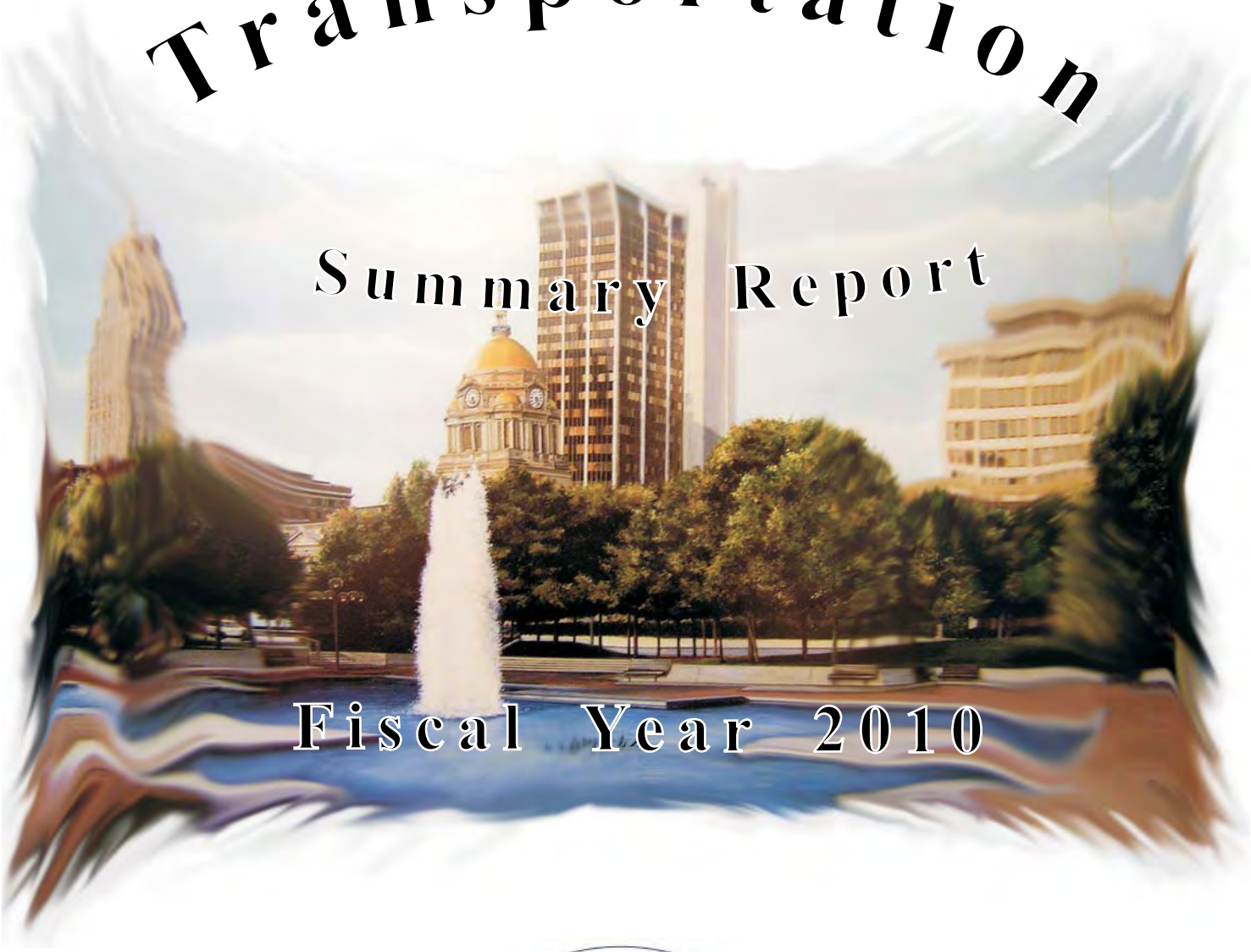
Transportation



Summary Report

Fiscal Year 2010

Northeastern Indiana Regional Coordinating Council

Table of Contents

Figures

Figures

Figures

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 2010. 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 2011-2014 Transportation Improvement Program (TIP) Projects for the Fort Wayne-New Haven-Allen County Metropolitan Planning Area, Safety Management System (SMS) activities, and bicycle/pedestrian planning activities.

Traffic Surveillance

Studies completed by the Northeastern Indiana Regional Coordinating Council

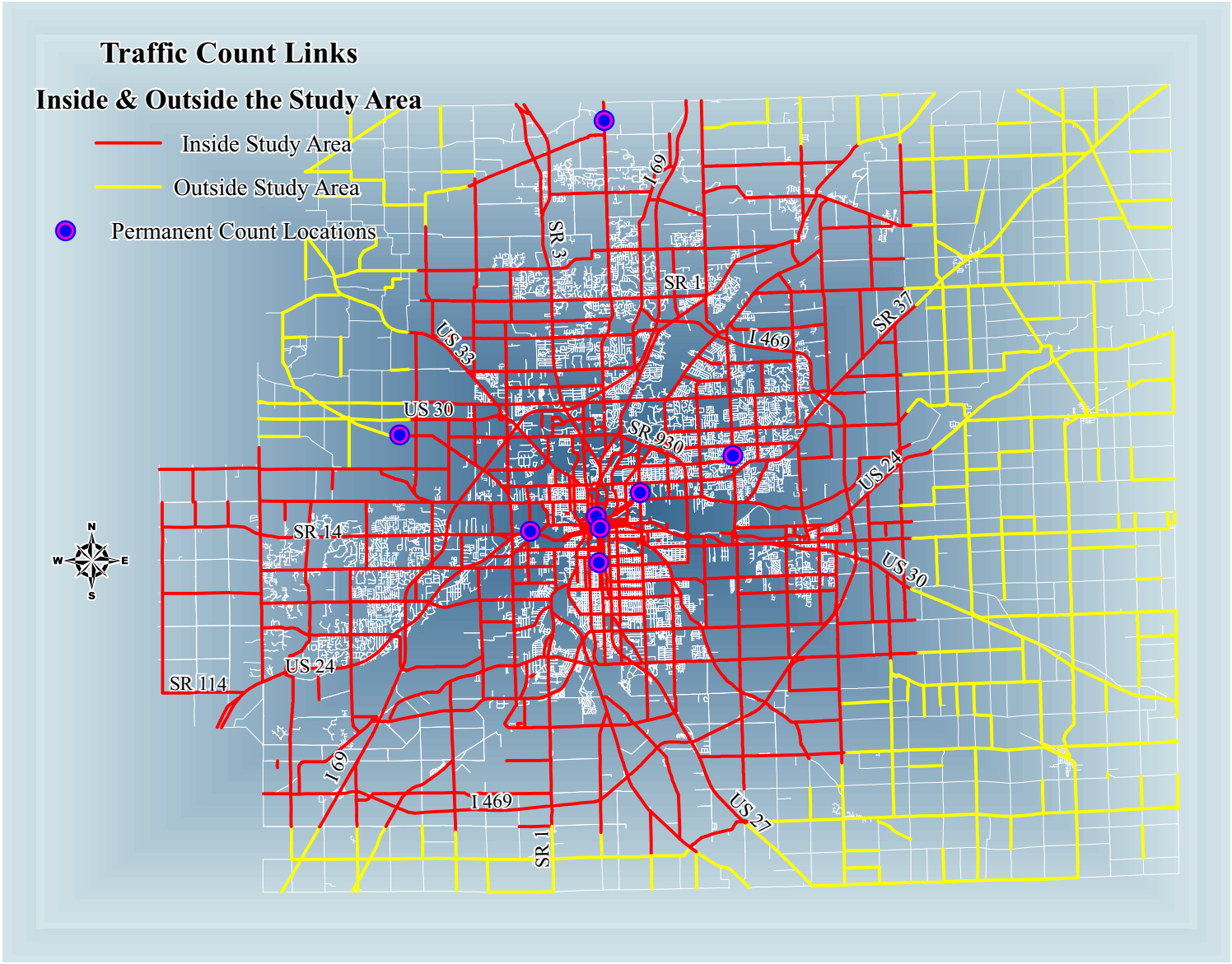
Transportation Summary Report Fiscal Year 2010

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 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

Figure 1



factors. Monthly count factors are important to determine because traffic volumes vary from one season to 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

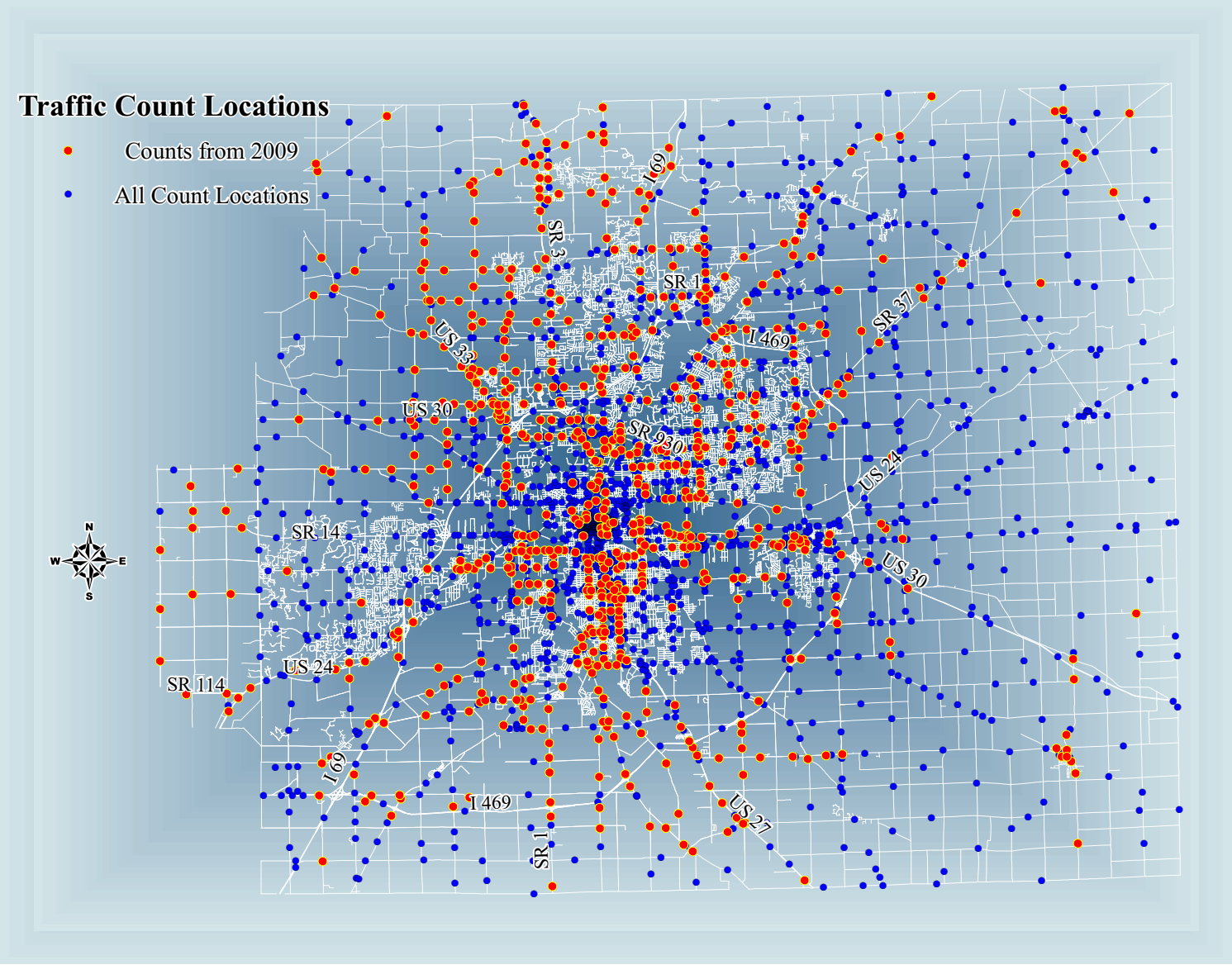


Figure 2

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 2009 (February, April - December), data was collected at 718 locations, as illustrated in Figure 2. Out of the 718 Counts, 176 locations where State Counts which are collected throughout the county and reported to INDOT. 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.

Figure 3 provides the range of traffic volumes present throughout Allen County. Some of the traffic count links shown in Figure 1 and Figure 3 exhibit links that may look unconnected or isolated. These links appear this way because they

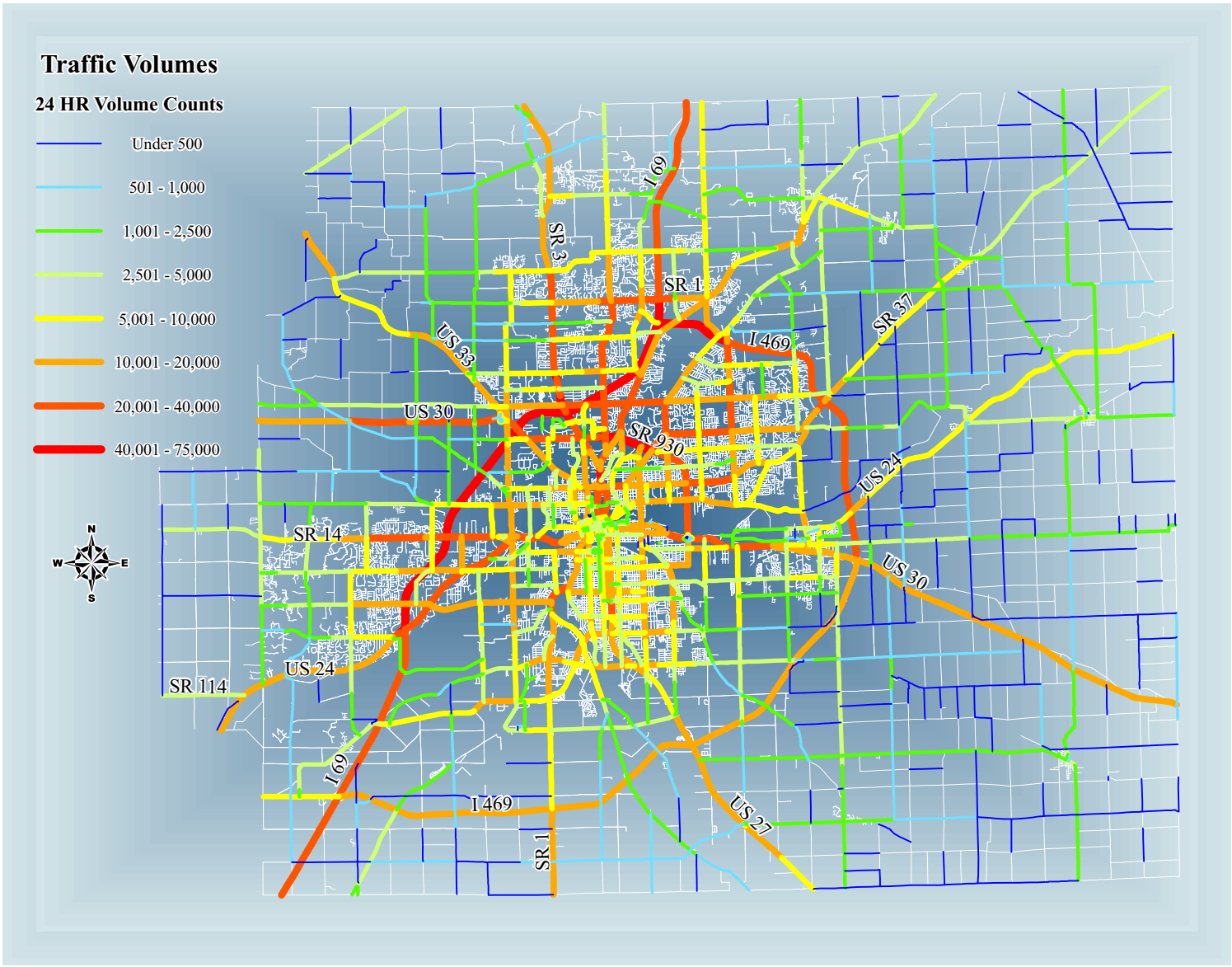


Figure 3

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

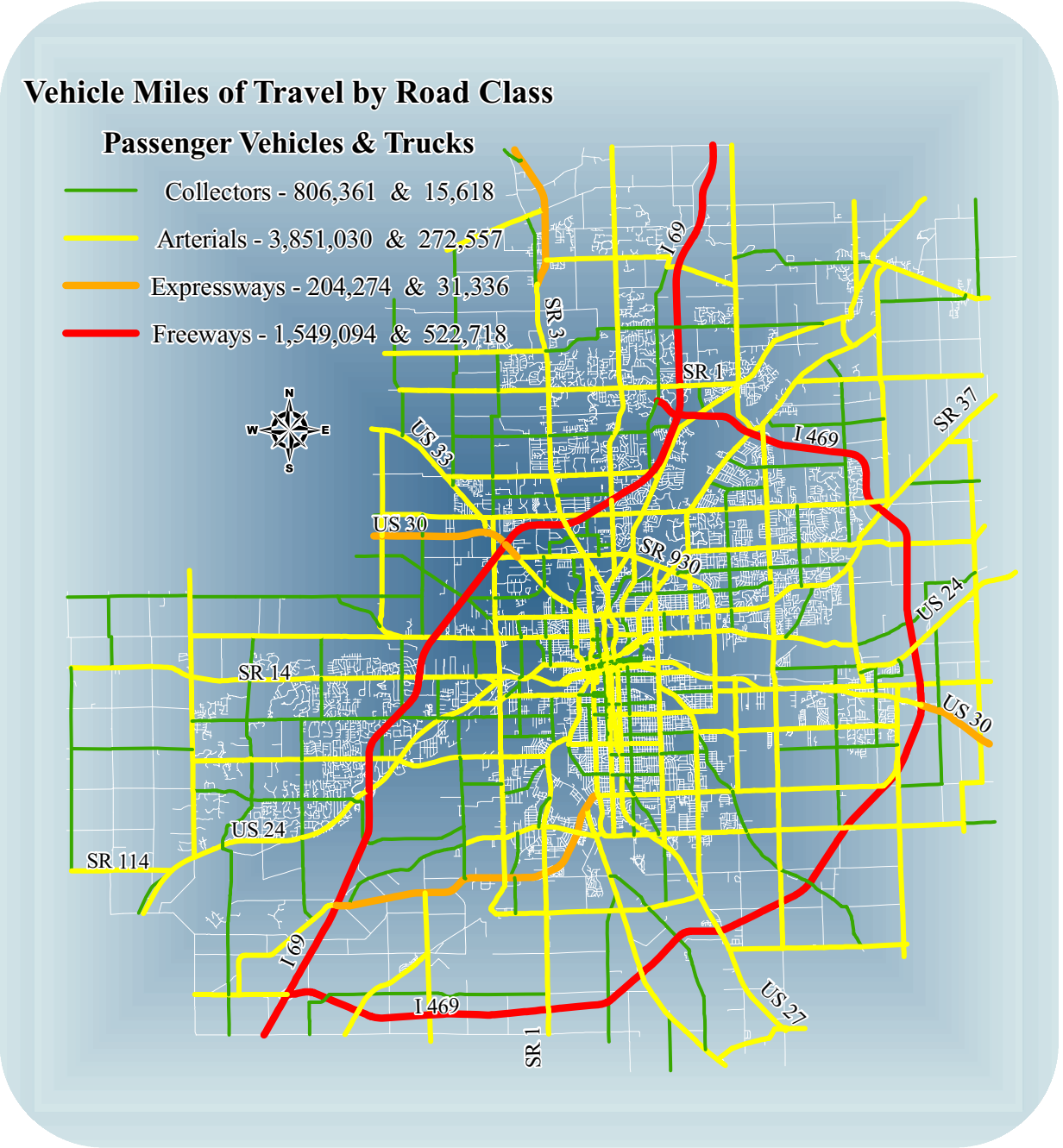
Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2010

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 7,336,515 million in 2008 to 7,252,988 million in 2009. This represents a decrease of 1.14 percent. The VMT decreased on expressways (7.35%), decreased on arterial streets (1.79%), and increased on collector streets (1.29%) from 2008. The VMT is illustrated for 2009 in Figure 4.

Figure 4



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 1999 to 2009 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. With some exceptions, the general trend shown on the chart shows an increasing total VMT throughout the ten year period as well as 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 2009 experienced a 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.

Figure 5

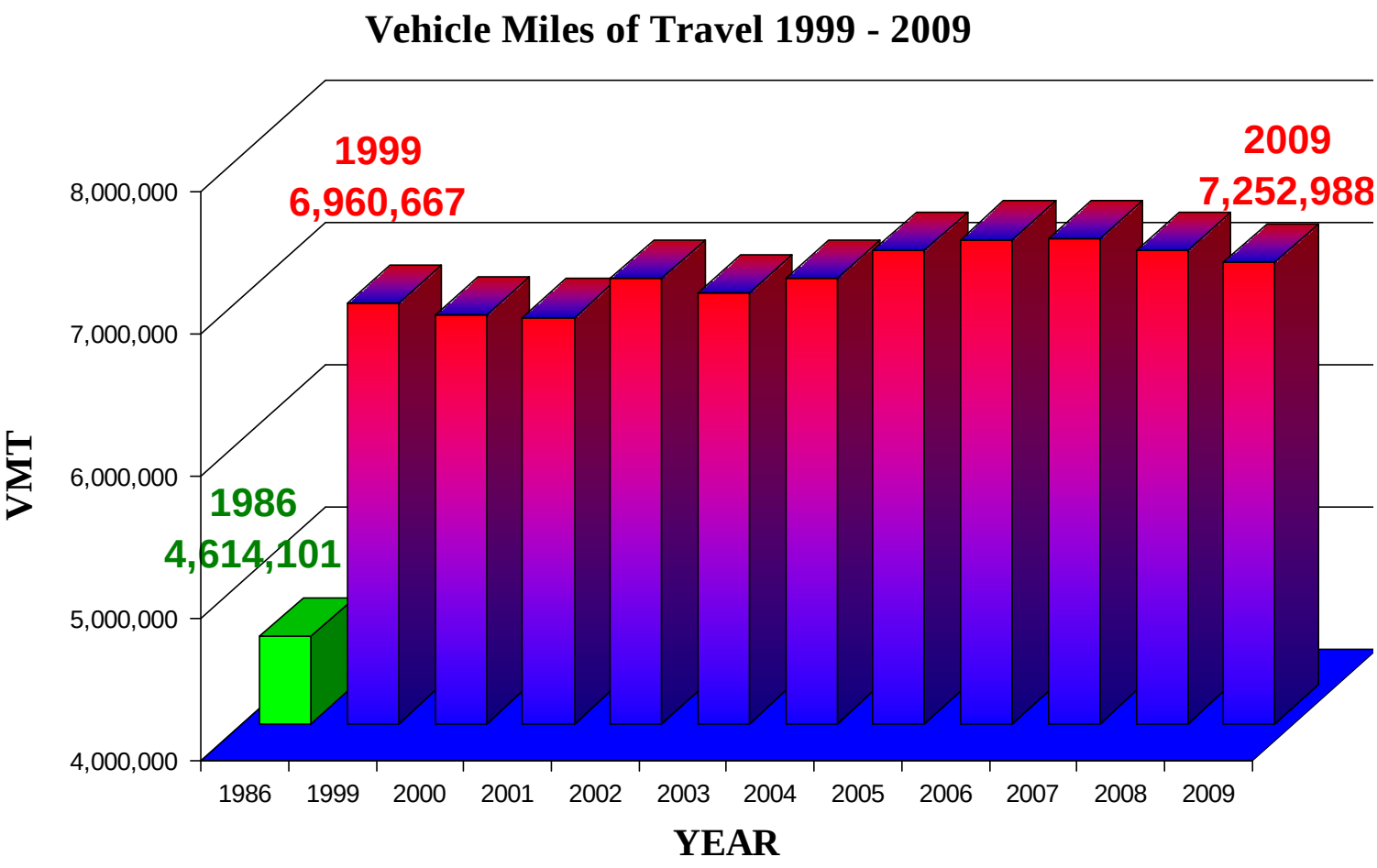


Figure 6 presents three pie charts that represent the proportions of VMT by street classification for the years 1986, 1999, and 2009. As you can see, the proportions of traffic in 1986 are different compared to the proportions of traffic in 1999 and 2009. Freeway traffic increased significantly while 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.

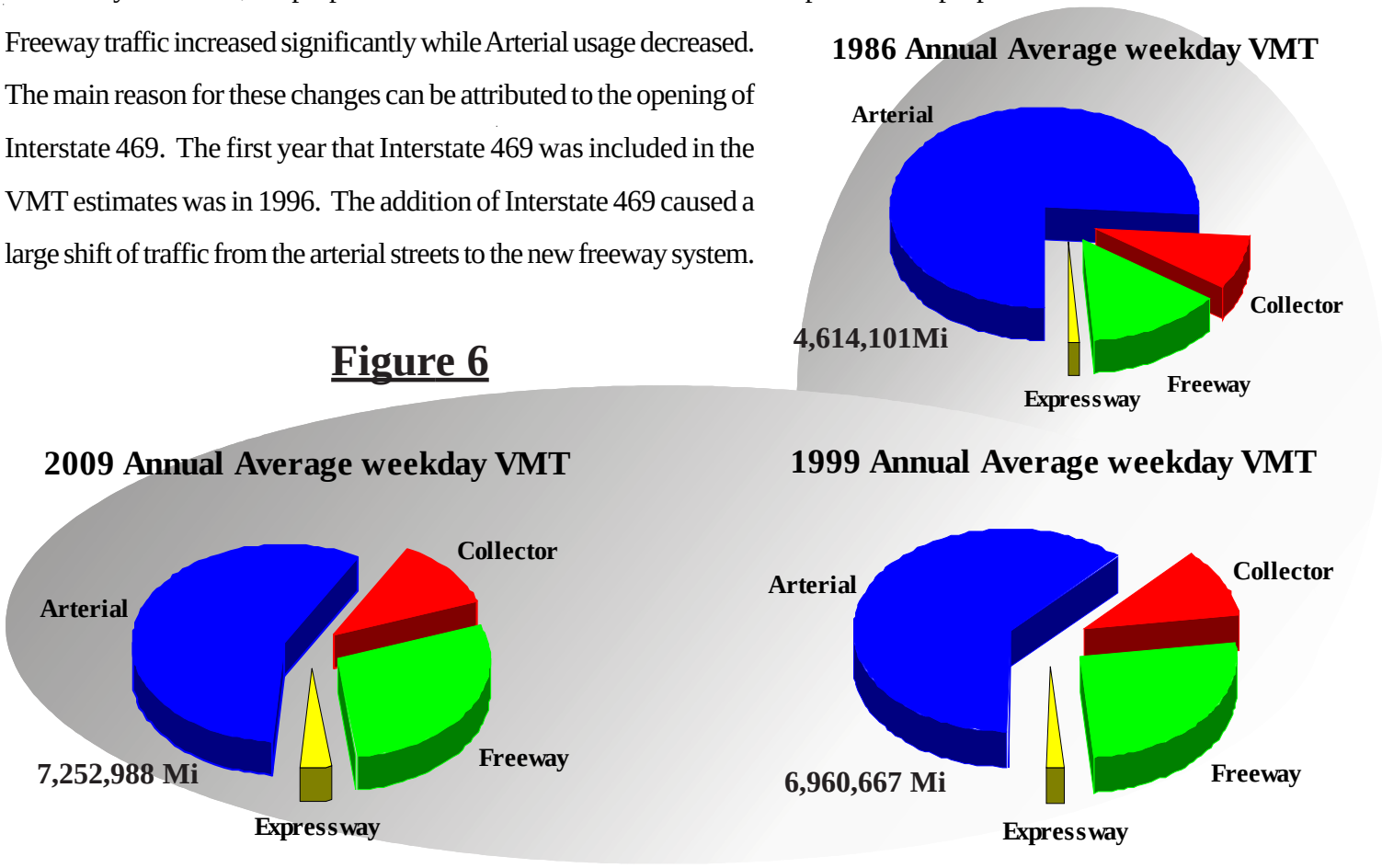


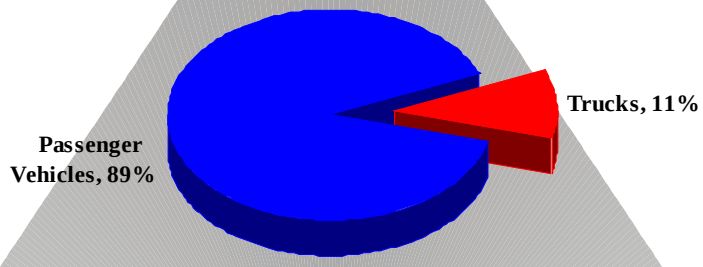
Figure 6

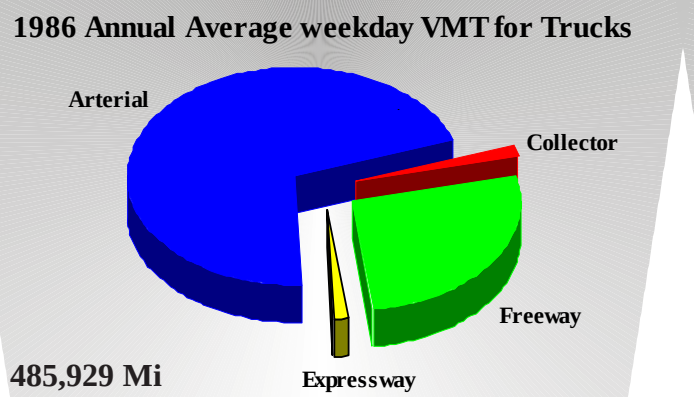
The VMT is also broken down to show the annual average VMT for passenger vehicles and trucks. The pie charts contained in Figure 7 illustrate the VMT for 1986 and 2009. The proportion of truck traffic compared to passenger vehicle traffic is almost identical in 1986 and 2009. A further breakdown of the proportionate usage of passenger vehicles versus trucks on the different road classifications shows some interesting differences between 1986 and 2009. 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 2009 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 2009. The utilization of the freeway system has alleviated a significant amount of truck traffic from the arterials.

