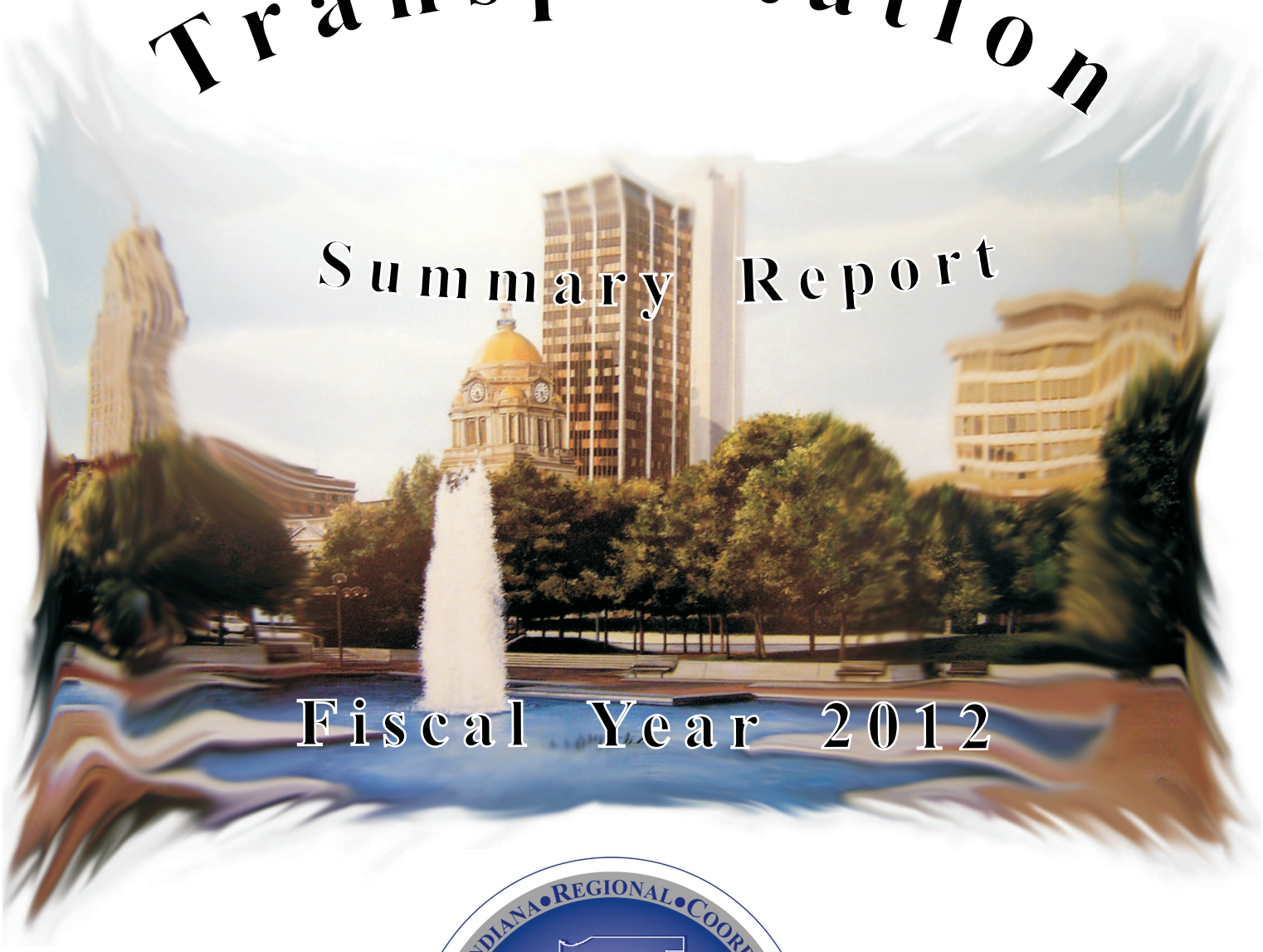
Transportation



Summary Report

Fiscal Year 2012

Northeastern Indiana Regional Coordinating Council

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INTRODUCTION

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

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

This Transportation Summary Report highlights and visually illustrates some of the transportation planning activities conducted and the products produced by NIRCC during Fiscal Year 2012. 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 2013-2016 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

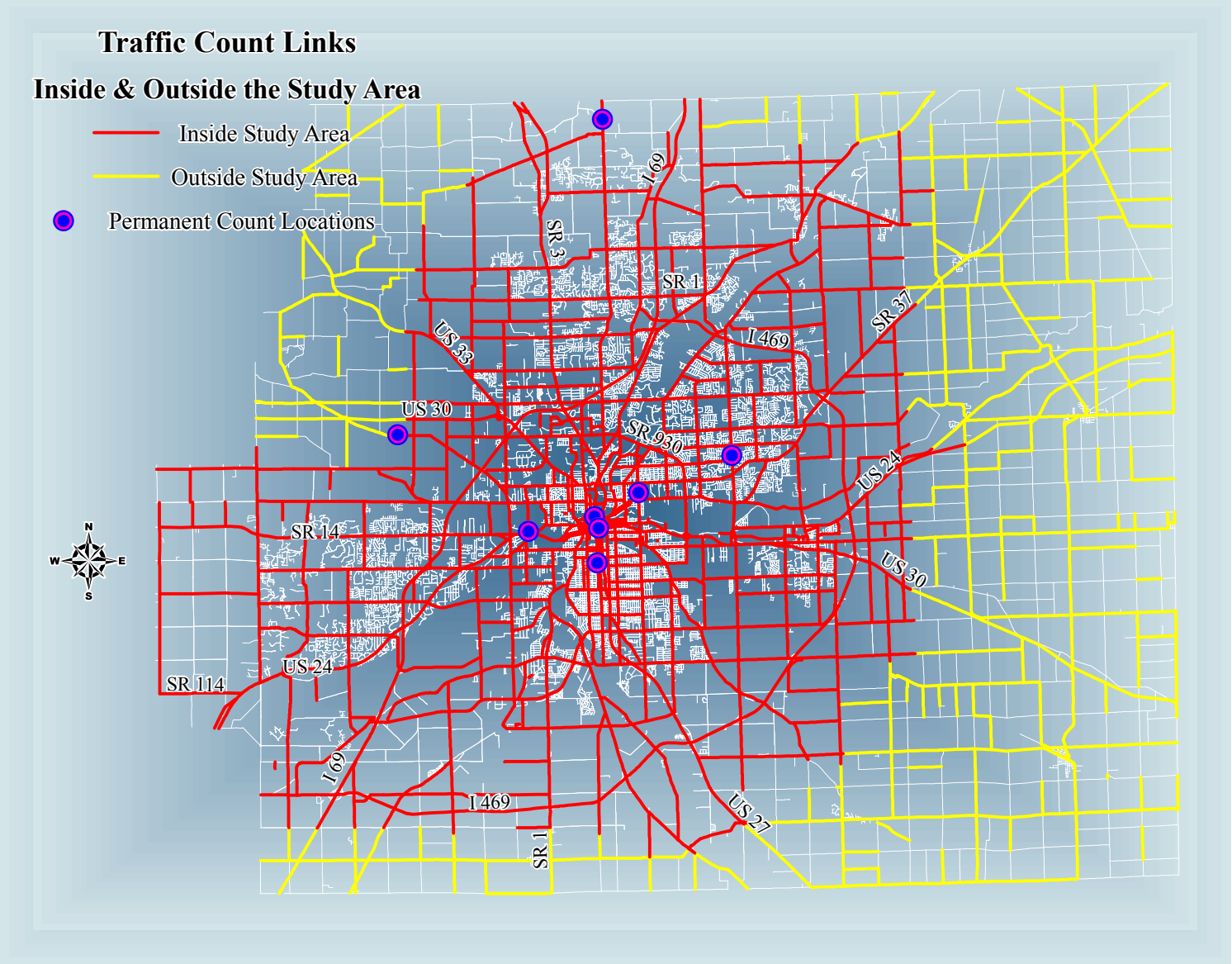
Transportation Summary Report Fiscal Year 2012

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

Figure 1



counting stations on Interstate 69 and State Road 930. The data from these stations, collected each month, is used to develop monthly count factors. Monthly count factors are important to determine because traffic volumes vary from one season to another for various reasons. Weather conditions, construction, economic activities and school/work schedules

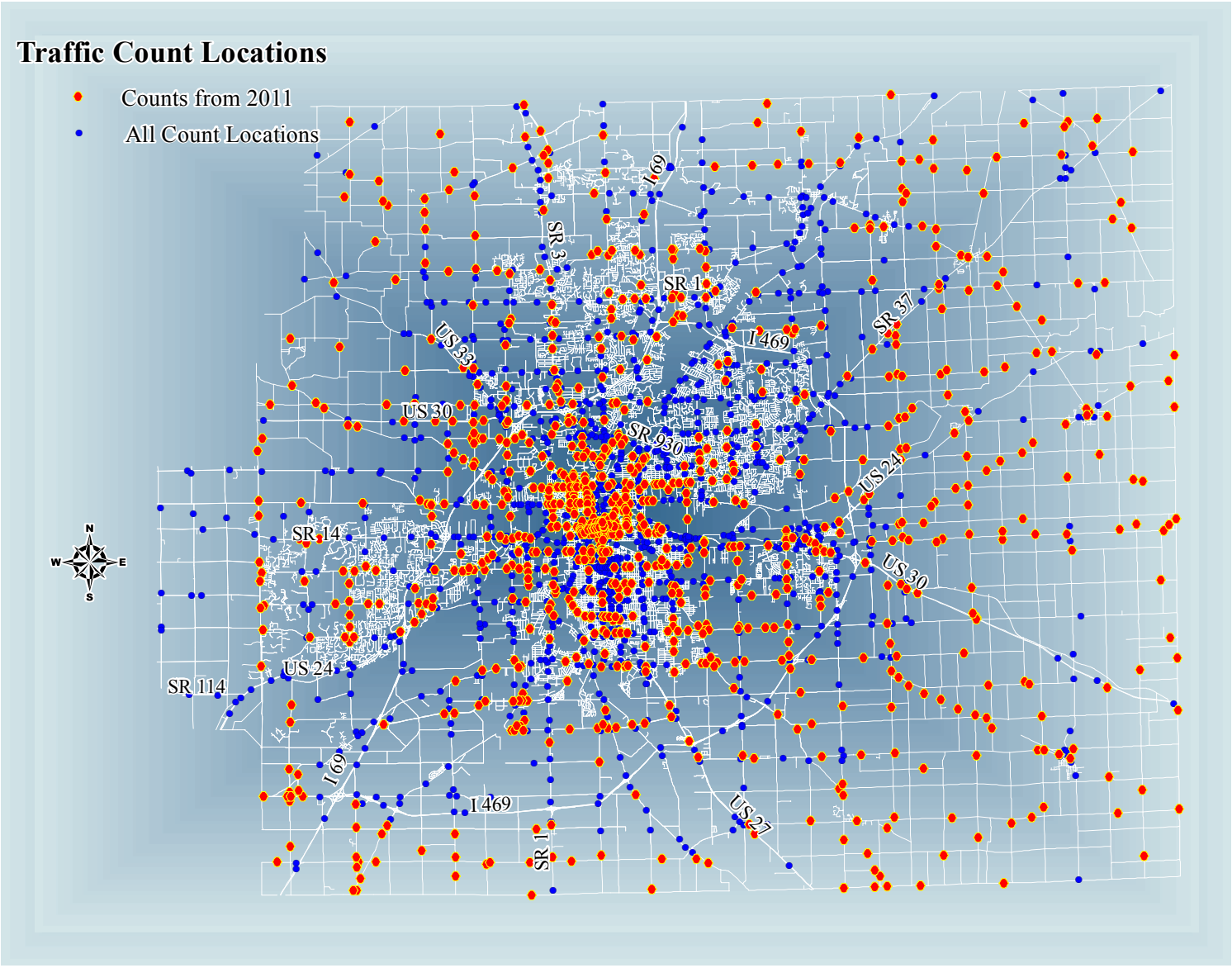


Figure 2

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

The second type of counts are temporary ground counts. In Count Year 2011 (March - November), data was collected at 867 locations, as illustrated in Figure 2. Out of the 867 Counts, 195 locations were collected throughout the county as part of our rural traffic count program. 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

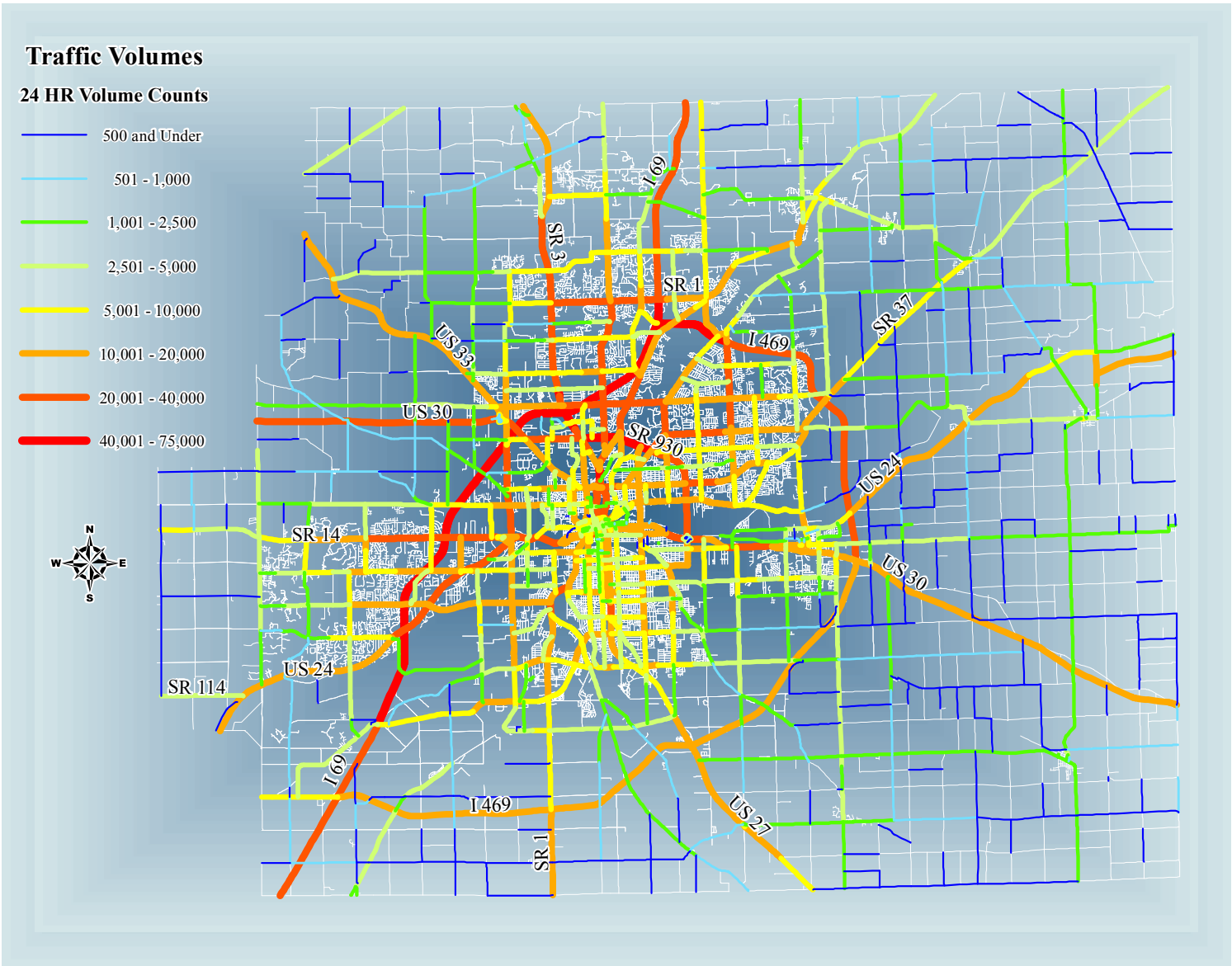


Figure 3

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

Vehicle Miles of Travel

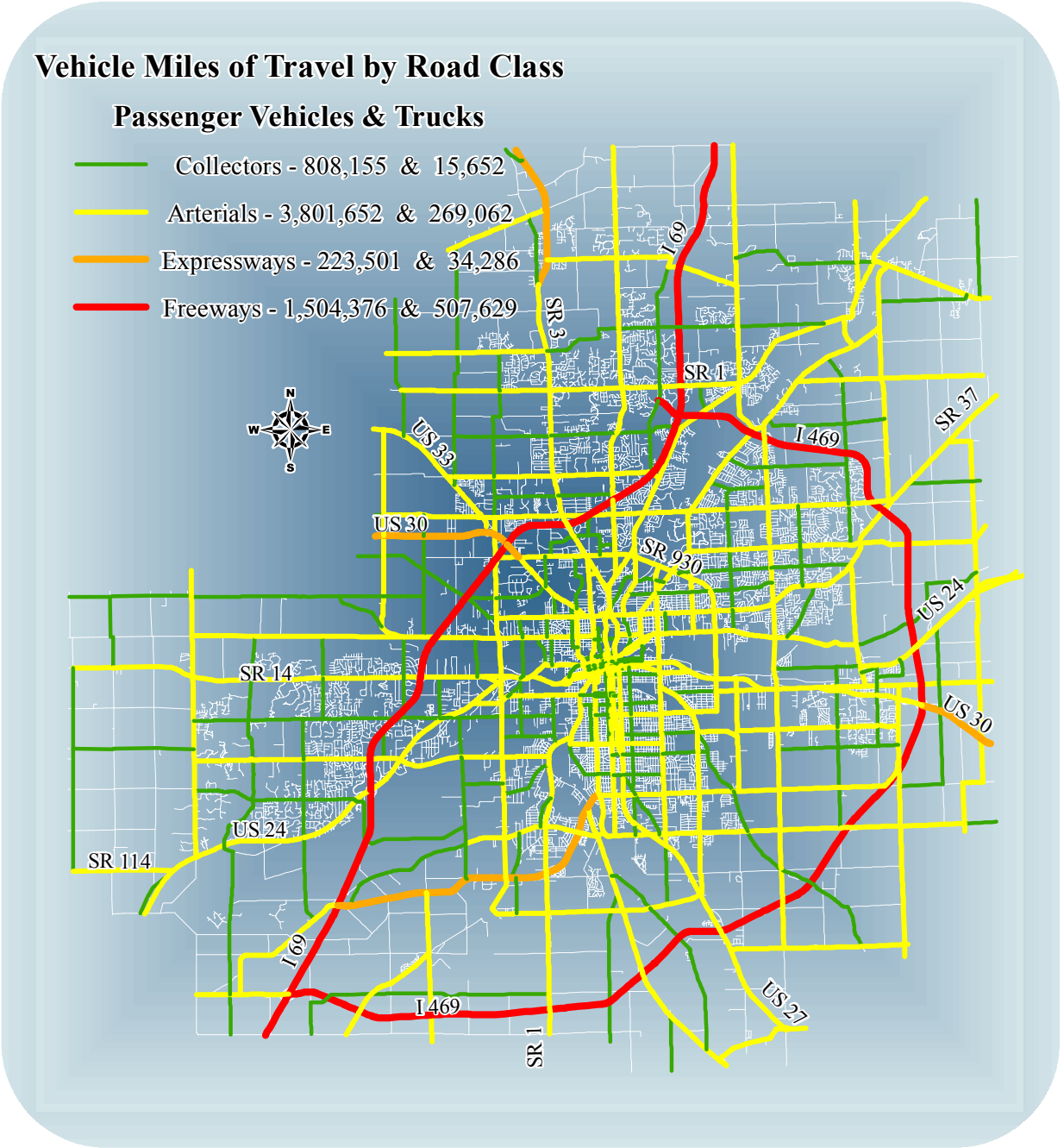
Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2012

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 increased from 7,062,317 million in 2010 to 7,164,314 million in 2011. This represents an increase of 1.44 percent. The VMT increased on arterial streets (1.49%), on collector streets (4.49%), and on expressways (2.72%) from 2010. The VMT is illustrated for 2011 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 2001 to 2011 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 some years experienced a slight decrease. These factors include an increase in automobile ownership per family, the spread of development, suburb to suburb travel, a rise in the percentage of two-income families, and other lifestyle changes.

Figure 5

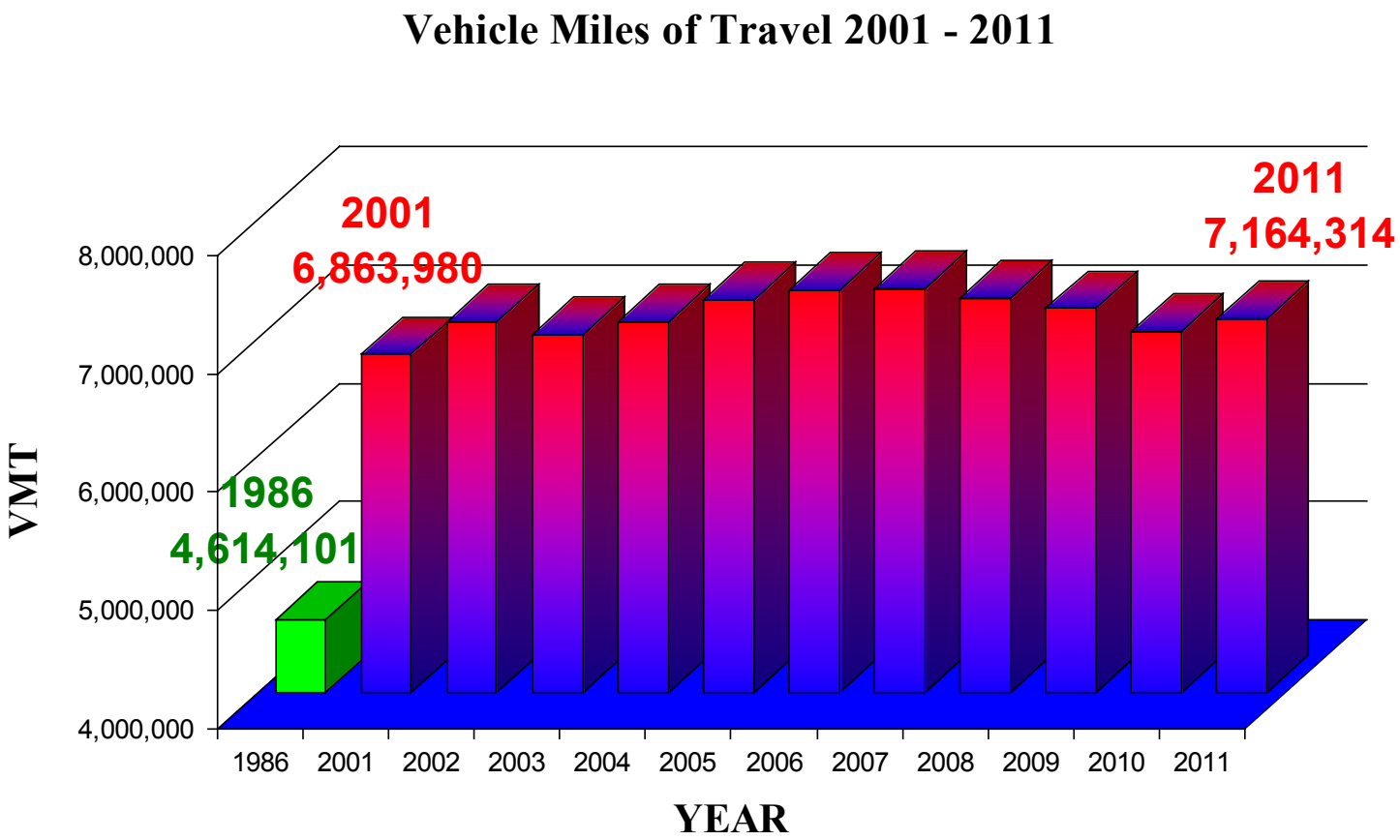
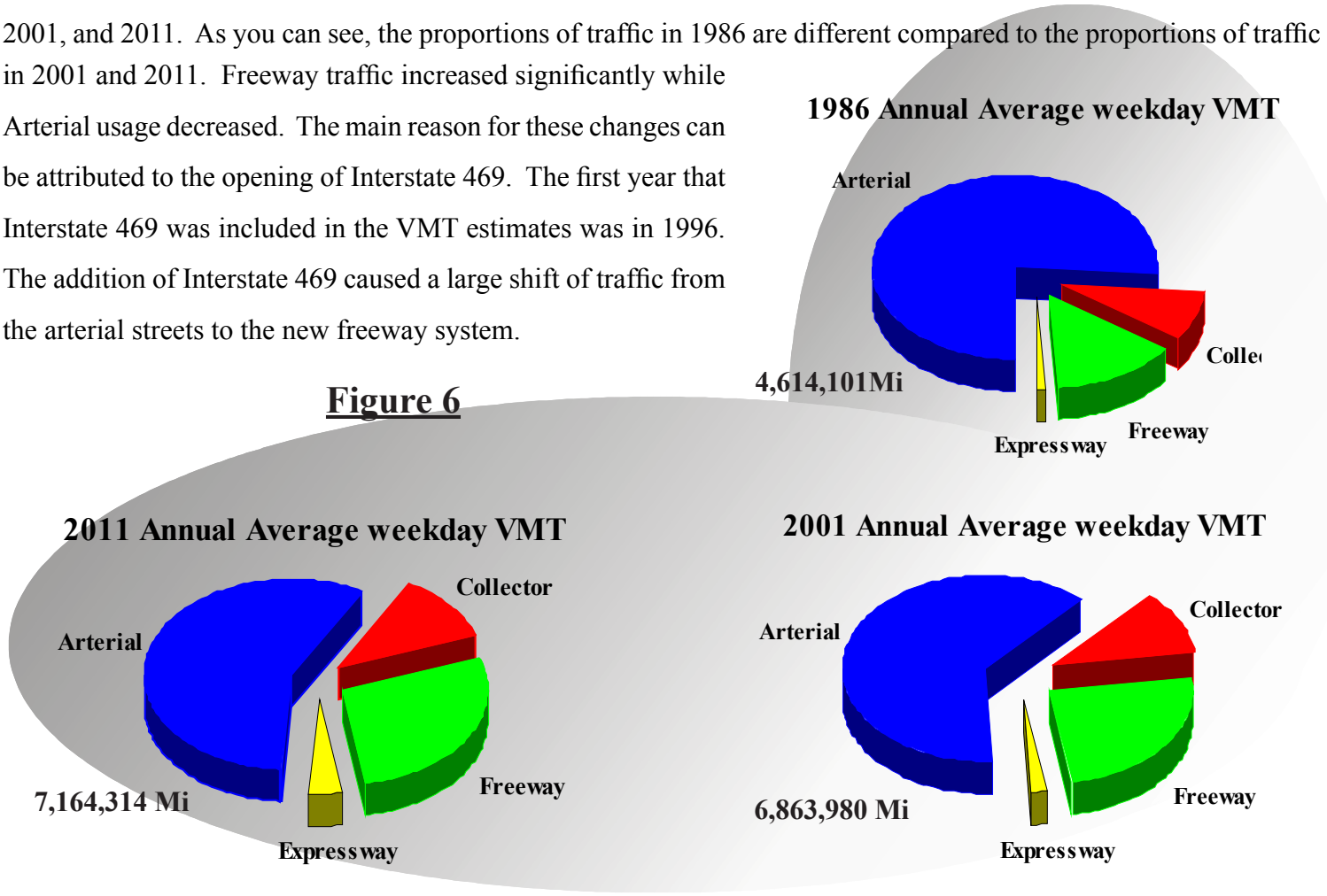


Figure 6 presents three pie charts that represent the proportions of VMT by street classification for the years 1986, 2001, and 2011. As you can see, the proportions of traffic in 1986 are different compared to the proportions of traffic in 2001 and 2011. Freeway traffic increased significantly while 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



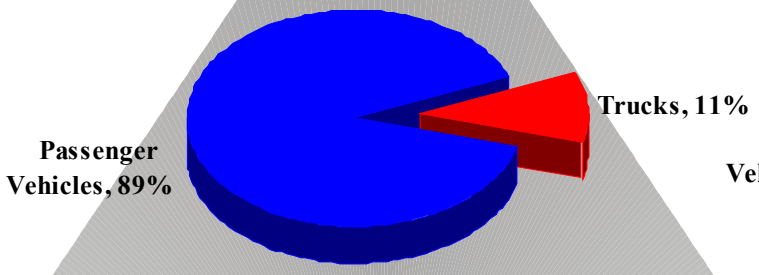
The VMT is also broken down to show the annual average VMT for passenger vehicles and trucks. The pie charts contained in Figure 7 illustrate the VMT for 1986 and 2011. The proportion of truck traffic compared to passenger vehicle traffic is almost identical in 1986 and 2011. A further breakdown of the proportionate usage of passenger vehicles versus trucks on the different road classifications shows some interesting differences between 1986 and 2011. 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 2011 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 2011. 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

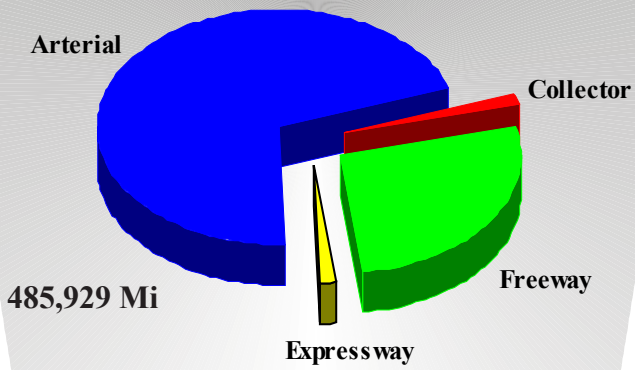
Figure 7

1986

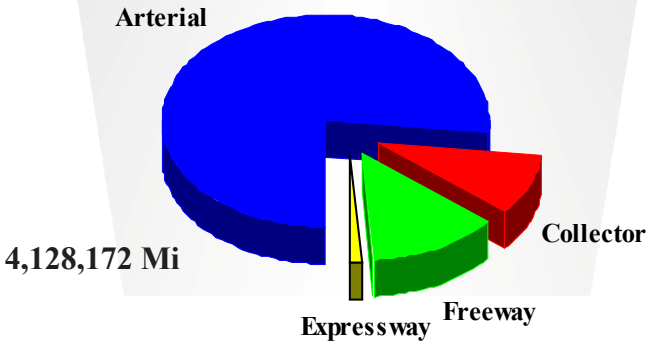
1986 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



1986 Annual Average weekday VMT for Trucks

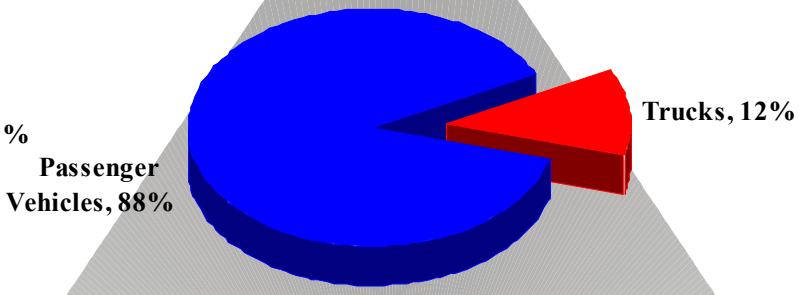


1986 Annual Average weekday VMT for Passenger Vehicles

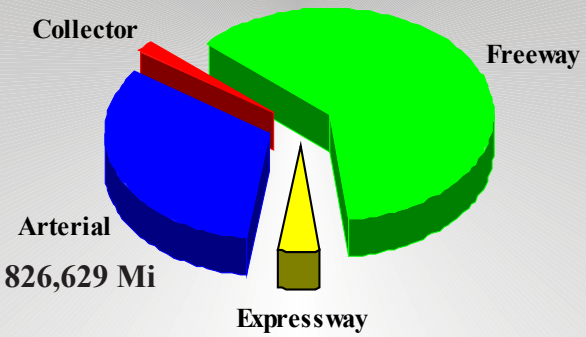


2011

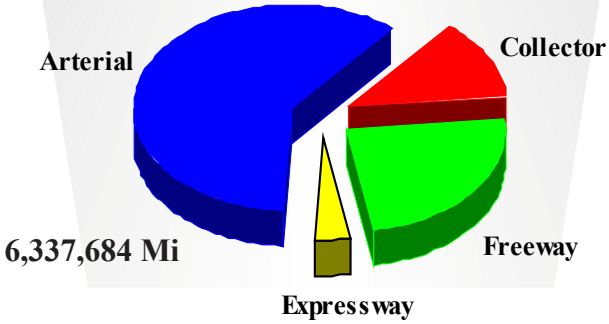
2011 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



2011 Annual Average weekday VMT for Trucks



2011 Annual Average weekday VMT for Passenger Vehicles



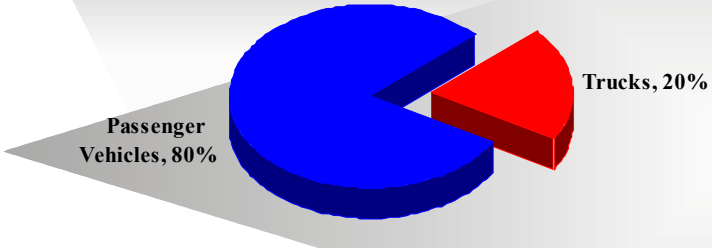
for some of the road classifications, the proportions of passenger vehicles and trucks for each road classification remained very similar between 1986 and 2011.

Figure 8

1986

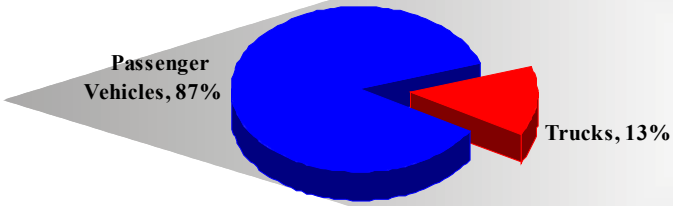
Freeways

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



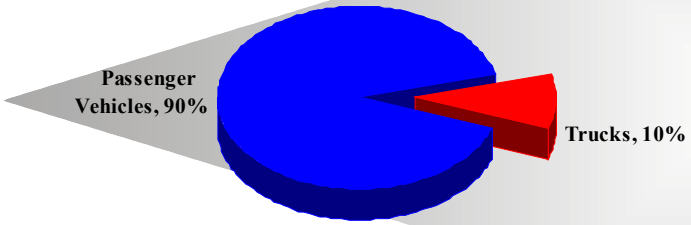
Expressways

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



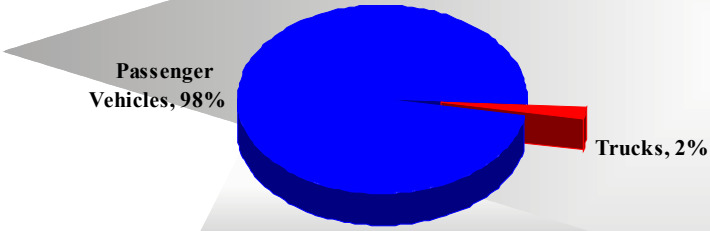
Arterials

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



Collectors

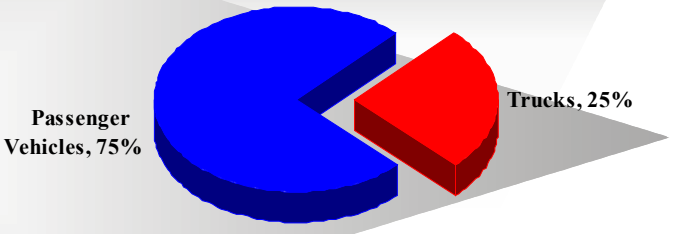
Percentage of 1986 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



2011

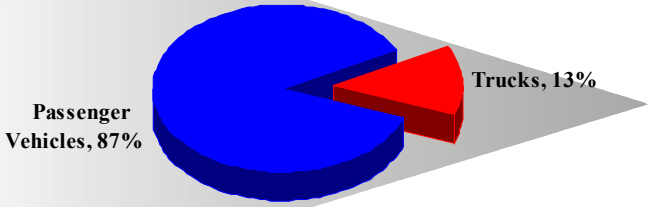
Freeways

Percentage of 2011 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



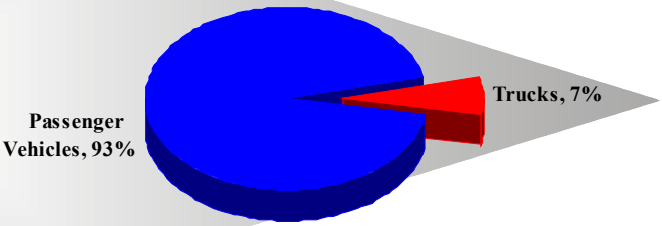
Expressways

Percentage of 2011 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



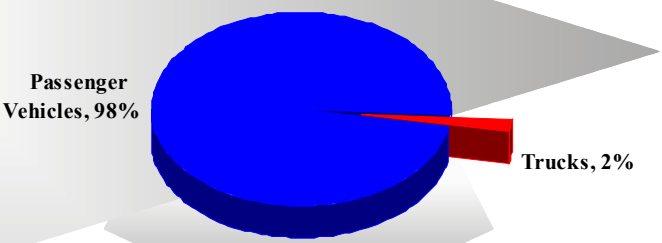
Arterials

Percentage of 2011 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



Collectors

Percentage of 2011 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



Intersection and Arterial Analysis

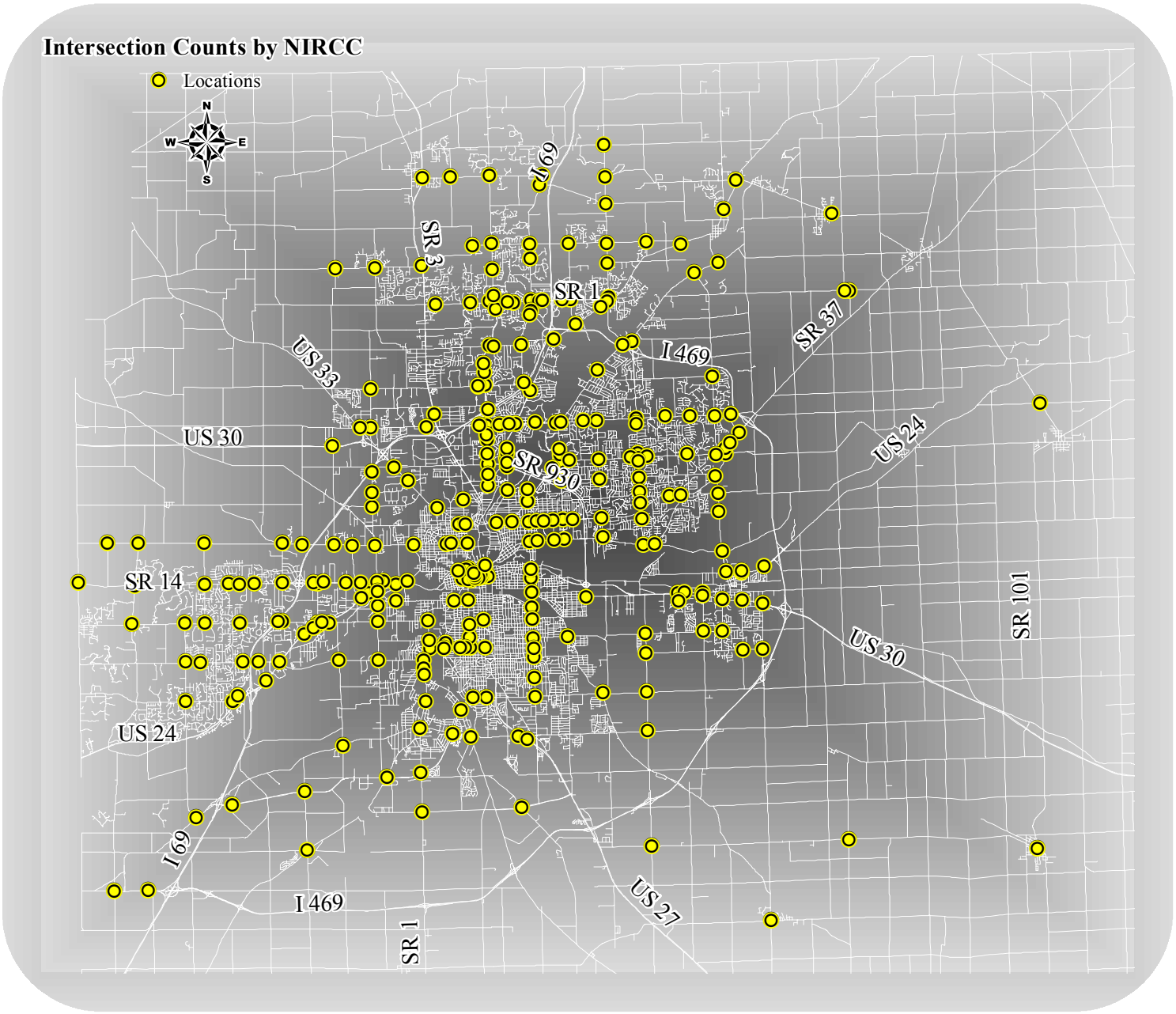
Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2012

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 2012, NIRCC evaluated 19 intersections which are listed in the table contained in Figure 10. Out of these 19 intersections, 15 were signalized and 4 were unsignalized.

Figure 9



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 2012 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 2012 are illustrated in Figure 15.

Figure 10

Signalized Intersections
•Aboite Center Rd / Coventry Ln
•Aboite Center Rd / Dicke Rd
• Aboite Center Rd / Homestead Rd
•Aboite Center Rd / W Jefferson Blvd
•Auburn Rd / Dupont Rd
•Calhoun St / Washington Blvd
•Clinton St / Mayhew Rd
•Cold Springs Blvd / Cook Rd
•Coldwater Rd / Cook Rd
•Coldwater Rd / Riley Dr
•Coldwater Rd / Wallen Rd
•Diebold Rd / State Road 1
•Dupont Rd / Longwood Dr
•Parkview Plaza Dr / State Road 1
•SR 1 / Tonkel Rd
Unsignalized Intersections
•Brookwood Dr / W Circle Dr
•Candlewood Way / Coldwater Rd
•Clinton St / Diebold Rd
•Clinton St / Wallen Rd

Figure 11

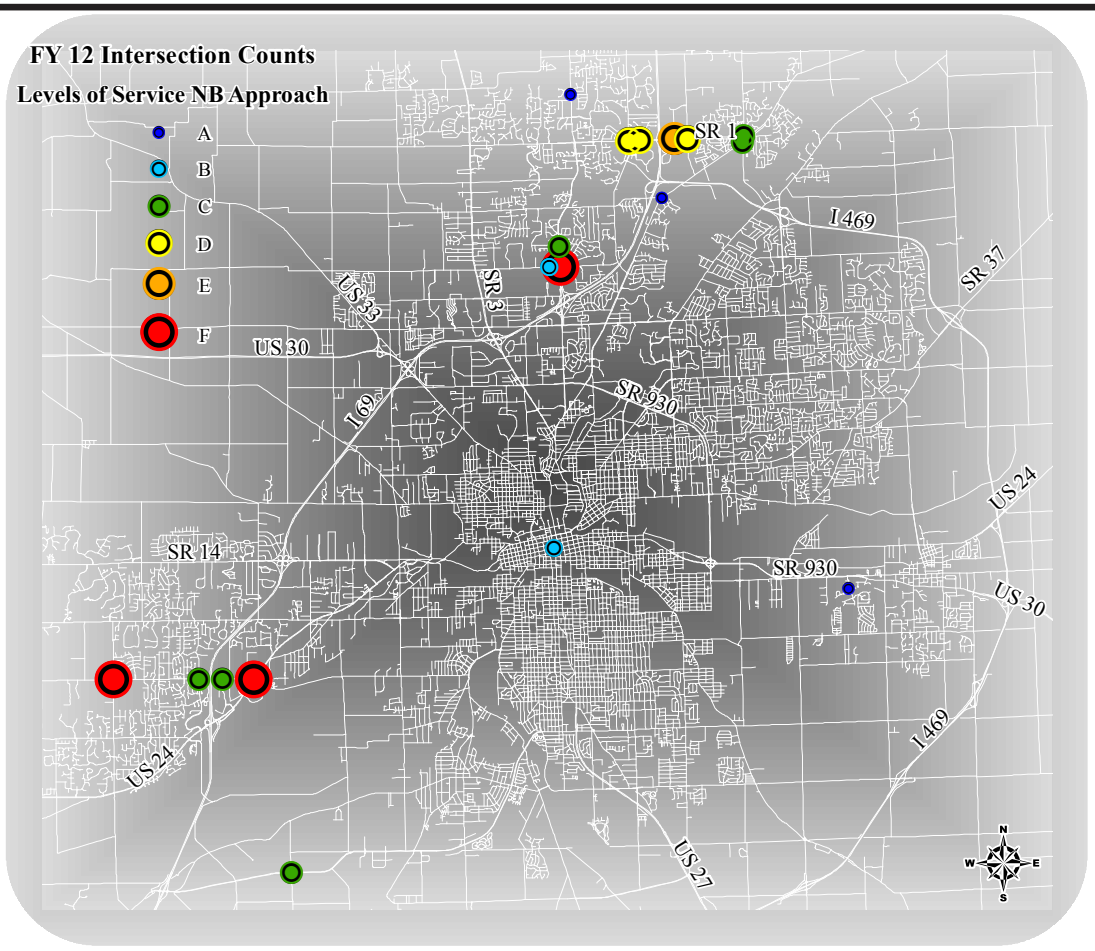
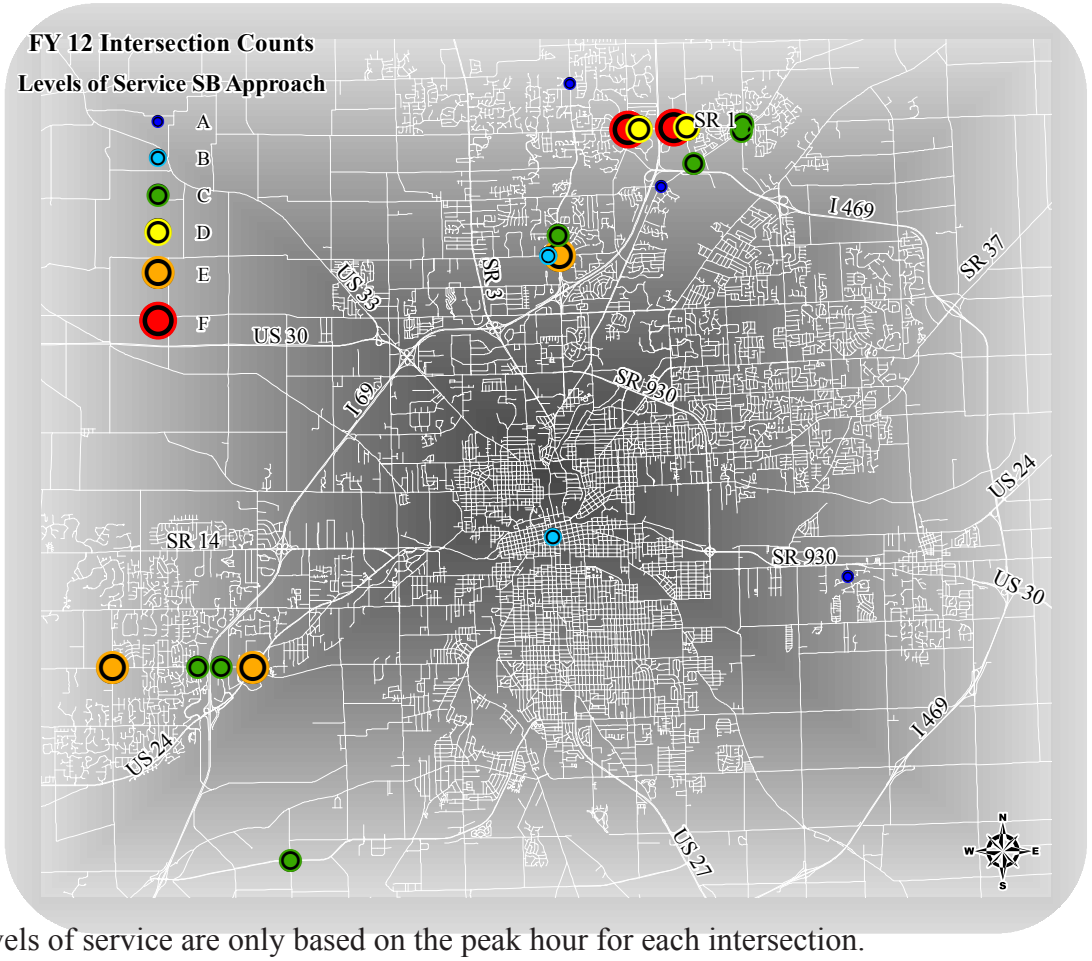