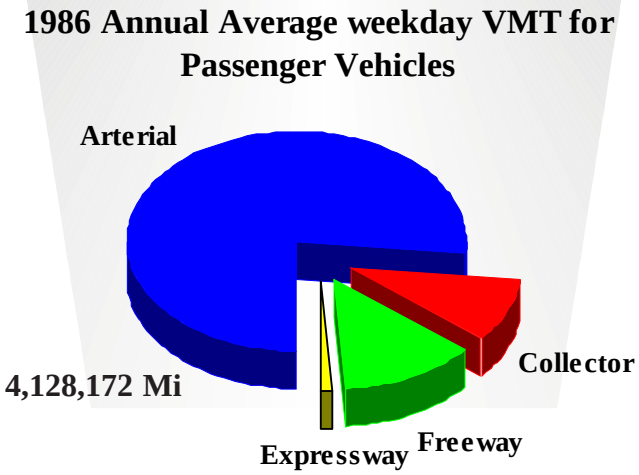
The pie charts contained in Figure 8 illustrate the proportion of passenger vehicle traffic versus truck traffic for each type of road classification. Even though the amounts of truck traffic and passenger vehicle traffic significantly changed

Figure 7

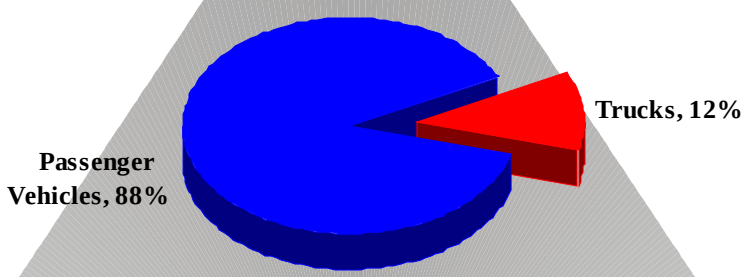
1986

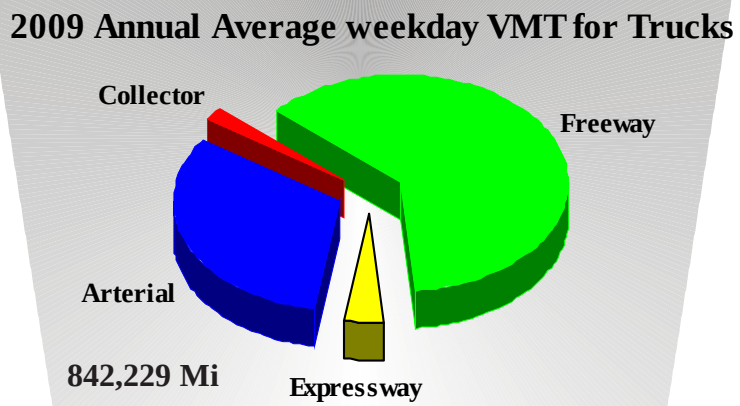


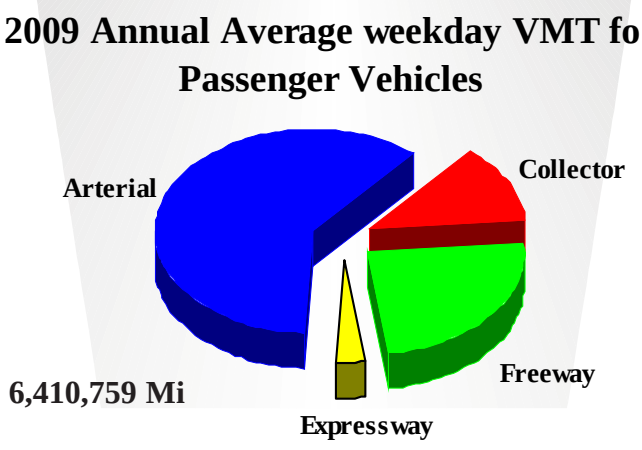




2009





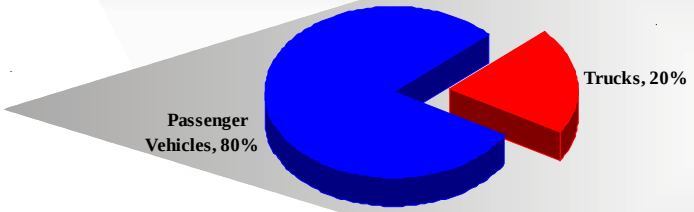


for some of the road classifications, the proportions of passenger vehicles and trucks for each road classification remained very similar between 1986 and 2008.

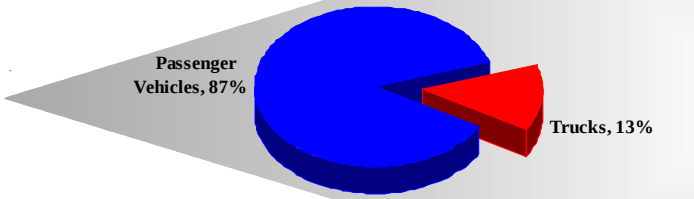
Figure 8

1986

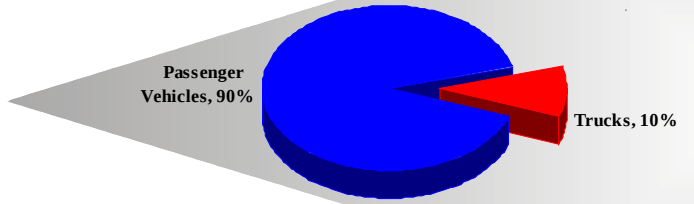
Freeways
Percentage of 1986 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



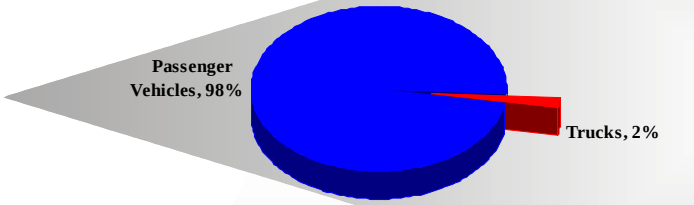
Expressways
Percentage of 1986 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



Arterials
Percentage of 1986 Annual Average weekday VMT for Passenger Vehicles compared to Trucks

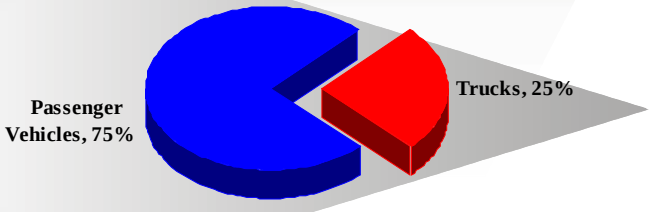


Collectors
Percentage of 1986 Annual Average weekday VMT for Passenger Vehicles compared to Trucks

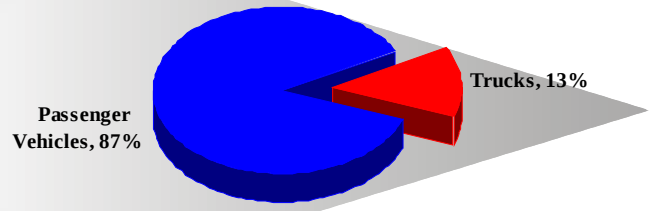


2009

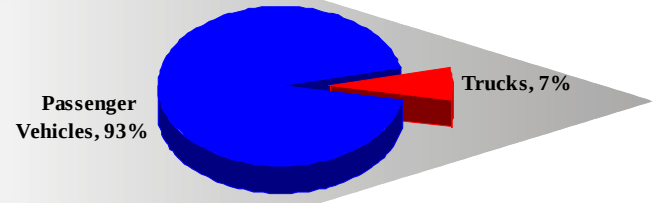
Freeways
Percentage of 2009 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



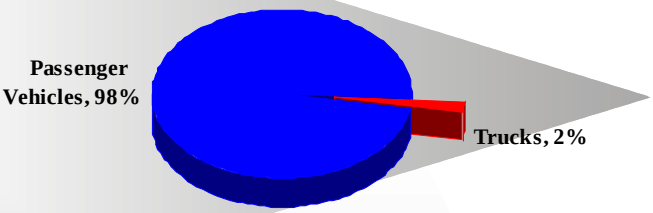
Expressways
Percentage of 2009 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



Arterials
Percentage of 2009 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



Collectors
Percentage of 2009 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



Intersection and Arterial Analysis

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2010

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 2010, NIRCC evaluated 25 intersections which are listed in the table contained in Figure 10. Out of these 25 intersections, 17 were signalized and 8 were unsignalized.

Figure 9

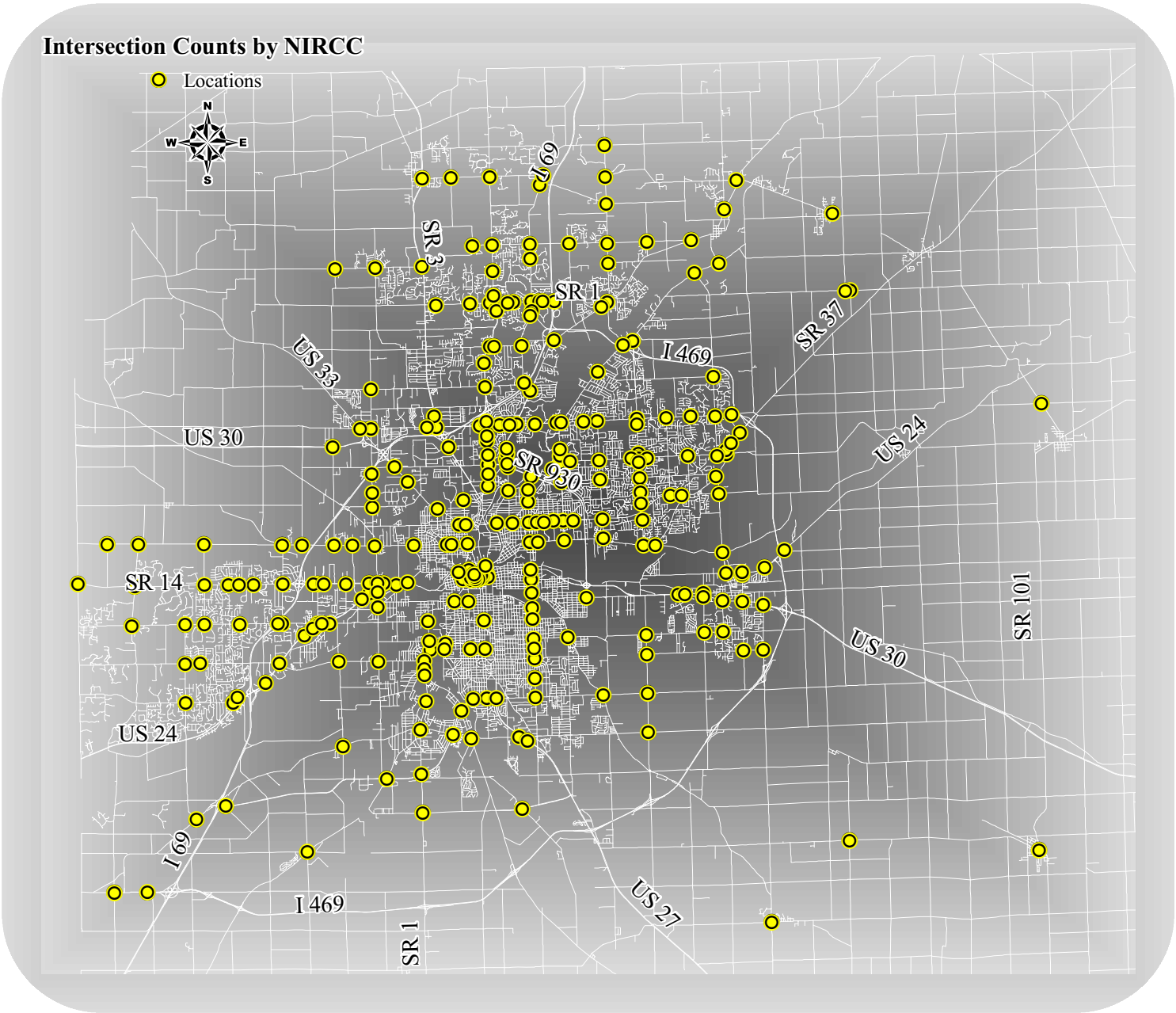


Figure 10

Signalized Intersections	Unsignalized Intersections	Unsignalized All-way Stops
•Adams Center Rd / Moeller Rd •Anthony Blvd / Lake Ave •Ardmore Ave / Engle Rd •Bishop Dwenger HS / Northwood Middle School / Washington Ctr Rd •Broadway St / Washington Blvd •Broyles Ave / St Joe Rd •Clinton St / Target / Coldwater Rd •Clinton St / Washington Ctr Rd •Coldwater Crossing / Stoney Creek/ Washington Ctr Rd •Coldwater Rd / Interstate 69 NB Off Ramp •Coldwater Rd / Washington Ctr Rd •Coventry Ln / Falls Dr •Hobson Rd / Lake Ave •Lake Ave / Randallia Dr •Landin Rd / Rose Ave •Reed Rd / St Joe Ctr Rd •St Joe Ctr Rd / River Run Trail / Towne House Retirement Center	•Adams Ctr Rd / Paulding Rd • Auburn Rd / I 469 Off Ramp •Beacon St / Lake Ave • Covington Rd / Dicke Rd •Marion Ctr Rd / Monroeville Rd	•Adams Ctr Rd / Tillman Rd • Maplecrest Rd / Monarch Dr •Rothman Rd / St Joe Rd

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 2010 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 2010 are illustrated in Figure 15.

Figure 11

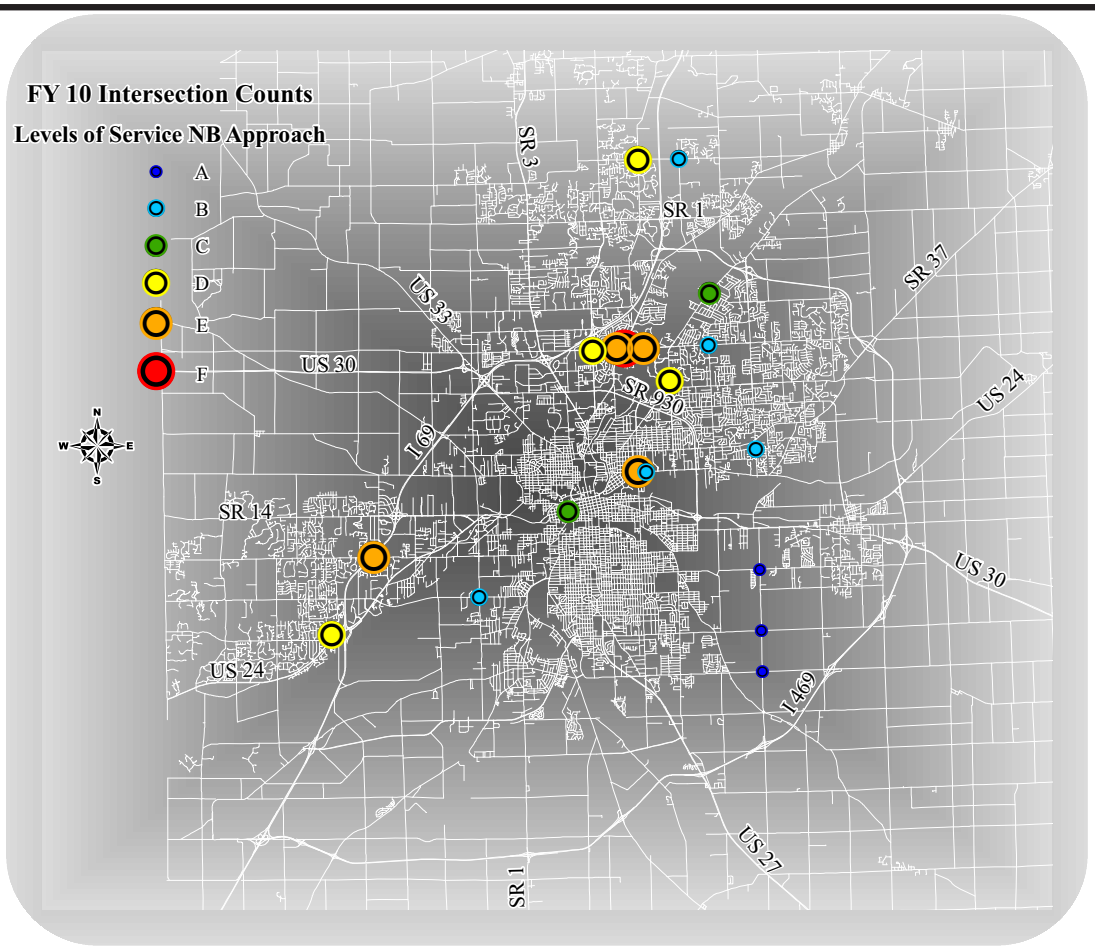
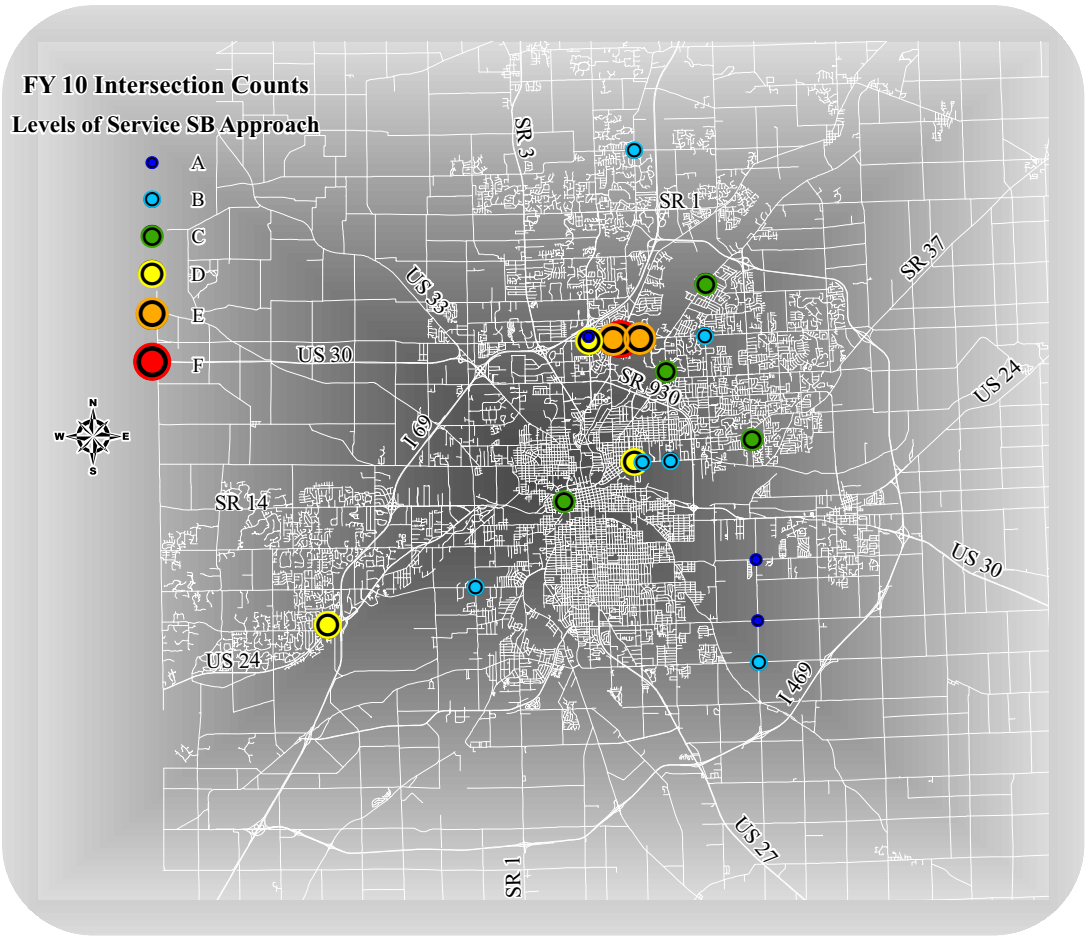


Figure 12



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

Figure 13

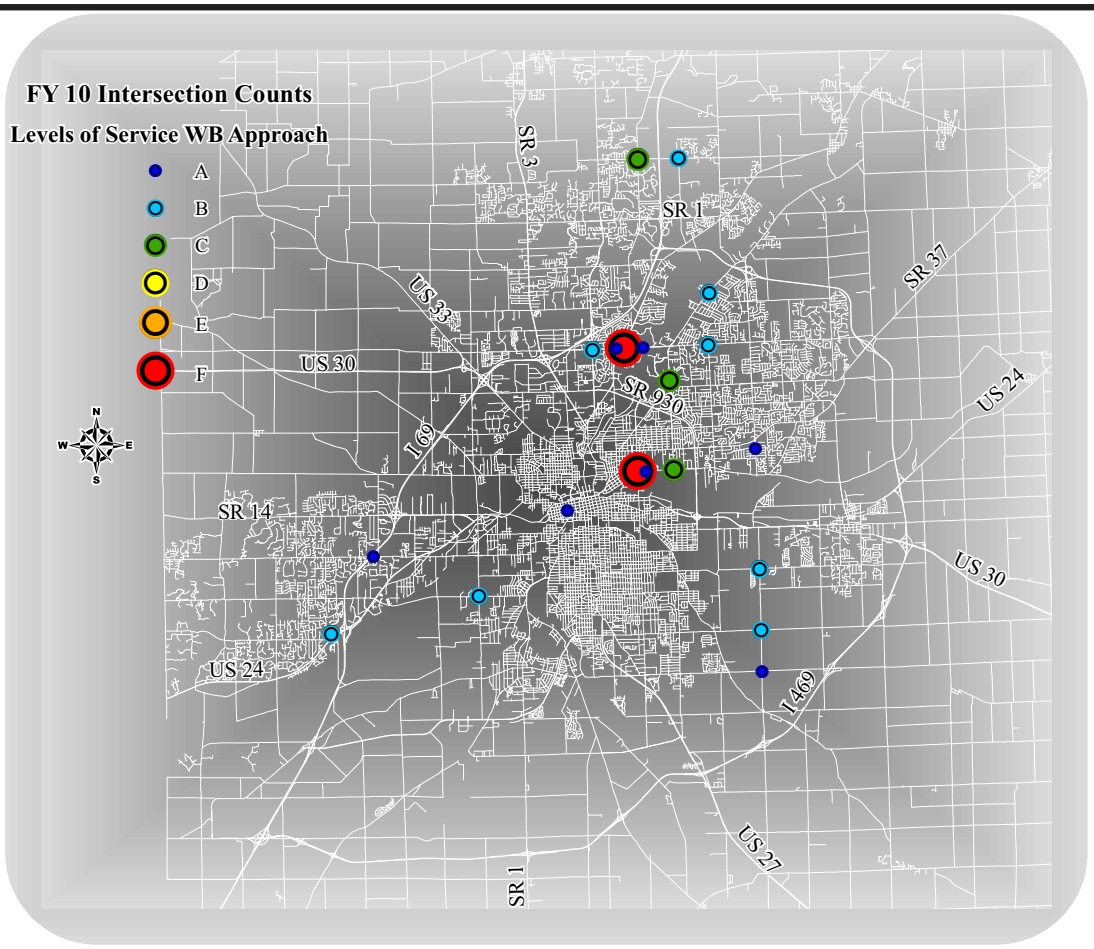
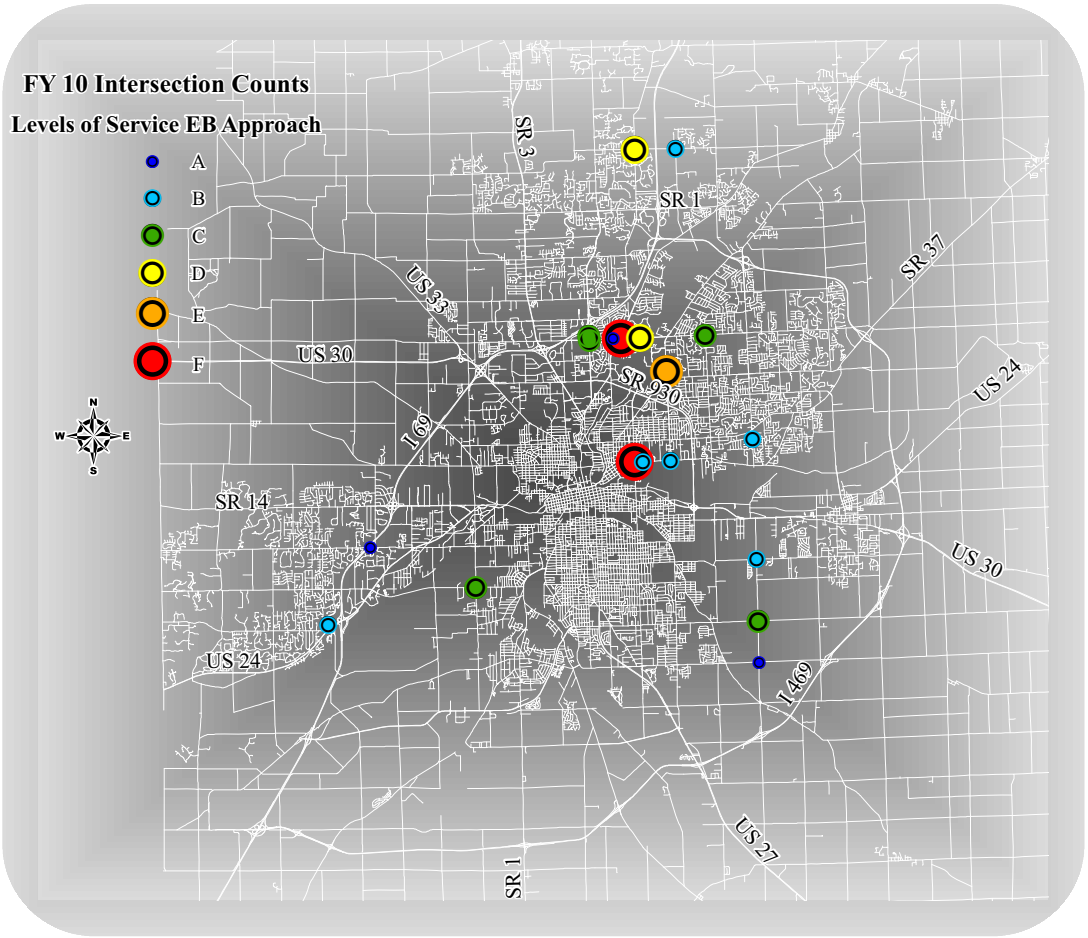
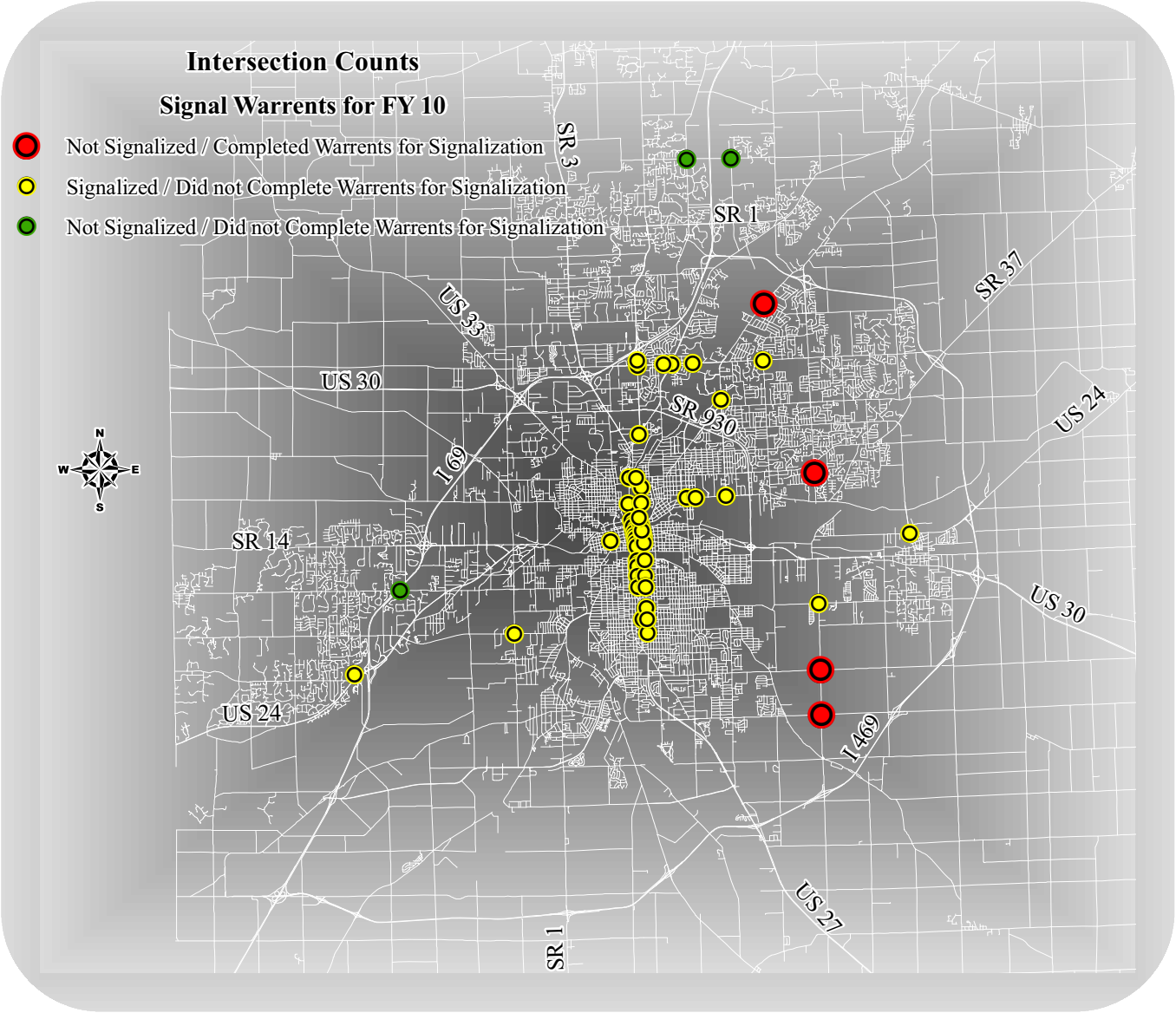


Figure 14



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

Figure 15


Intersection Counts
Signal Warrents for FY 10
Not Signalized / Completed Warrents for Signalization
Signalized / Did not Complete Warrents for Signalization
Not Signalized / Did not Complete Warrents for Signalization
N
W
E
S
SR 3
SR 1
US 33
SR 37
US 30
SR 930
US 24
I 69
SR 14
US 30
US 24
I 469
US 27
SR 1

Corridor Studies

Studies completed by the Northeastern Indiana Regional Coordinating Council

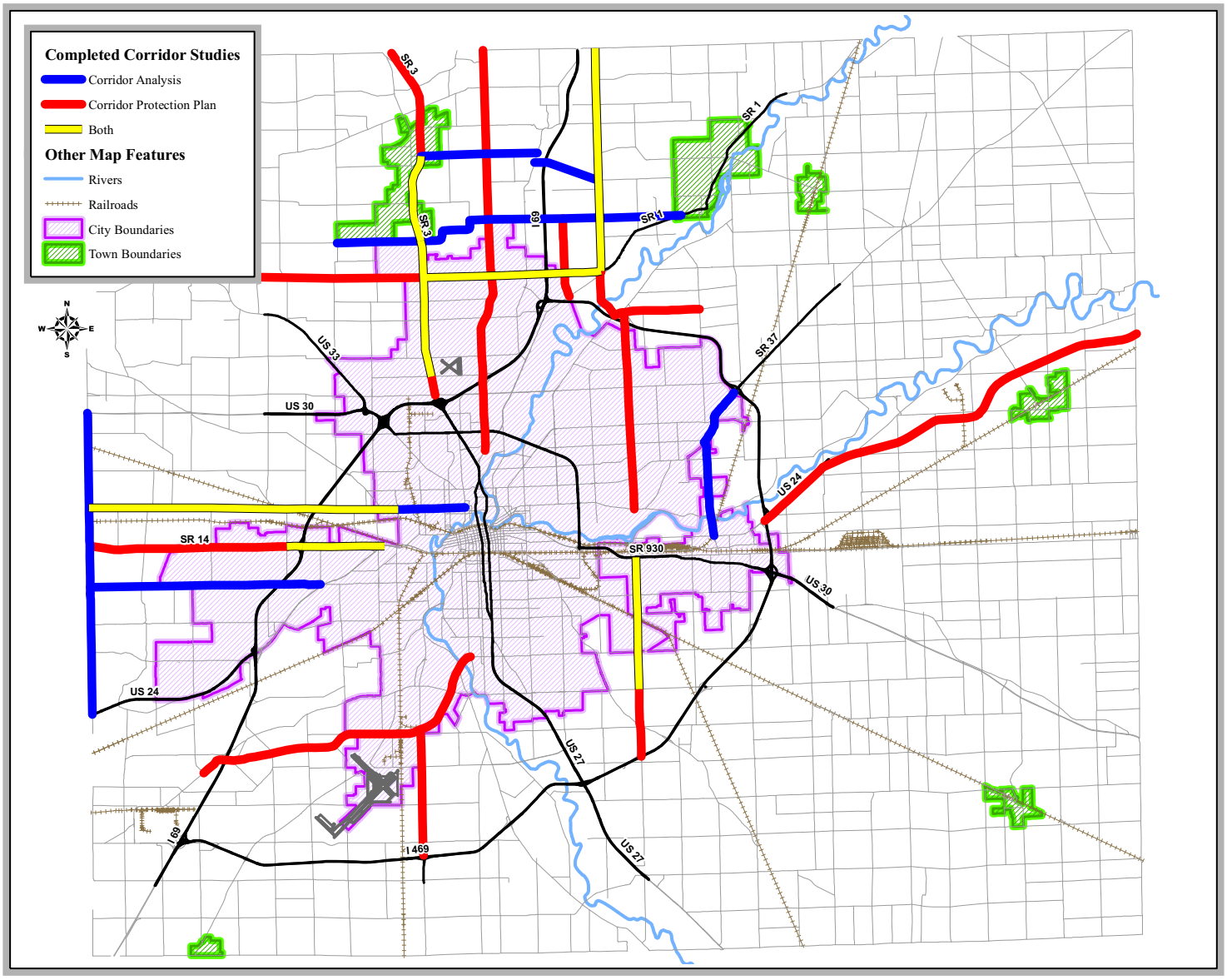
Transportation Summary Report Fiscal Year 2010

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

Figure 16



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 will 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 developing 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 2010, NIRCC completed two corridor protection plans shown in Figures 17 and 18. These studies are detailed in the following section of Corridor Studies called Corridor Protection Studies and Plans.