Figure 12



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

Figure 13

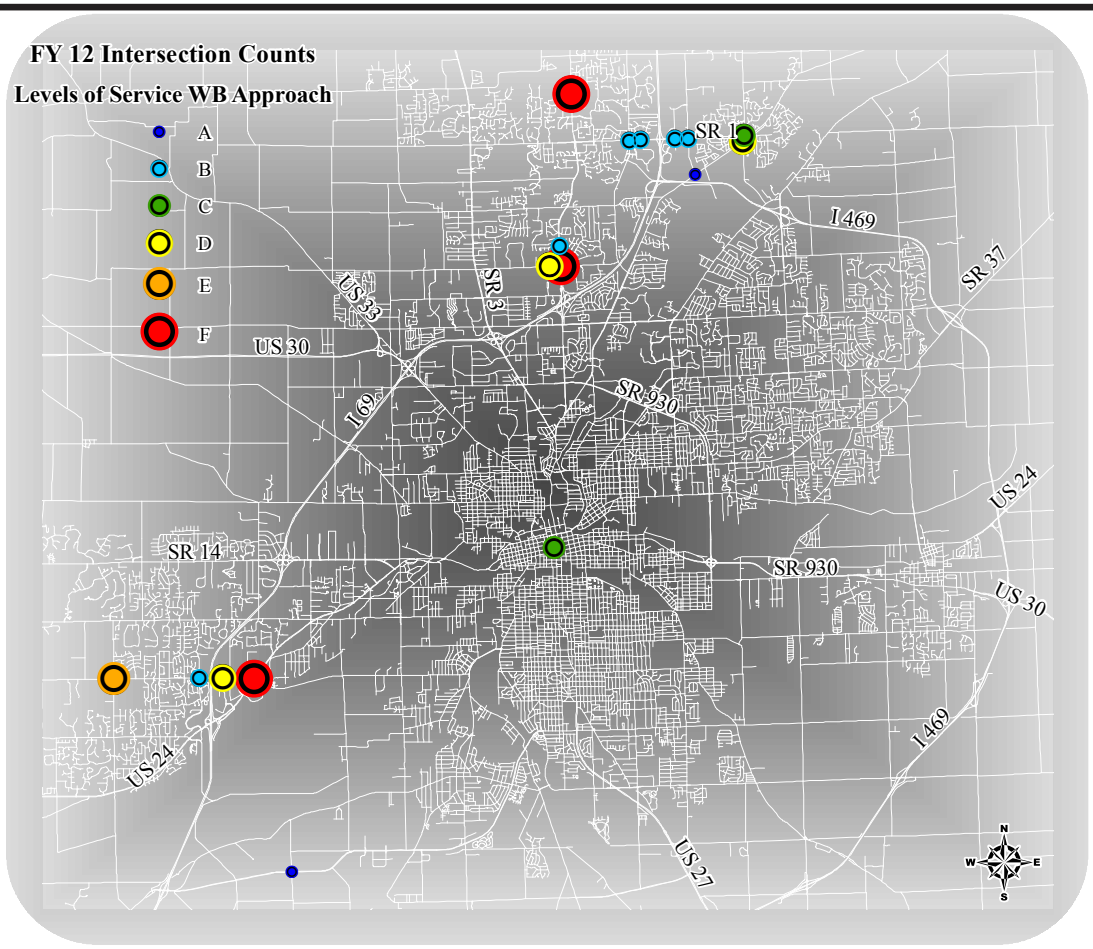
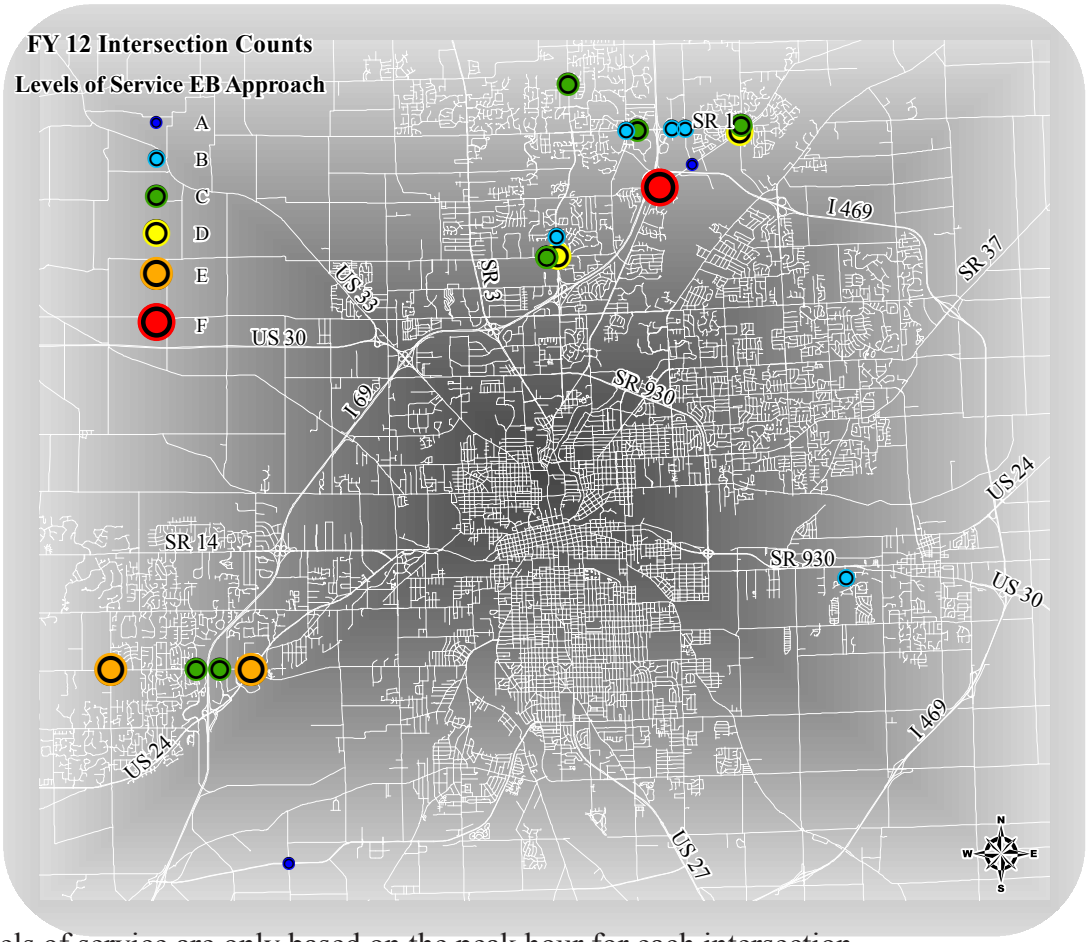
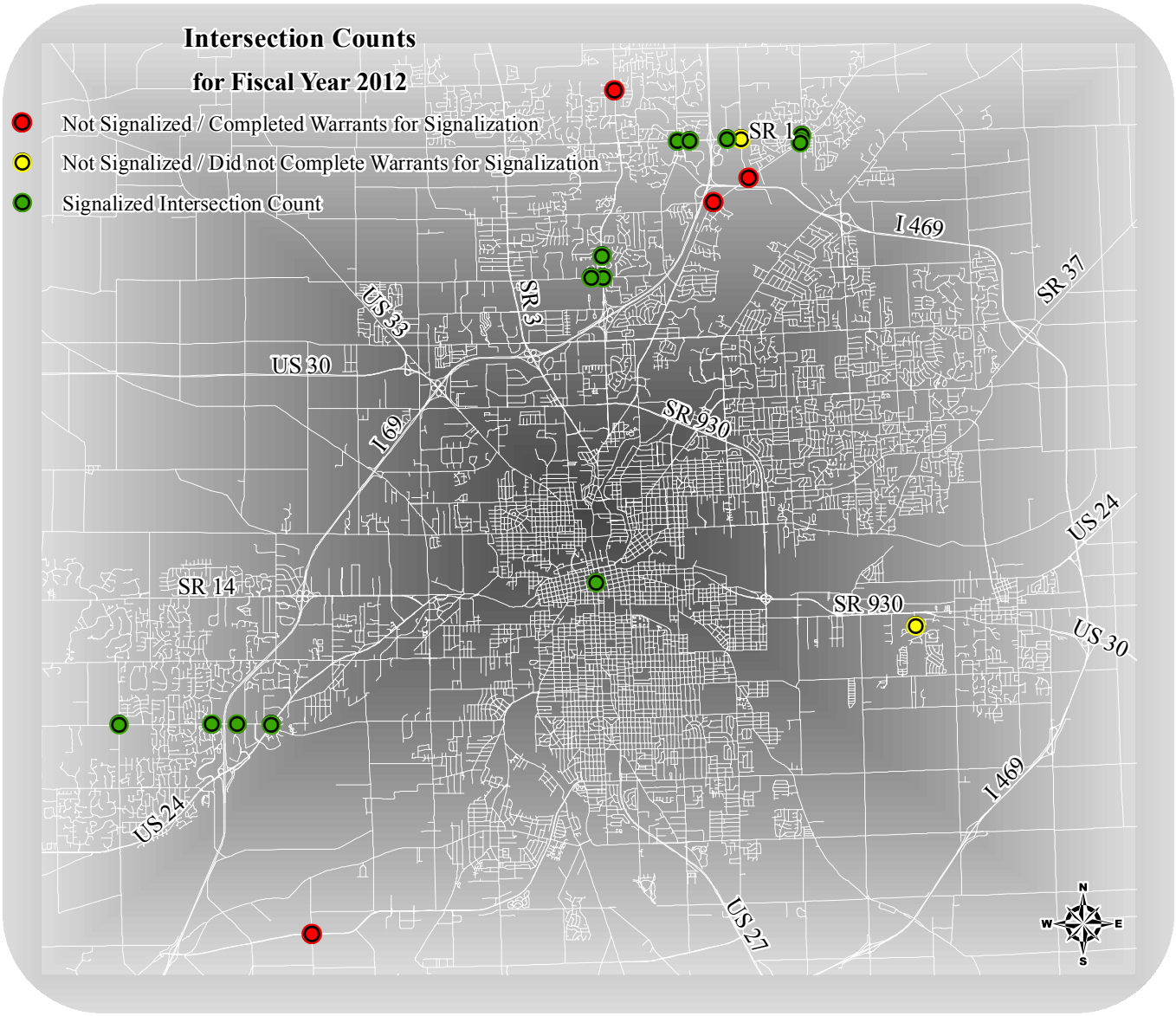


Figure 14



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

Figure 15


Intersection Counts
for Fiscal Year 2012
Not Signalized / Completed Warrants for Signalization
Not Signalized / Did not Complete Warrants for Signalization
Signalized Intersection Count
SR 1
I 469
SR 37
US 33
SR 3
US 30
I 69
SR 930
US 24
SR 14
SR 930
US 30
I 469
US 24
US 27
N
W
E
S

Corridor Studies

Studies completed by the Northeastern Indiana Regional Coordinating Council

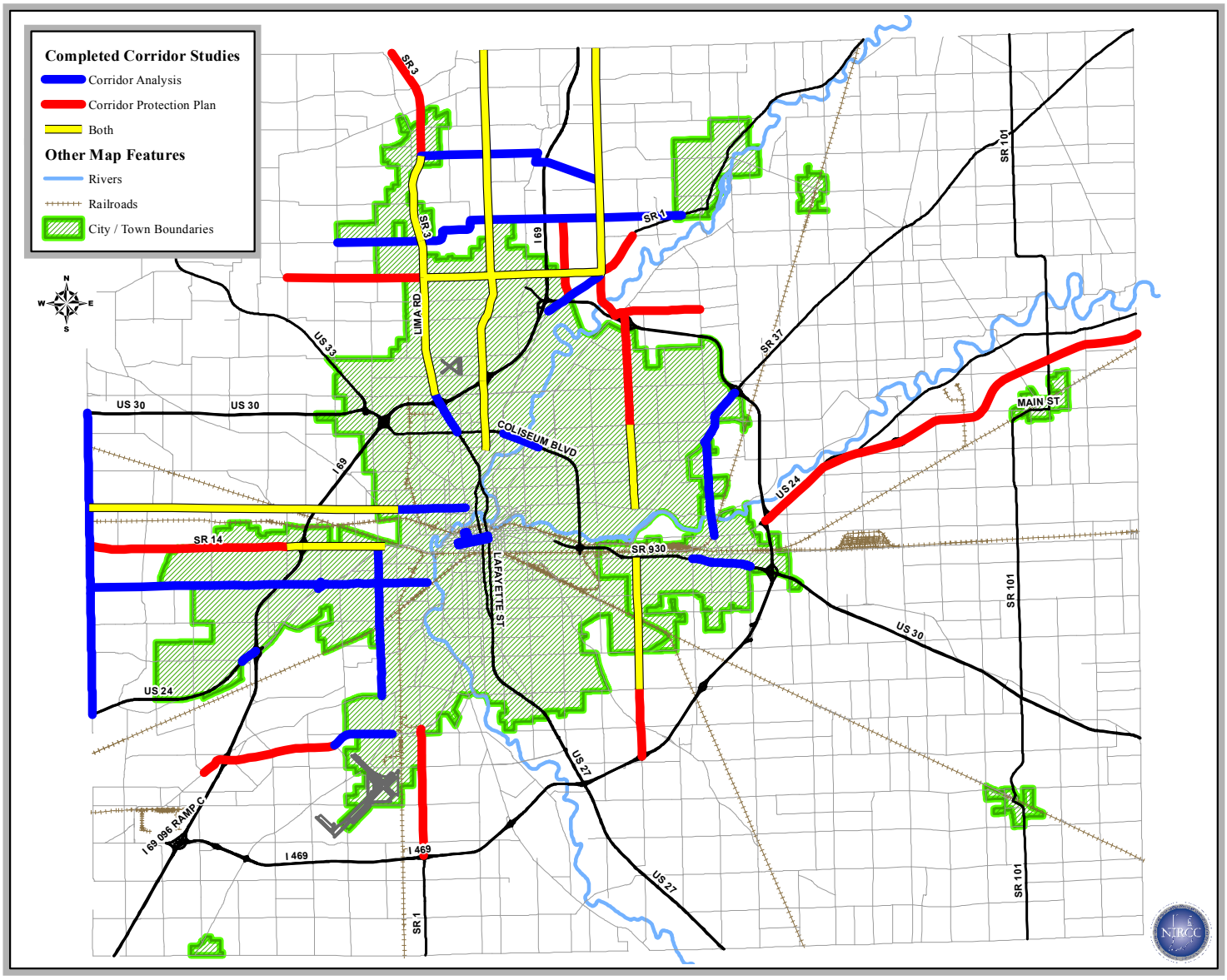
Transportation Summary Report Fiscal Year 2012

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

Figure 16



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

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

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

In Fiscal Year 2012, NIRCC completed one Corridor Analysis study shown in Figure 17 and one Sub-area Analysis shown in Figure 18. These studies are described on pages 29 through 42.

Figure 17

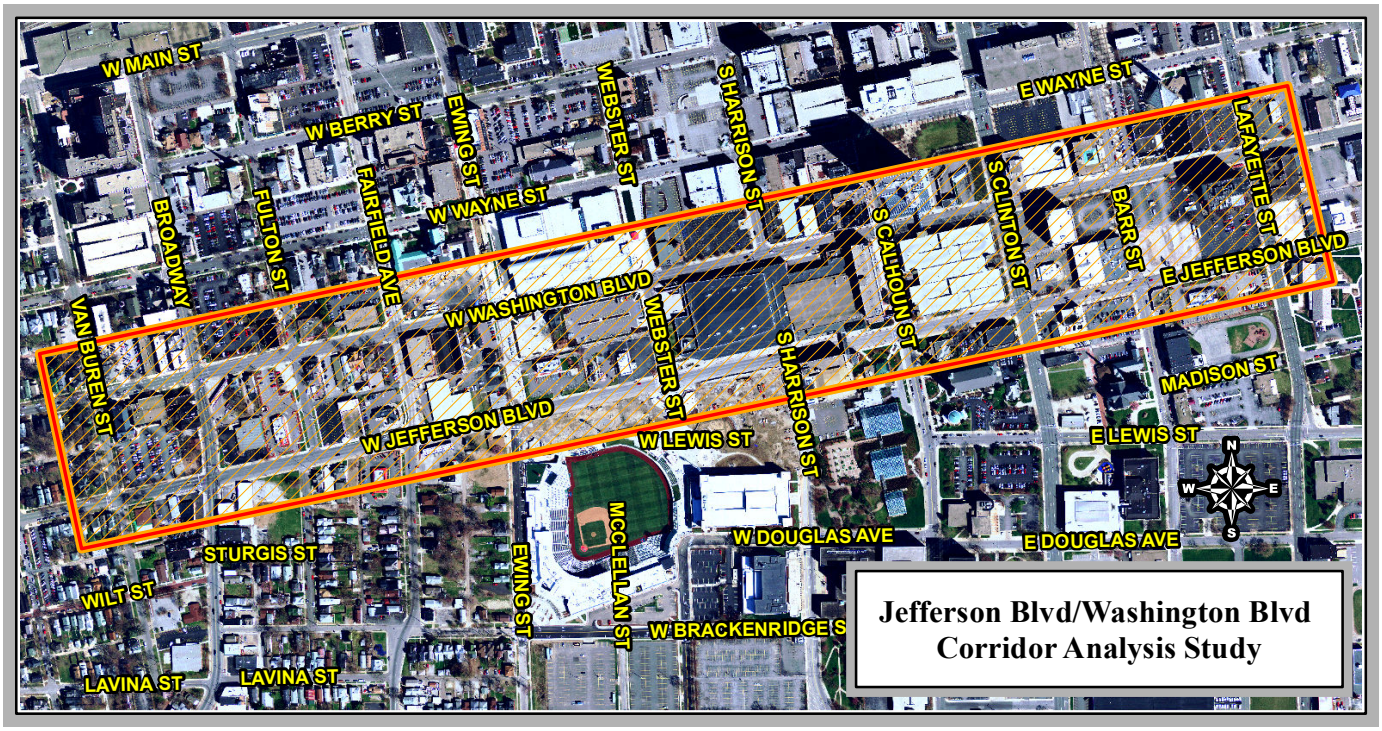


Figure 18


N Clinton St and SR 1 Sub-area Analysis
I 69
Tonkel Rd
SR 1
Diebold Rd
Clinton St
I 469
N
W
E
S

Corridor Analysis Study

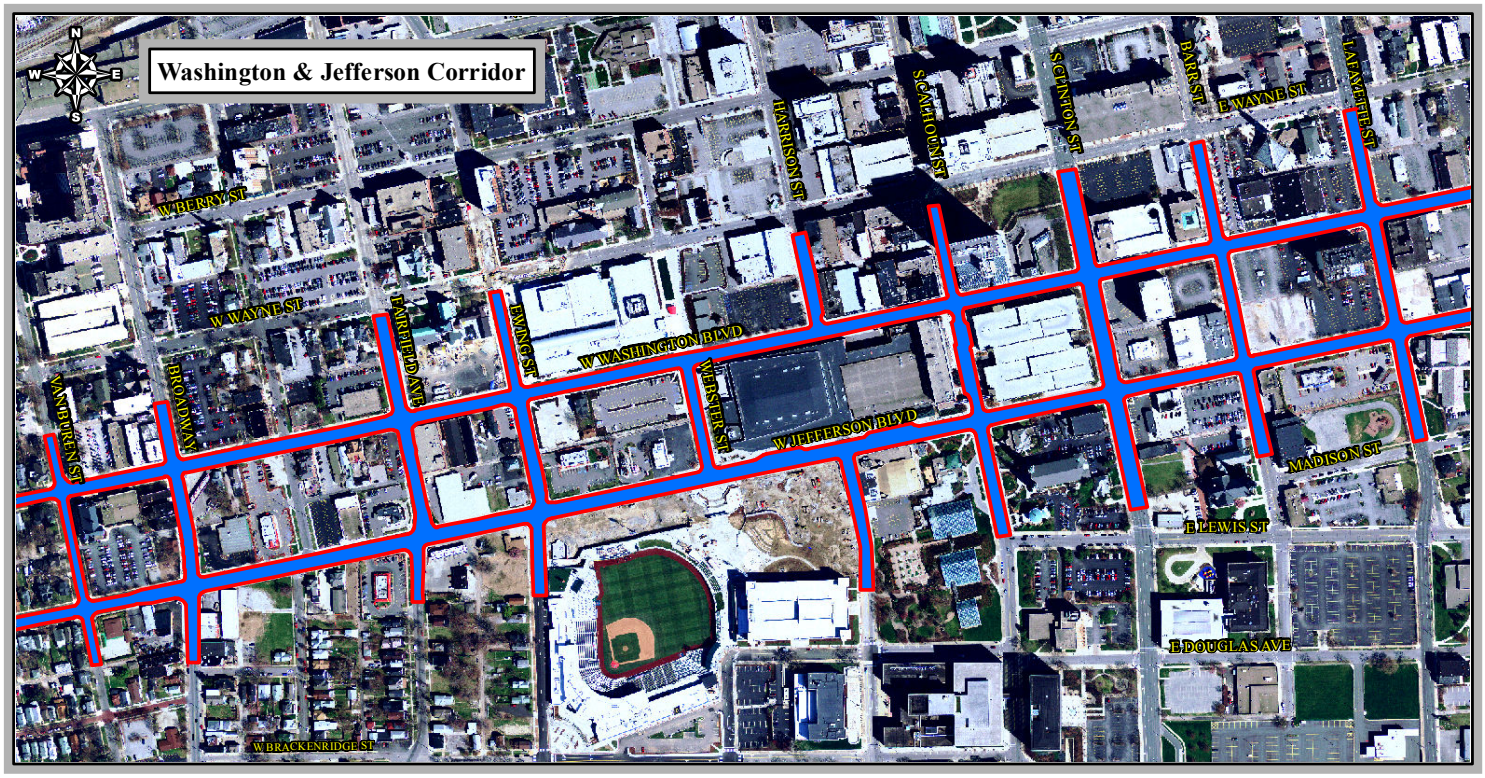
Jefferson Boulevard / Washington Boulevard Corridor Analysis Study

The main purpose of this corridor analysis is to evaluate traffic impacts of proposed roadway projects on an existing corridor. The City of Fort Wayne requested that an analysis be completed for the Jefferson Boulevard / Washington Boulevard Corridors to find out what type of impacts removing a travel lane from each corridor would have using existing conditions and future projected conditions. The analysis calculated and examined the existing and estimated future changes to the levels of service (LOS) based on current and projected traffic volumes.