Figure 17

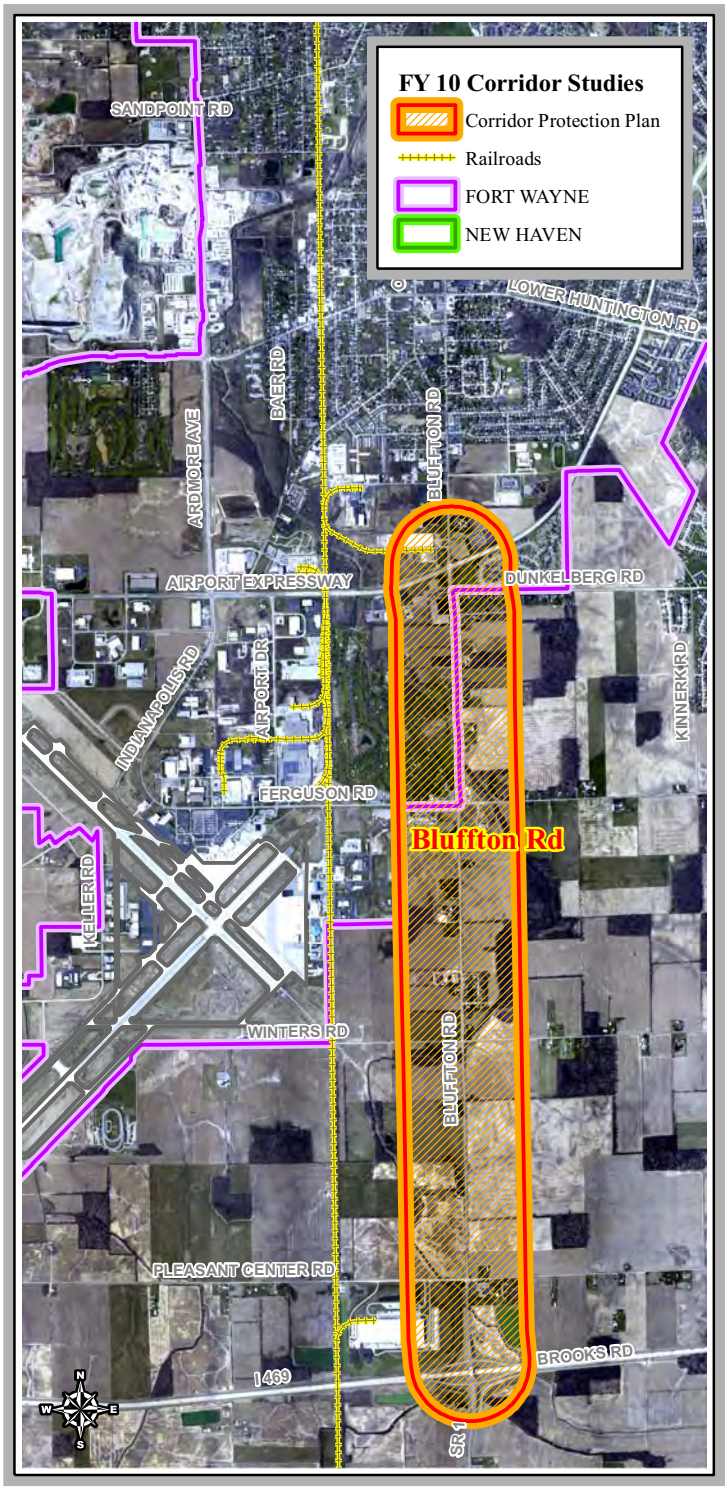
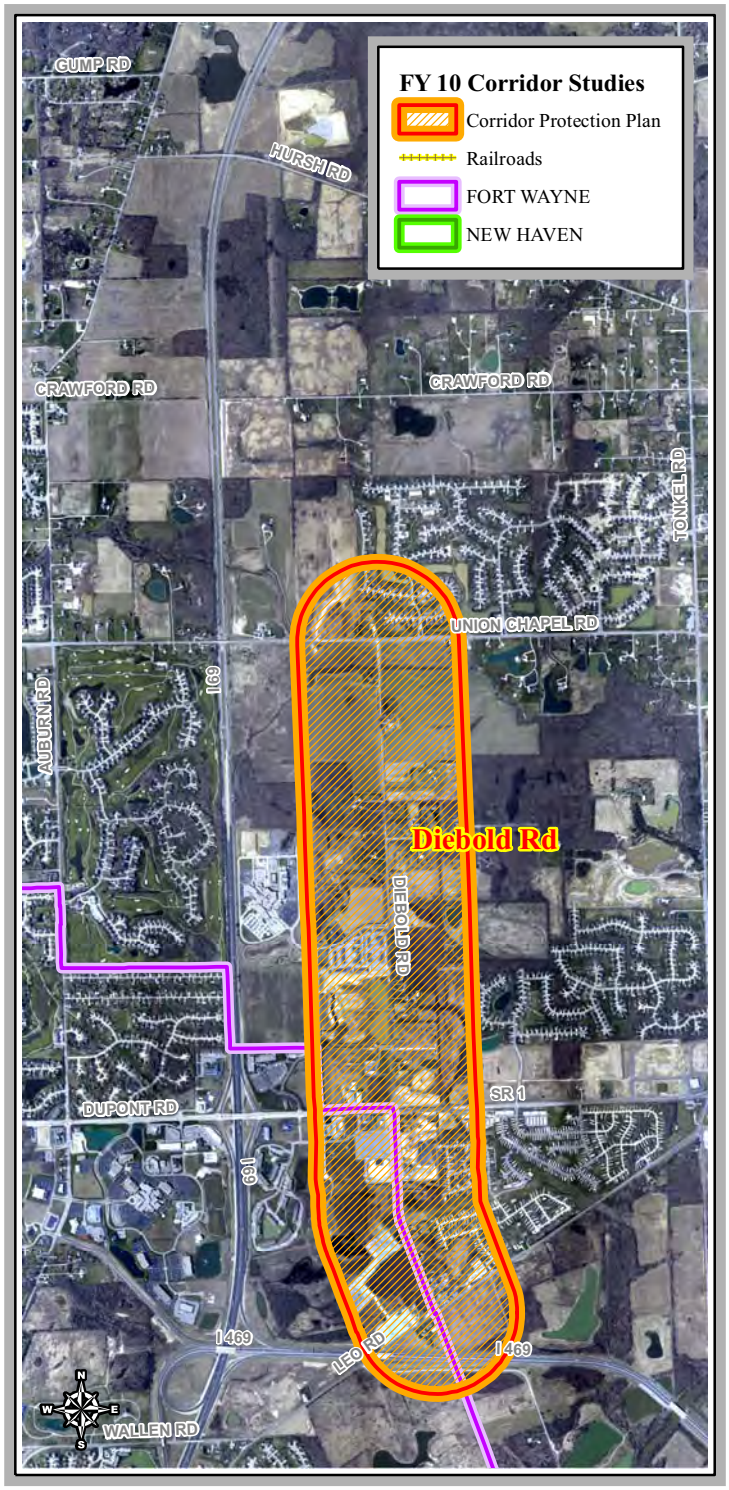


Figure 18



Corridor Protection Studies and Plans

Corridor Protection Studies and Plans

Bluffton Road Corridor Protection Plan

The Bluffton Road corridor protection plan is from Interstate 469 to Airport Expressway. This corridor is classified as an Arterial and is the primary point of access to the Fort Wayne International Airport. Recent and anticipated development in the surrounding area has significantly increased the use of this corridor. The optimal goal of the access recommendations included in this corridor protection plan is to complement and sustain the current and planned improvements along the corridor to maintain and improve both the efficiency and the safety of the corridor. The following are access recommendations for the Bluffton Road corridor from Interstate 469 to Airport Expressway. These recommendations are subject to engineering review and adjustments as needed. All accesses and developable land will have the following recommendations. Please note that this is a brief summary and that the full recommendations and visuals are provided in the final report.

- ***Encouragement of interconnection of developments by way of streets and sidewalks, when and where appropriate***
- ***Accesses to meet Access Standards Manual requirements***
- ***Full Accesses off of Bluffton Road to be a minimum of 1000' from major intersections (unless noted)***
- ***Full Accesses off of connecting roads to be a minimum of 1000' from Bluffton Road (unless noted)***
- ***Recommended Right-of-way: Bluffton Road a minimum of 75' from centerline***
- ***Corner cuts where appropriate***
- ***Interconnection of Signals throughout corridor***
- ***Signals to be no less than 1 mile apart***

Bluffton Road: Interstate 469 to Airport Expressway (refer to Figure 19)

I 469 to Pleasant Center Road

- No additional access through this segment

Pleasant Center Road to Winters Road

- Full access off of Pleasant Center Road to the north a minimum of 1,000' west of the intersection with Bluffton Road, preferably directly across from full access to the south approximately 2,000' west of the intersection with Bluffton Road
- Full access off of Pleasant Center Road to the north and south approximately 1,500' east of the intersection with Bluffton Road at the joint property line.
- Full access to the east and west a minimum of 1,000' north of the intersection with Pleasant Center Road.
- Full access to the east and west approximately 2,600' north of the intersection with Pleasant Center Road at the joint property line.
- Full access to the east and west a minimum of 1,000' south of the intersection with Winters Road.
- Full access off of Winters Road to the south a minimum of 1,000' west of the intersection with Bluffton Road, preferably directly across from full access to the north approximately 1,300' west of the intersection with Bluffton Road
- Full access off of Winters Road to the south approximately 1,200' east of the intersection with Bluffton Road at the joint property line, preferably directly across from full access to the north.
- No additional access through this segment

Winters Road to Ferguson Road

- Full access off of Winters Road to the north approximately 1,300' west of the intersection with Bluffton Road at the joint property line, preferably directly across from full access to the south.
- Full access off of Winters Road to the north approximately 1,200' east of the intersection with Bluffton Road, preferably directly across from full access to the south.
- Full access approximately 850' north of the intersection with Winters Road, directly across from Glamis Drive.
- Full access to the east and west approximately 2,000' north of the intersection with Winters Road.
- Full access to the east and west a minimum of 1,000' south of the intersection with Ferguson Road.
- No additional access through this segment

Ferguson Road to Airport Expressway

- Full access off of Ferguson Road to the north and south approximately 2,000' east of the intersection with Bluffton Road.
- Full access to the east approximately 2,000' north of the intersection with Ferguson Road.
- Full access to the east and west approximately 1,500' south of the intersection with Airport Expressway.
- No additional access through this segment

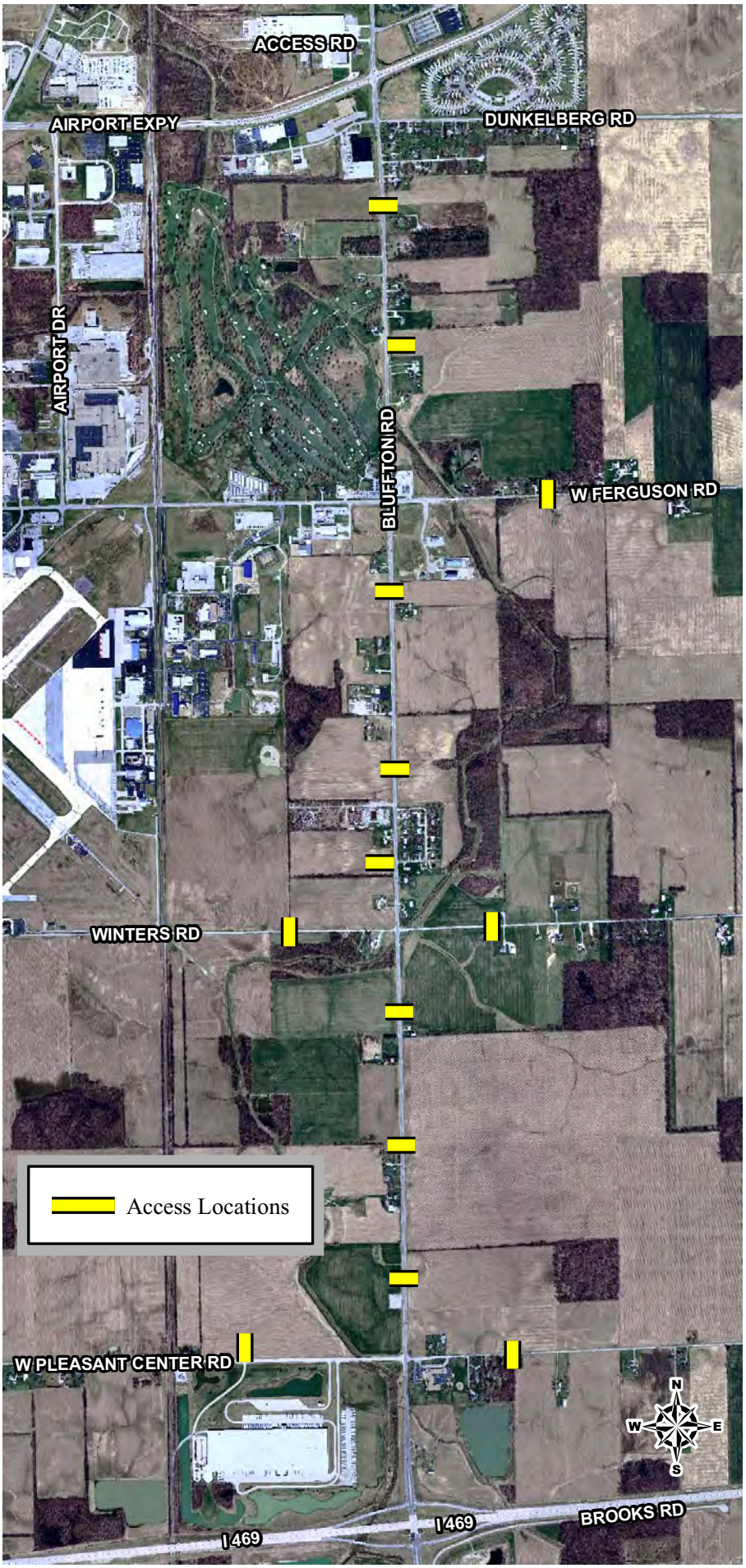


Figure 19
Bluffton Road Corridor Protection Plan

Corridor Protection Studies and Plans

Diebold Road Corridor Protection Plan

The Diebold Road Corridor Protection Plan is from North Clinton Street to union Chapel Road. Diebold Road is classified as a Collector from North Clinton Street to Dupont Road and as a local street from Dupont Road to Union Chapel Road. With the increased development along Dupont Road east of Interstate 69 and the current expansion and development occurring at the Parkview North Campus and the surrounding area, the Diebold Road Corridor has become a recent priority of local government. Diebold Road is also planned to be widened from Dupont Road to Union Chapel Road. The optimal goal of the access recommendations included in this corridor protection plan is to complement and sustain the current and planned improvements along the corridor to maintain and improve both the efficiency and the safety of the corridor. The following are access recommendations for the Diebold Road corridor from North Clinton Street to Union Chapel. These recommendations are subject to engineering review and adjustments as needed. All accesses and developable land will have the following recommendations. Please note that this is a brief summary and that the full recommendations and visuals are provided in the final report.

- ***Encouragement of interconnection of developments by way of streets and sidewalks, when and where appropriate***
- ***Accesses to meet Access Standards Manual requirements***
- ***Full Accesses off of Diebold Road to be a minimum of 1000' from major intersections (unless noted)***
- ***Full Accesses off of connecting roads to be a minimum of 1000' from Diebold Road (unless noted)***
- ***Recommended Right-of-way: Diebold Road a minimum of 50' from centerline***
- ***Corner cuts where appropriate***
- ***Interconnection of Signals throughout corridor***

Diebold Road: North Clinton Street to Union Chapel Road (refer to Figure 20)

North Clinton Street to Dupont Road / SR 1

- Full access to the south at the intersection of South Clinton Street and Diebold Road.
- Full access to the east approximately 750' south of the intersection with Dupont Road / SR1, directly across from primary entrance into the Movie Theater to the west.
- No additional access through this segment

Dupont Road / SR 1to New Vision Drive

- Full access to the east approximately 1,000' north of the intersection with Dupont Road / SR1
- No additional access through this segment

New Vision Drive to Union Chapel Road

- Full access to the east directly across from New Vision Drive to the west.
- Full access to the east approximately 600' north of the intersection with New Vision Drive.
- Full access to the west and east approximately 1,300' south of the intersection with Union Chapel Road.
- Due to the proposed I-69 interchange at Union Chapel Road there will be no full access west of Diebold Road permitted between the interchange and Diebold Road.
- Full access east of Diebold Road off of Union Chapel Road to the south approximately 700' east of the intersection with Diebold Road directly across Drayton Drive to the north.
- No additional access through this segment

Figure 20

Diebold Road
Corridor Protection Plan

Travel Time and Delay Studies

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2010

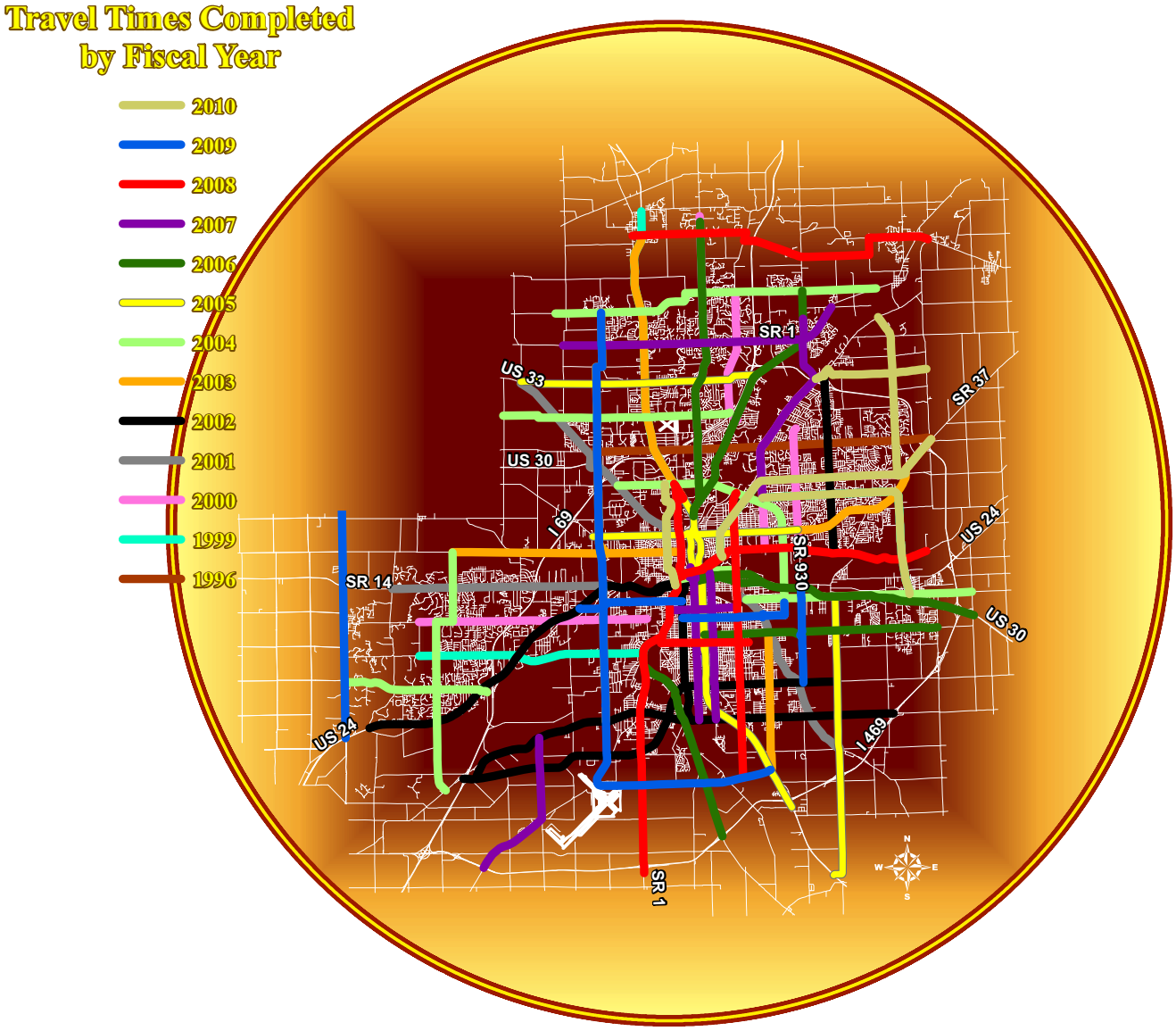
TRAVEL TIME & DELAY STUDIES

Another activity conducted by NIRCC is the travel time and delay studies. Figure 21 illustrates the travel time and delay studies that have been completed since Fiscal Year 1996. Since all the travel times from fiscal year 1997 and 1998 have been redone, those years are not displayed. 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.

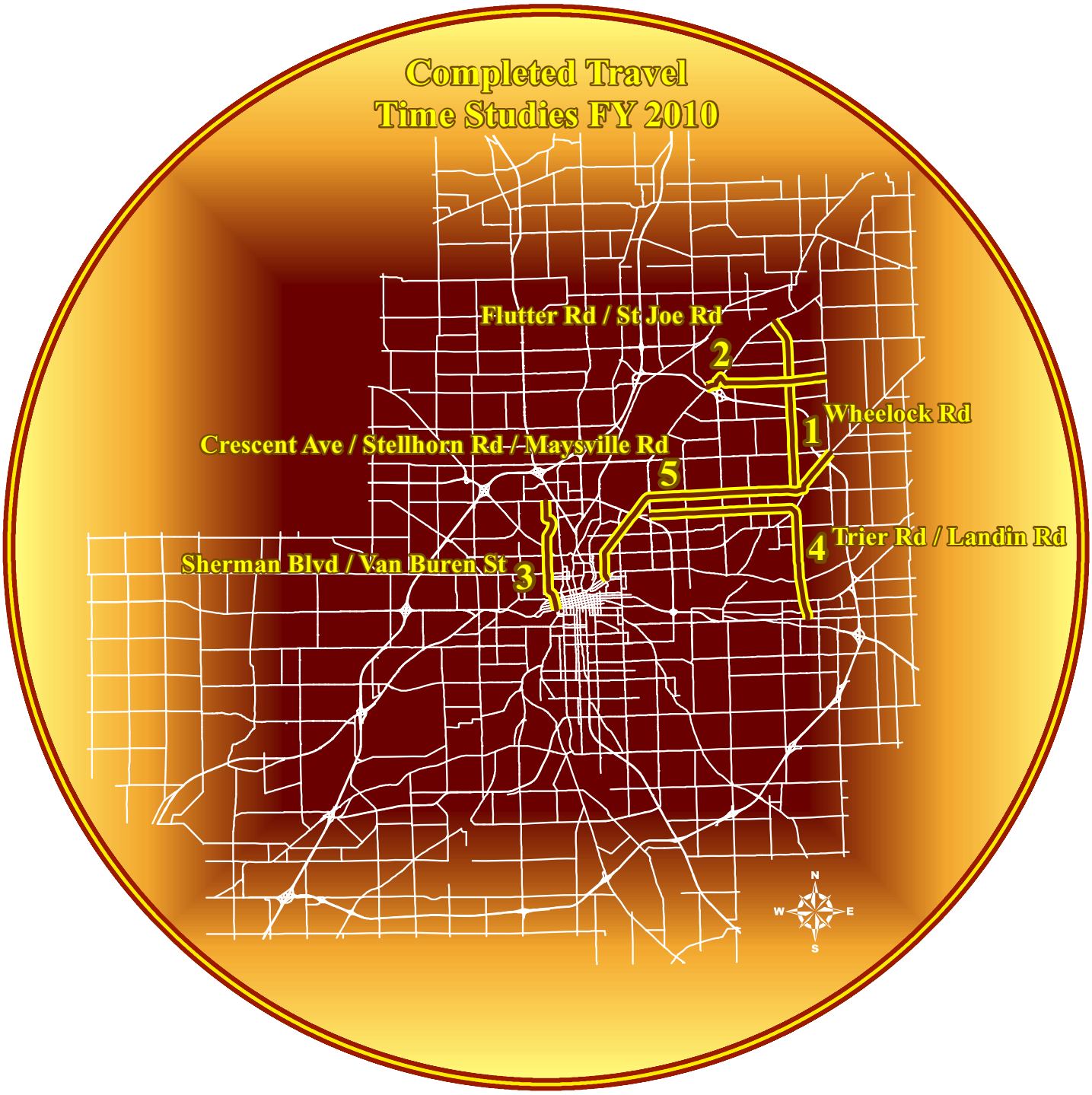
- *Identification of problem locations on facilities by virtue of high travel times and delay.*
- *Measurement of arterial level of service.*
- *Input into transportation planning models.*
- *Evaluations of route improvements.*
- *Input to economic analysis of transportation alternatives.*

Figure 21



NIRCC studied five (5) corridors during Fiscal Year 2010 including: **1) Wheelock Road** from Stellhorn Road to St Joe Road, **2) Flutter Road / St Joe Road** from Mayhew Road to Schwartz Road, **3) Sherman Boulevard / Van Buren Street** from Jefferson Boulevard to Coliseum Boulevard, **4) Trier Road / Landin Road / Broadway Street** from Hobson Road to Maysville Road & Maysville Road to Lincoln Hwy (New Haven), and **5) Crescent Avenue / Stellhorn Road / Maysville Road** from Columbia Avenue to St Joe Center Road. The travel time studies completed during Fiscal Year 2010 are illustrated in Figure 22 below.

Figure 22



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 23 - 36 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 five corridors studied in fiscal year 2010. 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.

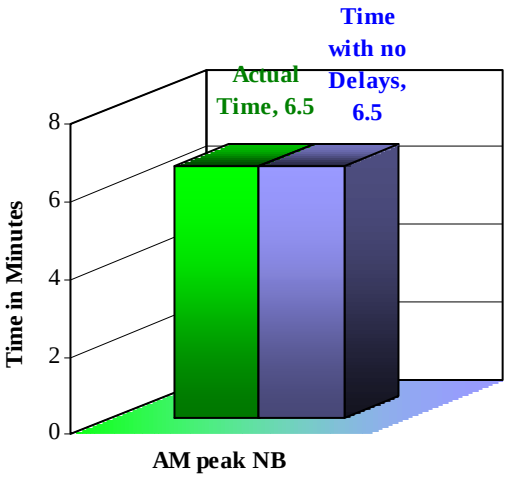
The other two bar charts display the average speed that NIRCC staff actually encountered from the beginning to the end of the travel time corridor during the time period with the greatest amount of delay, shown in red, and the time period with the least amount of delay, shown in green. These two bar 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.