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

The Jefferson Boulevard / Washington Boulevard Corridors (Figure 19) are east / west corridors that run through

Figure 19



the Central Business District of the City of Fort Wayne. The focus of this study is the area between Van Buren Street (west end) and Lafayette Street (east end). The lane reductions for these corridors are proposed between Van Buren Street and Clinton Street. Figure 19 shows the intersections, or analysis areas, that were studied. This report examines the following for the AM and PM peak hours:

1: Baseline Traffic Volumes/Lanes (2003)

2: Baseline volumes + Jefferson Boulevard /Washington Boulevard lane reduction (2003)

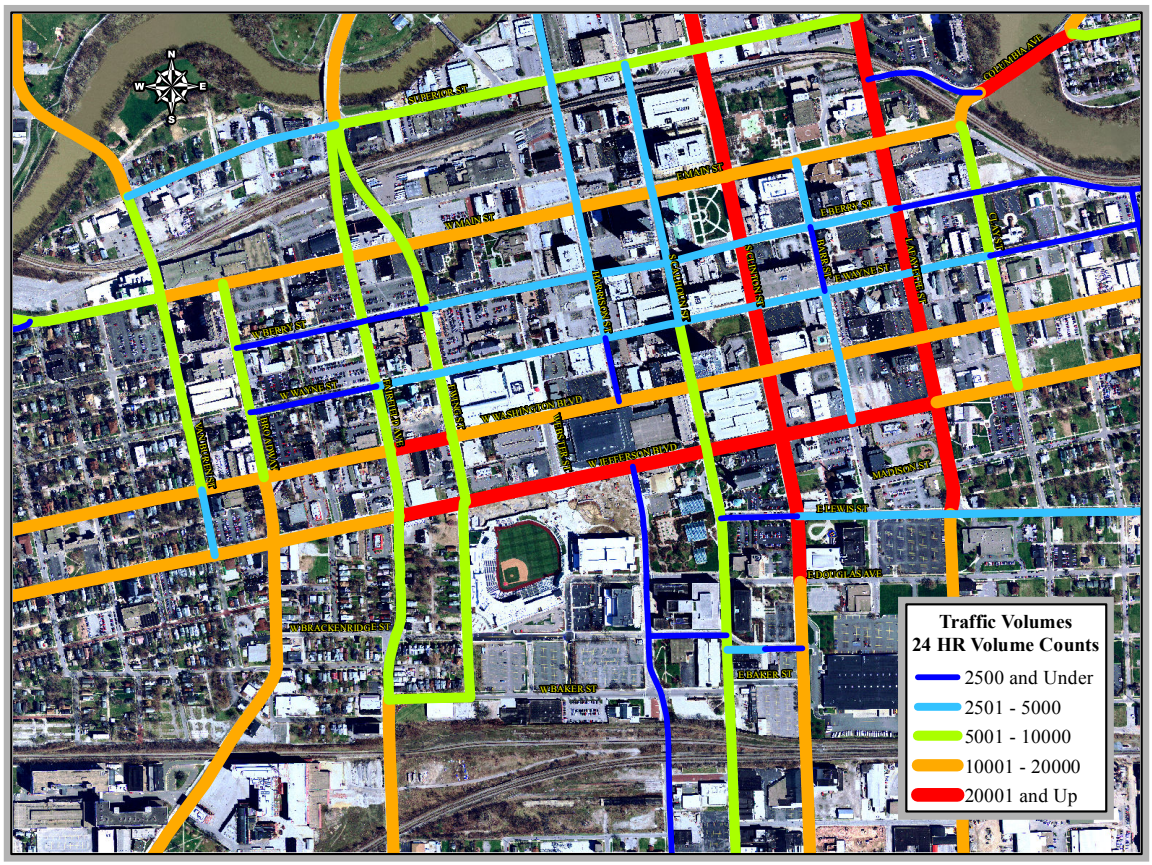
3: Projected 2030* volumes on existing Lanes

4: Projected 2030* volumes + Jefferson Boulevard /Washington Boulevard lane reduction

* 2030 volumes were projected and optimized at a 0.50%, 0.75%, and 1.0% annual growth rate (AGR).

Figure 20 gives an idea of what the current traffic flow is like around this area. Figures 21 - 29 show the existing and proposed intersection configurations as well as tables displaying the intersection analysis results for each of intersections analyzed. The conclusion of the corridor analysis indicates that removing a lane from Jefferson Boulevard is an acceptable option for the current and the near future. The corridor will need to be reevaluated as growth and development occurs to determine if any additional improvements are needed. However, removing a lane from Washington Boulevard will create additional delays and congestion for the present and near future. It's recommended to evaluate other alternatives for the Washington Boulevard corridor.

Figure 20



	Jefferson Blvd @ Van Buren St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	C	B
Lane Reductions	B	B

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	B	C
Lane Reductions AGR 0.50%	B	C
Exist Lanes AGR 0.75%	B	C
Lane Reductions AGR 0.75%	B	C
Exist Lanes AGR 1.00%	B	C
Lane Reductions AGR 1.00%	C	C

	Washington Blvd @ Van Buren St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	B	B
Lane Reductions	B	B

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	B	B
Lane Reductions AGR 0.50%	A	B
Exist Lanes AGR 0.75%	B	C
Lane Reductions AGR 0.75%	B	C
Exist Lanes AGR 1.00%	B	D
Lane Reductions AGR 1.00%	B	E

Figure 21
Washington & Jefferson Corridor Existing

Figure 22
Washington & Jefferson Corridor Proposed

	Jefferson Blvd @ Broadway	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	B	B
Lane Reductions	B	B

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	B	B
Lane Reductions AGR 0.50%	B	B
Exist Lanes AGR 0.75%	B	B
Lane Reductions AGR 0.75%	B	B
Exist Lanes AGR 1.00%	B	B
Lane Reductions AGR 1.00%	B	B

	Washington Blvd @ Broadway	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	B	B
Lane Reductions	C	C

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	C	B
Lane Reductions AGR 0.50%	D	C
Exist Lanes AGR 0.75%	C	B
Lane Reductions AGR 0.75%	E	D
Exist Lanes AGR 1.00%	D	C
Lane Reductions AGR 1.00%	F	F

	Jefferson Blvd @ Fairfield Ave	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	B	B
Lane Reductions	B	D

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	B	B
Lane Reductions AGR 0.50%	B	E
Exist Lanes AGR 0.75%	B	C
Lane Reductions AGR 0.75%	C	E
Exist Lanes AGR 1.00%	B	D
Lane Reductions AGR 1.00%	C	F

	Washington Blvd @ Fairfield Ave	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	B	D
Lane Reductions	C	F

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	B	F
Lane Reductions AGR 0.50%	B	F
Exist Lanes AGR 0.75%	B	F
Lane Reductions AGR 0.75%	C	F
Exist Lanes AGR 1.00%	B	F
Lane Reductions AGR 1.00%	C	F

Figure 23
Washington & Jefferson Corridor Existing

Figure 24
Washington & Jefferson Corridor Proposed

	Jefferson Blvd @ Ewing St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	A	A
Lane Reductions	A	B

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	A	A
Lane Reductions AGR 0.50%	A	A
Exist Lanes AGR 0.75%	A	A
Lane Reductions AGR 0.75%	A	A
Exist Lanes AGR 1.00%	A	A
Lane Reductions AGR 1.00%	A	A

	Washington Blvd @ Ewing St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	A	B
Lane Reductions	A	C

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	A	B
Lane Reductions AGR 0.50%	B	B
Exist Lanes AGR 0.75%	A	B
Lane Reductions AGR 0.75%	B	C
Exist Lanes AGR 1.00%	A	B
Lane Reductions AGR 1.00%	B	D

	Jefferson Blvd @ Webster St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	B	A
Lane Reductions	B	A

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	A	A
Lane Reductions AGR 0.50%	B	A
Exist Lanes AGR 0.75%	A	A
Lane Reductions AGR 0.75%	C	A
Exist Lanes AGR 1.00%	B	A
Lane Reductions AGR 1.00%	D	A

	Washington Blvd @ Webster St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	A	A
Lane Reductions	A	A

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	A	A
Lane Reductions AGR 0.50%	A	A
Exist Lanes AGR 0.75%	A	A
Lane Reductions AGR 0.75%	A	B
Exist Lanes AGR 1.00%	A	A
Lane Reductions AGR 1.00%	A	C

Figure 25

Washington & Jefferson Corridor Existing

Figure 26

Washington & Jefferson Corridor Proposed

	Jefferson Blvd @ Harrison St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	A	B
Lane Reductions	B	B

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	A	B
Lane Reductions AGR 0.50%	B	D
Exist Lanes AGR 0.75%	A	B
Lane Reductions AGR 0.75%	C	E
Exist Lanes AGR 1.00%	A	C
Lane Reductions AGR 1.00%	D	F

	Washington Blvd @ Harrison St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	A	A
Lane Reductions	A	B

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	A	A
Lane Reductions AGR 0.50%	A	B
Exist Lanes AGR 0.75%	A	A
Lane Reductions AGR 0.75%	A	B
Exist Lanes AGR 1.00%	A	B
Lane Reductions AGR 1.00%	A	B

	Jefferson Blvd @ Calhoun St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	B	B
Lane Reductions	B	B

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	B	B
Lane Reductions AGR 0.50%	B	C
Exist Lanes AGR 0.75%	B	C
Lane Reductions AGR 0.75%	B	C
Exist Lanes AGR 1.00%	B	D
Lane Reductions AGR 1.00%	B	D

	Washington Blvd @ Calhoun St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	B	A
Lane Reductions	C	A

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	A	A
Lane Reductions AGR 0.50%	B	B
Exist Lanes AGR 0.75%	A	A
Lane Reductions AGR 0.75%	B	B
Exist Lanes AGR 1.00%	B	A
Lane Reductions AGR 1.00%	C	B

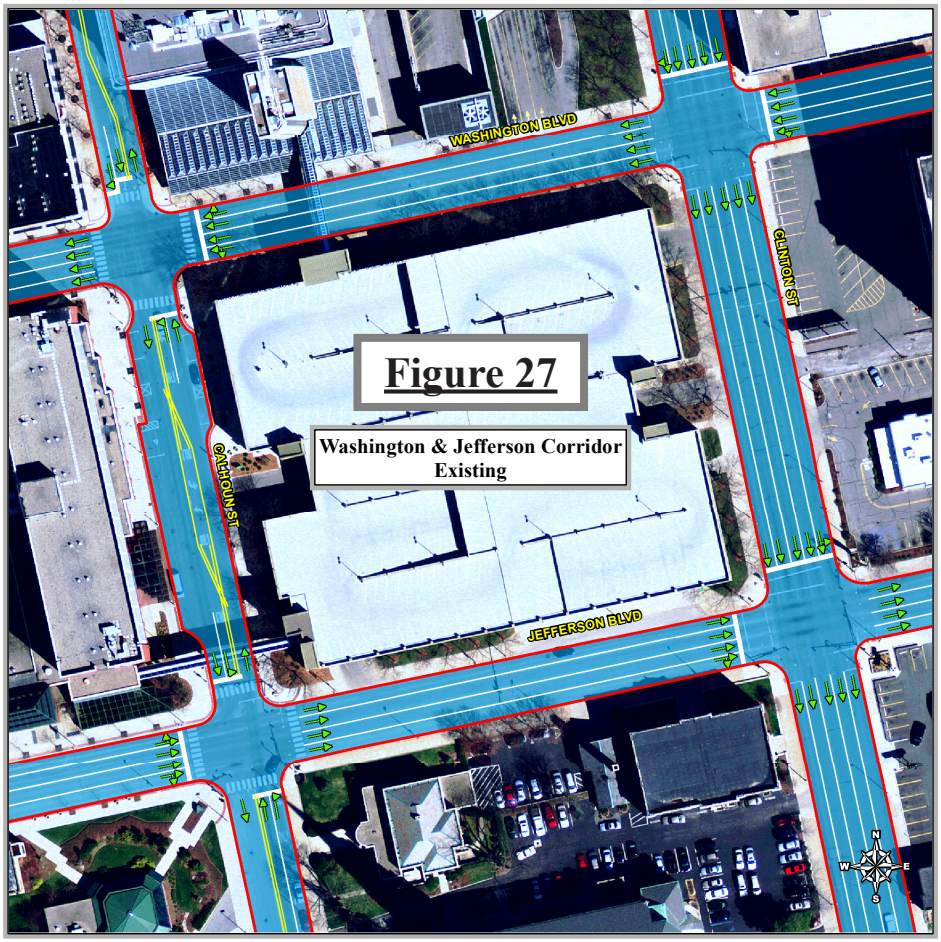


Figure 27

Washington & Jefferson Corridor Existing

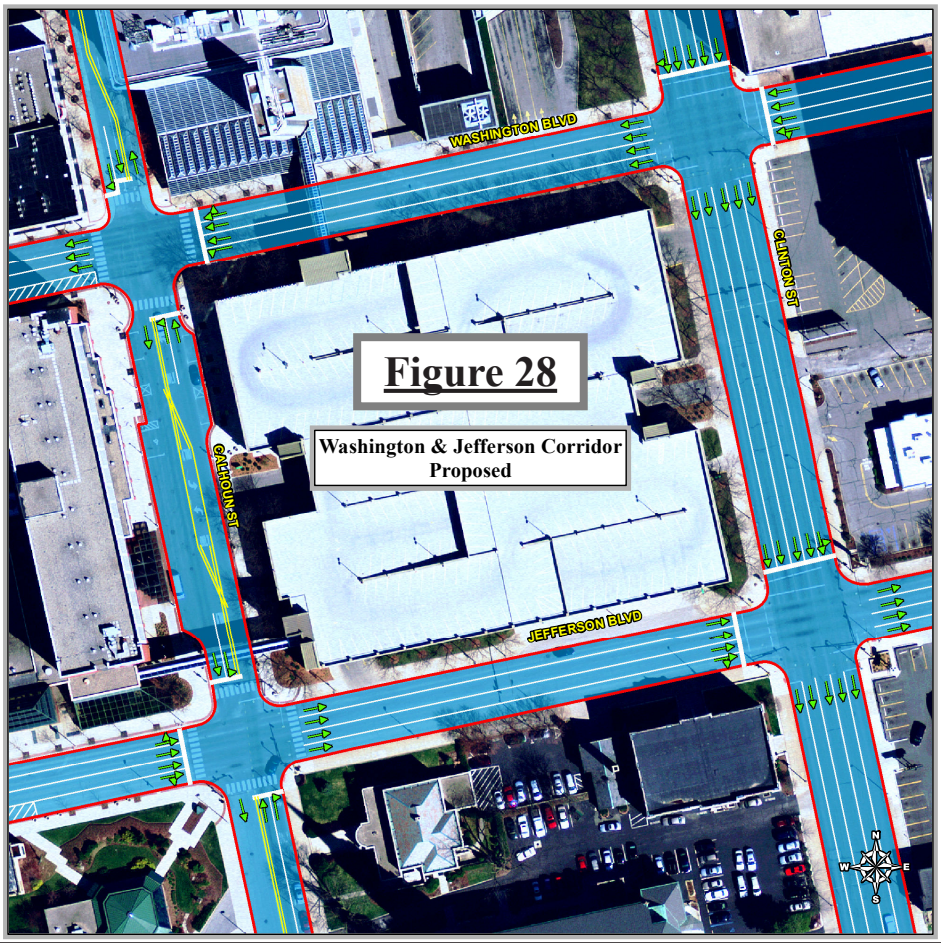


Figure 28

Washington & Jefferson Corridor Proposed

	Jefferson Blvd @ Clinton St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	B	B
Lane Reductions	B	B

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	B	B
Lane Reductions AGR 0.50%	B	C
Exist Lanes AGR 0.75%	B	C
Lane Reductions AGR 0.75%	B	C
Exist Lanes AGR 1.00%	B	D
Lane Reductions AGR 1.00%	B	D

	Washington Blvd @ Clinton St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	B	A
Lane Reductions	C	A

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	A	A
Lane Reductions AGR 0.50%	B	B
Exist Lanes AGR 0.75%	A	A
Lane Reductions AGR 0.75%	B	B
Exist Lanes AGR 1.00%	B	A
Lane Reductions AGR 1.00%	C	B

	Jefferson Blvd @ Barr St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	A	A
Lane Reductions	A	A

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	A	A
Lane Reductions AGR 0.50%	B	B
Exist Lanes AGR 0.75%	A	A
Lane Reductions AGR 0.75%	B	A
Exist Lanes AGR 1.00%	A	A
Lane Reductions AGR 1.00%	B	A

	Washington Blvd @ Barr St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	A	A
Lane Reductions	A	A

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	A	A
Lane Reductions AGR 0.50%	A	A
Exist Lanes AGR 0.75%	A	B
Lane Reductions AGR 0.75%	A	A
Exist Lanes AGR 1.00%	A	B
Lane Reductions AGR 1.00%	A	A

	Jefferson Blvd @ Lafayette St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	D	F
Lane Reductions	D	F

Projected 2030	AM	PM
Exist Lanes AGR 0.50%	F	F
Lane Reductions AGR 0.50%	F	F
Exist Lanes AGR 0.75%	F	F
Lane Reductions AGR 0.75%	F	F
Exist Lanes AGR 1.00%	F	F
Lane Reductions AGR 1.00%	F	F

	Washington Blvd @ Lafayette St	
	LOS	
Baseline 2003	AM	PM
Existing Lanes	D	B
Lane Reductions	D	B

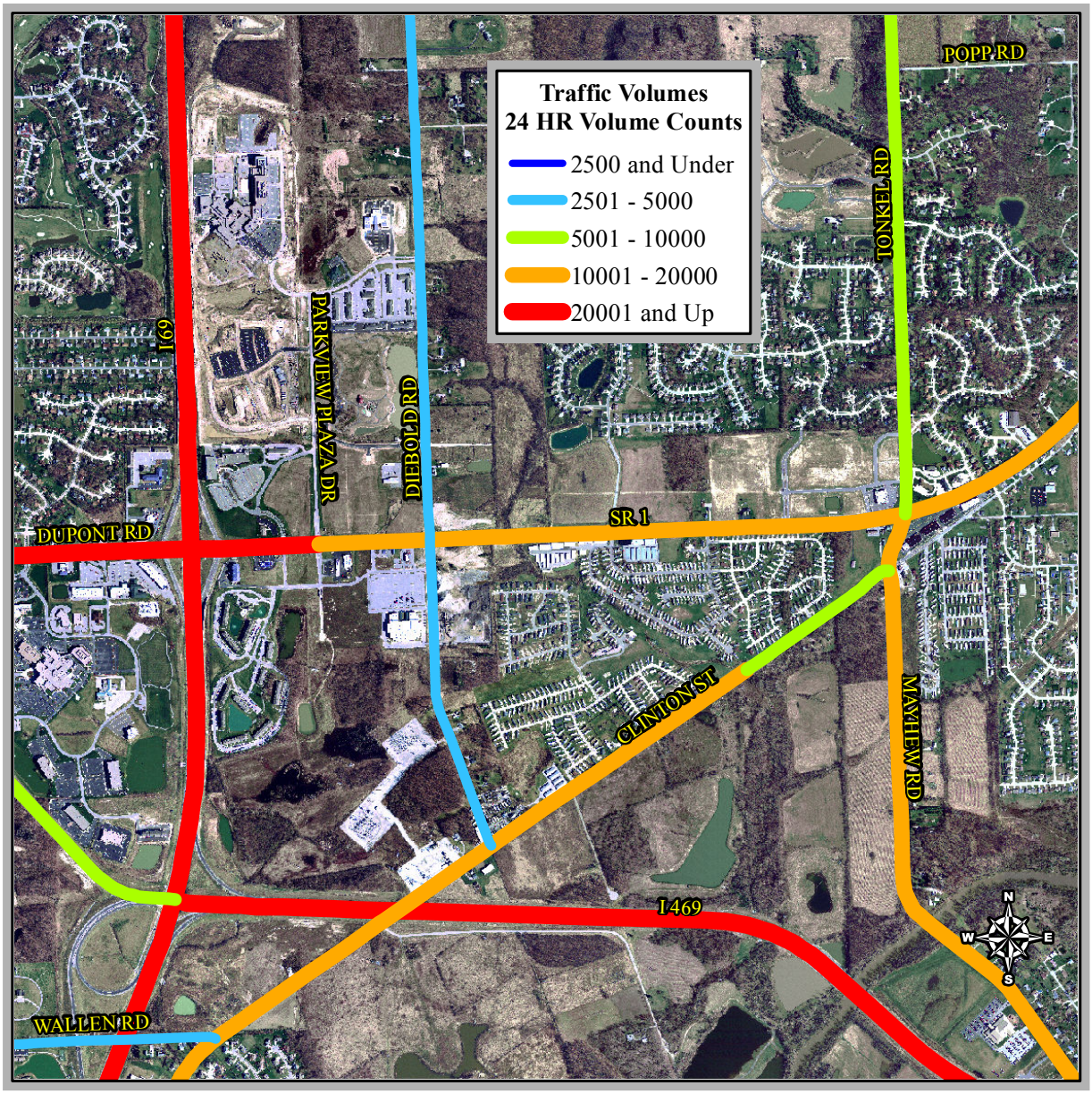
Projected 2030	AM	PM
Exist Lanes AGR 0.50%	F	B
Lane Reductions AGR 0.50%	F	B
Exist Lanes AGR 0.75%	F	B
Lane Reductions AGR 0.75%	F	B
Exist Lanes AGR 1.00%	F	C
Lane Reductions AGR 1.00%	F	C

Sub-area Analysis

The area surrounding Clinton Street & State Road 1

The purpose of this sub-area analysis is to evaluate the potential traffic impacts on the surrounding roads and intersections that new developments near the Parkview Hospital area may cause. The study area of this sub-area analysis can be seen in figure 18 and includes Clinton Street and State Road 1 which is the main focus of the analysis. The study of impacts to the Clinton Street and State Road 1 corridors was initiated by NIRCC due to the increases in developments in the area. Functionally classified as Urban Minor Arterials, Clinton Street and State Road 1 serve as east/west corridors on the north side of Fort Wayne. The State Road 1 and Interstate 69 interchange is an extremely busy urban interchange providing interstate access to two regional medical complexes, business/employment centers, and other commercial/retail businesses. The traffic volumes (figure 30) are anticipated to continue increasing as the

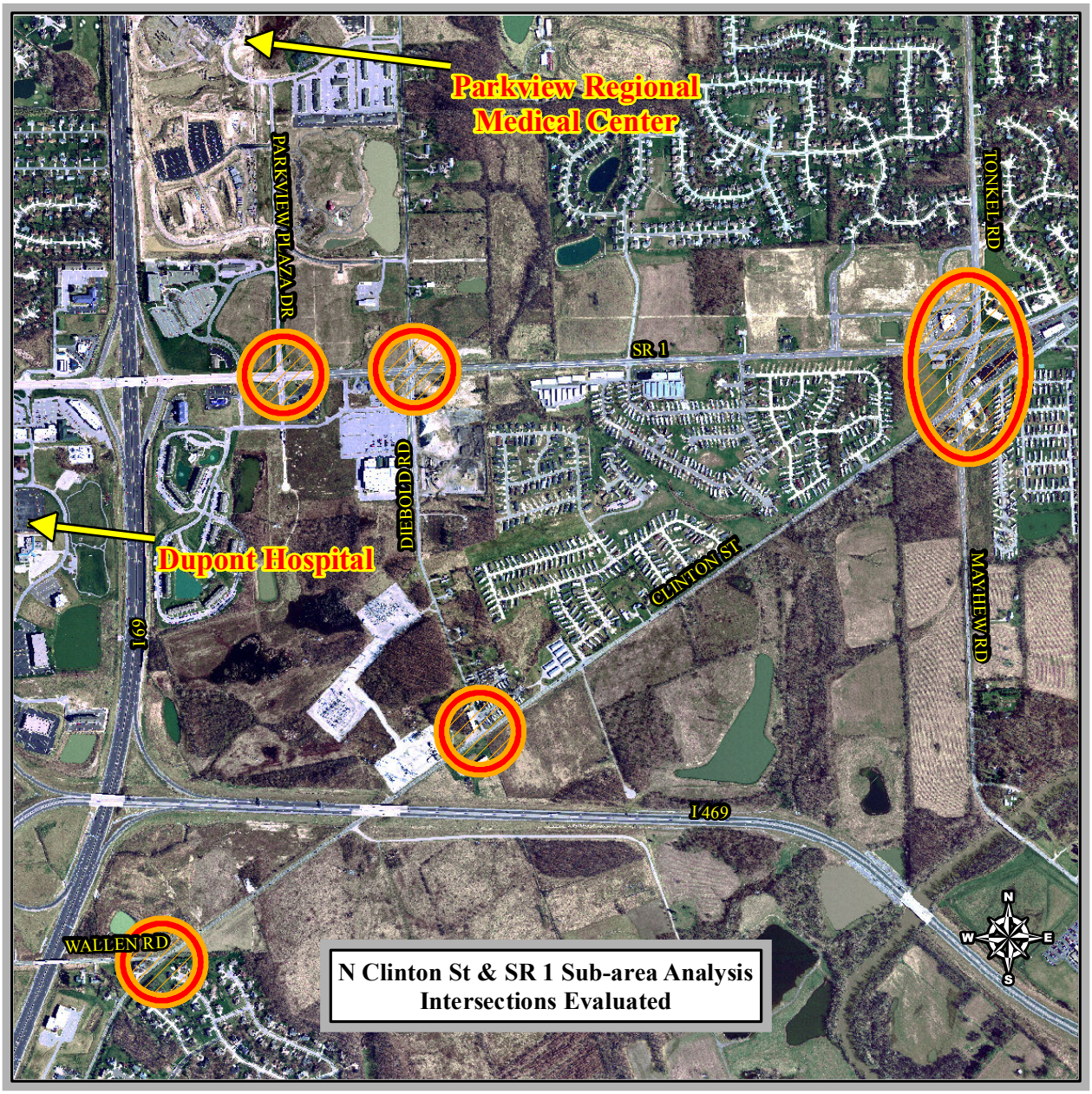
Figure 30



medical complex expands and additional business and residential developments locate within the corridor's travel shed. Based on existing traffic volumes, the study evaluated the operating conditions (LOS) for three intersections along Clinton Street from Wallen Road to Mayhew Road, and three intersections along State Road 1 from the Interstate 69 northbound exit ramp to Tonkel Road (figure 31). A Study Review Team that included representatives from the Indiana Department of Transportation, City of Fort Wayne, Allen County, and Northeastern Indiana Regional Coordinating Council assisted in the review of the process and analyses presented in this sub-area analysis.