Travel Time and Delay Summary Section for Fiscal Year 2010

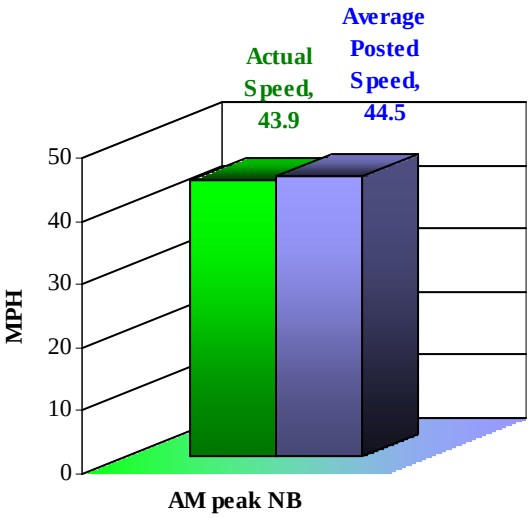
Figure 23

Wheelock Road
AM Peak

Travel Time with the Least Amount of delay



Travel Speed with the Least Amount of delay



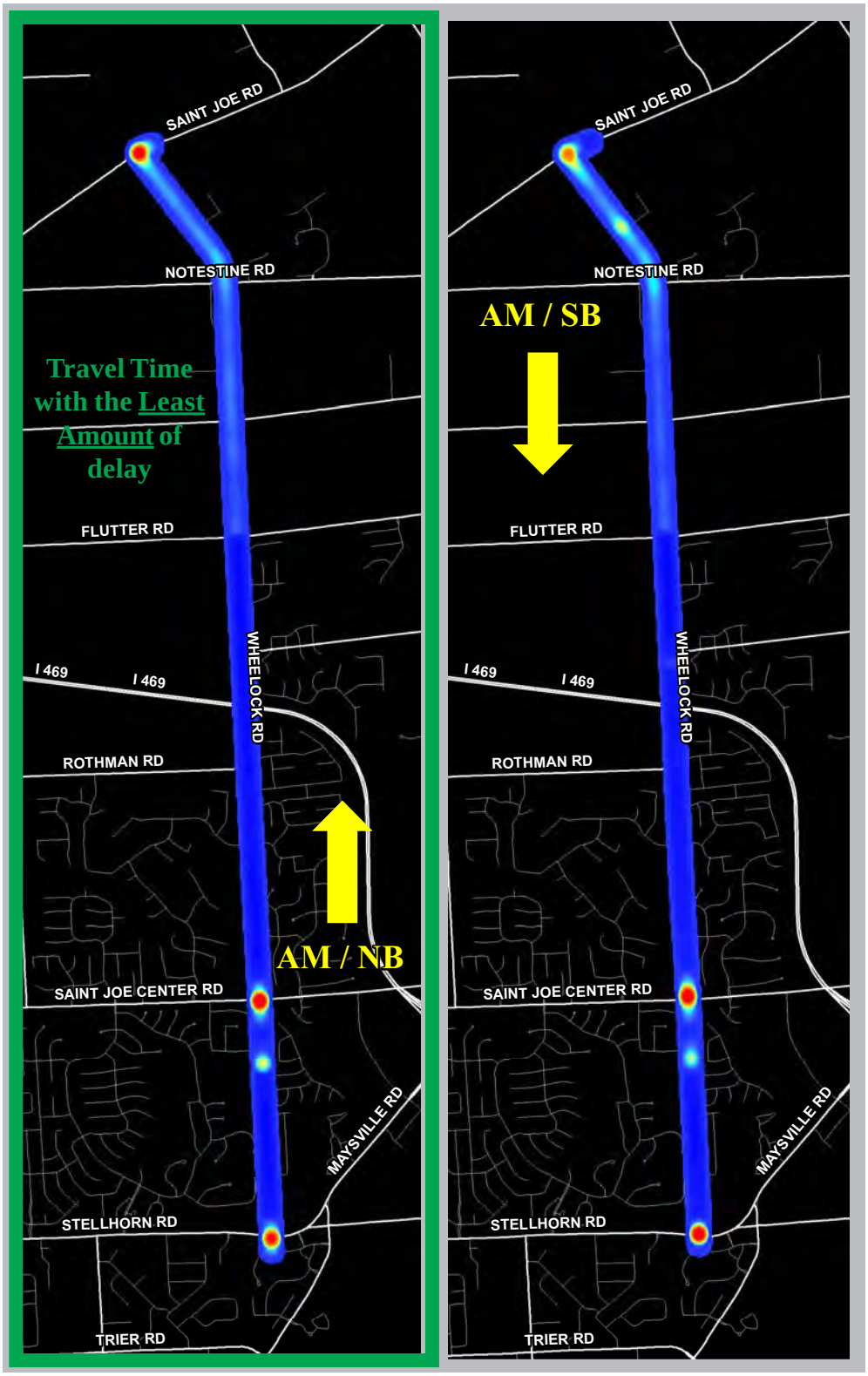
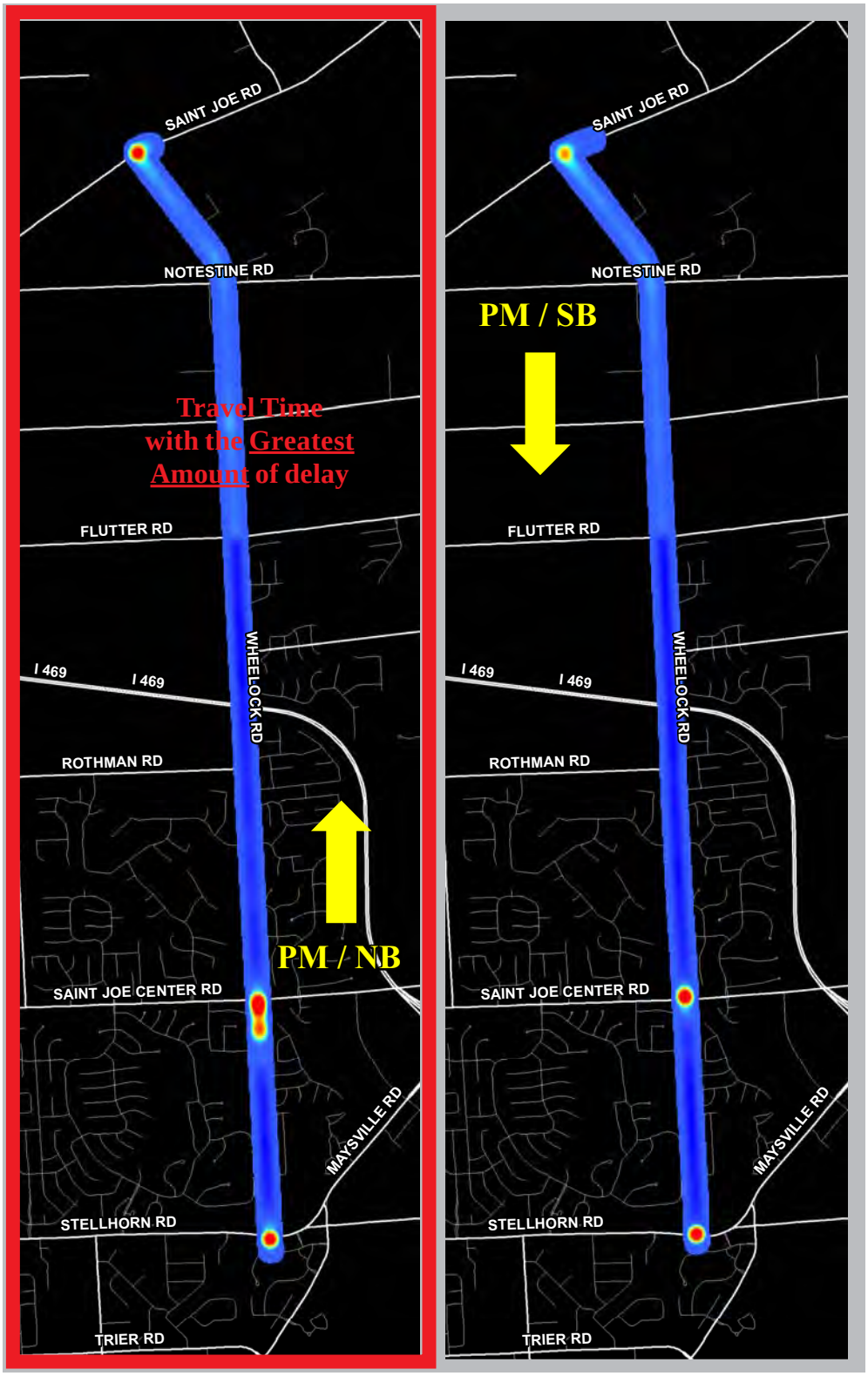
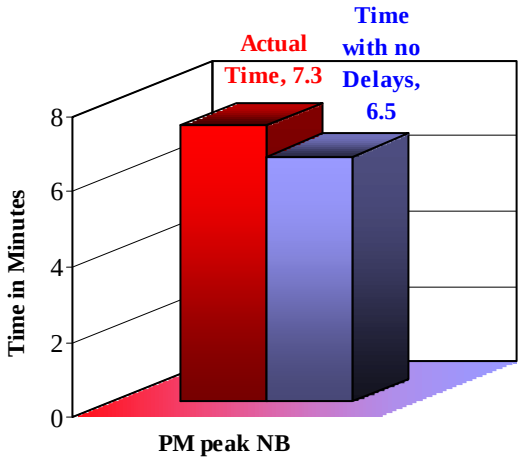


Figure 24

Wheelock Road
PM Peak



Travel Time with the Greatest Amount of delay



Travel Speed with the Greatest Amount of delay

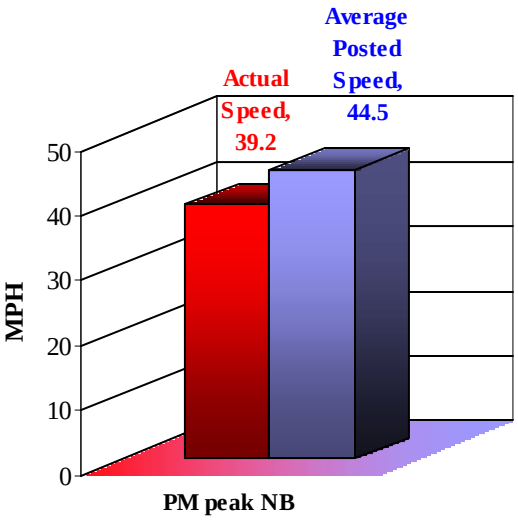
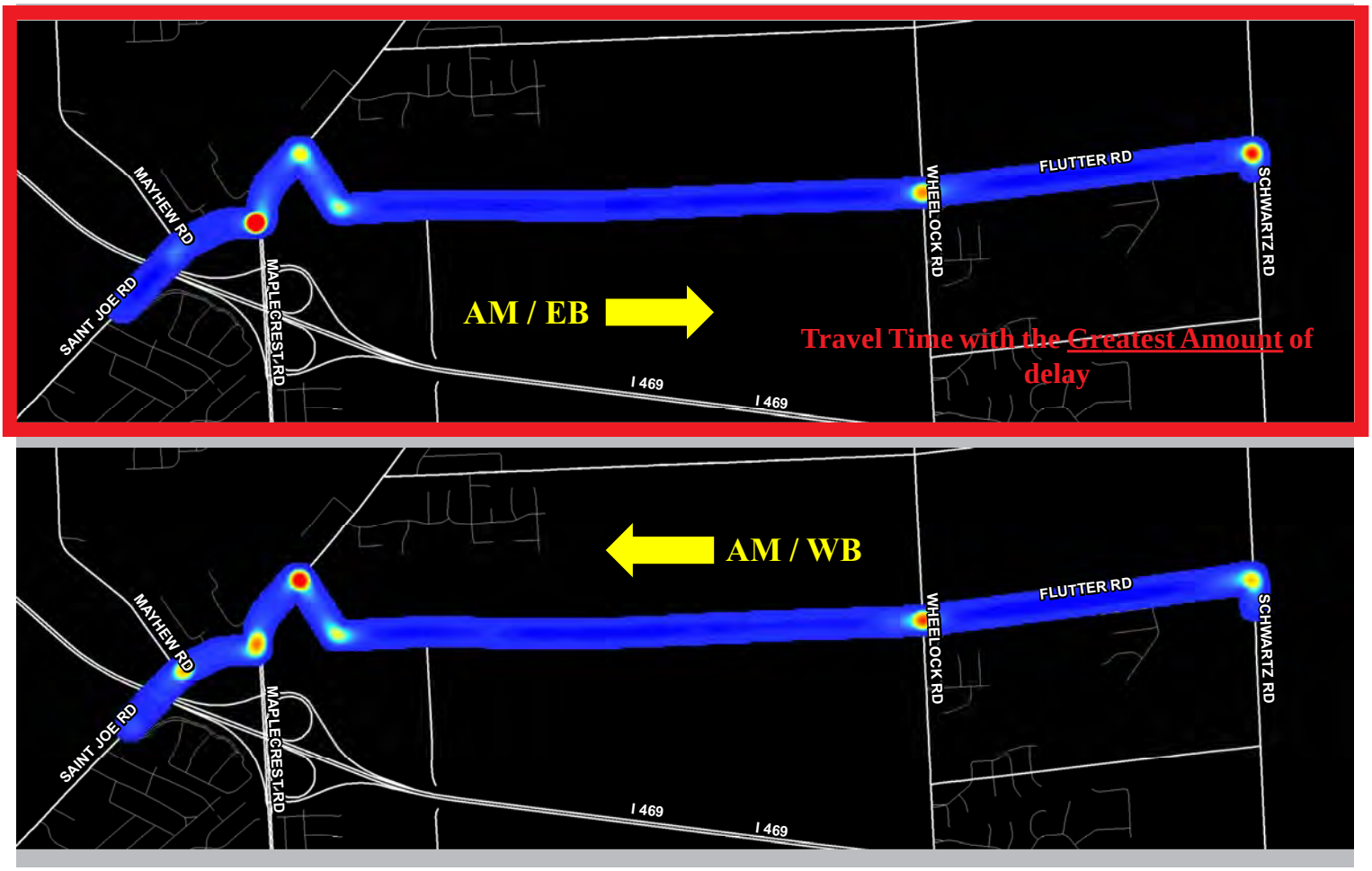
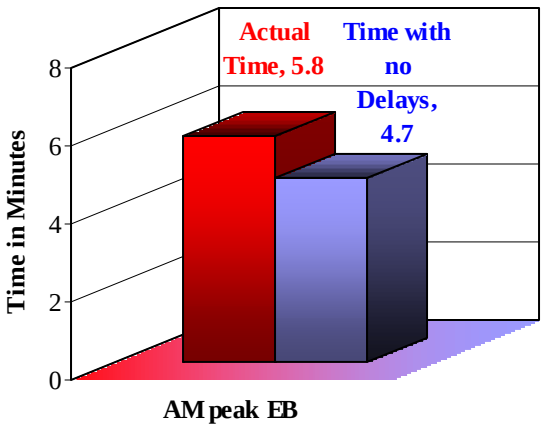


Figure 25

Flutter Road / St Joe Road
AM Peak



Travel Time with the Greatest Amount of delay



Travel Speed with the Greatest Amount of delay

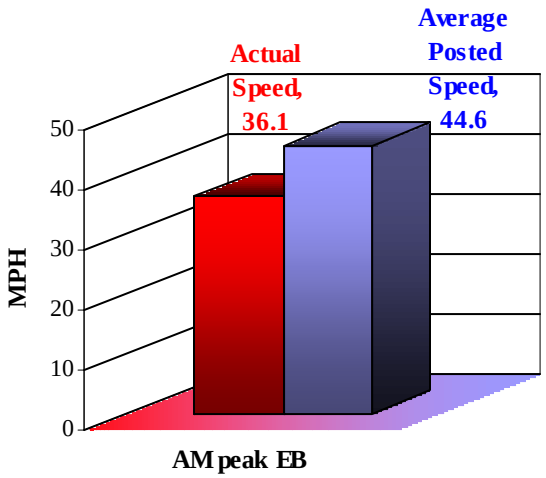
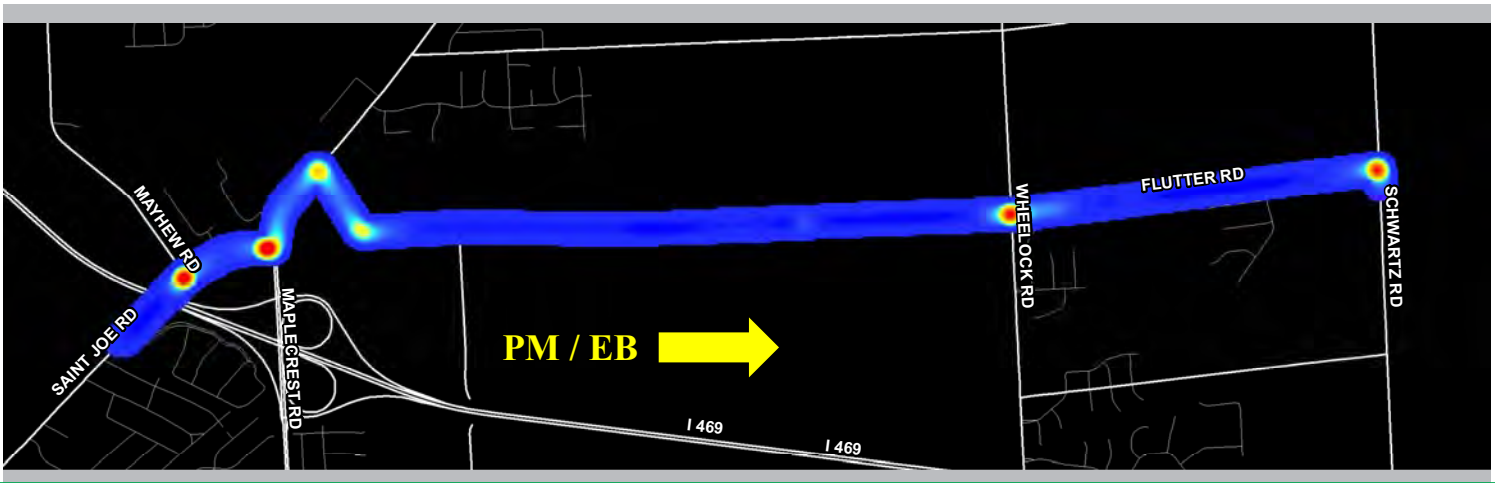
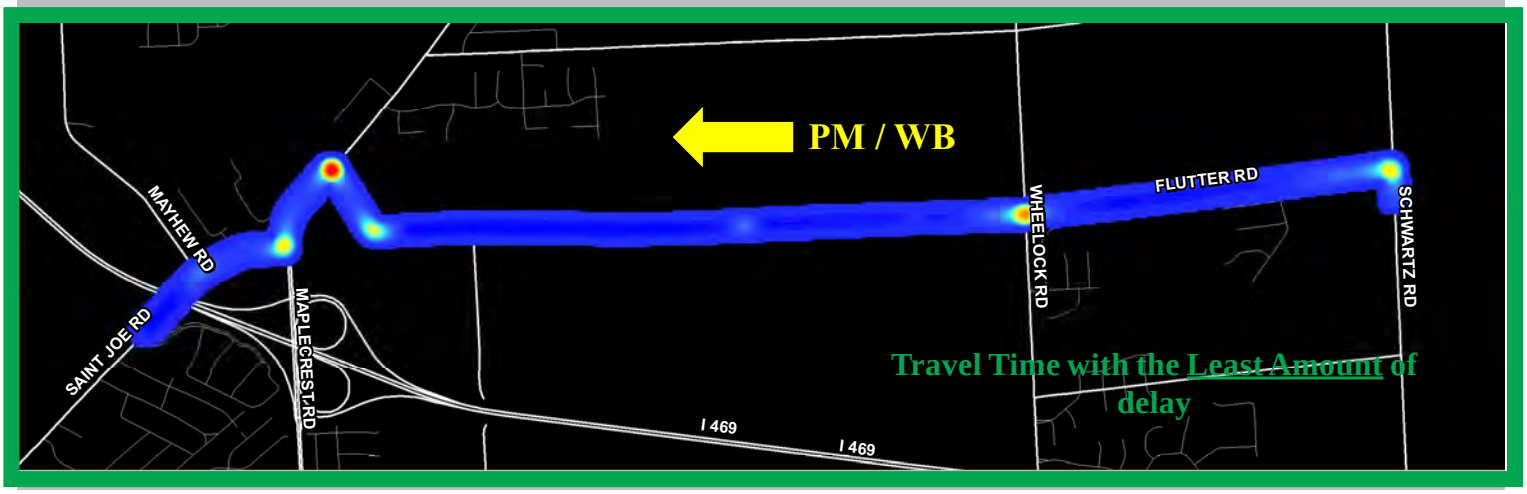


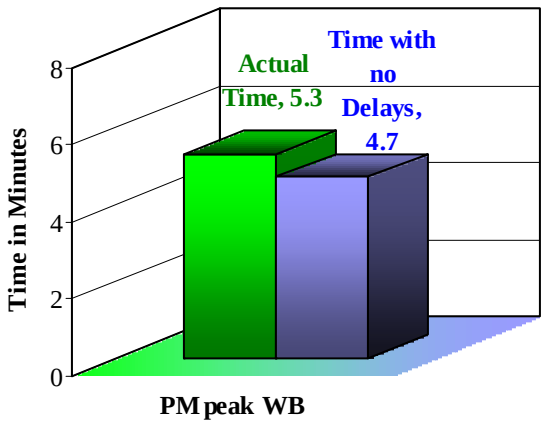
Figure 26

Flutter Road / St Joe Road
PM Peak





Travel Time with the Least Amount of delay



Travel Speed with the Least Amount of delay

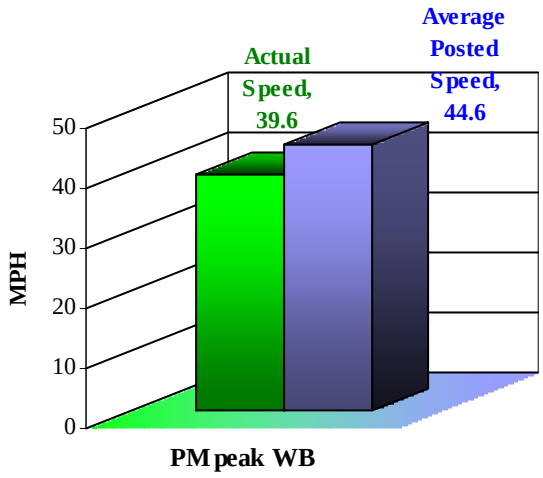
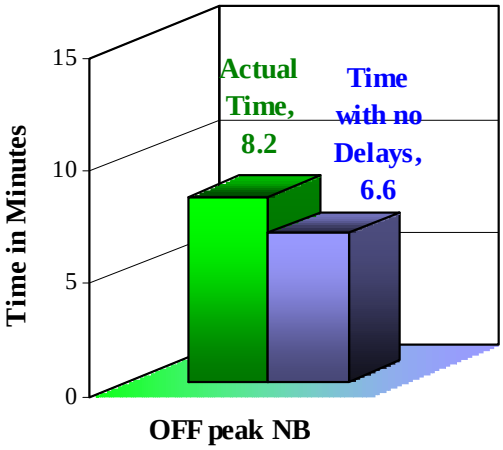


Figure 27

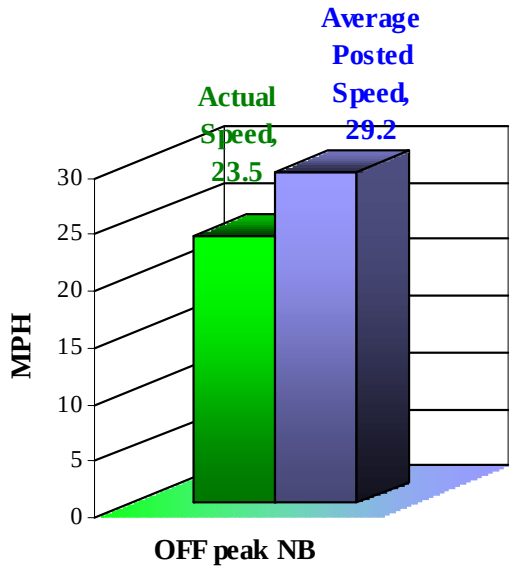
Sherman Boulevard / Van Buren Street
AM Peak

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

Travel Time with the Least delay



Travel Speed with the Least delay



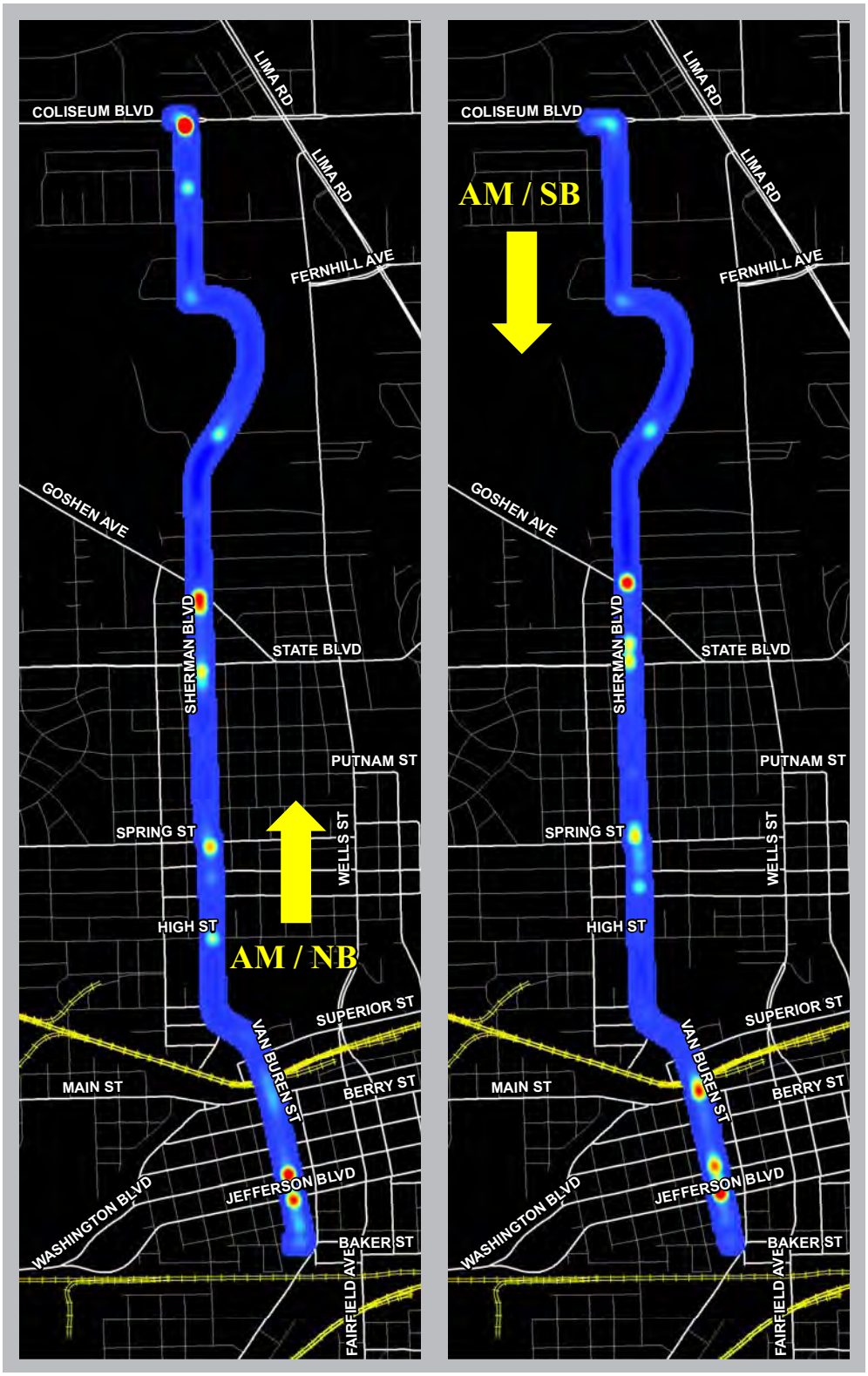
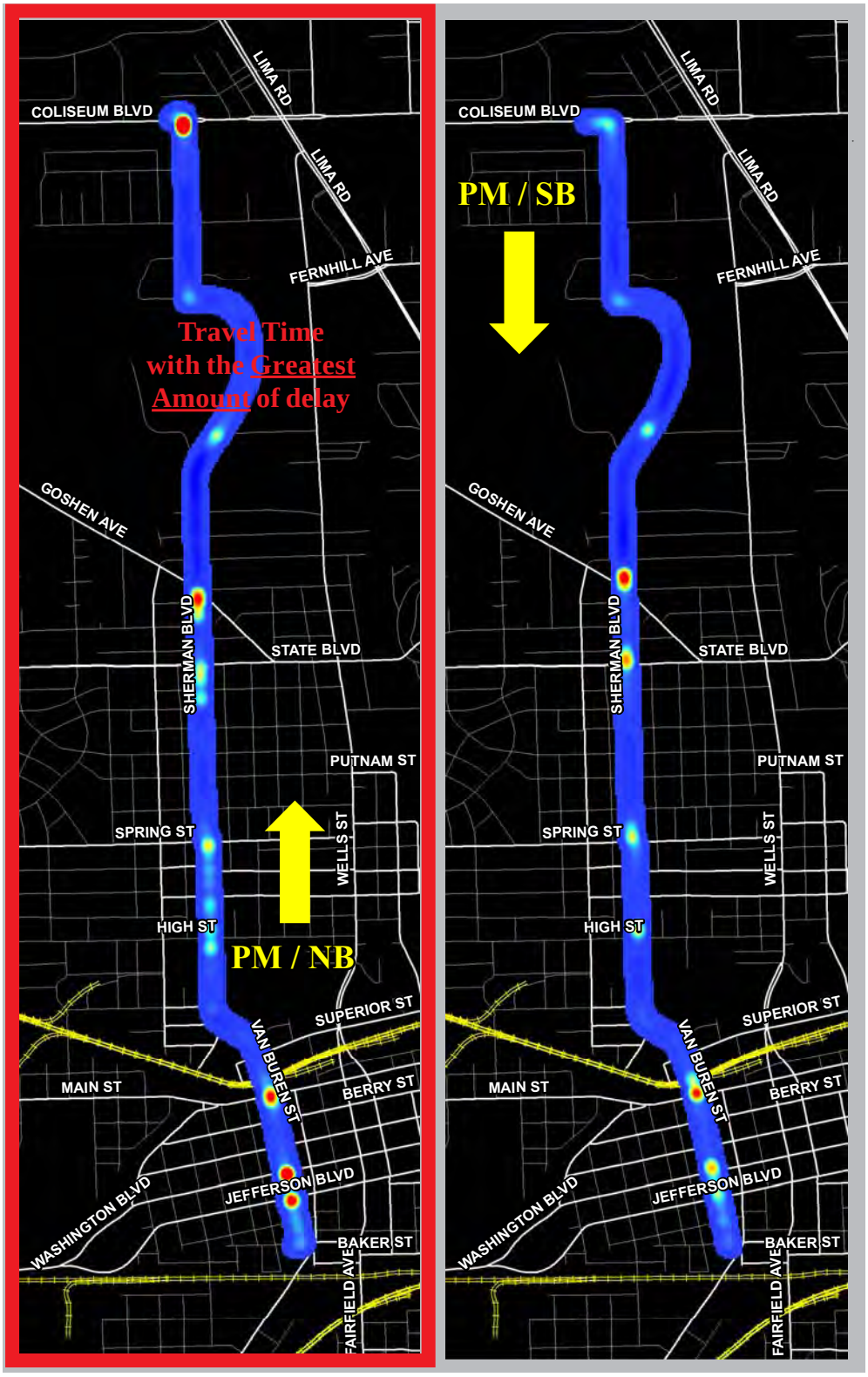
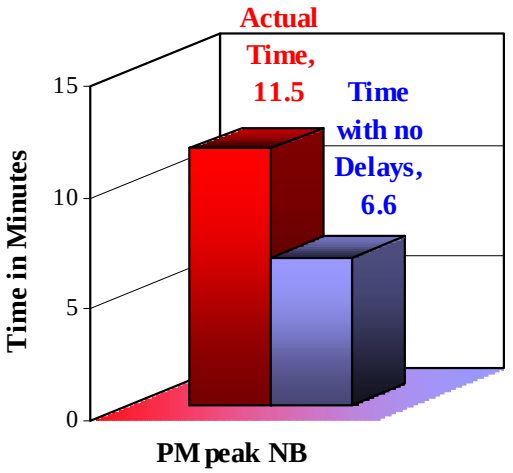