The study evaluates the trip generation of vehicle trips based on the new developments (figure 32) approved in the study area. The analyses focus on evaluating the impacts of the new trips to the intersection service levels and overall operating characteristics of the Clinton Street and State Road 1 corridors. Service level, or level of service (LOS), is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel

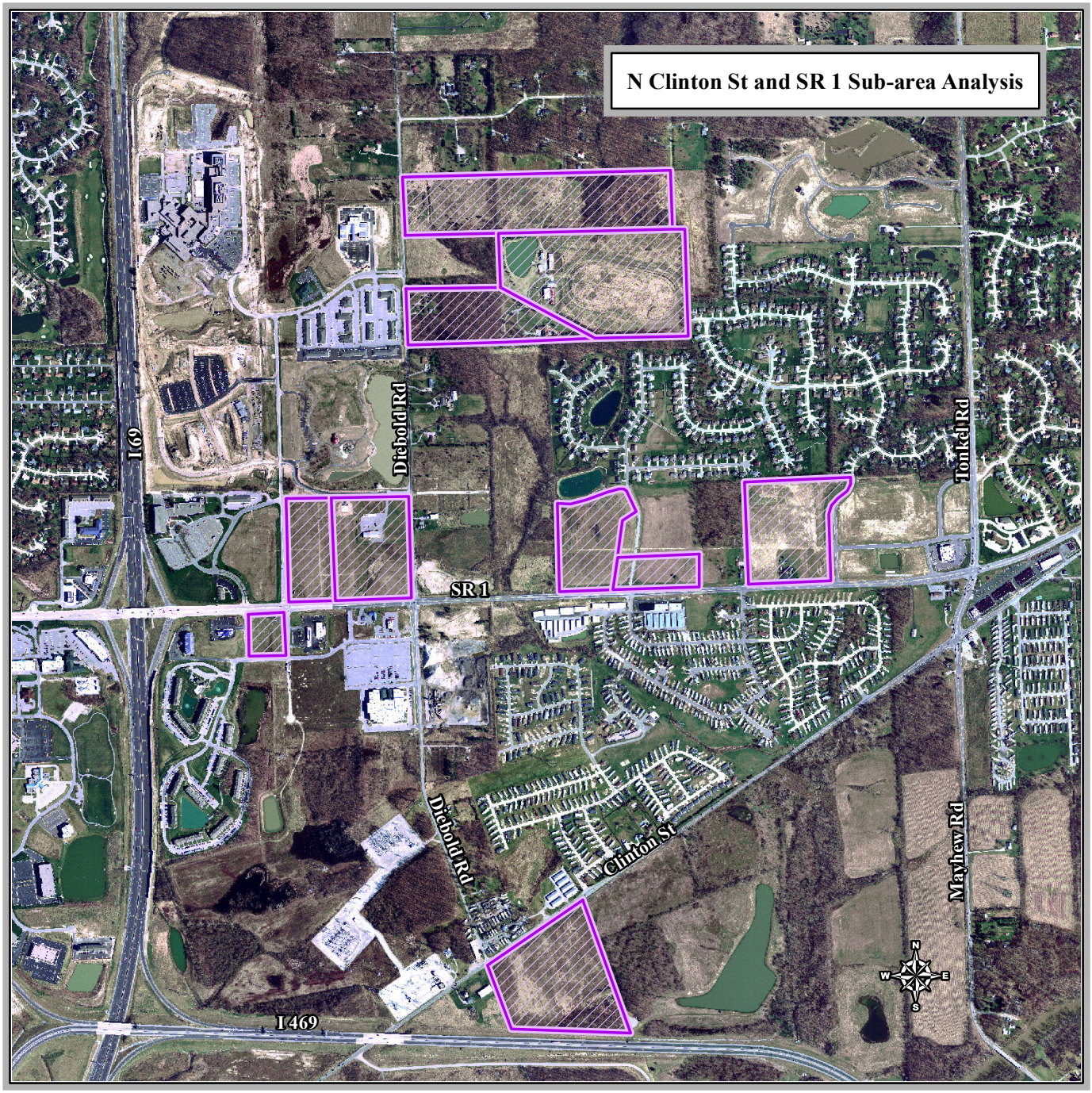
Figure 31



time. Level of service is based upon the average stop delay per vehicle for each movement on each approach of an intersection. The combination of intersection performance along a corridor including traveling speed and delay define the level of service for the corridor.

Level of Service ranges from good to bad using a scale of A to F. Level of Service "A" describes operations with very low delays and where most vehicles do not stop at all. Level of Service "C" describes operations with longer delays, the number of stopping vehicles is significant, but many vehicles still pass without stopping. Level of Service "F" describes operations with delays unacceptable to most drivers, intersection capacity is exceeded, most vehicles must

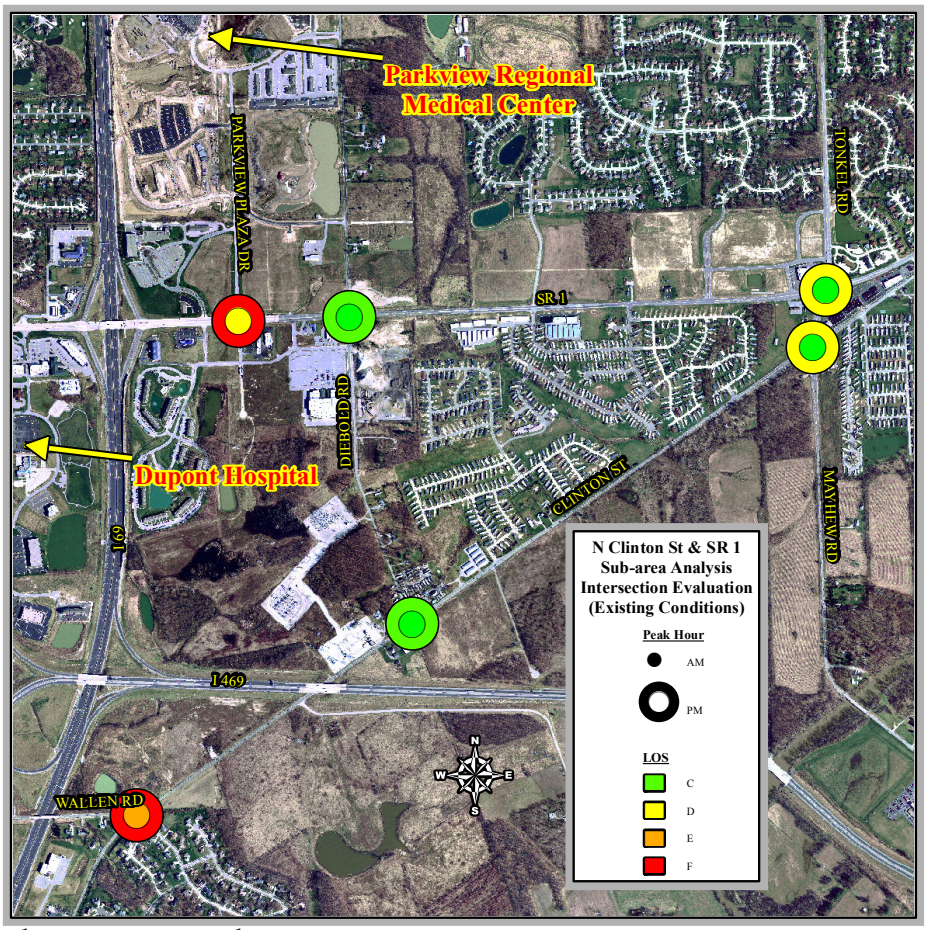
Figure 32



stop, and multiple green phases may be required before a vehicle clears the intersection. Figures 33 and 34 show what the LOS is for the AM and PM peak times for the intersections included in the analysis. Figure 33 shows the LOS for what is considered the "Existing Conditions" and figure 34 shows the LOS for "Phase I Conditions". Please note for figures 33 and 34 that levels of service for the intersection of Clinton Street and Wallen Road only represent the eastbound approach and levels of service for the intersection of Clinton Street and Diebold Road only represent the southbound approach since these are unsignalized intersections.

Figure 33

Existing Conditions



Analysis based on "Existing Conditions" uses 2012 turning movement counts and geometric configurations. The analyses were conducted for the morning and evening peak traffic periods. The following are the current intersection configurations used for the "Existing Conditions" analysis:

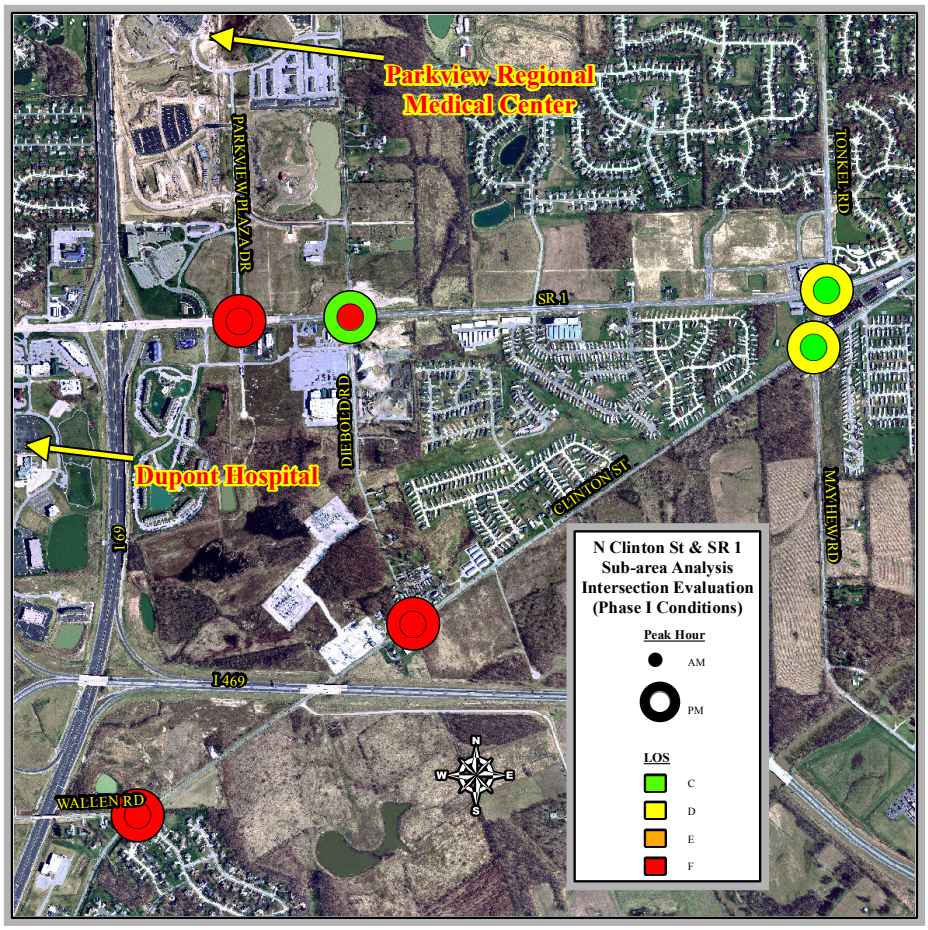
1. Clinton Street and Wallen Road – Unsignalized intersection with three approaches and one stop control.
2. Clinton Street and Diebold Road – Unsignalized intersection with three approaches and one stop control.
3. Clinton Street and Mayhew Road – Signalized intersection with four approaches.
4. State Road 1 and Clinton Street/Tonkel Road – Signalized intersection with four approaches.
5. State Road 1 and Diebold Road – Signalized intersection with four approaches.
6. State Road 1 and Parkview Plaza Drive – Signalized intersection with four approaches, the south approach is a commercial drive, and the north approach is an entrance into the Parkview Hospital Complex.

"Phase I Conditions" evaluated the impacts of ten new developments (figure 32) in the study area, and their traffic flow distributions based on a horizon year of 2014. The most critical factors influencing trip generation is the type and size of the development. The trips generated by new or modified land uses for Phase I were calculated based on trip rates and trip characteristics documented in the ITE Trip Generation Manual 8th edition. The new trips are

distributed to the highway network and added to the existing traffic volumes.

Figure 34

Phase I Conditions



The distribution of the population within the area, the characteristics of the roadway system and degree of congestion on the corresponding roadway affect the directional distribution of the site-generated traffic. The trip distributions for this study area were determined by examining the existing traffic counts, the new roadway configurations, and by evaluating the major traffic generators in the vicinity of the study area. The turning movements at each intersection are derived from the trip generation and trip distribution process.

In addition to the newly generated trips, an annual growth rate of 1.2% was applied to the mainline traffic on the highway network. This additional traffic is based on growth within the region, and represents trips that will pass through the study area. The adjusted traffic volumes, including new trips and trips based on regional growth, were used to perform the intersection analyses. These analyses were conducted for the morning and evening peak traffic periods

The analyses indicate that two of the intersections on the Clinton Street / State Road 1 corridors won't function at acceptable levels of service. The Diebold Road/ State Road 1 intersection will operate at a LOS of "F" during the AM Peak, under the Phase I condition. The Parkview Plaza Drive/ State Road 1 intersection will operate at a LOS of "F" during the AM and PM peak hours under Phase I conditions. INDOT is in the process of retiming the intersections along the State Road 1 corridor to improve the LOS. Also, the Clinton Street/Diebold Road intersection for the southbound approach and the Clinton Street/Wallen Road intersection for the eastbound approach will operate at levels of service of "F" during the AM and PM peak hours under Phase I conditions.

The recommendations based on the sub-area analysis for each of the intersections are as follows:

1. Clinton Street and Wallen Road – Continue to reevaluate this intersection as developments and growth

occur to determine if signal warrants have been met.

2. Clinton Street and Diebold Road – Add an exclusive left turn lane on the southwest approach.
3. Clinton Street and Mayhew Road – No recommendations at this time.
4. State Road 1 and Clinton Street/Tonkel Road – No recommendations at this time.
5. State Road 1 and Diebold Road – Continue to reevaluate this intersection as developments and growth occurs.
6. State Road 1 and Parkview Plaza Drive – Continue to reevaluate this intersection as developments and growths occur.

There are three major roadway projects either under construction or planned in the area as well. The first is the construction of a new Interstate 69 interchange at Union Chapel Road, which is currently under construction. The second is two roundabouts on Union Chapel Road adjacent to the new interchange, one located at the Auburn Road and the other located at Diebold Road. The third project is the reconstruction of the Interstate 69 / State Road 1 interchange, modifying the current interchange into a Diverging Diamond Interchange. The Dupont Oaks Boulevard / State Road 1 intersection will be reviewed for meeting signal warrants as part of Traffic Impact Studies for the proposed developments in the area. Once these projects are complete and the additional developments have been built NIRCC will reevaluate the area.

Travel Time and Delay Studies

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2012

TRAVEL TIME & DELAY STUDIES

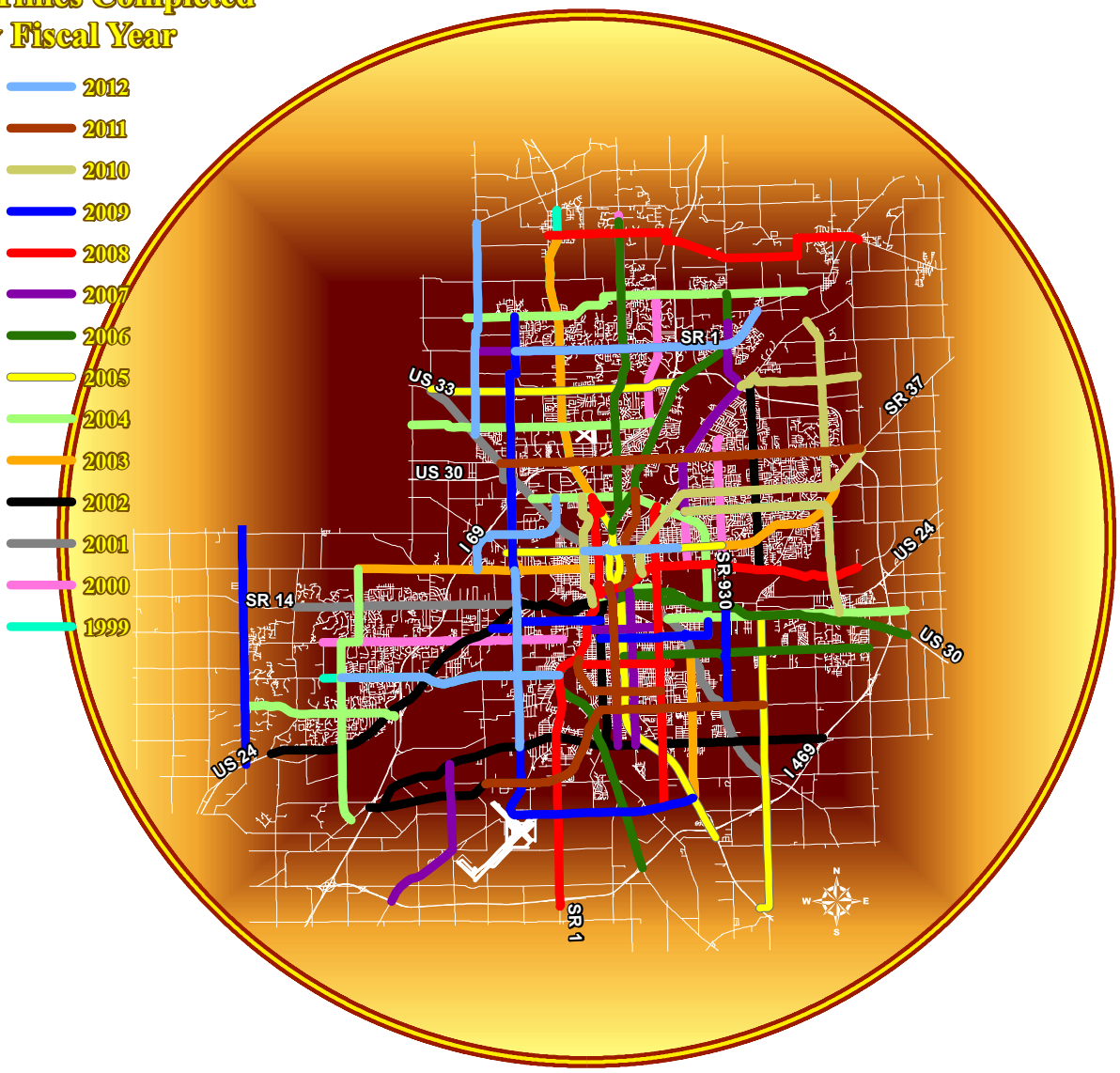
Another activity conducted by NIRCC is the travel time and delay studies. Figure 35 illustrates the travel time and delay studies that have been completed since Fiscal Year 1999. Travel time is one method to measure the congestion in the transportation system. It is essential for proper evaluation of the system because time is one of the most compelling and accurate yardsticks of the efficiency of street and highway service. Travel time is defined as the total time for a vehicle to complete a designated trip over a section of the road or from a specific origin to a specific destination. The studies conducted by NIRCC use the "average speed" method to obtain the travel time and delay data.

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

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

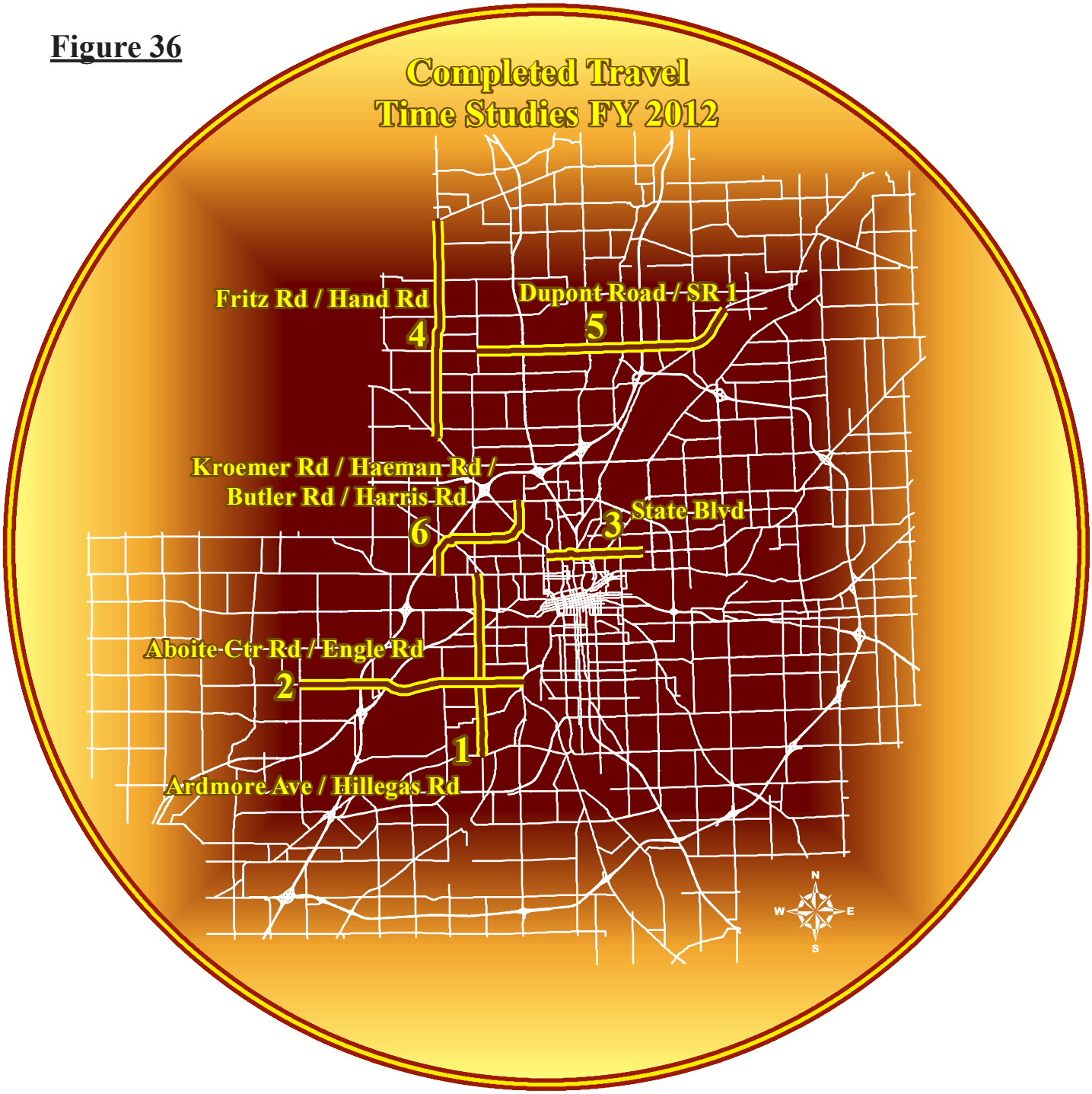
Figure 35

Travel Times Completed by Fiscal Year



NIRCC studied five (6) corridors during Fiscal Year 2012 including: **1) Ardmore Avenue / Hillegas Road** from Lower Huntington Road to Bass Road, **2) Aboite Center Road / Engle Road** from Homestead Road to Bluffton Road, **3) State Boulevard** from Sherman Boulevard to Beacon Street, **4) Fritz Road / Hand Road** from US 33 to Shoaff Road, **5) Dupont Road / SR 1** from Bethel Road to Popp Road, and **6) Kroemer Road / Haeman Road / Butler Road / Harris Road** from Coliseum Boulevard to Bass Road. The travel time studies completed during Fiscal Year 2012 are illustrated in Figure 36 below.