Figure 28

Sherman Boulevard / Van Buren Street
PM Peak



Travel Time with the Greatest Amount of delay



Travel Speed with the Greatest Amount of delay

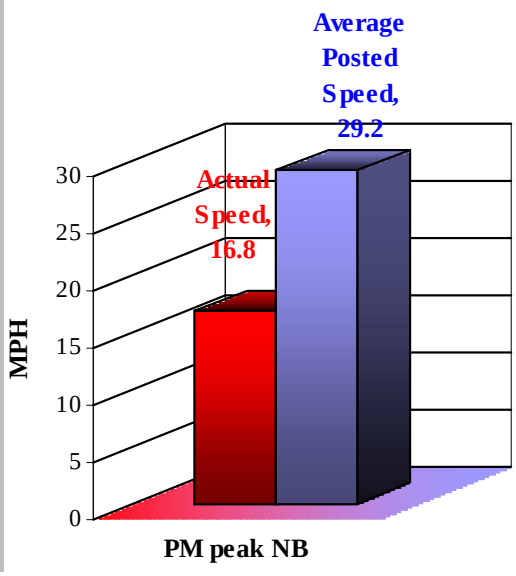
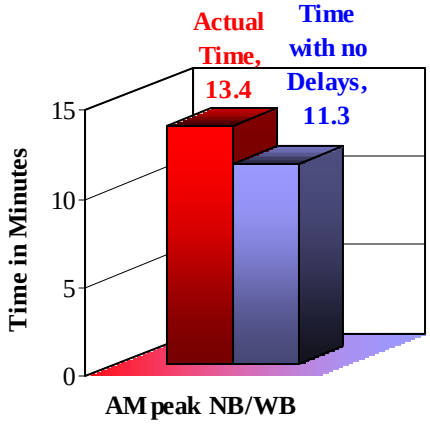


Figure 29

Trier Road / Landin Road / Broadway Street
AM Peak

Travel Time with the Greatest delay



Travel Speed with the Greatest delay

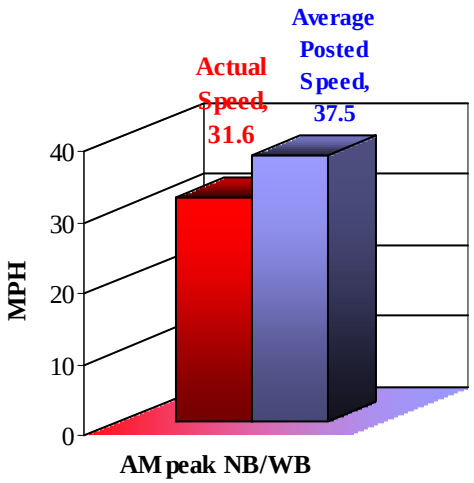


Figure 30

Trier Road / Landin Road / Broadway Street
AM Peak

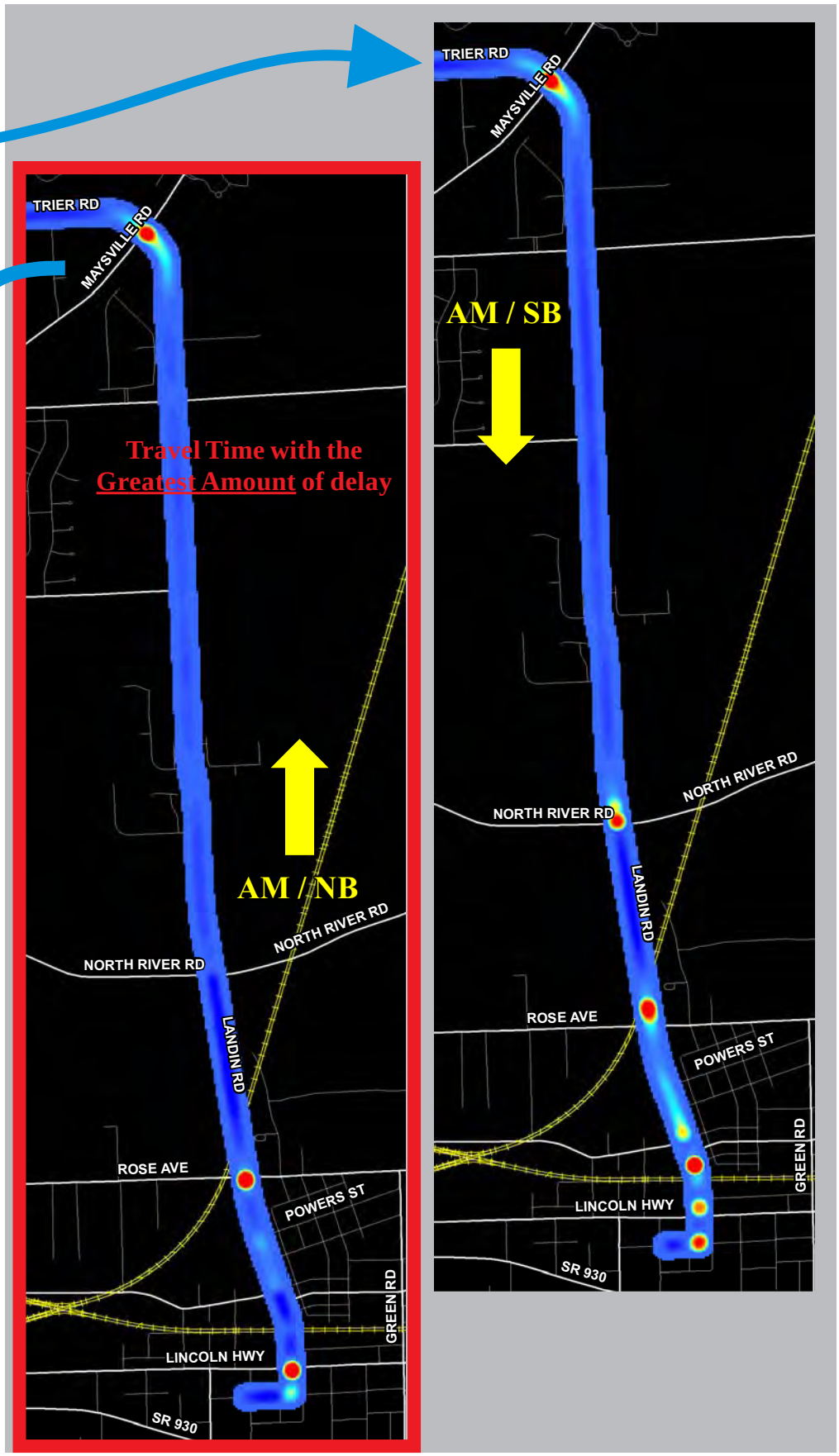
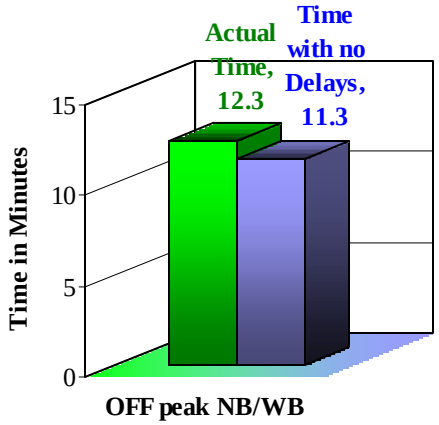


Figure 31

Trier Road / Landin Road / Broadway Street
PM Peak

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

Travel Time with the Least delay



Travel Speed with the Least delay

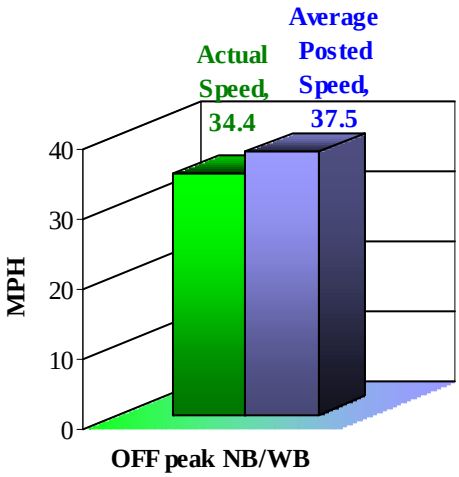


Figure 32

Trier Road / Landin Road / Broadway Street
PM Peak

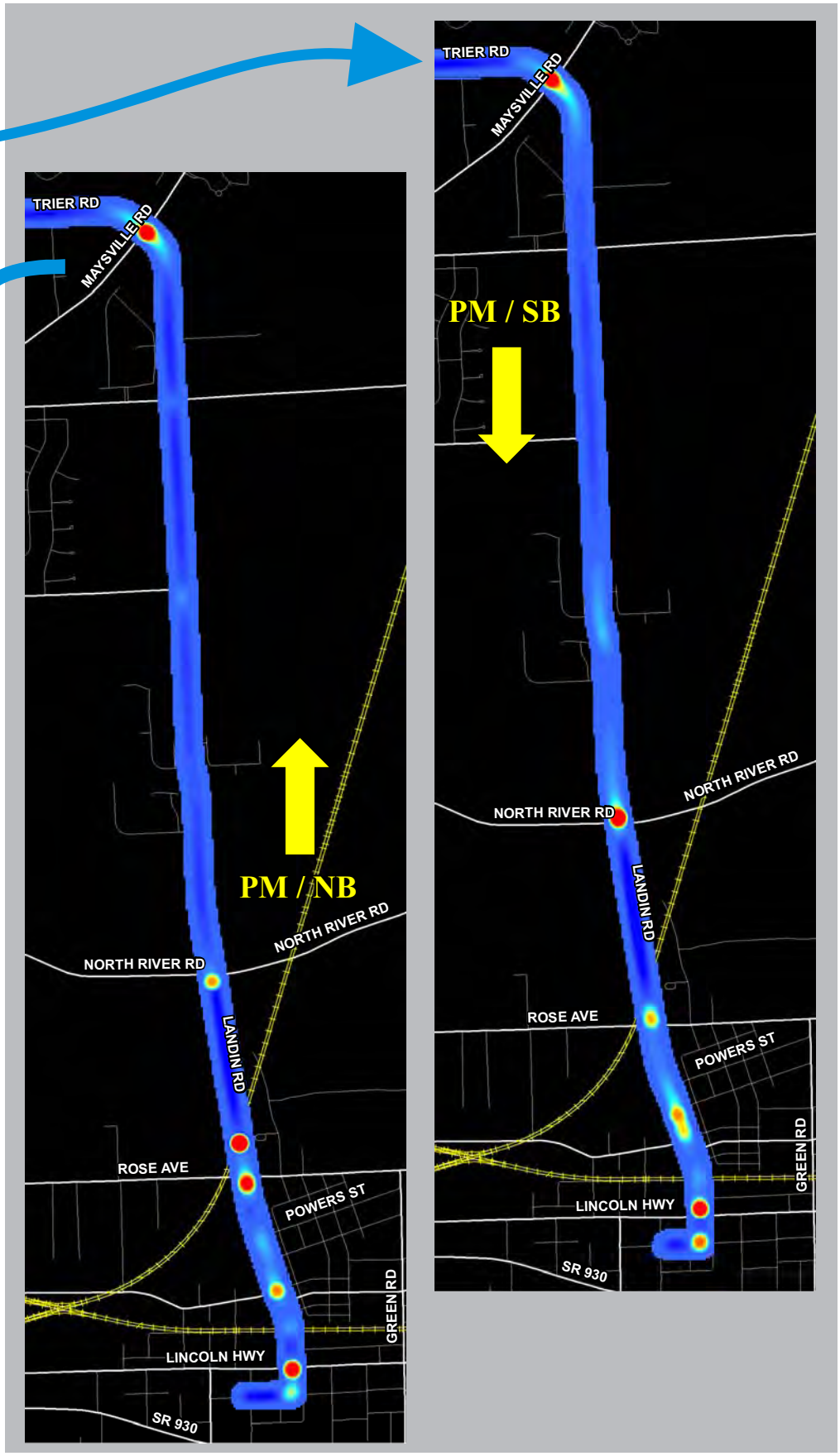


Figure 33

Crescent Avenue / Stellhorn Road / Maysville Road
AM Peak

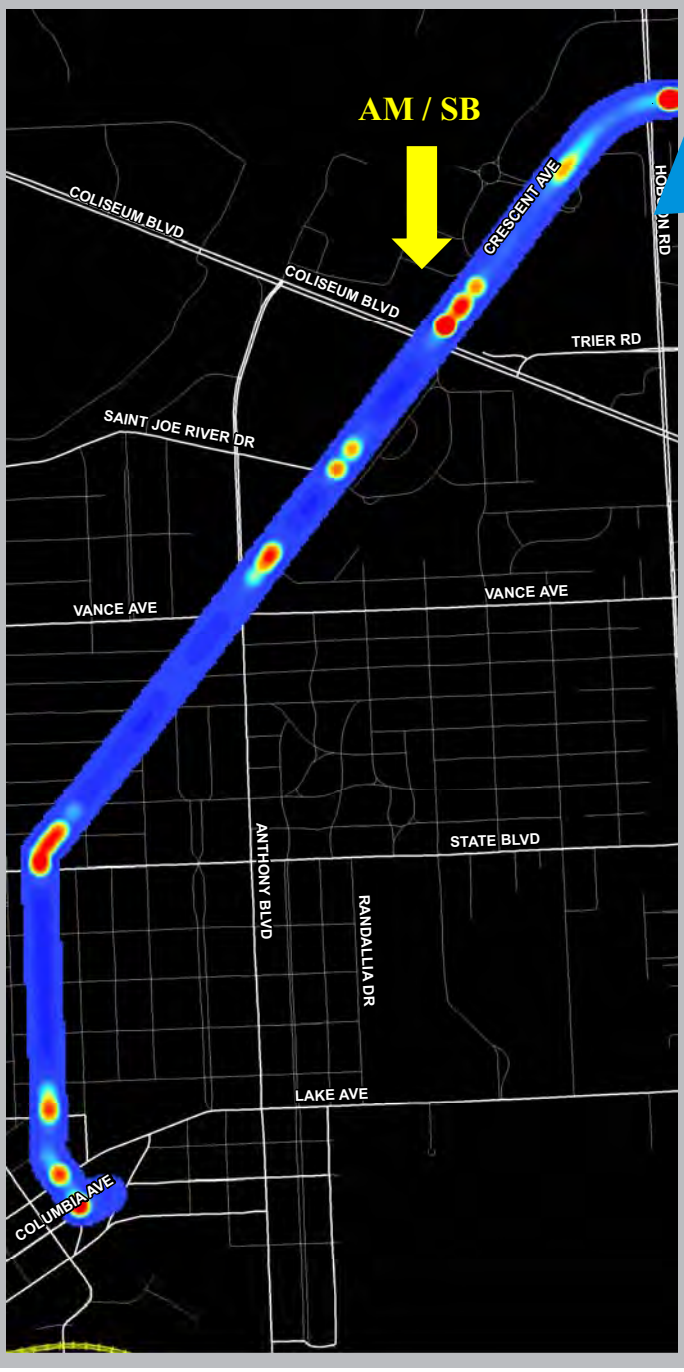
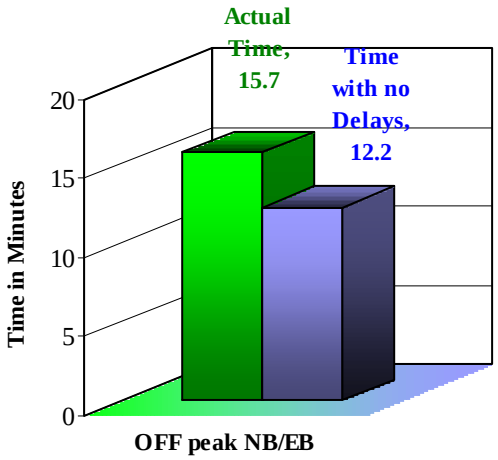


Figure 34

Crescent Avenue / Stellhorn Road / Maysville Road
AM Peak

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

Travel Time with the Least delay



Travel Speed with the Least delay

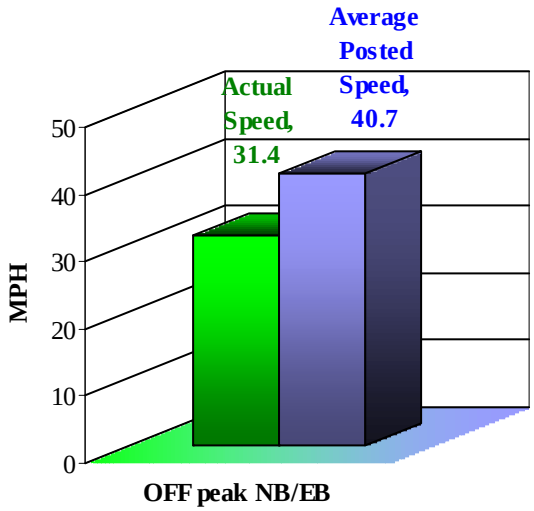


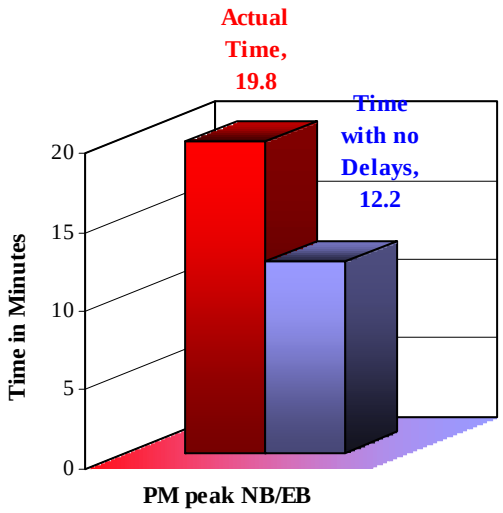
Figure 35

Crescent Avenue / Stellhorn Road / Maysville Road
PM Peak

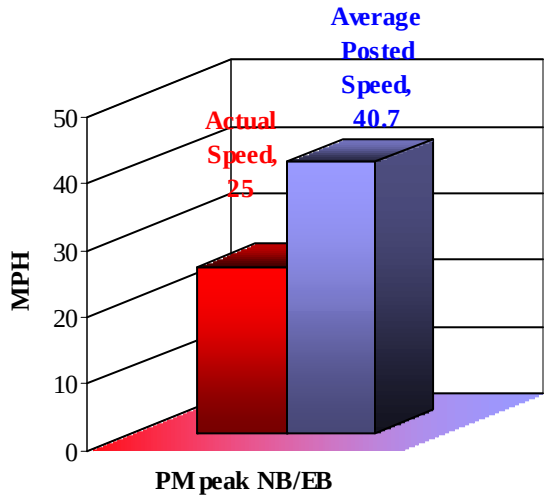
Figure 36

Crescent Avenue / Stellhorn Road / Maysville Road
PM Peak

Travel Time with the Greatest delay



Travel Speed with the Greatest delay



Transportation Improvement Program

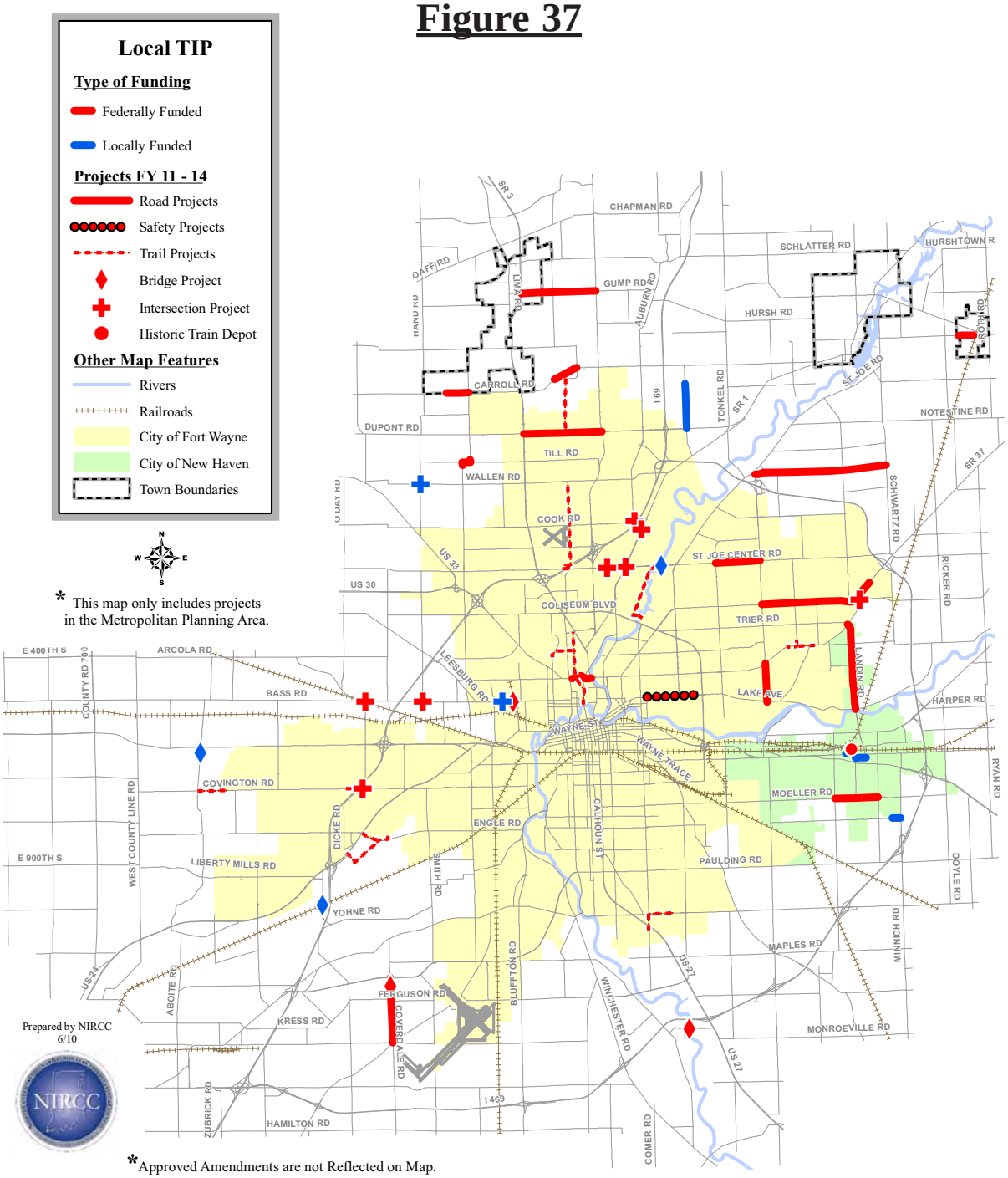
Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2010

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) PROJECTS

NIRCC prepared the Fiscal Year 2011-2014 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 (2030-II) 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 Wayne Public Transportation Corporation, City of

Figure 37



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).

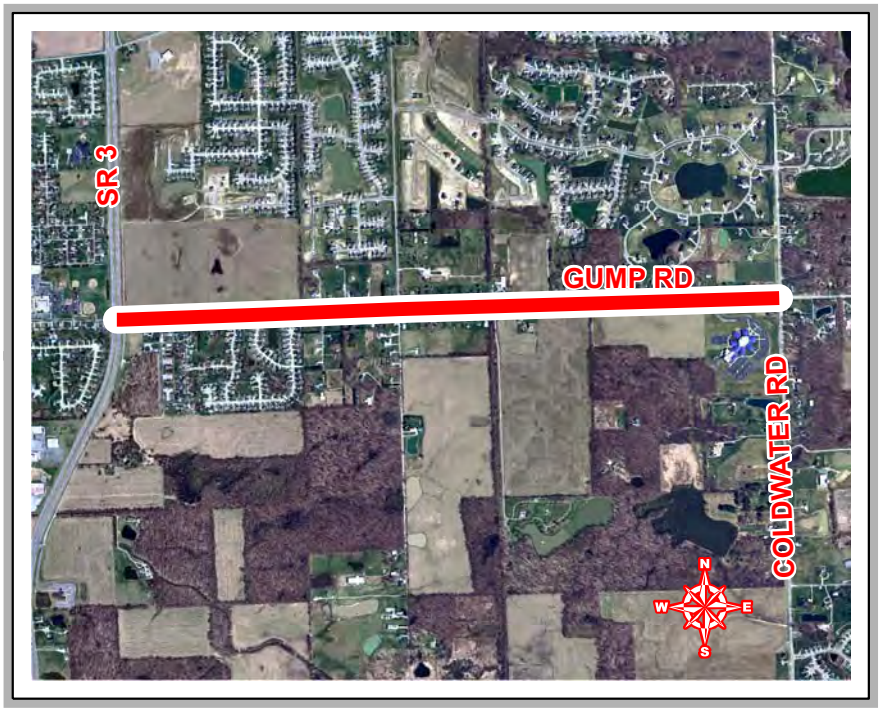


Figure 38

The preliminary engineering includes 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 39

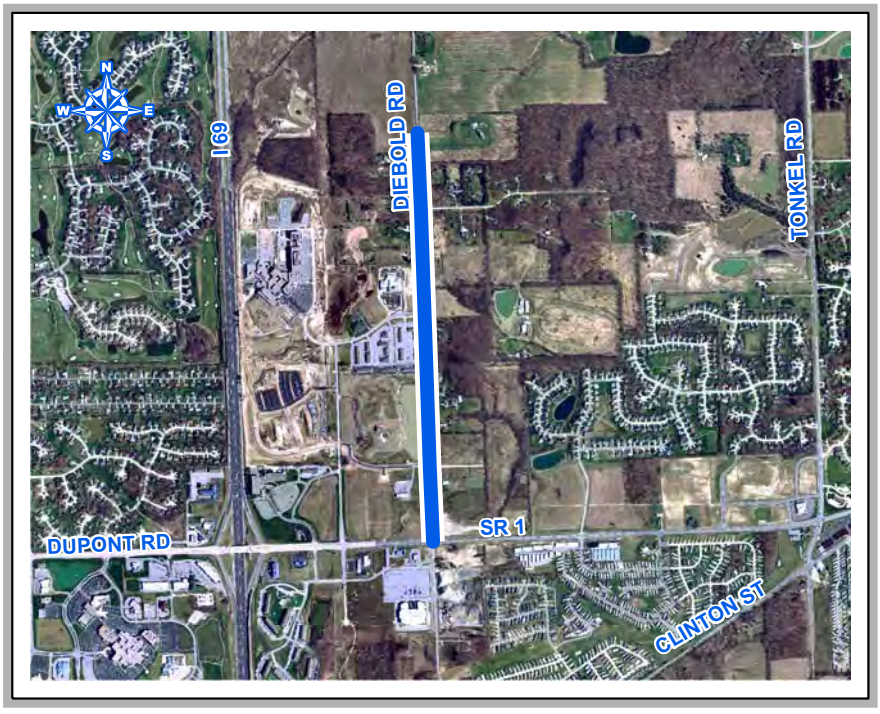


Figure 37 shows the locations of local TIP projects throughout the Metropolitan Planning Area. The local TIP map identifies projects that fit into two different categories. The projects that are colored blue identify projects that utilize only local funds whether it is City of Fort Wayne, City of New Haven, or Allen County. The projects colored red identify projects that utilize matching local funds with federal aid funds. Figures 38 and 39 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 61 through 63, and transit funding is listed on pages 64 and 65.