Figure 36



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 37 - 54 give the results of this data. You will see on the maps that as the travel time vehicle slows down or stops multiple times at any given point the areas are shown in red. The blue areas indicate the vehicle is traveling at faster speeds.

The following pages present a summary along with density maps of the six corridors studied in Fiscal Year 2012. 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.

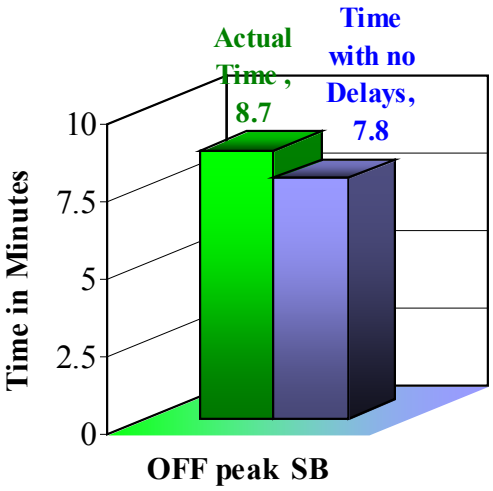
Travel Time and Delay Summary Section for Fiscal Year 2012

Figure 37

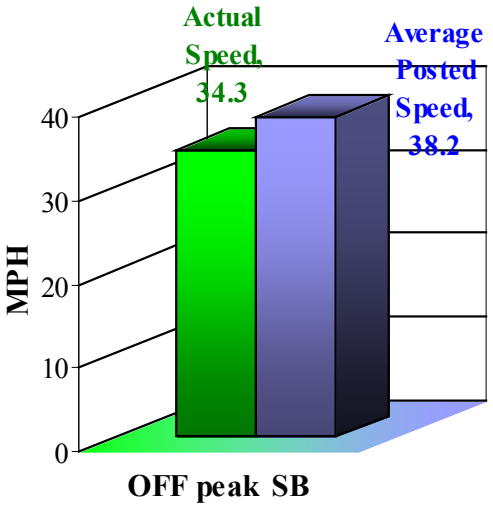
Ardmore Avenue / Hillegas Road
AM Peak

*Off Peak Travel Times are not shown graphically.

Travel Time with the Least Amount of delay



Travel Speed with the Least Amount of delay



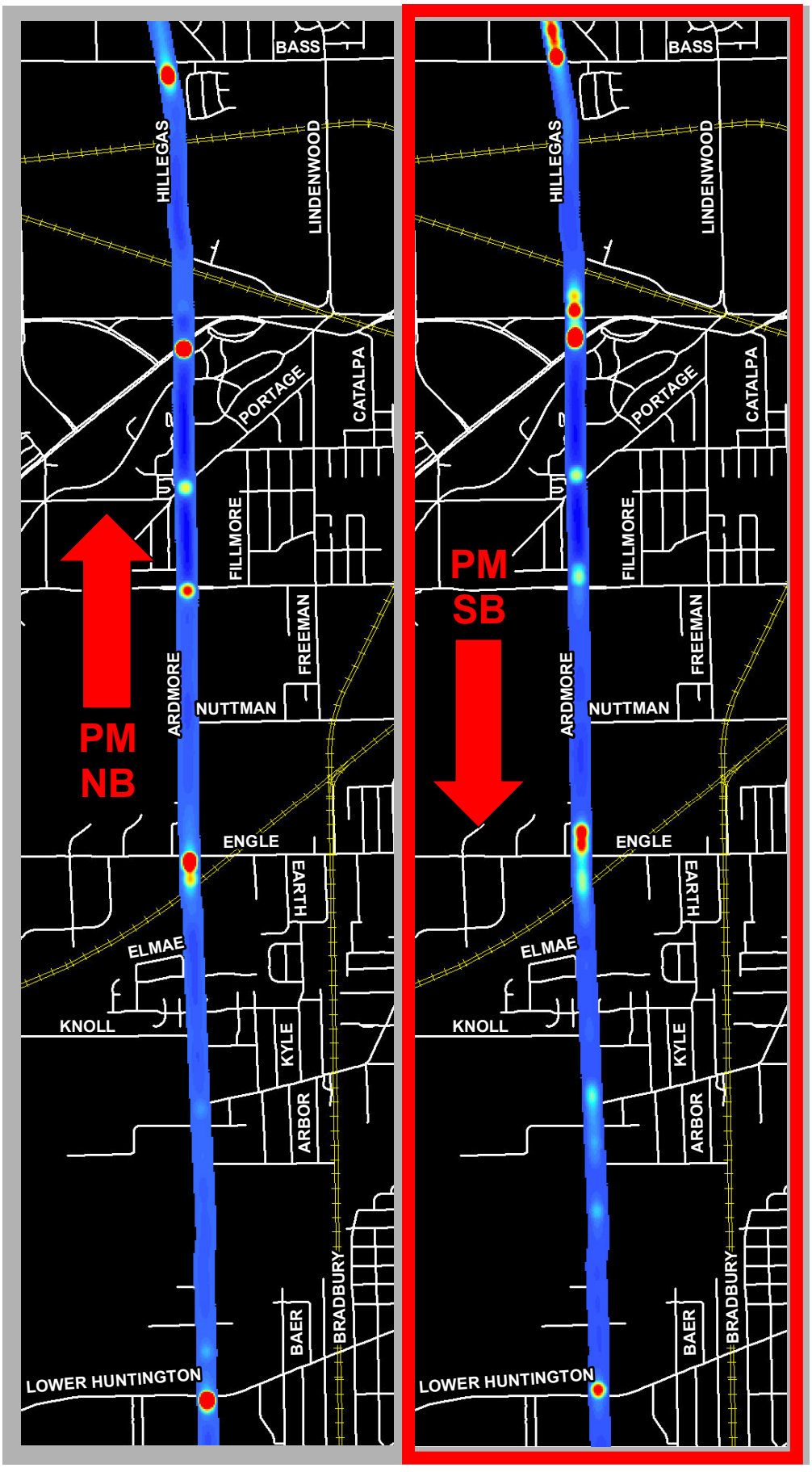
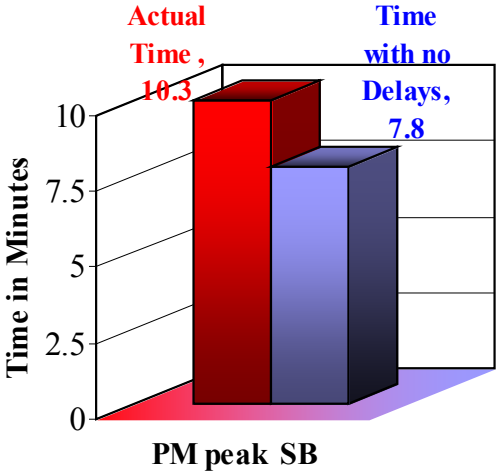


Figure 38

Ardmore Avenue / Hillegas Road
PM Peak

Travel Time with the Greatest Amount of delay



Travel Speed with the Greatest Amount of delay

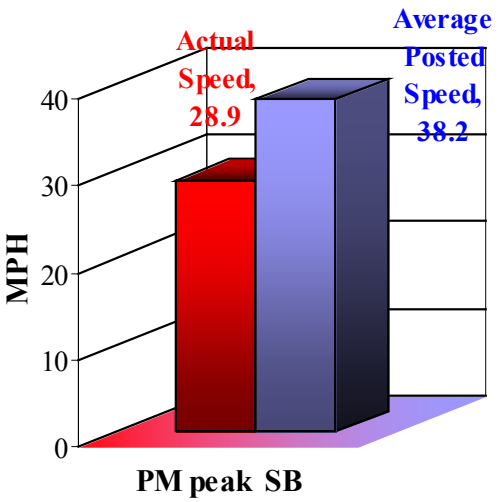


Figure 39

Aboite Center Road / Engle Road
AM Peak Eastbound

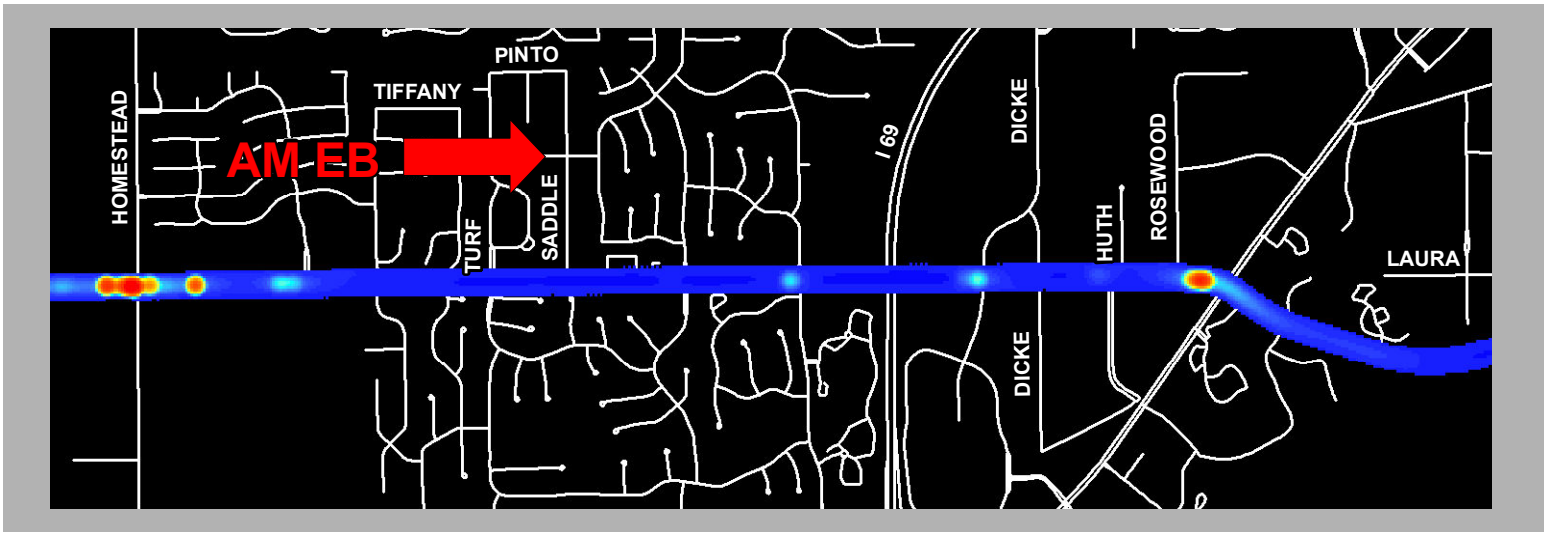
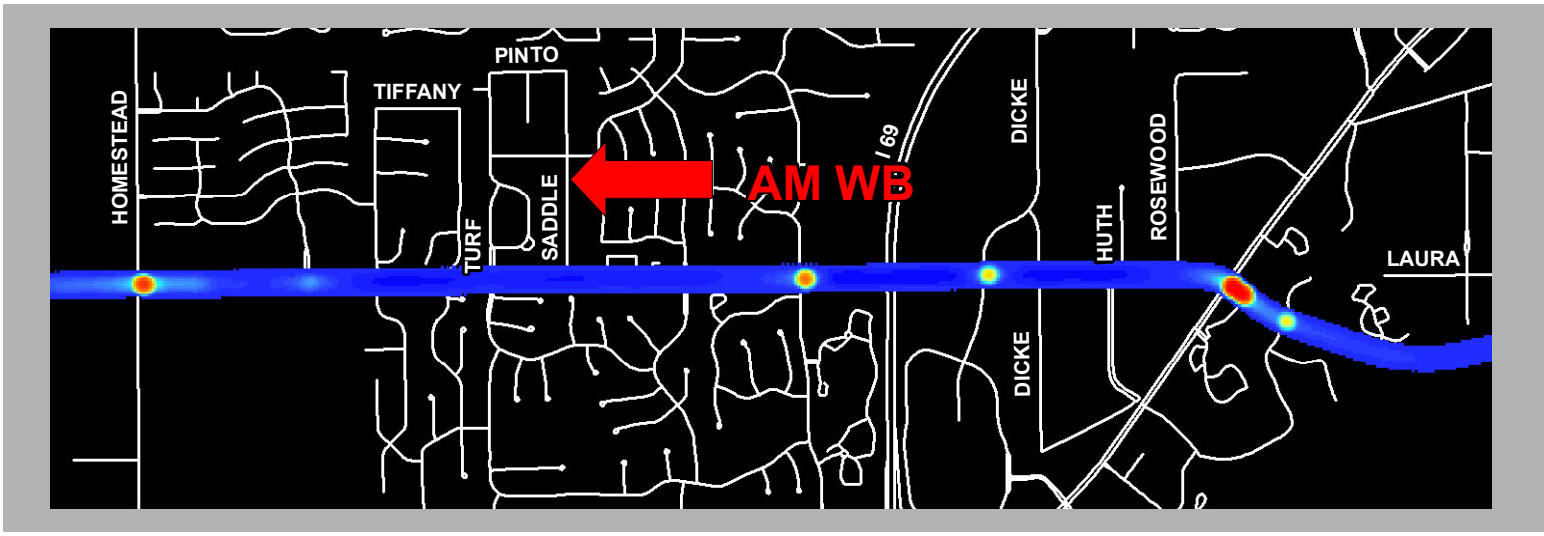


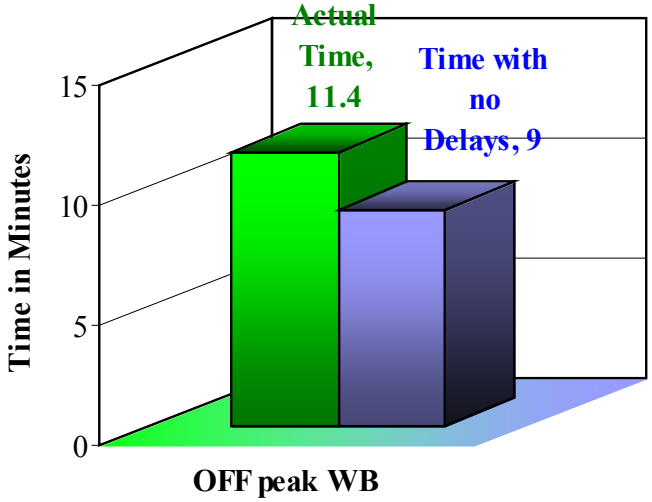
Figure 40

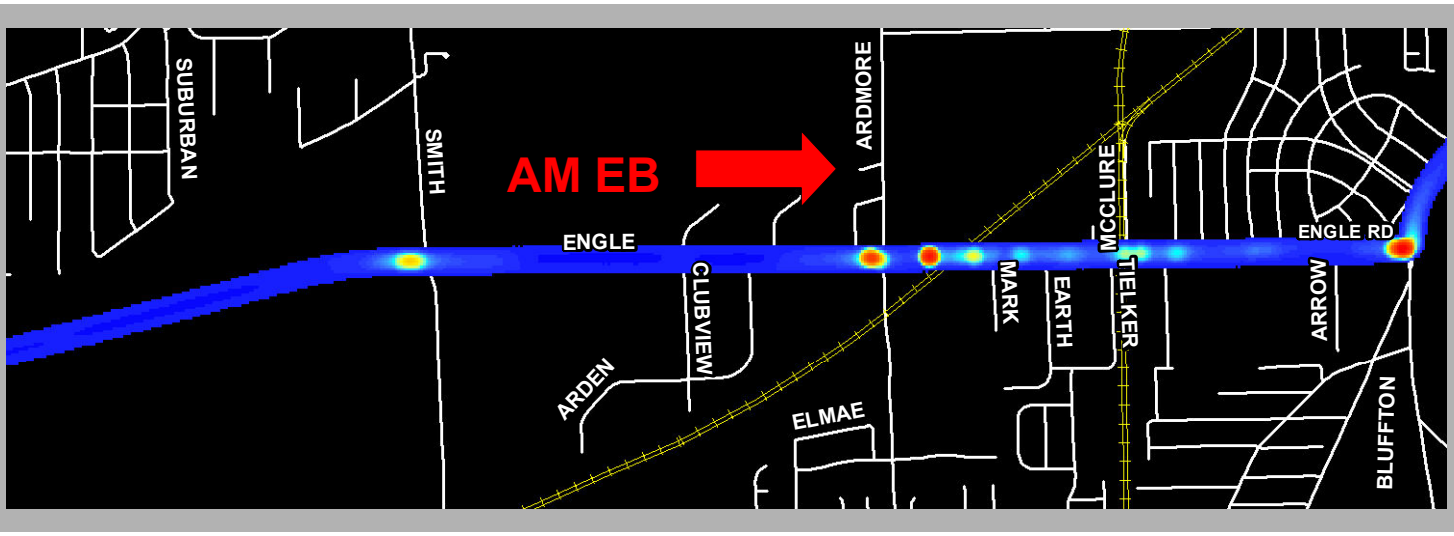
Aboite Center Road / Engle Road
AM Peak Westbound

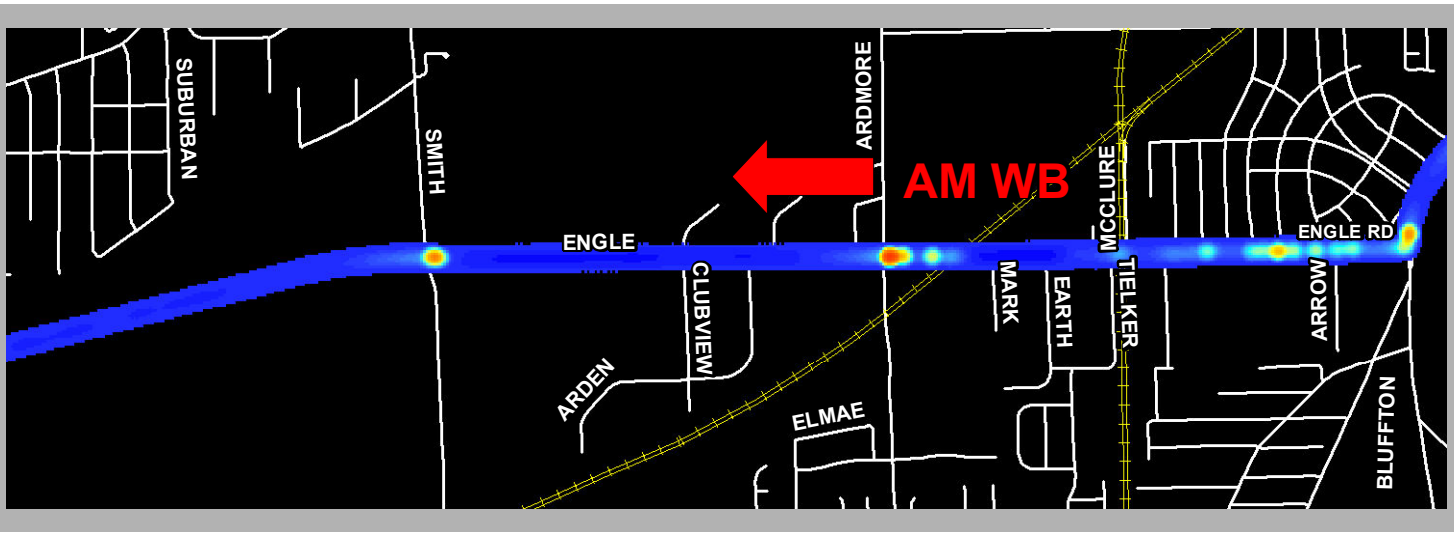


Travel Speed with the Least Amount of delay

*Off Peak Travel Times are not shown graphically.







Travel Time with the Least Amount of delay

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

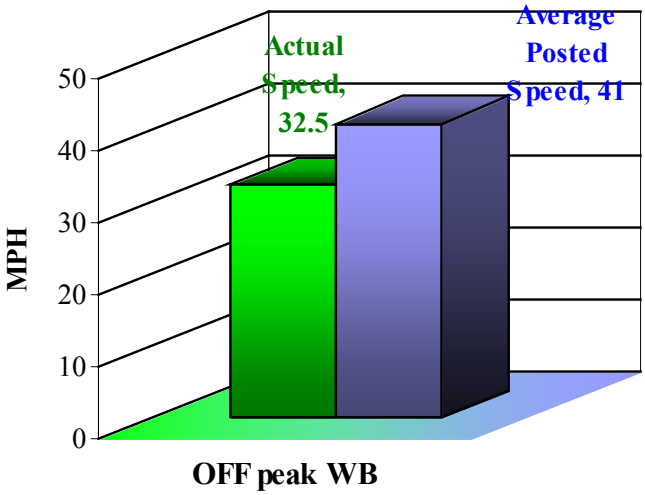


Figure 41

Aboite Center Road / Engle Road
PM Peak Eastbound

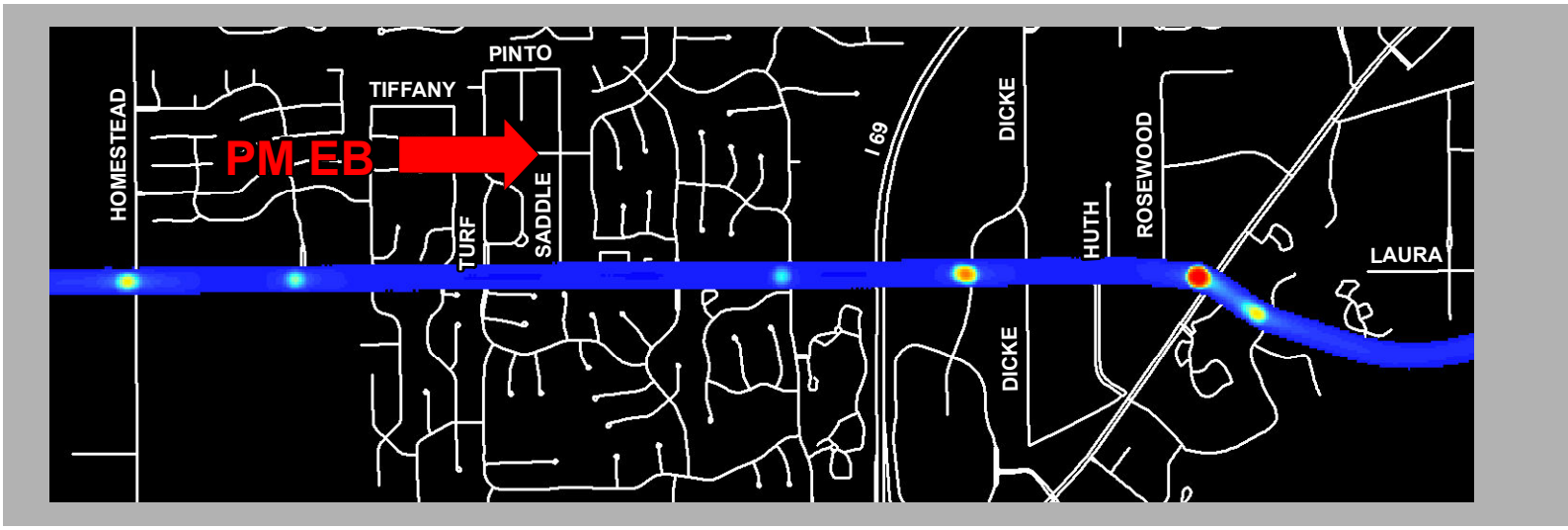
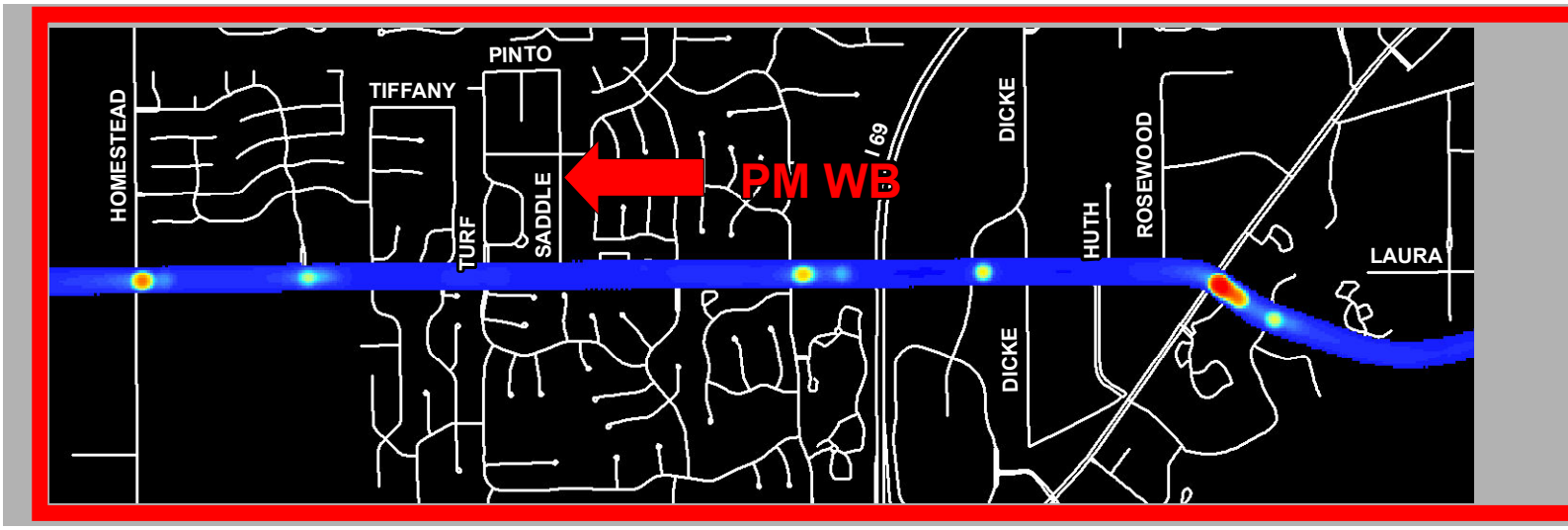
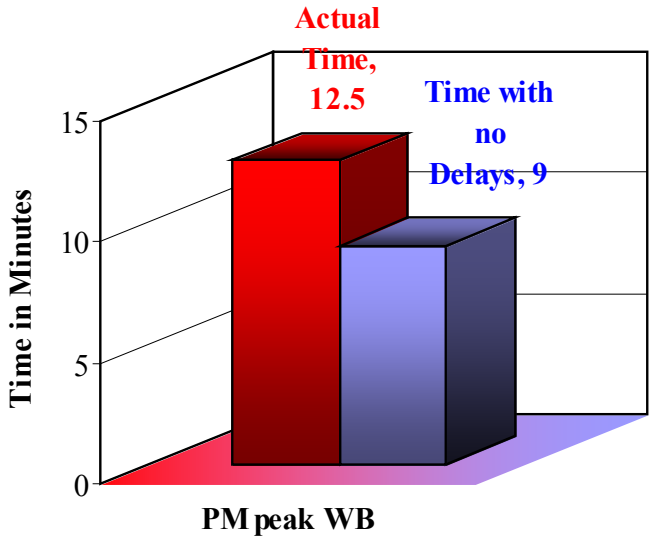