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) PROJECTS LISTED

FUNDING CLASSIFICATIONS	
ARRA – American Recovery and Reinvestment Act	LR&S - Local Road and Street
CMAQ - Congestion Mitigation and Air Quality	MVH - Motor Vehicle Highway
EB - Equity Bonus	RTP - Recreation Trails Program
HES - Hazard Elimination and Safety	SRTS - Safe Routes to School
HSIP - Highway Safety Improvement Program	STP - Surface Transportation Program
JARC – Job Access Reverse Commute	TE - Transportation Enhancement

FY 11 TIP Local Highway Projects

ROAD PROJECTS-AREA OVER 200,000

Project	Phase	LPA	Funding Type
*2nd Street: Shoal Ln to Main St	PE	GB	Group IV
Auburn Rd - Cook Rd & Clinton St	CN	FW	State/STP/CMAQ
*Bethel Rd / Huguenard Rd / Till Rd	PE	AC	CMAQ
Bostick Rd - Bridge #262 over St. Mary's River	CN	AC	Group IV - BR
Carroll Rd - Corbin Rd to .5 mi w/o Corbin Rd	PE	FW	CMAQ
*Carroll Rd - Preserve Blvd to Bethel Rd	PE	HT	Group IV
Clinton St & Washington Center Rd	PE	FW	CMAQ
Clinton St & Washington Center Rd	RW	FW	CMAQ
Coverdale Rd - from Indianapolis Rd to Airport Exp	CN	AC	Group IV
Coverdale Rd - Bridge #231 over Robinson-Brindle Ditch	CN	AC	Group IV - BR
Covington Rd & Dicke Rd	RW	FW	STP/CMAQ
Covington Rd Trail: Ladue Ln to I-69	PE	FW	CMAQ
Covington Rd Trail: Beal-Taylor Ditch to West Hamilton Rd	RW	FW	TE
Covington Rd Trail: Beal-Taylor Ditch to West Hamilton Rd	CN	FW	TE
Dartmouth Dr & Washington Center Rd	CN	FW	HSIP/HES
Dawkins Rd bridge #187 over Litzenburg Drain	CN	AC	Group IV - BR
Dupont Rd - Lima Rd (SR 3) to Coldwater Rd	PE	FW	STP
Engle Rd Trail: Jefferson Blvd to Towpath Trail	PE	FW	CMAQ
Flutter Rd: Schwartz Rd to Maplecrest Rd	RW	AC	STP
Fort Wayne CBD: Pedestrian Signal Indicators (Phase I)	CN	FW	HSIP
Fort Wayne CBD: Pedestrian Signal Indicators (Phase II)	CN	FW	HSIP
Fort Wayne CBD: Special Pavement Markings (Piano Key)	CN	FW	HSIP
Gump Rd - SR 3 to Coldwater Rd	RW	AC	STP
Johnny Appleseed Park to Shoaff Park Trail (Phase 1B)	RW	FW	TE
Johnny Appleseed Park to Shoaff Park Trail (Phase 1B)	CN	FW	TE
Lake Ave: Anthony Blvd to Stanley Avenue	PE	FW	HSIP
Maplecrest Rd - Lake Ave to State Blvd	RW	FW	STP
Maysville Rd/Stellhorn Rd-Koester Ditch to Maplecrest Rd	PE	FW	STP
Moeller Rd - Green Rd to Hartzell Rd	RW	NH	STP/CMAQ
Moeller Rd - Green Rd to Hartzell Rd	CN	NH	STP/CMAQ

**Denotes an Amendment or Modification to Project*

Continued... FY 11 TIP Local Highway Projects

ROAD PROJECTS-AREA OVER 200,000

Project	Phase	LPA	Funding Type
Monroeville Rd Br #276- Over Hoffman-Lepper Drain	CN	AC	Group IV - BR
New Haven Depot & Corridor Project	CN	NH	TE
Railroad Corridor Acquisition	RW	FW	TE
Signal Controller Upgrade-283 intersections	CN	FW	STP/CMAQ
Six Mile Creek	RW	FW	TE
*Spring Street Bridge over Norfolk Southern Railroad	CN	AC	STP/CMAQ
State Blvd - Spy Run Ave to Cass	RW	FW	STP
State Blvd, Lahmeyer Rd & Maysville Rd Sidewalk	CN	FW	SRTS
Towpath Trail (Phase IV)	CN	AC	TE
Wireless Vehicle Detection-68 intersections	CN	FW	STP/CMAQ

FY 12 TIP Local Highway Projects

ROAD PROJECTS-AREA OVER 200,000

Project	Phase	LPA	Funding Type
*2nd St (Grabill): Shoal Ln to Main St	RW	GR	Group IV
Bass Rd & Hadley Rd	RW	AC	STP/CMAQ
*Bethel Rd / Huguenard Rd / Till Rd	RW	AC	CMAQ
Carroll Rd - Corbin Rd to .5 mi w/o Corbin Rd	RW	FW	CMAQ
*Carroll Rd - Preserve Blvd to Bethel Rd	RW	HT	Group IV
Clinton St & Washington Center Rd	CN	FW	CMAQ
Covington Rd & Dicke Rd	CN	FW	STP/CMAQ
Covington Rd Trail: Ladue Ln to I-69	RW	FW	CMAQ
Engle Rd Trail: Jefferson Blvd to Towpath Trail	RW	FW	CMAQ
Flutter Rd - St Joe Rd to Schwartz Rd	CN	AC	STP
Flutter Rd - St Joe Rd to Schwartz Rd	CN	AC	CMAQ
Lake Ave: Anthony Blvd to Stanley Avenue	CN	FW	HSIP
Landin Rd - North River Rd to Maysville Rd	RW	NH	STP
Maplecrest Rd - Lake Ave to State Blvd	CN	FW	STP
Pufferbelly Trail - Fourth St to Fernhill Ave	RW	FW	TE

**Denotes an Amendment or Modification to Project*

FY 13 TIP Local Highway Projects

ROAD PROJECTS-AREA OVER 200,000

Project	Phase	LPA	Funding Type
*2nd St (Grabill): Shoal Ln to Main St	CN	GR	Group IV
Bass Rd & Hadley Rd	CN	AC	STP/CMAQ
Bass Rd & Kroemer Rd	RW	AC	STP
Carroll Rd - Corbin Rd to .5 mi w/o Corbin Rd	CN	FW	CMAQ
*Carroll Rd - Preserve Blvd to Bethel Rd	CN	HT	Group IV
Covington Rd Trail: Ladue Ln to I-69	CN	FW	CMAQ
Dupont Rd - Lima Rd (SR 3) to Coldwater Rd	RW	FW	STP
Engle Rd Trail: Jefferson Blvd to Towpath Trail	CN	FW	CMAQ
Gump Rd - SR 3 to Coldwater Rd	CN	AC	STP
Maysville Rd & Stellhorn Rd	RW	FW	STP/CMAQ
*Pufferbelly Trail - Fourth St to Fernhill Ave	CN	FW	TE
Pufferbelly Trail North - Dupont Rd to Carroll Rd	CN	FW	RTP
Six Mile Creek Trail: Southtown Centre to Lamar Dr	CN	FW	TE
State Blvd - Spy Run Ave to Clinton St	CN	FW	STP

FY 14 TIP Local Highway Projects

ROAD PROJECTS-AREA OVER 200,000

Project	Phase	LPA	Funding Type
Bethel Rd / Huguenard Rd / Till Rd	CN	AC	CMAQ
St. Joe Center Rd - Reed Rd to Maplecrest Rd	PE	FW	STP
State Blvd - Clinton St to Cass St	CN	FW	STP

**Denotes an Amendment or Modification to Project*

Federal Transit Administration	
Section 5307 / Section 5309 - Funds	
Fort Wayne Public Transportation Corporation	
FY 2011	
Capital Equipment Purchases (Section 5307 Funds)	
	**Downtown Transfer Station Construction (previously approved funds)*
	*Downtown Transfer Station Construction
	Four (4) Heavy Duty Replacement Buses
	One (1) Replacement Operations vehicle
	One (1) Replacement Maintenance Truck
	AVL/Communication Hardware/Subscription Cost
	Other Maintenance Equipment
	Computer/Office Equipment
Capital Equipment Purchases (Section 5309 Funds)	
	Hybrid Option for four (4) Buses (funds requested)
Additional Operating Funds	
	CMAQ - Transit Awareness
	CMAQ - Free Fare on Air Quality Action Days for Ozone
	CMAQ - University Shuttle
	CMAQ - Discount Pass Program
	JARC
	New Freedom
Operating Funds and Preventative Maintenance Expenses	
	Capitalization of Maintenance Costs (Section 5307)
	Complimentary Paratransit Costs (Section 5307)

FY 2012	
Capital Equipment Purchases (Section 5307 Funds)	
	Eight (8) Replacement Minibuses (body on chassis)
	Rehab/renovate Admin/Maintenance Facility
	Computer/Office Equipment
	AVL/Communication Hardware/Subscription Cost
	Other Maintenance Equipment
Additional Operating Funds	
	CMAQ - University Shuttle
	CMAQ - Discount Pass Program
	JARC
	New Freedom
Operating Funds and Preventative Maintenance Expenses	
	Capitalization of Maintenance Costs (Section 5307)
	Complimentary Paratransit Costs (Section 5307)

**Denotes an Amendment or Modification to Project*

Federal Transit Administration			
Section 5307 / Section 5309 - Funds			
Fort Wayne Public Transportation Corporation			
FY 2013			
Capital Equipment Purchases (Section 5307 Funds)			
	One (1) Replacement Minibus (Body on Chassis)		
	Three (3) Replacement modified minivan Supervisor vehicles		
	One (1) Replacement maintenance truck		
	AVL/Communication Hardware/Subscription Cost		
	Other Maintenance Equipment		
	Computer/Office Equipment		
Additional Operating Funds			
	JARC - Low incomeTransportation to and from work		
	New Freedom - Transportation Above & Beyond ADA Requirements		
Operating Funds and Preventative Maintenance Expenses			
	Capitalization of Maintenance Costs (Section 5307)		
	Complimentary Paratransit Costs (Section 5307)		

FY 2014			
Capital Equipment Purchases (Section 5307 Funds)			
	Four(4) Heavy Duty Replacement Hybrid Buses		
	Computer/Office Equipment		
	AVL/Communication Hardware/Subscription Cost		
	Other Maintenance Equipment		
Additional Operating Funds			
	JARC - Low incomeTransportation to and from work		
	New Freedom - Transportation Above & Beyond ADA Requirements		
Operating Funds and Preventative Maintenance Expenses			
	Capitalization of Maintenance Costs (Section 5307)		
	Complimentary Paratransit Costs (Section 5307)		

Federal Transit Administration - Section 5310 - Funds	
FY 2011	
2010 Funding Cycle	
1. Allen County Council on Aging	
	One (1) Type C 12- Passenger modified van w/lift
2. Community Transportation Network	
	Three (3) Type C 12- Passenger modified vans w/lifts

**Denotes an Amendment or Modification to Project*

Safety Management System

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2010

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 2010 NIRCC obtained all crash records that occurred in Allen County during 2009. 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 2009 crash data and included it in the crash database, NIRCC combined the 2009 crash data with the 2007 and 2008 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 40, 41, and 42 display the densities of crash frequencies for the Fort Wayne, New Haven, and Allen County area.

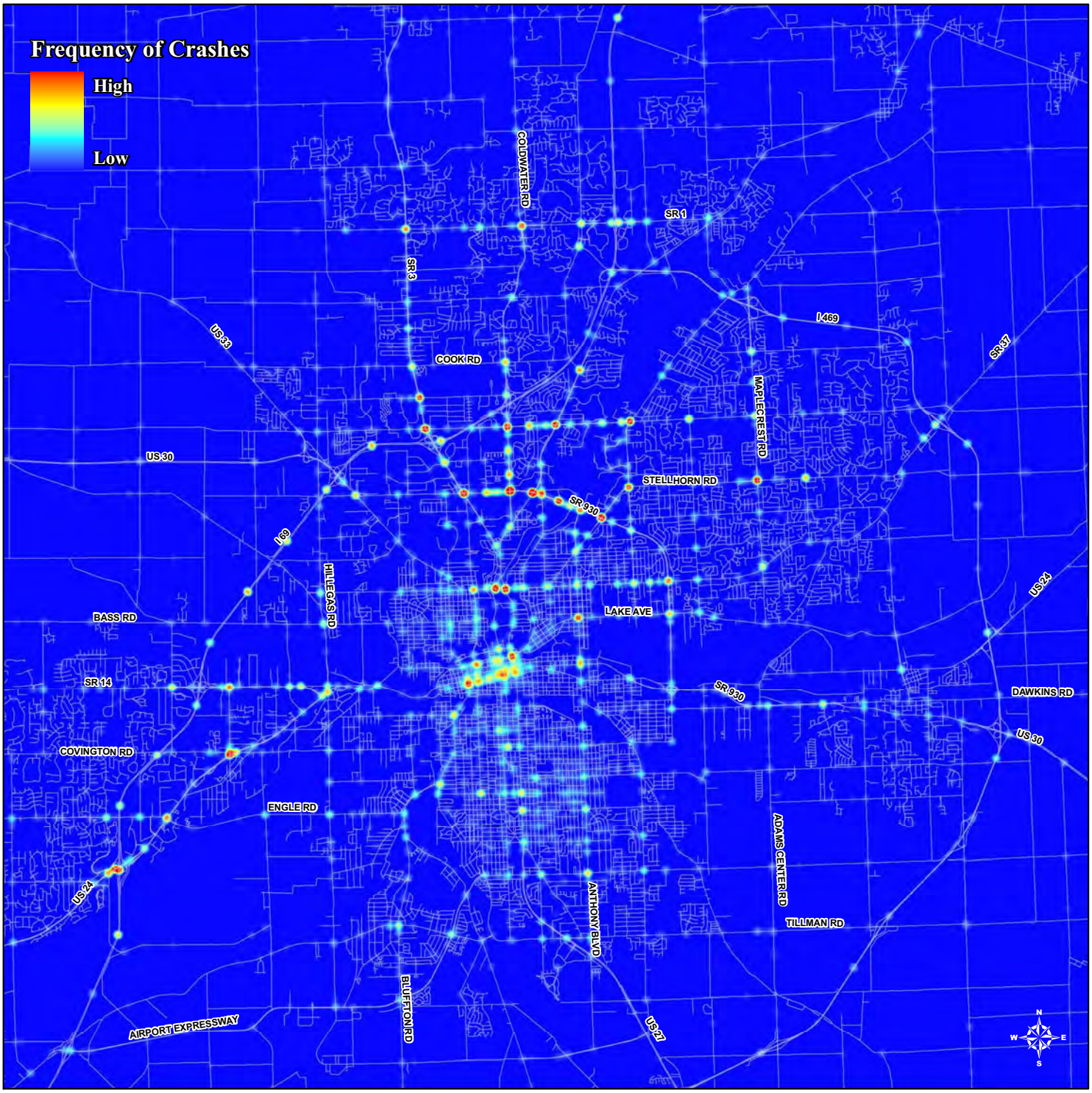
Annual Summary and Listing of Crash Locations

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, 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.

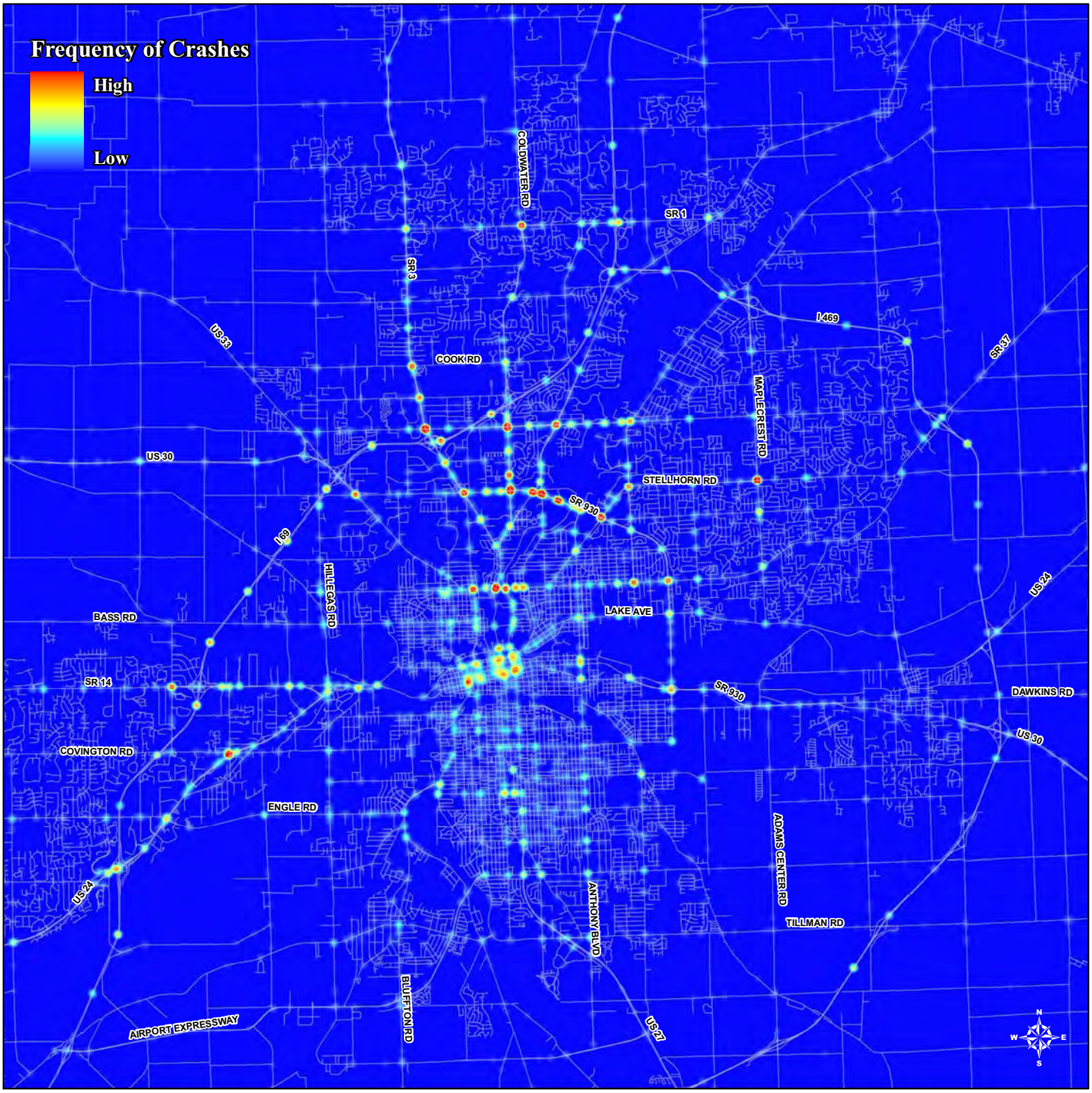
The second product from annual crash data is a summary or listing of the hazardous crash locations from the previous year. Every year staff utilizes two procedures to identify crash locations with a higher frequency of crashes and another for locations

Figure 40 - 2009 Crash Data



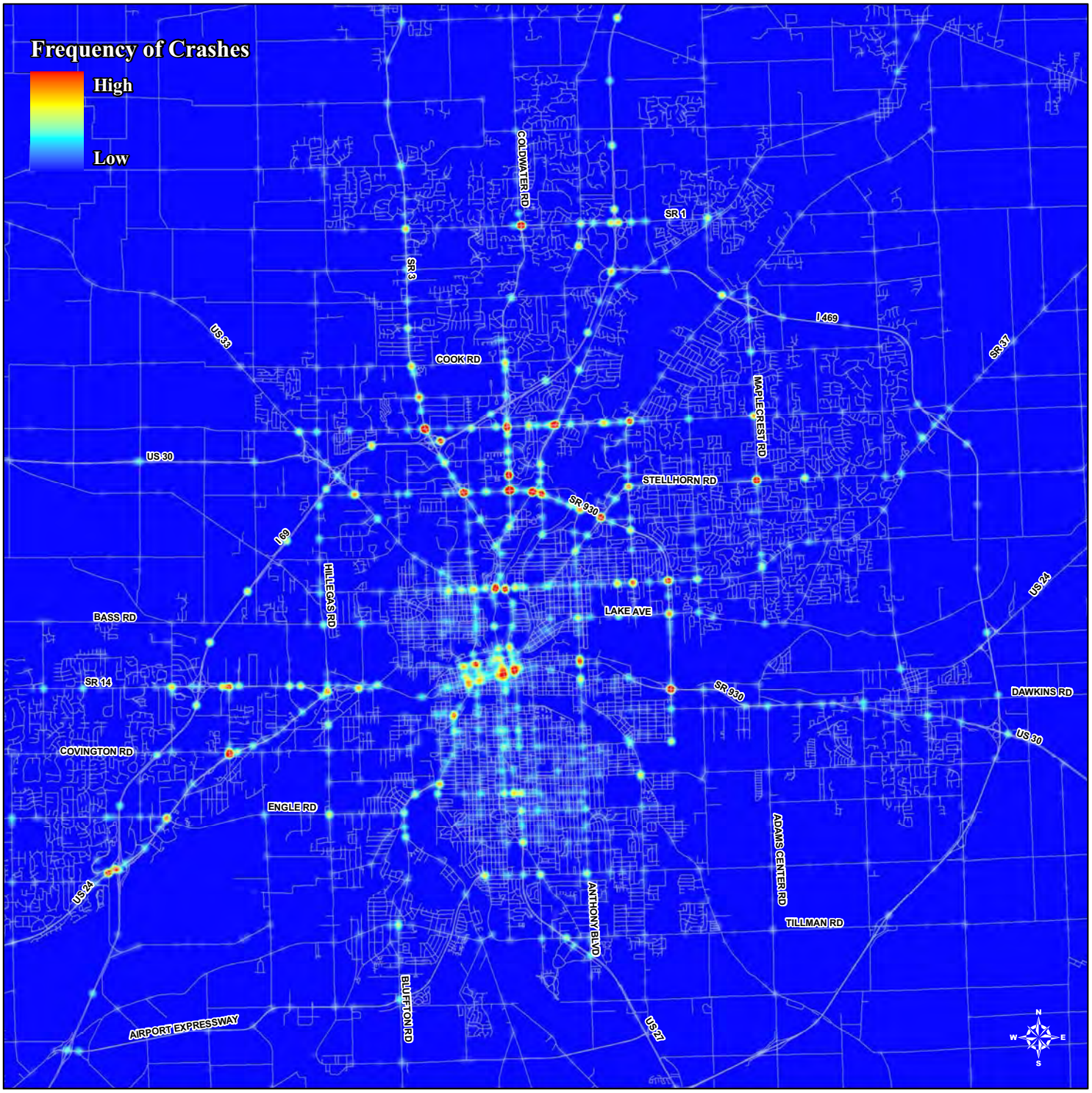
with a lower crash frequency. Identification of crash frequency is provided through use of GIS software that creates buffers around intersection crash locations. The buffers are created using a 250 foot radius around each crash location and grouping all crashes within itself. This process resulted in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

Figure 41 - 2008 Crash Data



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

Figure 42 - 2007 Crash Data



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.

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;

Frequency	Percentage of I/F
6	100% to 33 %
5	100% to 40%
4	100% to 50%
3	100 % to 66%

Hazardous Location Identification

In Fiscal Year 2010 staff reviewed all the crash location listings created for 2007, 2008, and 2009 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 2007, 2008, and 2009. 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 be updated annually to review trends and previously identified hazardous locations. Additional locations that meet the approved criteria will also be added.

Bicycle and Pedestian Planning

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2010

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-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. This plan (shown in Figure 43) was included in the 2030 Long Range Transportation Plan and is now included in the 2030-II Transportation Plan. 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. Staff continues to update the plan annually. The plan is also available on the NIRCC website at www.nircc.com.

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. The most current plans for Allen County and the region can be seen in Figures 43 and 44.

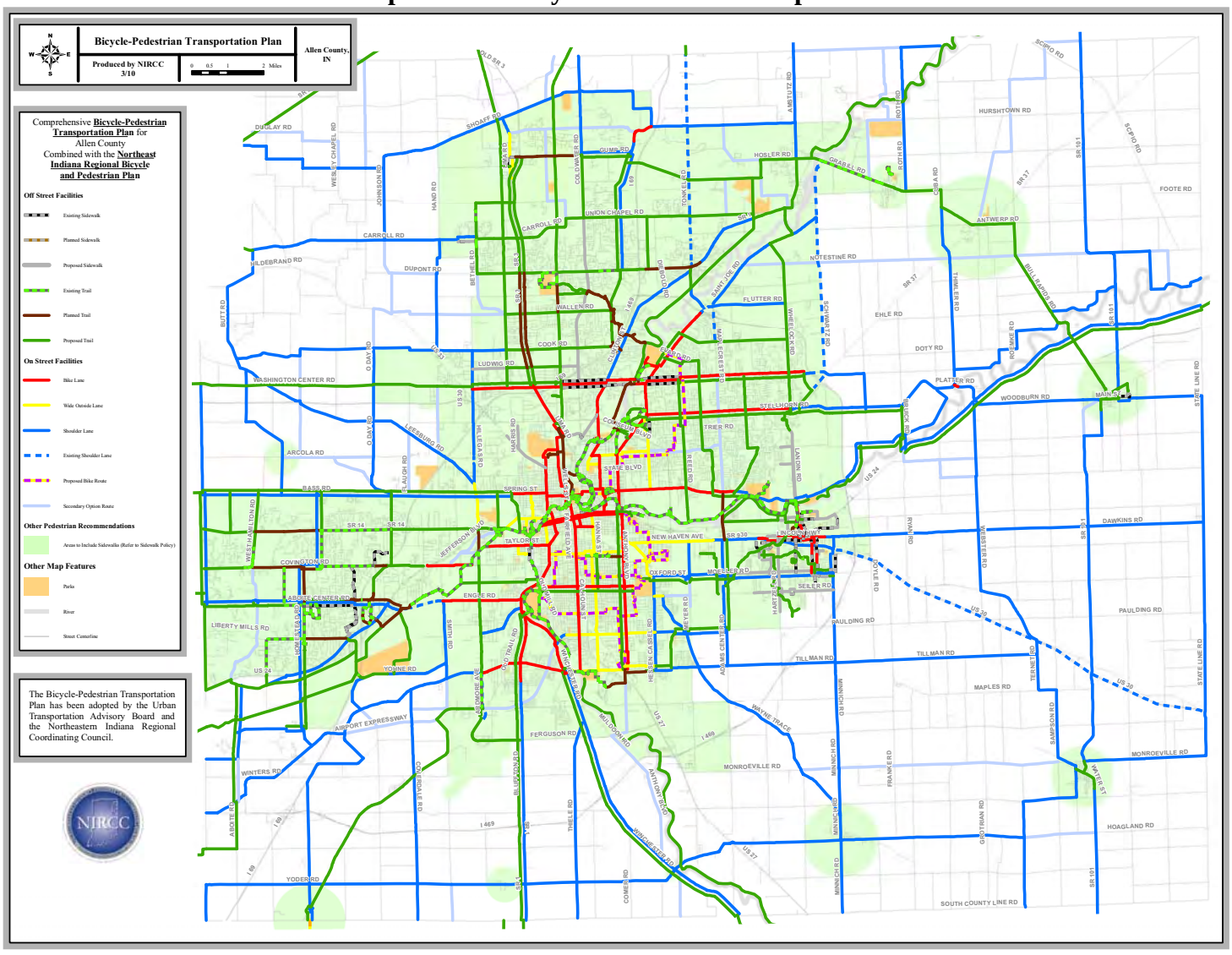
During the last transportation plan update NIRCC enhanced the bicycle and pedestrian plan with a prioritization of local planning efforts. NIRCC, along with the Fort Wayne Greenways Manager, asked local trail advocacy groups and governmental agencies to prioritize their planning efforts to give a better idea of what may be accomplished in the next 10 to 15 years. The local advocacy groups and governmental agencies consulted during this process included Aboite New Trails, Greenway Consortium, Little River Wetlands Project, Northwest Allen Trails, City of Fort Wayne, and City of New Haven Parks Department. Figure 45 shows the priorities set by the appropriate group or agency for corridors identified in their plans with a priority level of 1, 2, or 3.

Priority 1 is identified by a dark purple color for the off street facilities and an orange color for the on street facilities. Priority 1 corridors represent the highest priority for local groups or agencies to complete. These trails may already be partly constructed, partially funded, fully funded, and/or design has already begun in some capacity. These are corridors that local groups and governmental agencies are pursuing with completion goals that range from the near future to within the next 10 to 15 years.

Priority 2 corridors, identified in yellow, are the next highest priority. There is currently no funding and/or no design for these proposed corridors. These are corridors that are of significant importance to the local groups and agencies but they are not the current focus of their efforts. These are corridors that will likely be identified as priority 1 once some of the current priority 1 projects are complete.