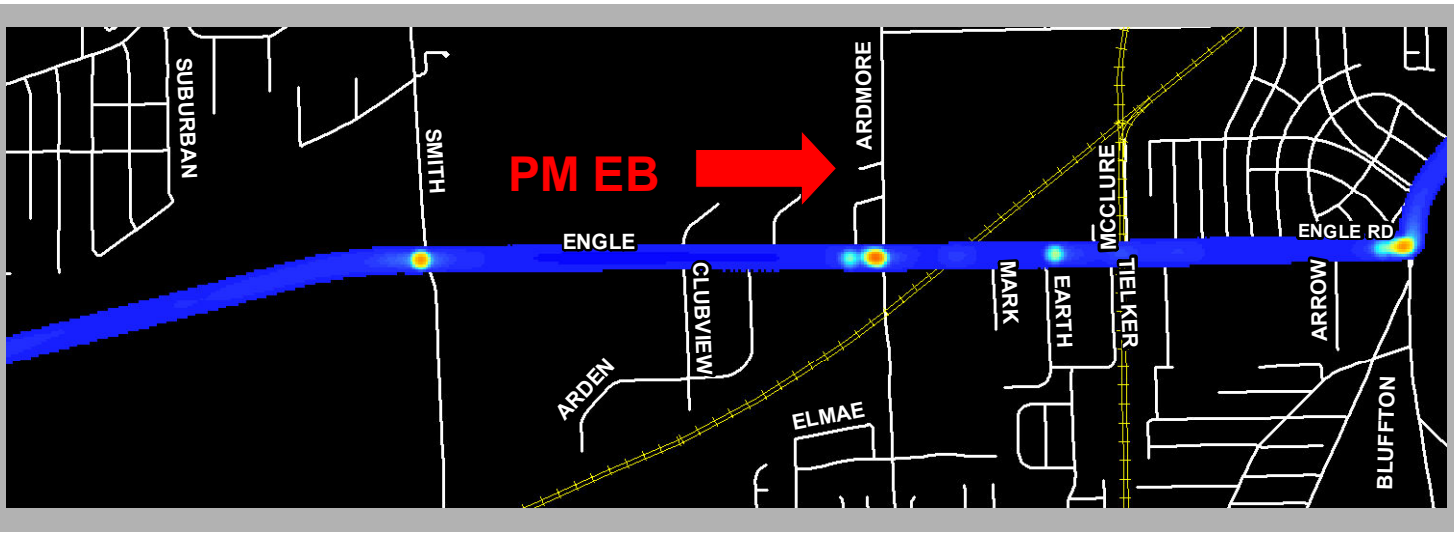
Figure 42

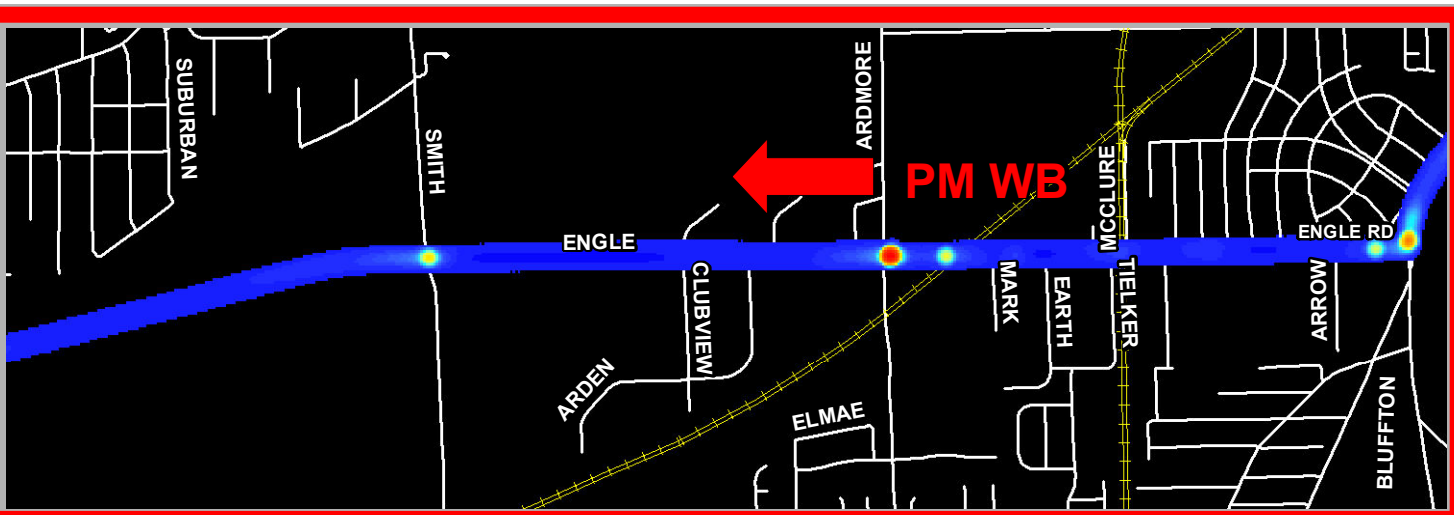
Aboite Center Road / Engle Road
PM Peak Westbound



Travel Time with the Greatest Amount of delay







Travel Speed with the Greatest Amount of delay

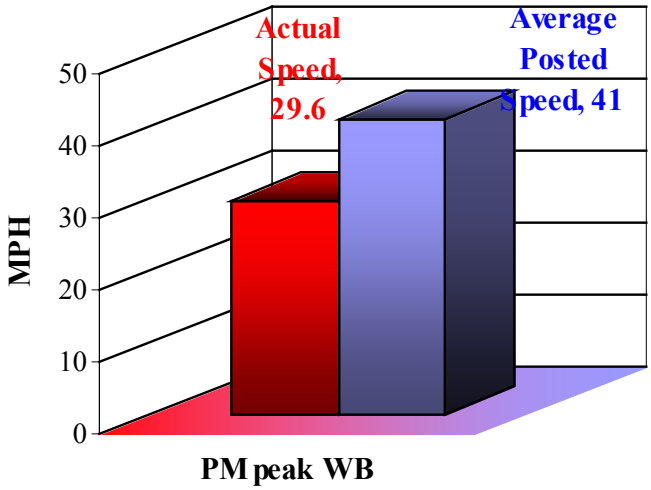
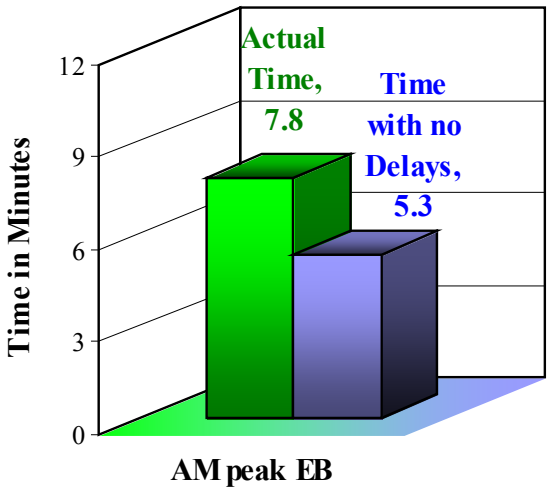
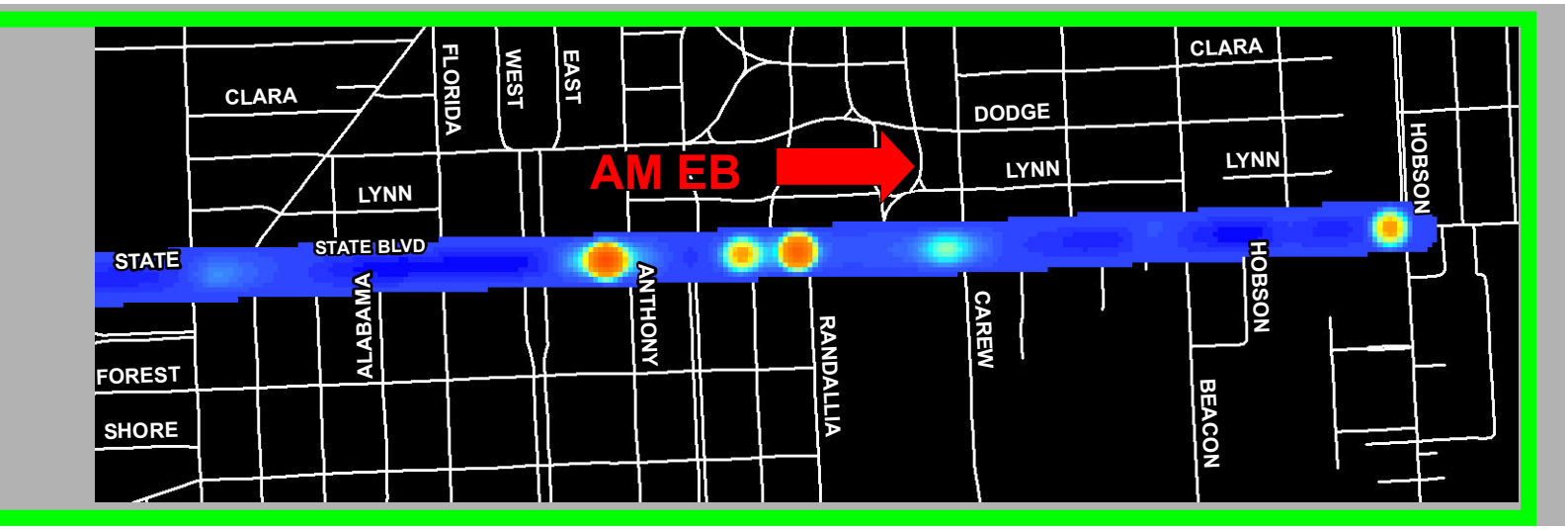


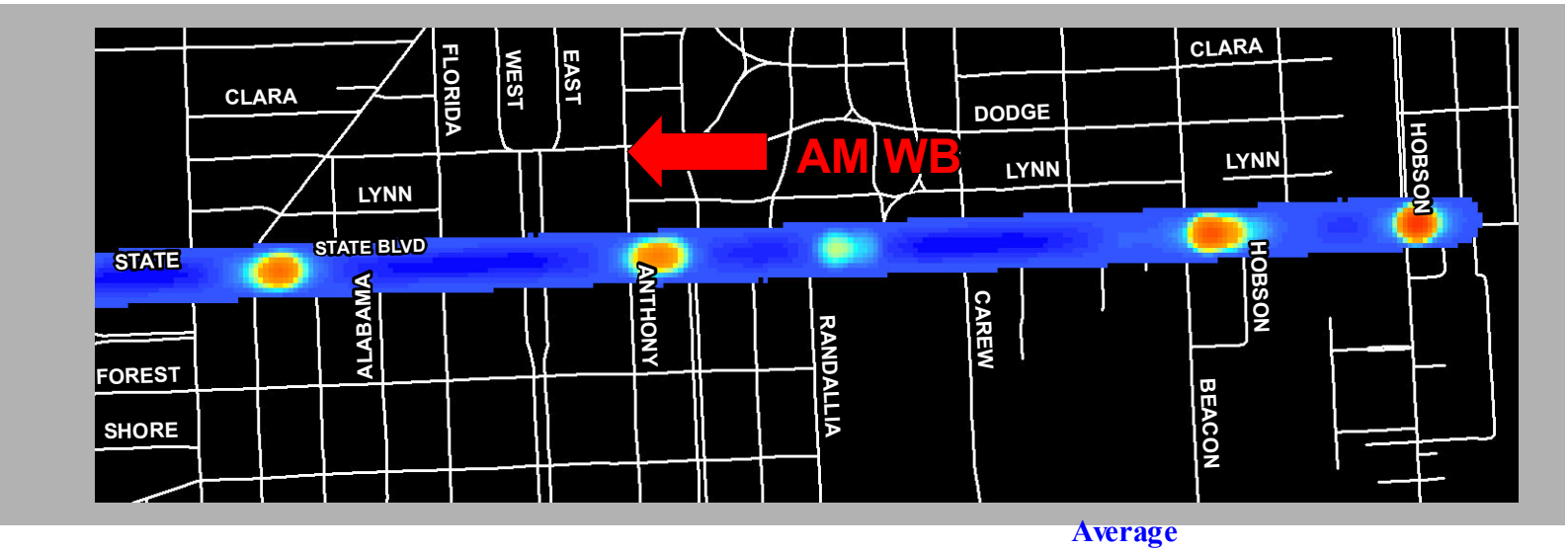
Figure 43
State Boulevard
AM Peak Eastbound

Figure 44
State Boulevard
AM Peak Westbound

Travel Time with the Least Amount of delay







Travel Speed with the Least Amount of delay

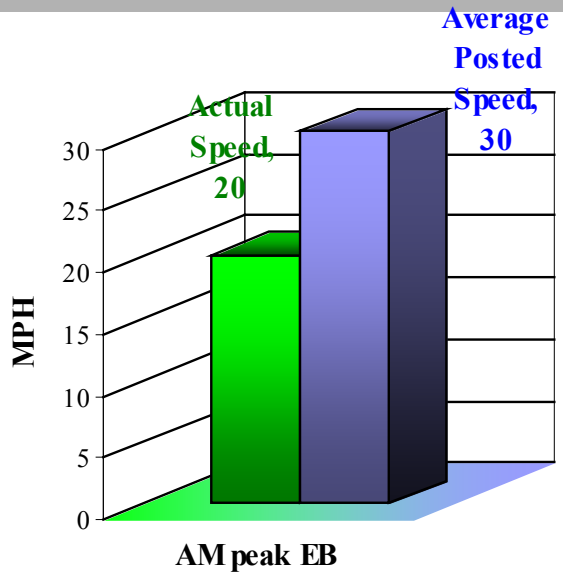
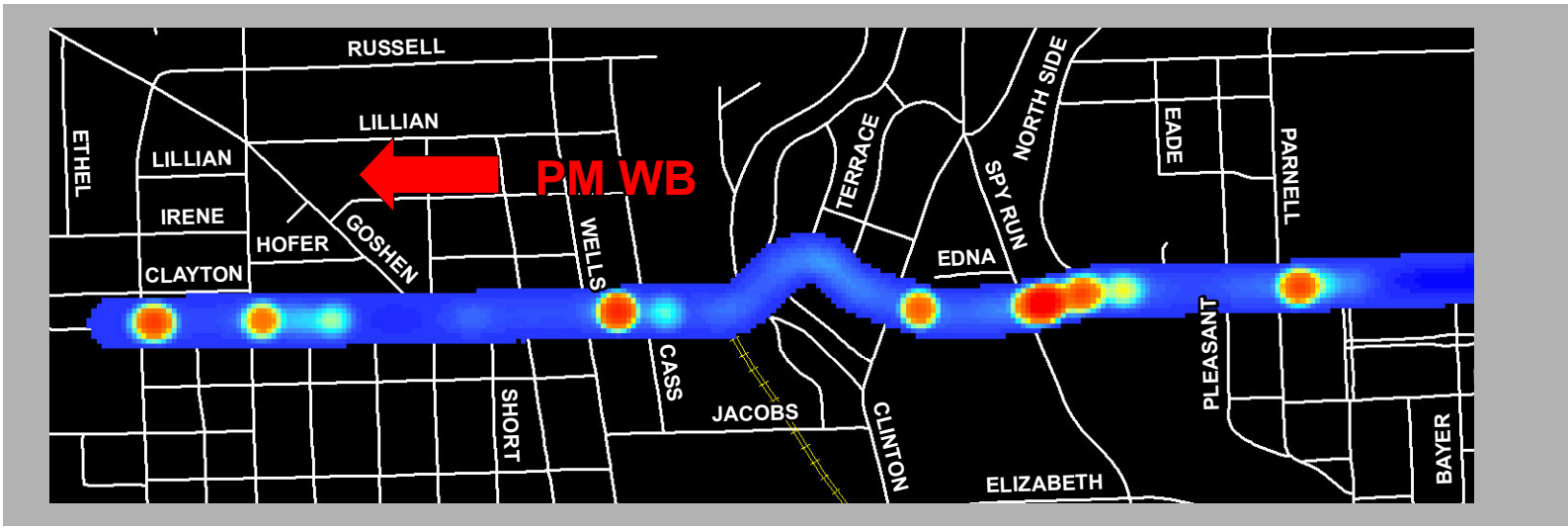
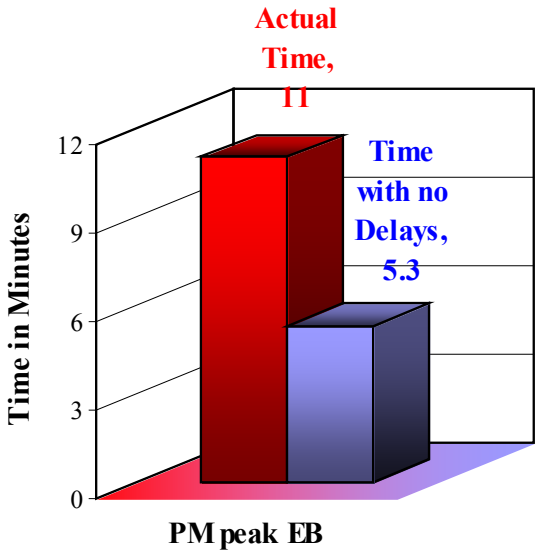


Figure 45
State Boulevard
PM Peak Eastbound

Figure 46
State Boulevard
PM Peak Westbound



Travel Time with the Greatest Amount of delay



Travel Speed with the Greatest Amount of delay

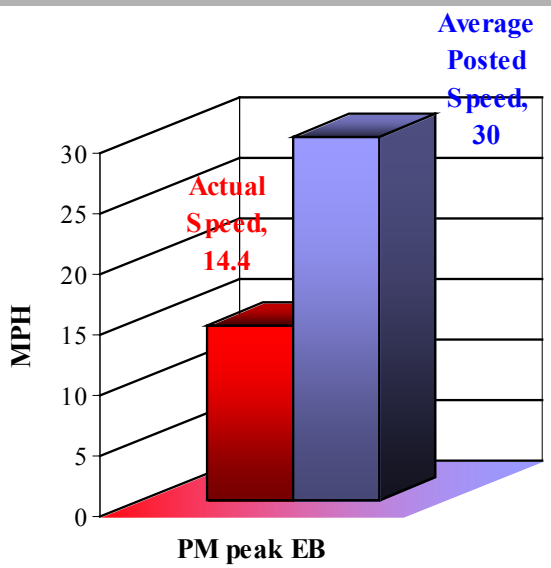
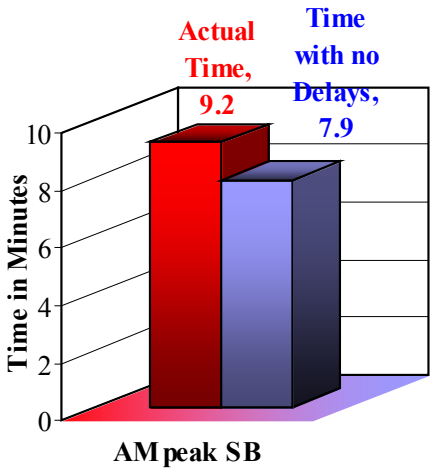