Figure 43

The Comprehensive Bicycle-Pedestrian Transportation Plan



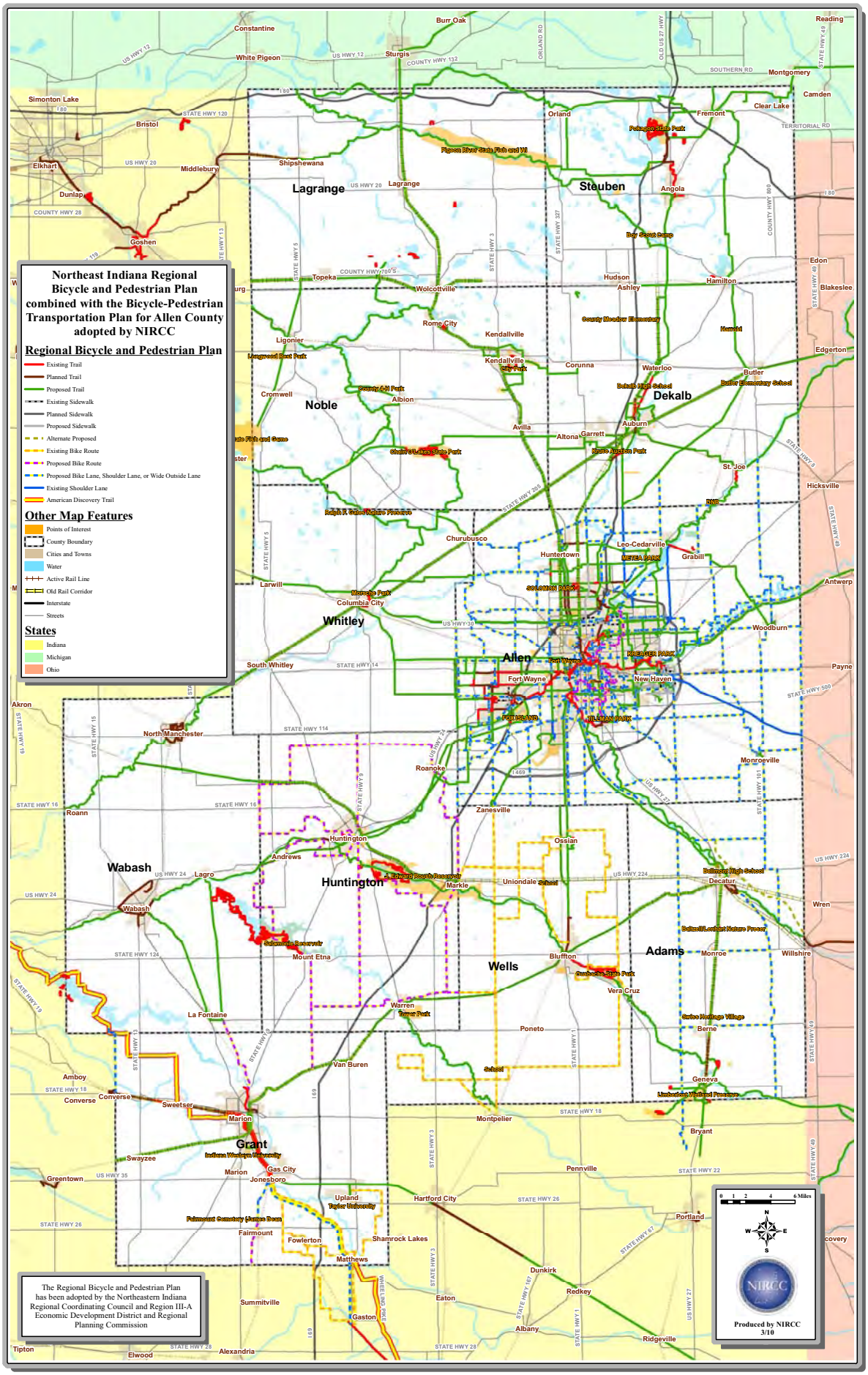
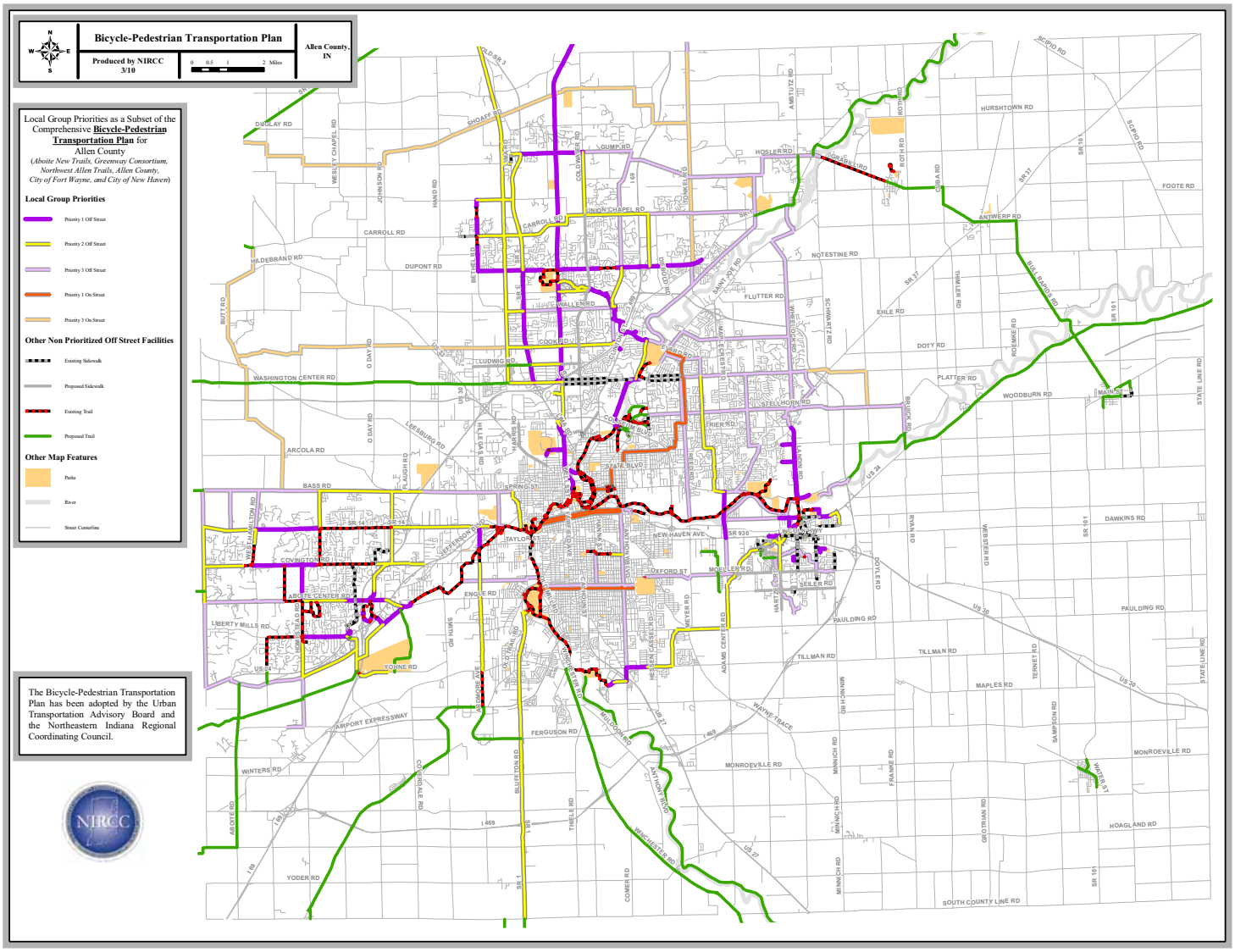


Figure 44

Regional Bicycle and Pedestrian Plan

Figure 45

Local Group Priorities of The Comprehensive Bicycle-Pedestrian Transportation Plan



Priority 3 corridors, identified by the light purple color for the off street facilities and the light orange color for the on street facilities, are the lowest priority. These corridors are more conceptual in nature. These corridors are identified on local group and governmental agency plans but there is no foreseeable source of funding for completing them. If opportunities arise, these are corridors that may change in priority levels. At this point these corridors are not being actively pursued.

This past fiscal year NIRCC has participated in two planning efforts lead by the City of Fort Wayne. NIRCC staff is on the Bicycle Planning Team which is charged with developing the Bike Fort Wayne plan for the City of Fort Wayne and the Sidewalk Planning Team which is charged with developing the Walk Fort Wayne Plan for the City of Fort Wayne.

The Bike Fort Wayne plan that the Bicycle Planning Team is working on will set goals for implementing bicycle infrastructure throughout the next 10 years. The bike plan, for the most part, utilizes corridors identified on NIRCC's Bicycle-Pedestrian

Transportation Plan to help plan and prioritize these types of improvements. Two corridors from NIRCC's plan have been identified as pilot projects for bike lane improvements to be constructed in 2009/2010. These two corridors seen in Figure 46 are the Wayne Street and Berry Street corridors and the Rudisill Boulevard Corridor.

The Walk Fort Wayne Plan being developed by the Sidewalk Planning Team is a 10 year plan that will provide guidance on how and where to fill in sidewalk gaps along Fort Wayne's arterial and collector roadways, through

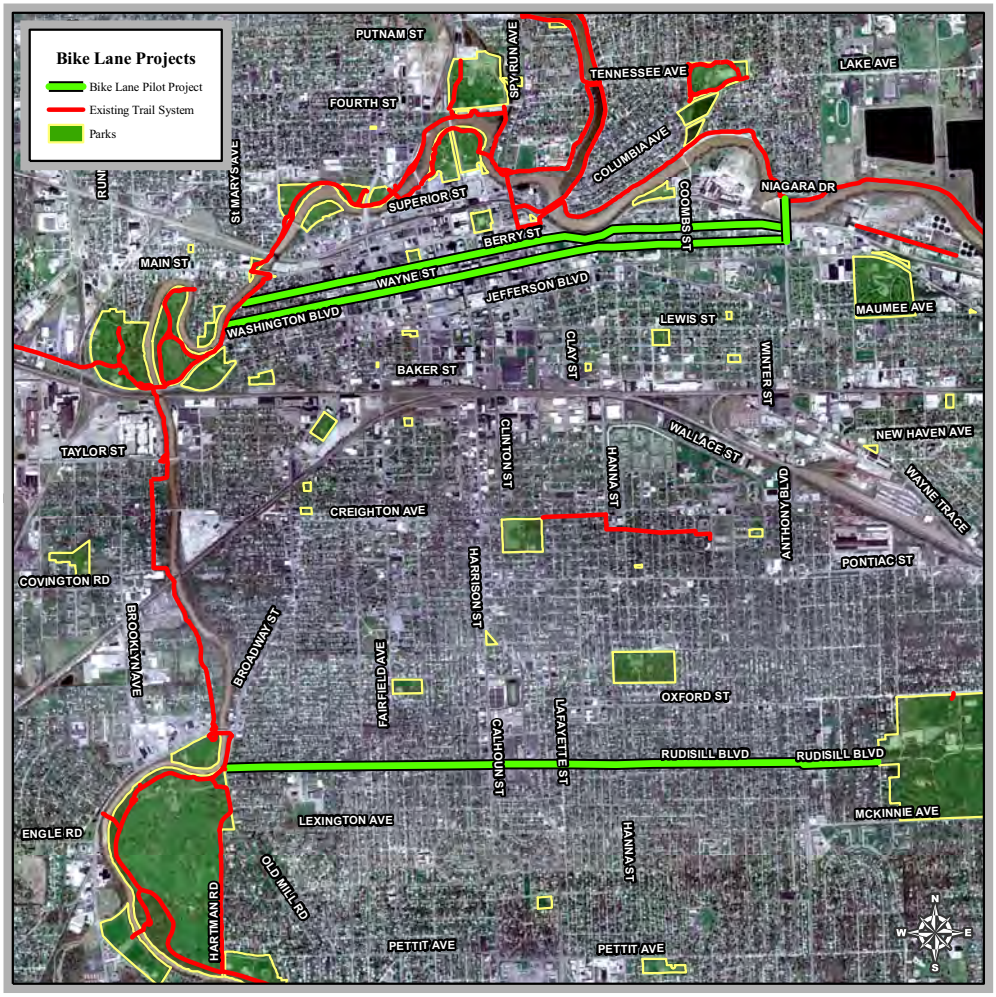


Figure 46

Figure 47

the use of new sidewalks and shared-use paths. The plan will prioritize pedestrian capital improvements within the city of Fort Wayne. Some of the tools being utilized to help facilitate this process are the sidewalk inventory created by NIRCC and the sidewalk gap inventory created by NIRCC and the Fort Wayne Planning Department. An example of these two tools can be seen in Figure 47. In fact, the sidewalk gaps shown along the north side of Paulding Road and the sidewalk gaps shown along Anthony Boulevard were selected earlier this year for sidewalk construction. These projects have recently been completed by the City of Fort Wayne.

Pedestrian Safety Action Plan

for Allen County

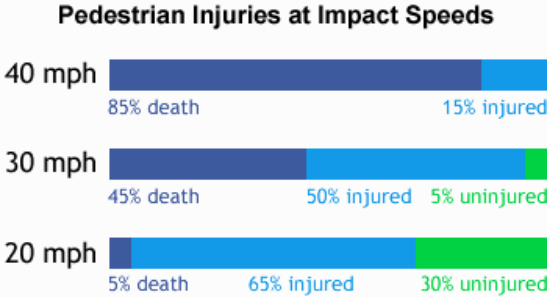
Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2010

PEDESTRIAN SAFETY ACTION PLAN

Over the three year time period spanning from 2006 through 2008 there were almost 35,000 recorded accidents involving motor vehicles, pedestrians, and bicyclists in Allen County. Accidents involving pedestrians accounted for about 1% of these. Fatalities for all accident types accounted for about 0.2% of the almost 35,000 accidents. Out of the 0.2% of total fatalities, 9% of them were pedestrian fatalities. These numbers are disproportionate when 99% of all accidents occurring in Allen County for these three years did not involve a pedestrian.

The nature of pedestrian accidents are usually much more severe than motor vehicle accidents. Since motor vehicles provide a significant amount of protection, people are less likely to be injured or killed when involved in an accident. From 2006 through 2008 about 19% of all motor vehicle accidents resulted in an injury or fatality. During this same time period nearly 82% of all pedestrian accidents resulted in an injury or fatality. As you can see from the graphic below, speeds in excess of just 20 mph produce a significant number of fatalities and injuries when there is an accident between a motor vehicle and a pedestrian. Since nearly every street throughout Allen County has speed limits that exceed 20 mph, pedestrian deaths and injuries can occur at almost any location.



The relationship between pedestrian injury severity and motor vehicle impact speeds.

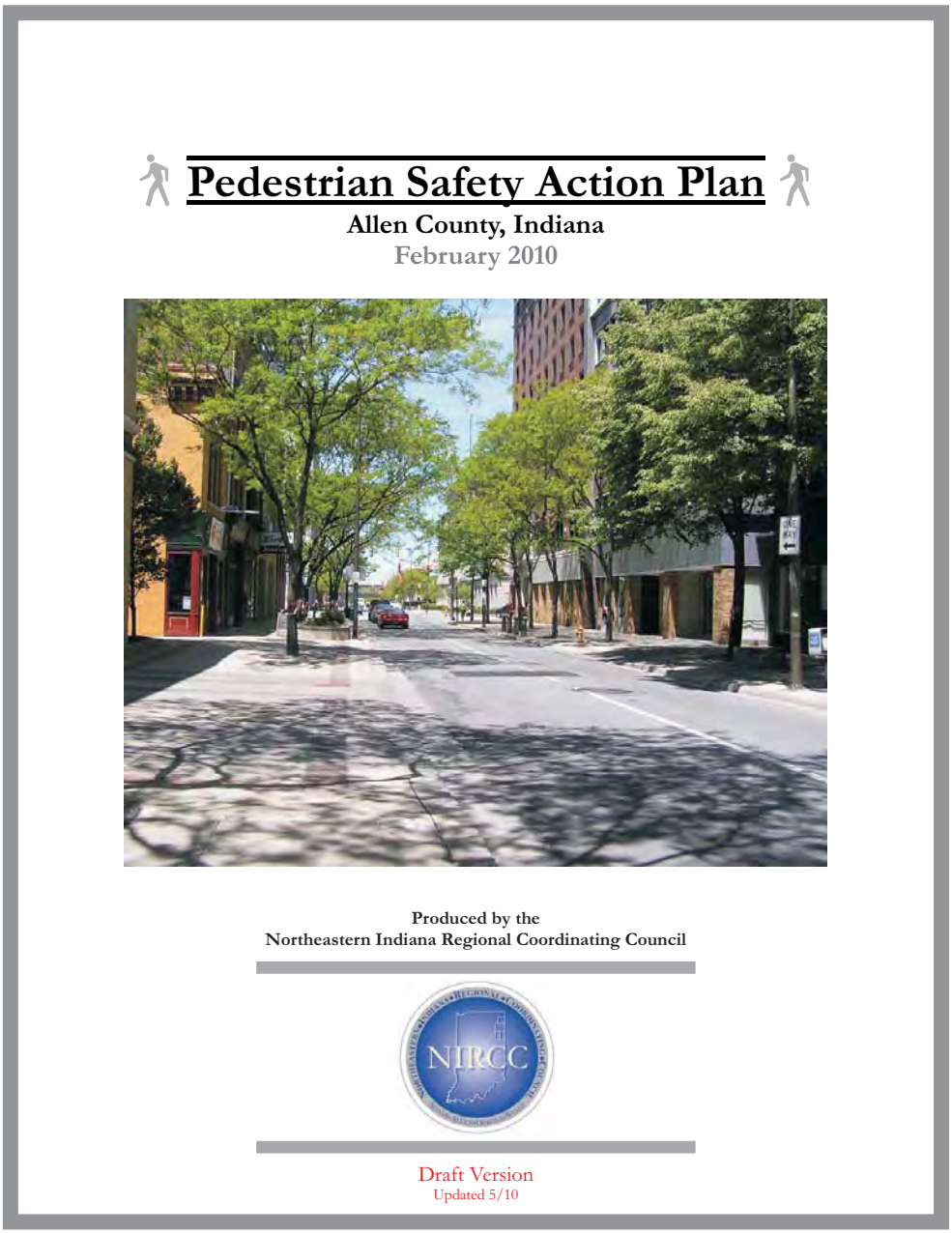
http://www.saferoutesinfo.org/guide/engineering/slowing_down_traffic.cfm

Since it is unreasonable to decrease speed limits on a system wide basis to create a safer impact speed for pedestrians, transportation engineers and planners must consider factors that can reduce the frequency and severity of pedestrian accidents through a multitude of countermeasures and action steps. These countermeasures and action steps must identify engineering (including special design characteristics), educational, enforcement, and encouragement strategies that will provide short term and long term solutions.

The purpose of creating a Pedestrian Safety Action Plan (PSAP) for Allen County is to create a plan that will be implemented throughout the transportation planning process and beyond for purposes of producing realized pedestrian safety improvements that are tailored to specific problems in our area. The PSAP goal is specifically to reduce the frequency and severity of pedestrian crashes, fatalities, and injuries for all users by establishing a framework to identify practical and achievable strategies to improve pedestrian safety, prioritize improvements, and provide a means of development and implementation. To ensure a comprehensive approach, the plan will involve the four E's (Engineering, Education, Enforcement, and Encouragement) in identifying and implementing an effective PSAP. The following steps, as listed in the Federal Highway Administration's report titled "How to Develop a Pedestrian Safety Action Plan", are incorporated into Allen County's PSAP:

- Define objectives.
- Identify Locations.
- Select countermeasures.
- Develop an implementation strategy.
- Institutionalize changes to planning and design standards.
- Consider land use, zoning and site design issues.
- Reinforce commitment.
- Evaluate results.

To accomplish the goal of the pedestrian safety action plan there must be steps taken to measure the success of the plan as well as create a method for ensuring some sort of commitment to implement the plan. This can be done by creating a list of objectives that are measurable and provide a clear purpose for what they intend to achieve. It is important to define objectives that consider engineering, education, enforcement, and encouragement type solutions. The objectives used in this plan include reducing the 3 year average number of pedestrian accidents, updating manuals, enhancing or upgrading crosswalks and pedestrian signals, identifying specific intersections or corridors for improvements, identifying high usage transit stops for pedestrian treatments, and prioritizing areas around schools for safety treatments.



A significant amount of time was spent creating maps and producing data that would help identify locations for safety improvements and help support, track, and achieve the objectives listed in the plan. NIRCC already produces and maintains a large amount of data that is used throughout the Pedestrian Safety Action Plan. Examples of this data include a sidewalk and trail inventories for the entire Allen County area, traffic counts, locations of transit routes and stops, crash data, census data, intersection analysis data, and other various roadway characteristics. Other information used in the plan for geographical analysis include land use types and patterns, schools, colleges and universities, parks, libraries, major destinations or attractions, etc. In the section titled Pedestrian Safety Action Plan Maps you can see some of the maps that went in to drafting the PSAP for Allen County. To see the entire plan just visit NIRCC's website at www.nircc.com.

Pedestrian Safety Action Plan Maps

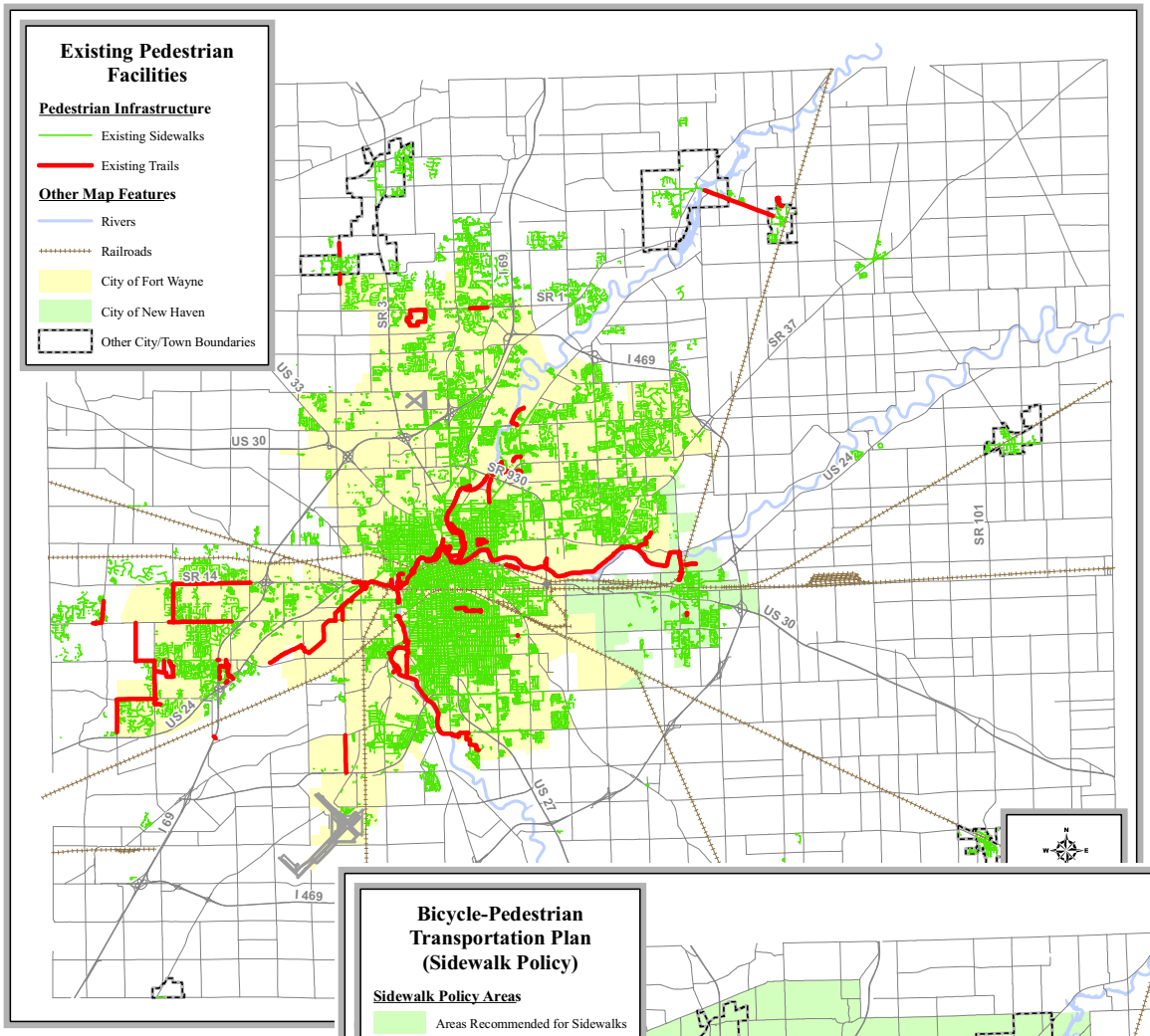


Figure 48

Every sidewalk in Allen County has been digitized using aerial photography and a trail database is maintained and updated on a regular basis. Information derived from this map includes locations where gaps exist in the sidewalk network, densities of development, points of conflict where sidewalks and trails cross streets and driveways, and areas where you would expect significant amounts of pedestrian trips since there is already a precedence of existing infrastructure.

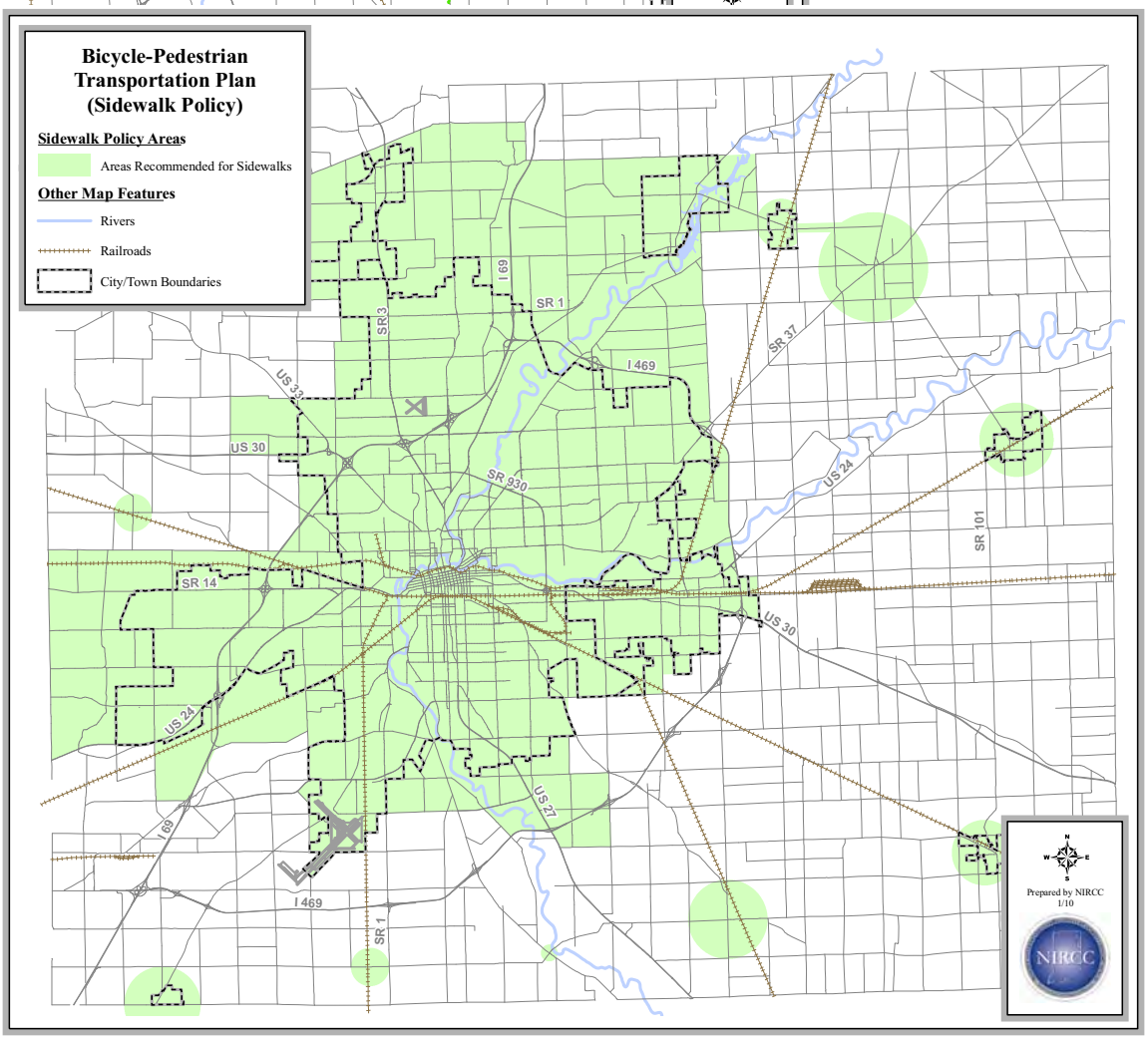
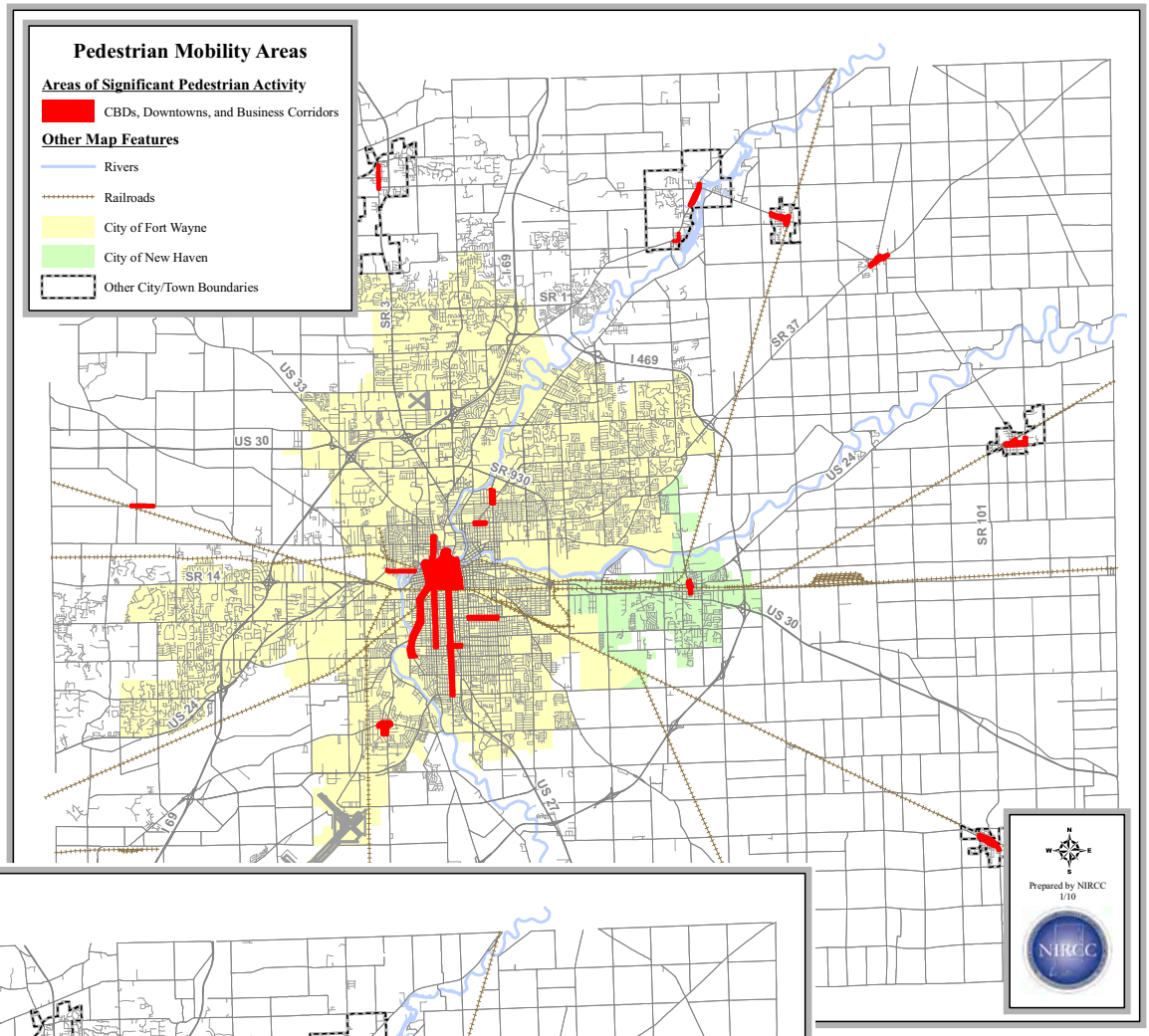


Figure 49

The areas identified in green are included with NIRCC's sidewalk policy and part of the Bicycle and Pedestrian Transportation Plan which is also included in the 2030-II Transportation Plan. These areas identified are a combination of jurisdictions including all the cities and towns within Allen County, the urban area, and various developing areas throughout the county. These areas are recommended for pedestrian improvements which also creates a need for pedestrian safety to be a priority.

Figure 50

The identified areas depend on pedestrian safety and mobility. These areas include Central Business Districts, downtown areas, and commercial areas. They consist of urban type design characteristics with closely situated commercial, retail, and service related development surrounded by dense residential development. These are major destinations for vehicles and pedestrians which make conflicts between the two inevitable. These areas rely on Pedestrian mobility and safety.



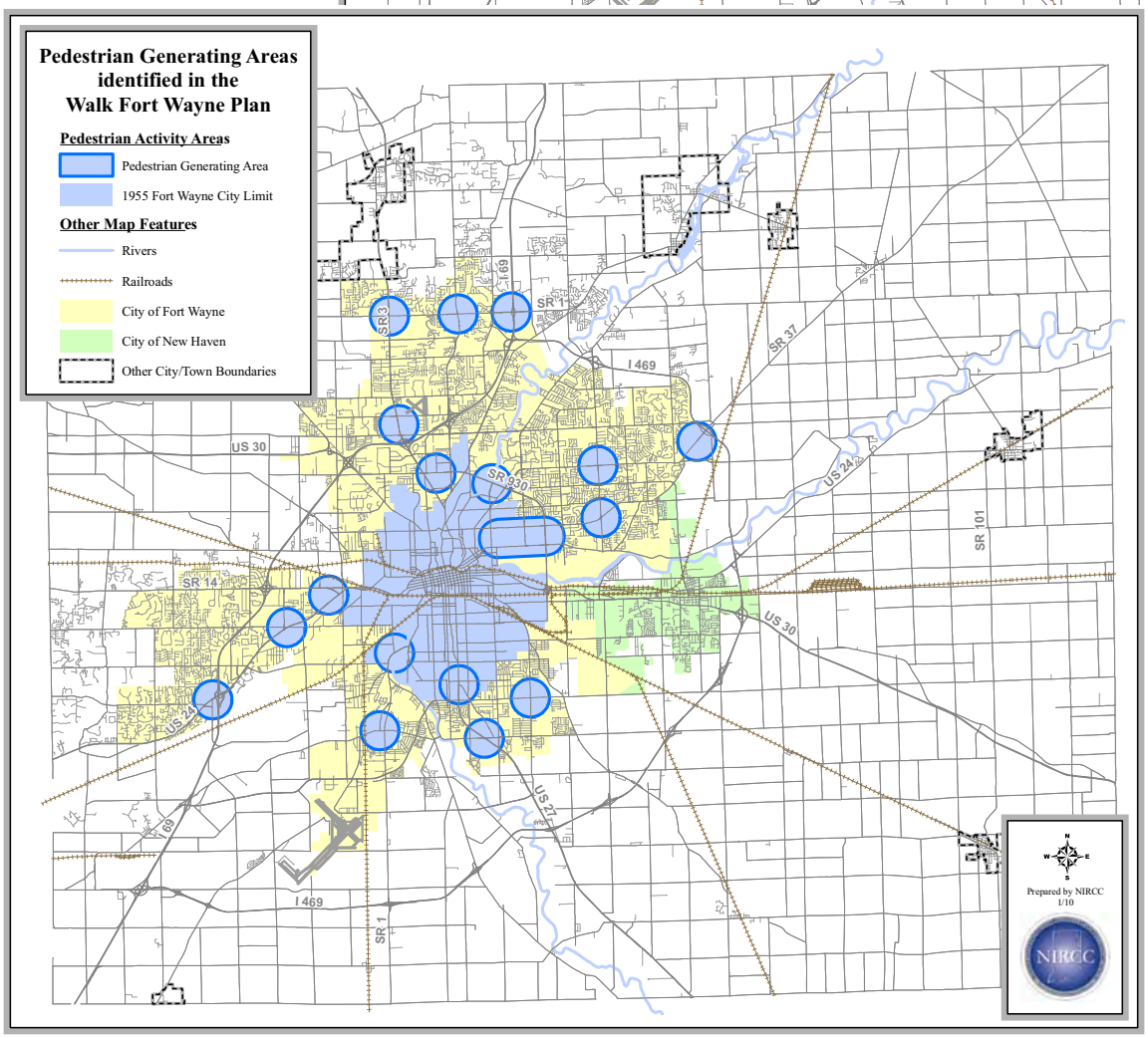


Figure 51

These areas have been identified by Fort Wayne's "Walk Fort Wayne Plan" as pedestrian generating areas. These areas have been identified through the use of survey information, information gathered from public meetings, a geographic analysis of development clusters, and input from the Primary Team who is charged with developing the Walk Fort Wayne Plan. These areas represent significant destinations and attractions for pedestrian interaction and motorvehicle conflict.

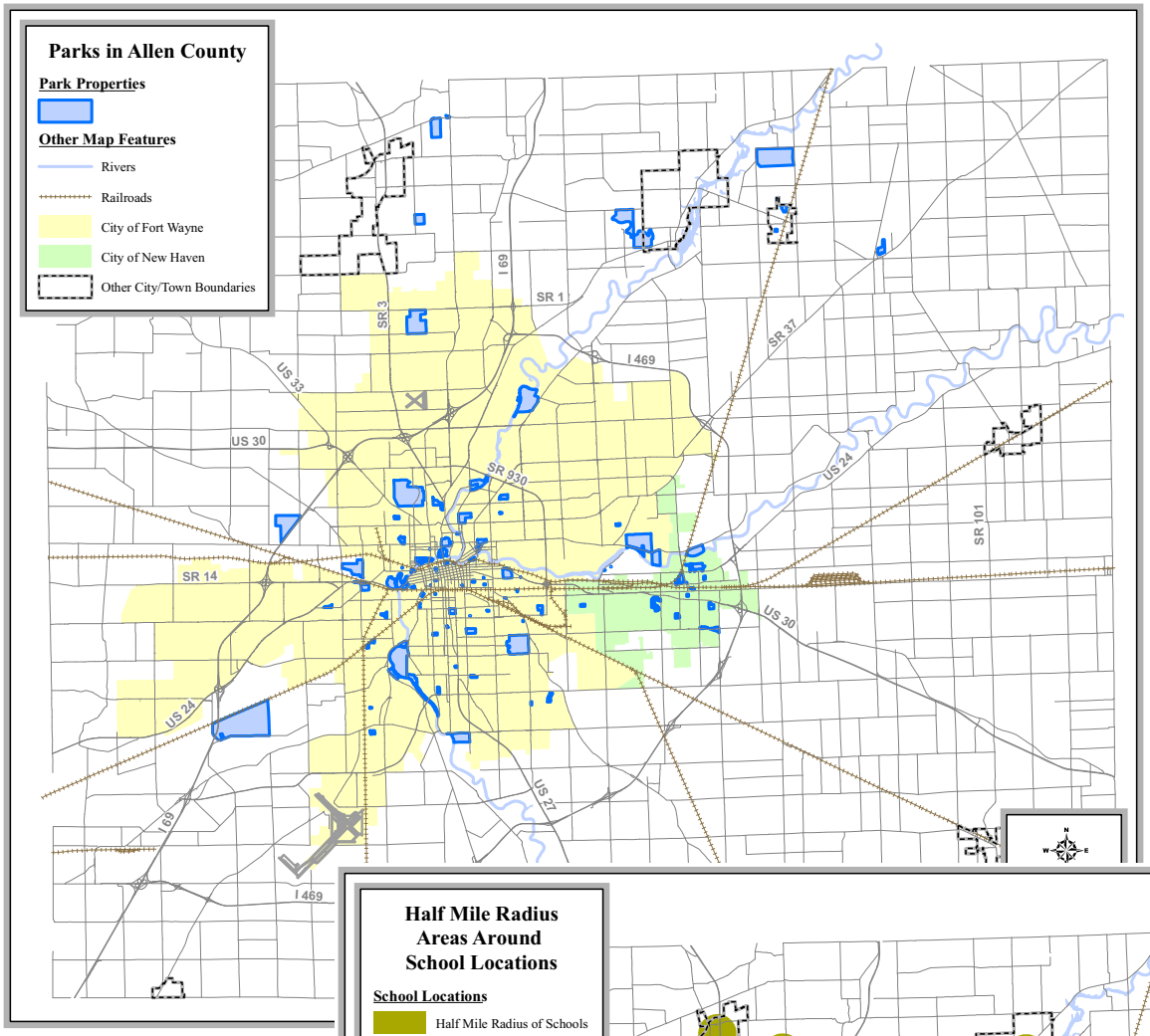


Figure 52

Another destination that attracts large numbers of pedestrians are parks and recreational areas. This map shows the locations of park facilities throughout Allen County. These areas provide a significant amount of pedestrian related activities on a regular basis. Large numbers of pedestrian trips occur within and around these areas which often create motorist and pedestrian conflict points.

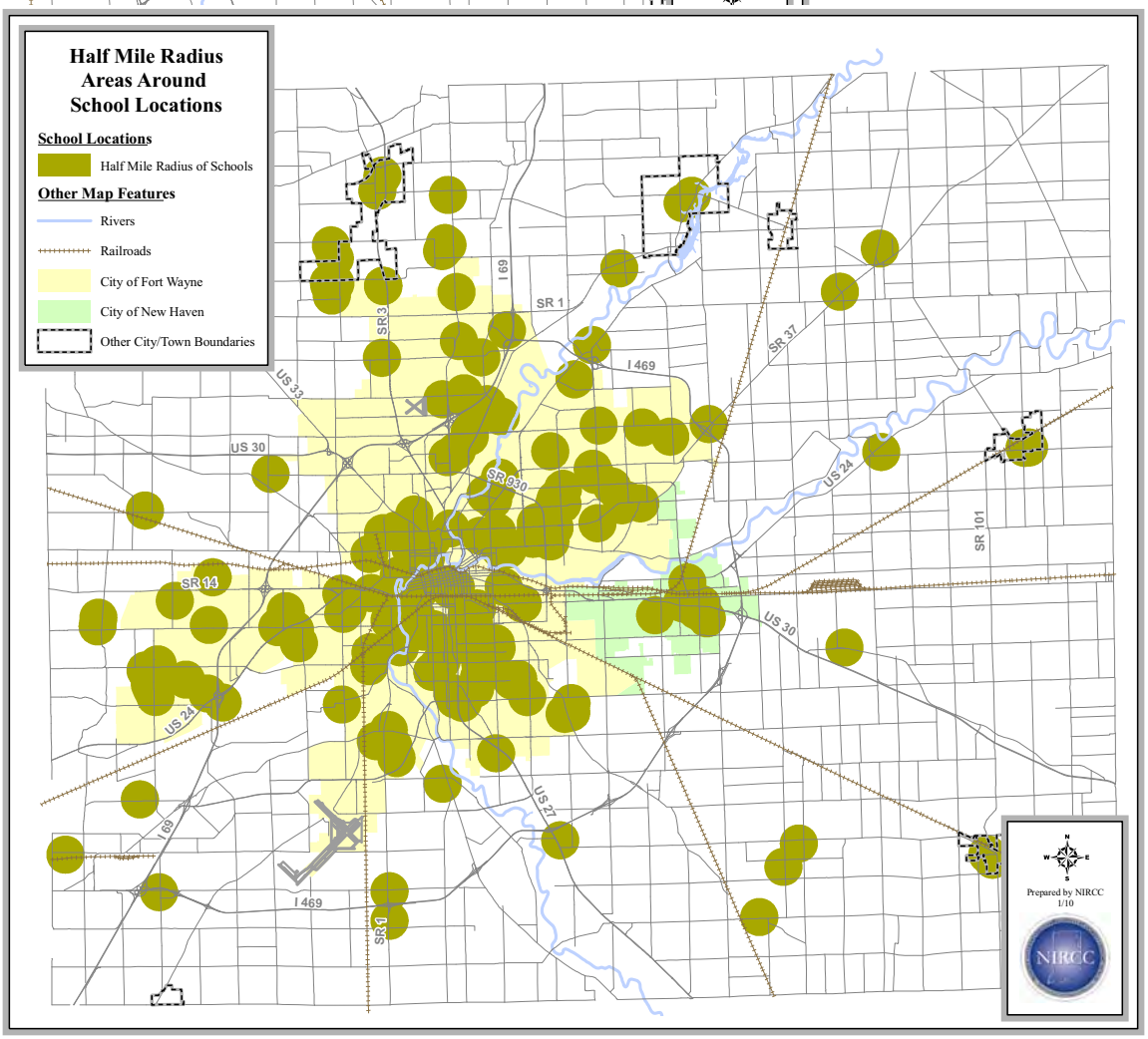
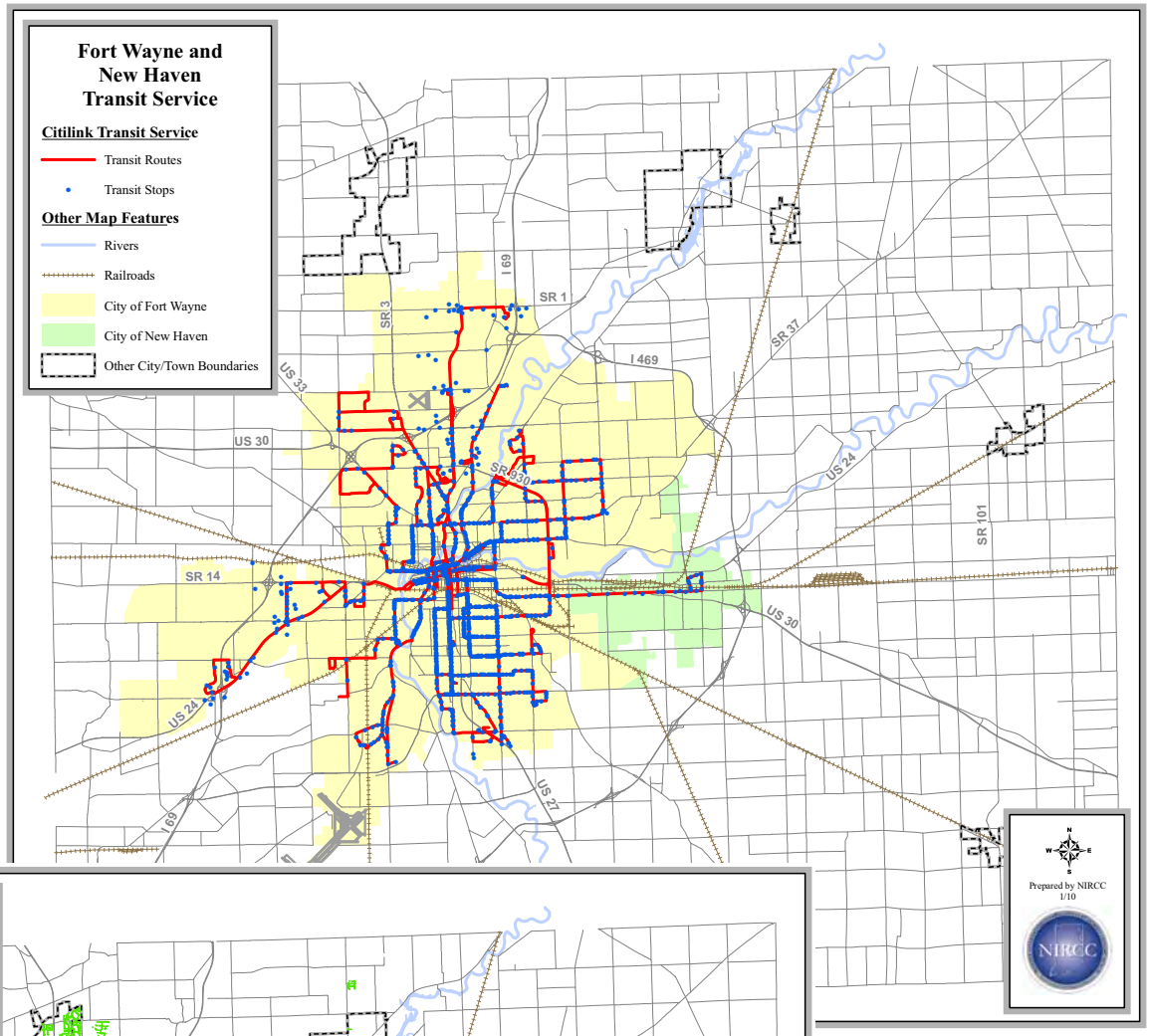


Figure 53

Areas around schools are recognized as high priorities for pedestrian safety improvements as well. The Green areas are within a half mile radius of school locations throughout Allen County. Many schools within Fort Wayne, New Haven, and some of the cities and towns throughout Allen County have students who walk to school. Crash data from 2006-2008 reveals that almost 80% of all pedestrian related accidents occurred within these half mile radius areas.

Figure 54

Transit service areas are another high priority concern for pedestrian safety. Almost 60% of all pedestrian accidents occurred within 100 ft of a transit route or transit stop throughout Fort Wayne and New Haven for the 4 year period of 2005-2008. Since accessibility to transit service is an important component to pedestrian mobility and the quality of life for many people, the presence of pedestrian safe facilities in these areas are of high concern.



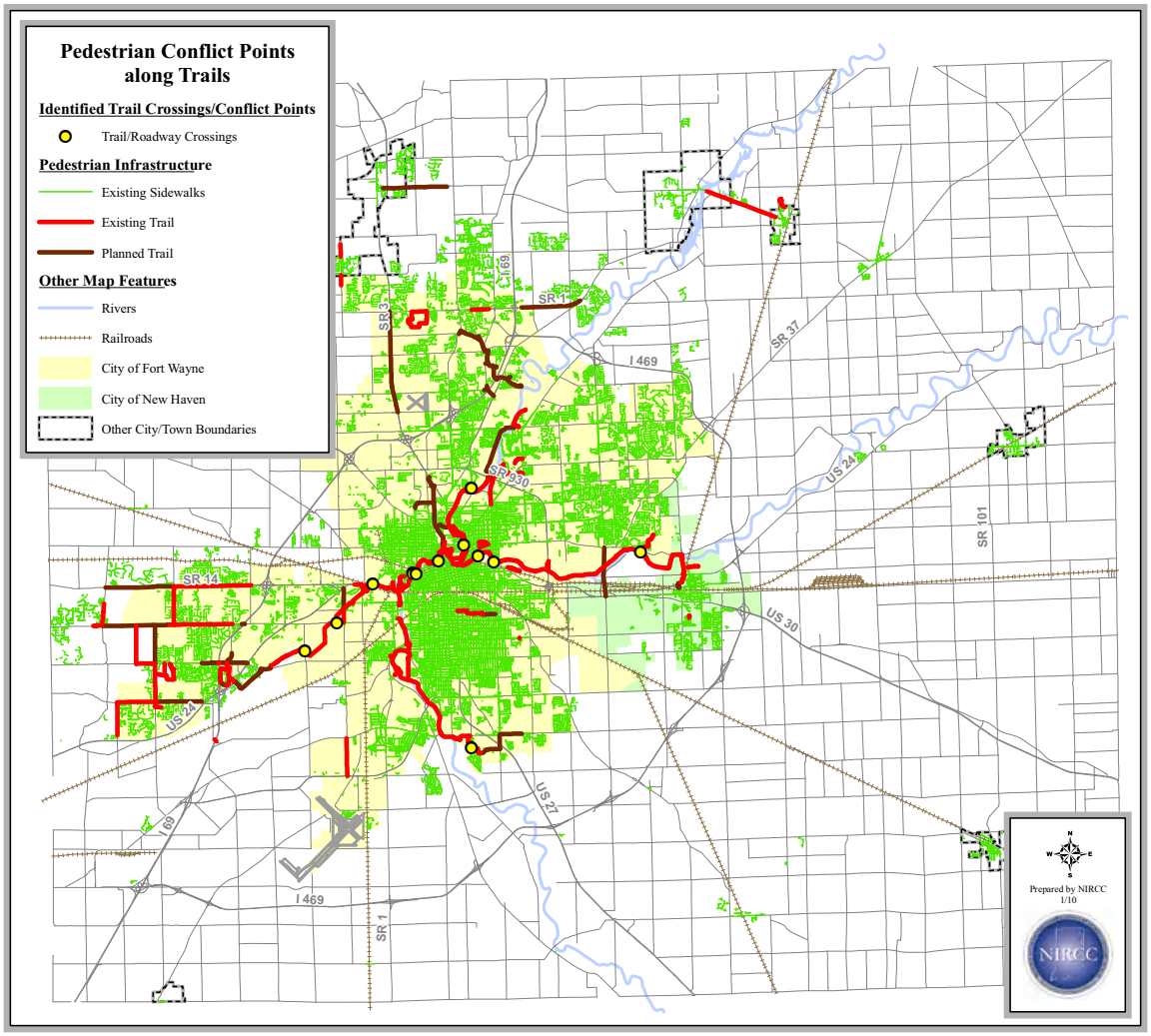


Figure 55

This map provides a view of trail crossing locations that may need to be addressed with safety improvements. It also shows trails that are planned in the near future that may need enhanced pedestrian safety devices or facilities as well. The kinds of improvements for these types of facilities may include access management strategies, enhanced crosswalk treatments, pedestrian signals or countdown indicators, or even grade separated pedestrian crossings.

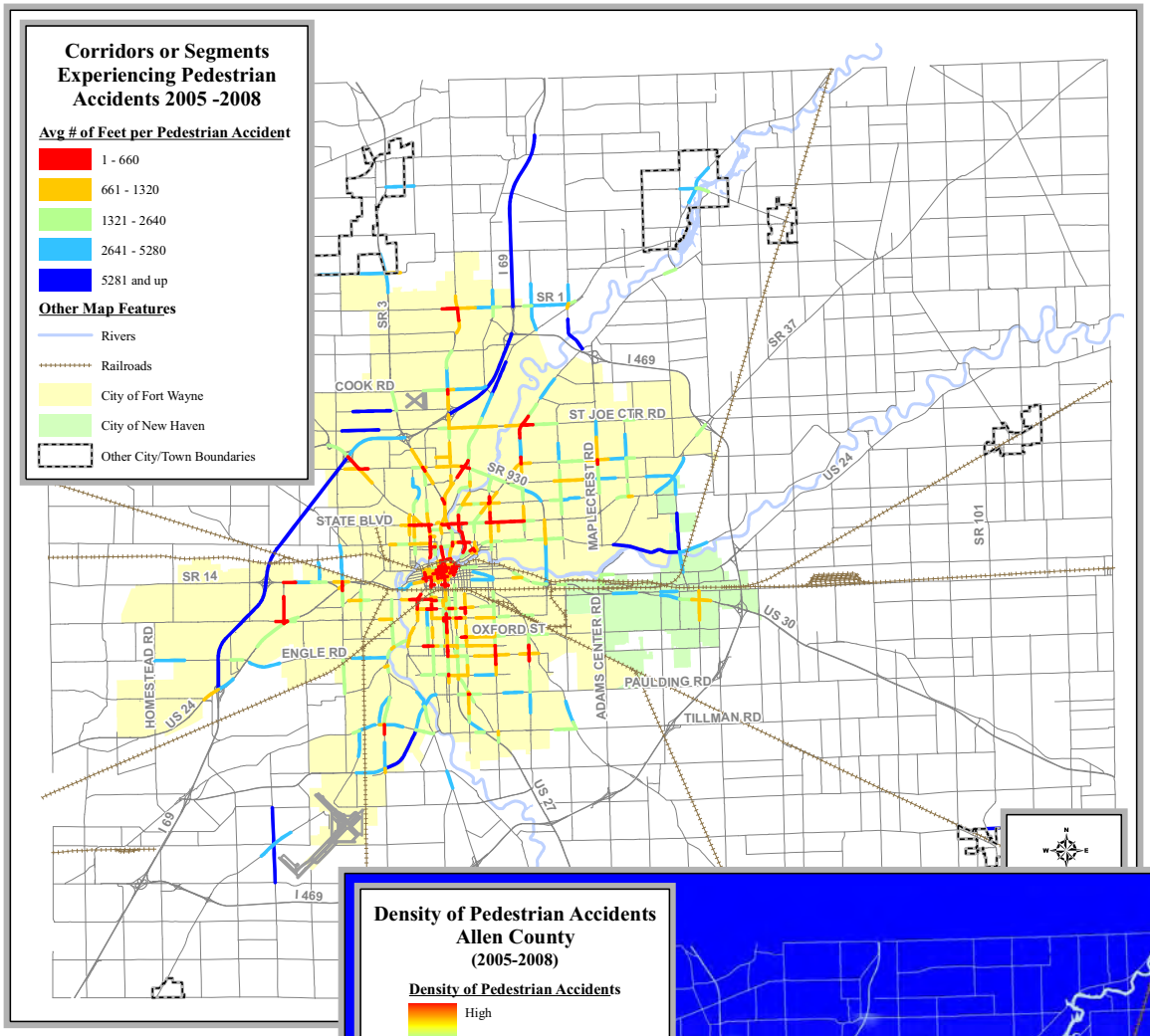


Figure 56

This is one example of a way that NIRCC determines if corridors are experiencing higher than expected pedestrian related accidents. This map takes road segments of different lengths and divides the segment length by the total number of pedestrian accidents along that segment. This formula gives a sense of which corridors are experiencing higher densities of pedestrian accidents regardless of its length.

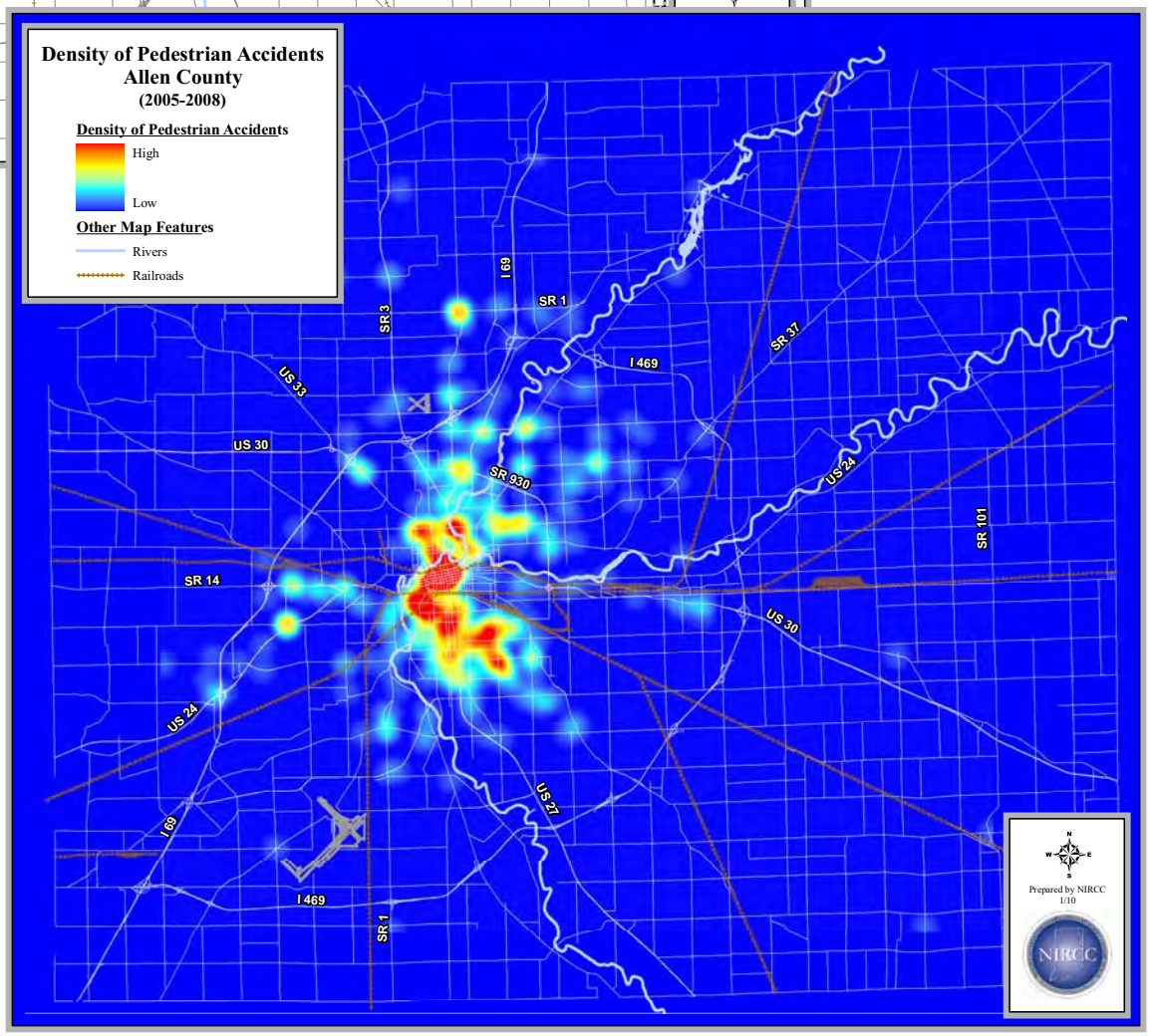


Figure 57

A significant factor that provides guidance for choosing potential safety improvement areas, locations, and even project types is crash data. NIRCC maintains a crash database that is updated yearly with every reported accident that occurs in Allen County. From this database NIRCC has mapped pedestrian accidents throughout the entire county. This provides a visual of the areas with the highest density of pedestrian accidents over the period 2005 through 2008.

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 2010. The Summary Report highlights a majority of the transportation planning activities conducted and the products produced by NIRCC during Fiscal Year 2010. 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 2011-2014 Transportation Improvement Program (TIP) represent the improvements selected for implementation. The Fiscal Year 2011-2014 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), 2030-II Transportation Plan, and many other documents and staff contact information.

Transportation Summary Report Fiscal Year 2010

Northeastern Indiana Regional Coordinating Council
One East Main Street, City County Bldg. Room 830
Fort Wayne, IN 46802
Phone: 260-449-7309
Fax: 260-449-8652
Website: www.nircc.com

Northeastern Indiana Regional Coordinating Council