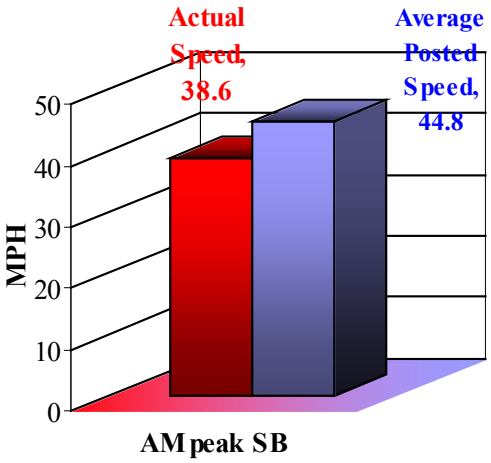
Figure 47

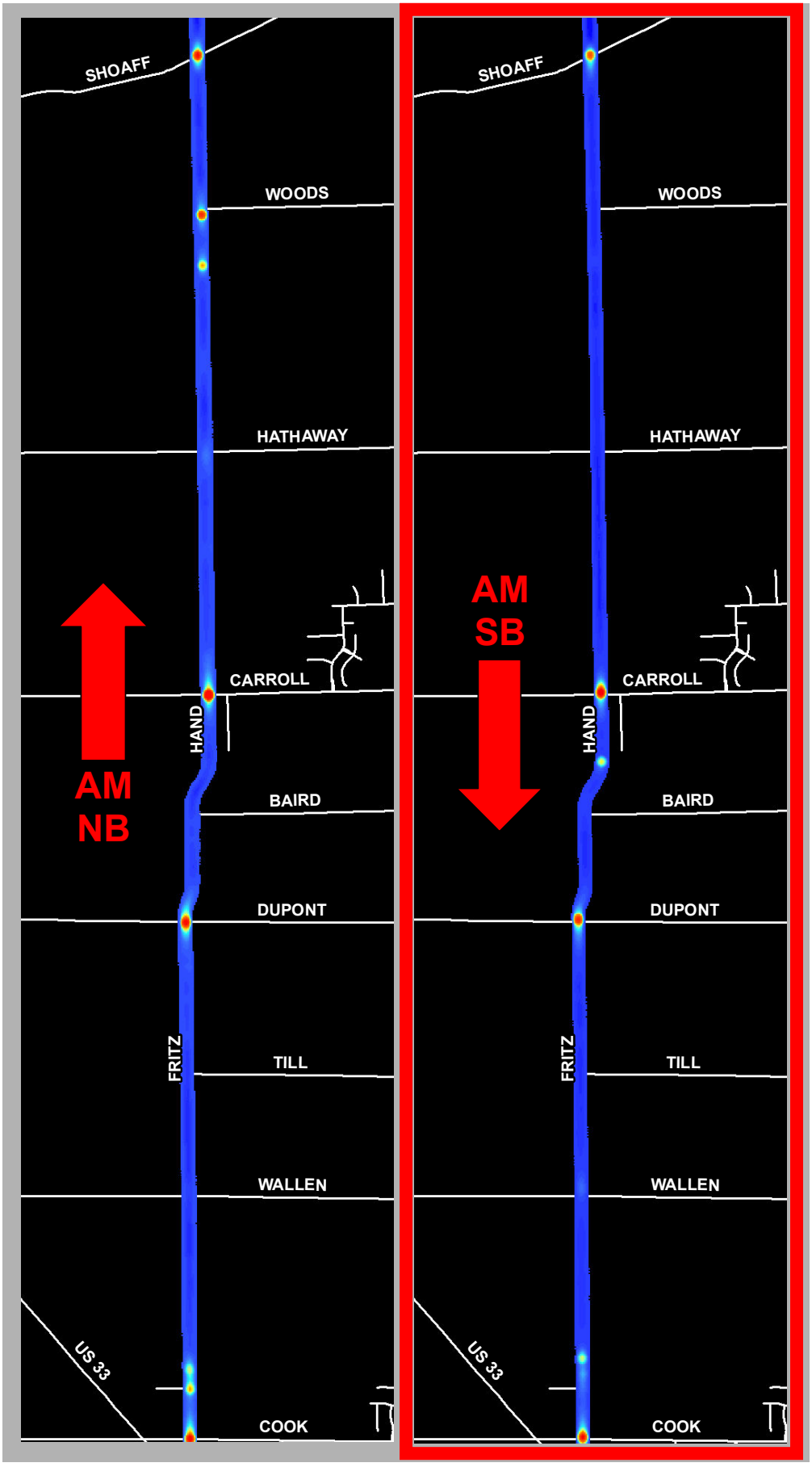
Fritz Road / Hand Road
AM Peak

Travel Time with the Greatest Amount of delay



Travel Speed with the Greatest Amount of delay





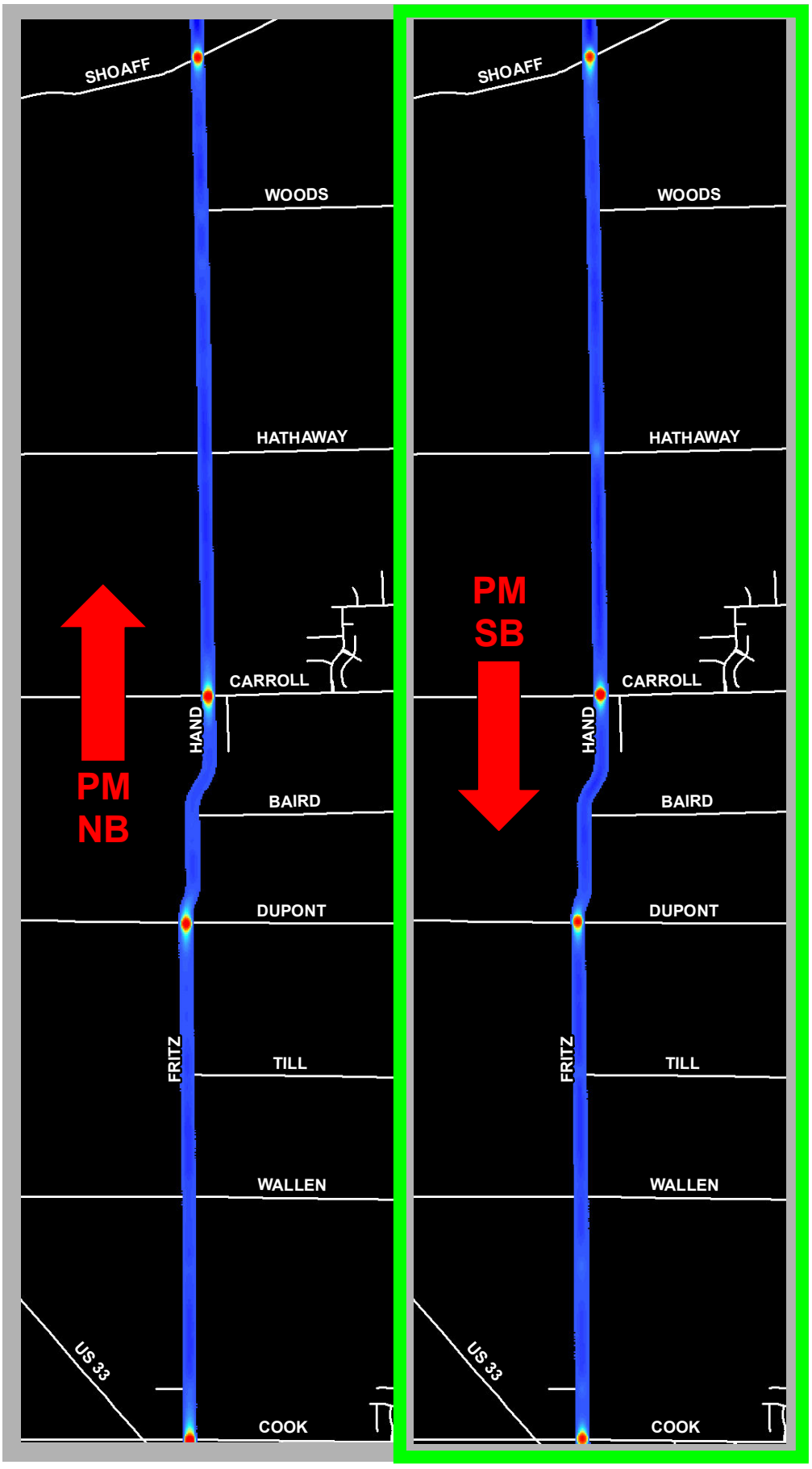
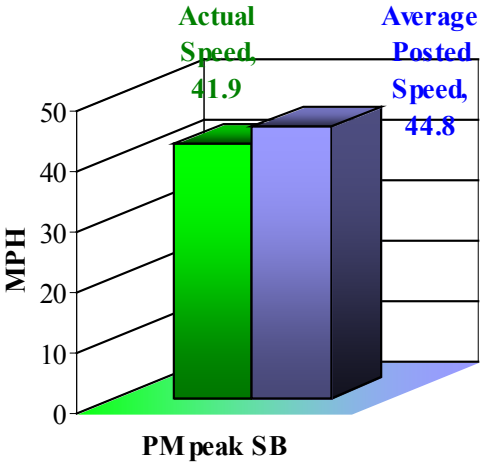


Figure 48

Fritz Road / Hand Road
PM Peak

Travel Speed with the Least delay



Travel Time with the Least delay

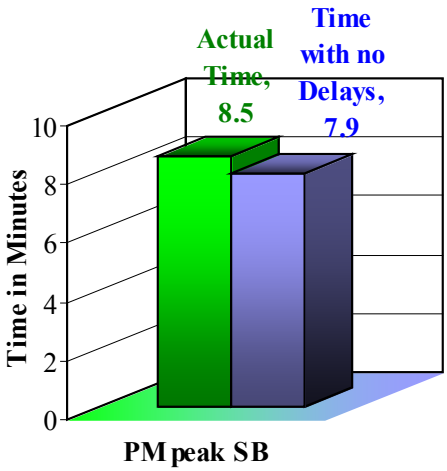


Figure 49

Dupont Road / State Road 1
AM Peak Eastbound

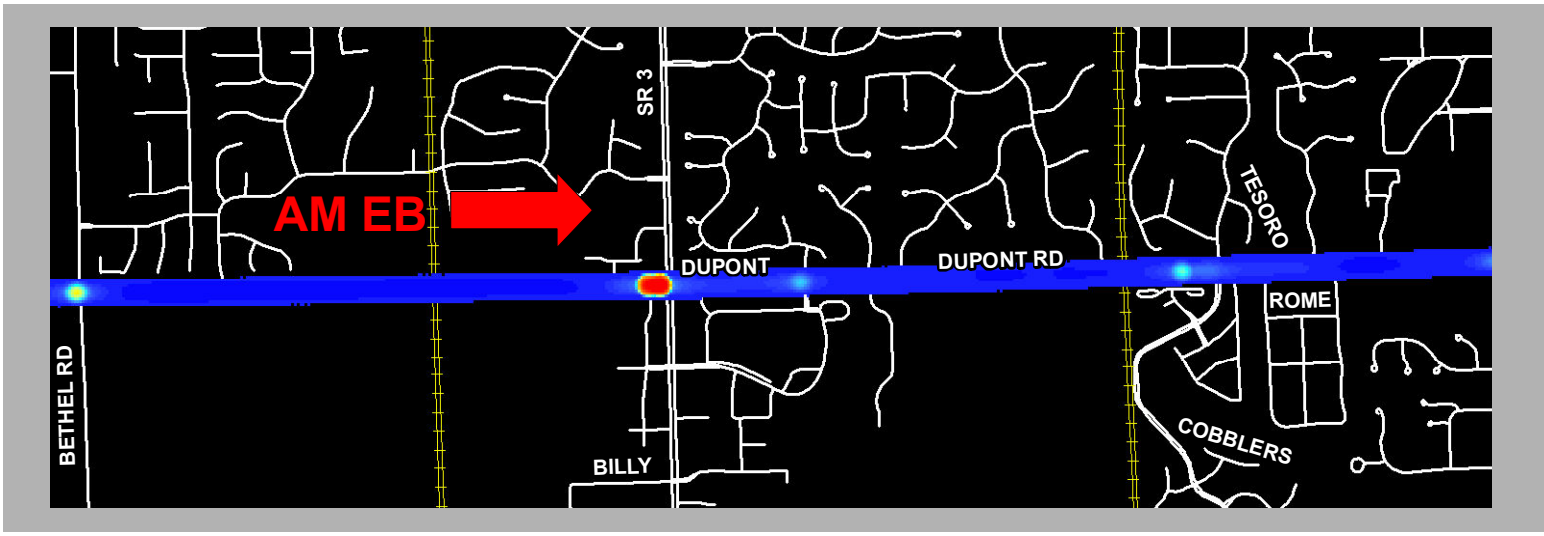
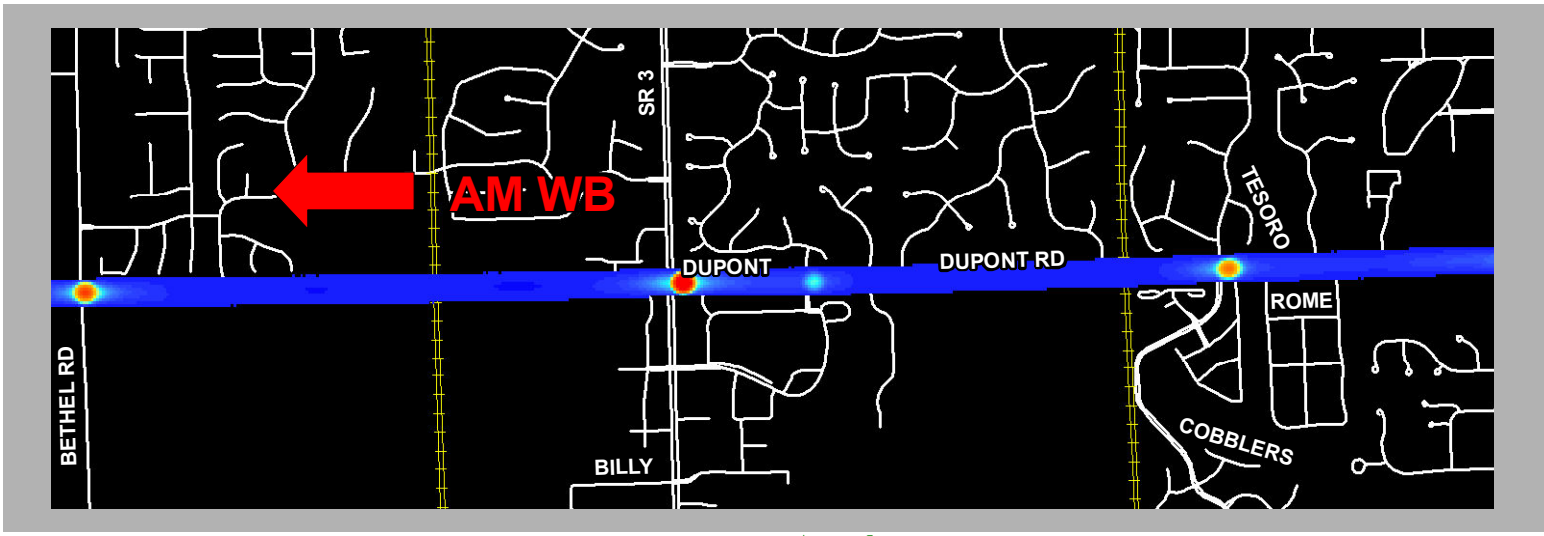


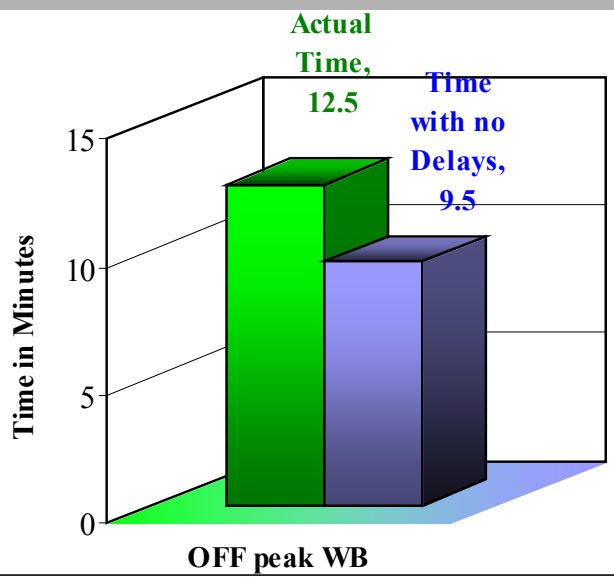
Figure 50

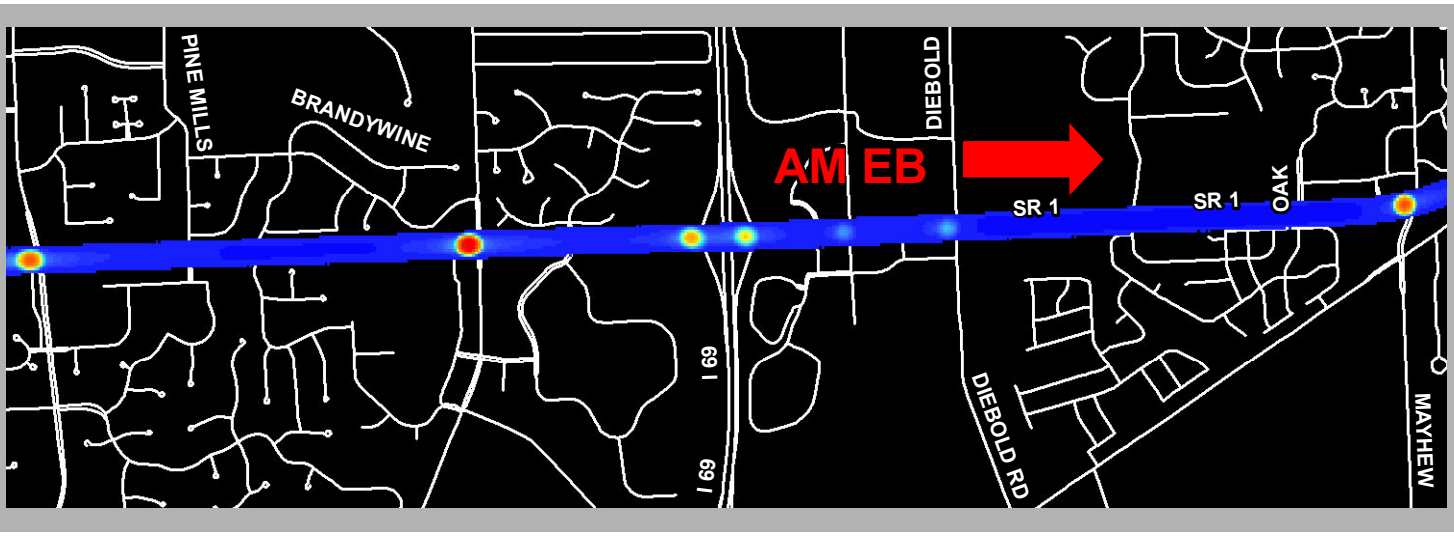
Dupont Road / State Road 1
AM Peak Westbound

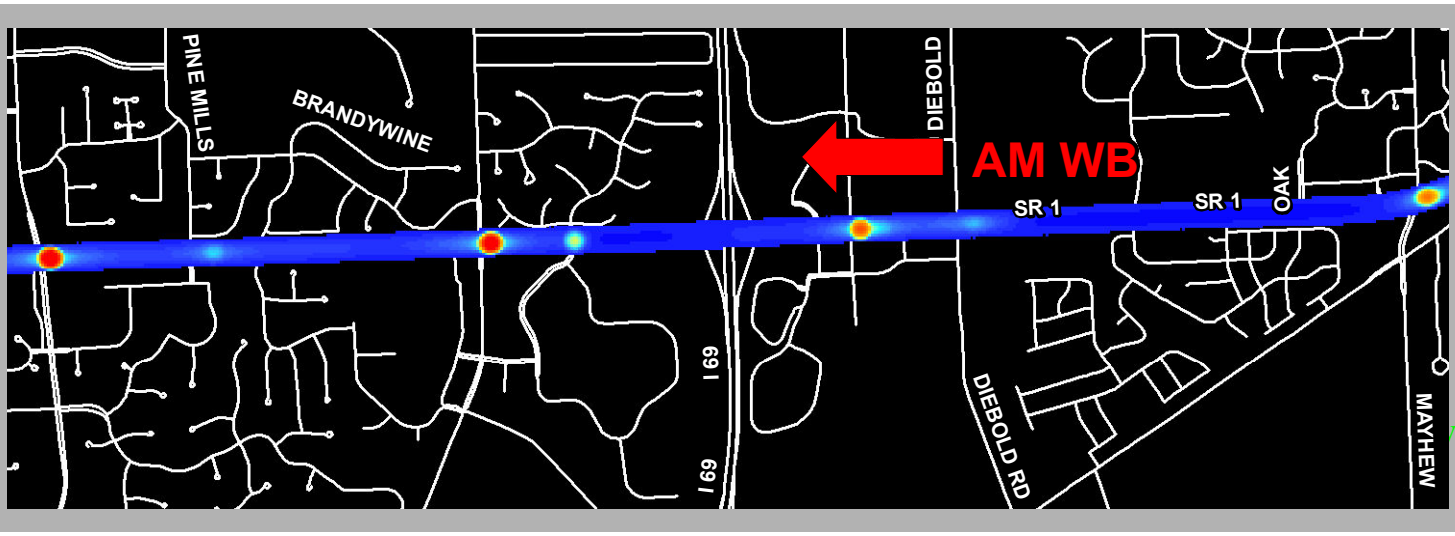


Travel Time with the Least delay

*Off Peak Travel Times are not shown graphically.







Travel Speed with the Least delay

*Off Peak Travel Times are not shown graphically.

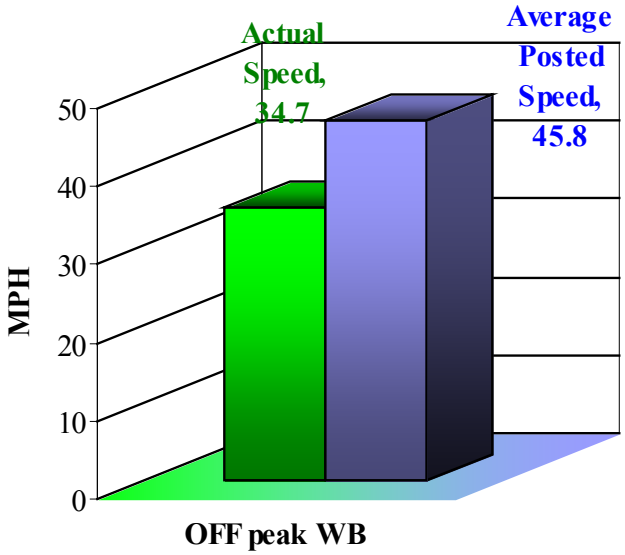


Figure 51
Dupont Road / State Road 1
PM Peak Eastbound

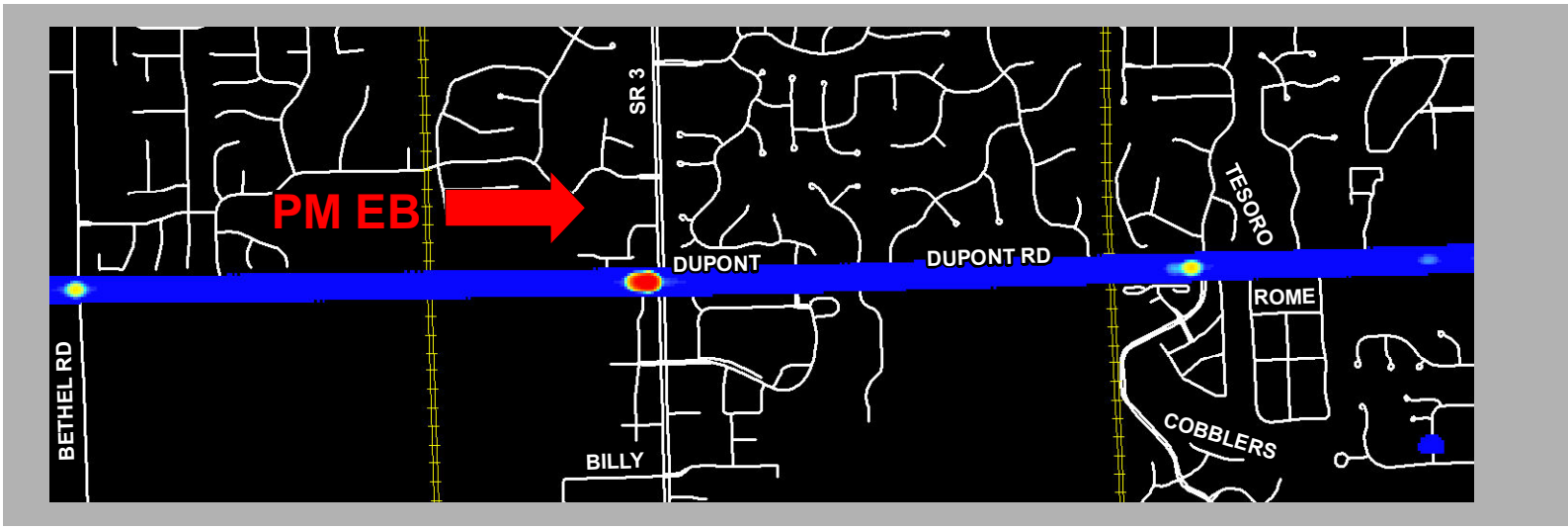
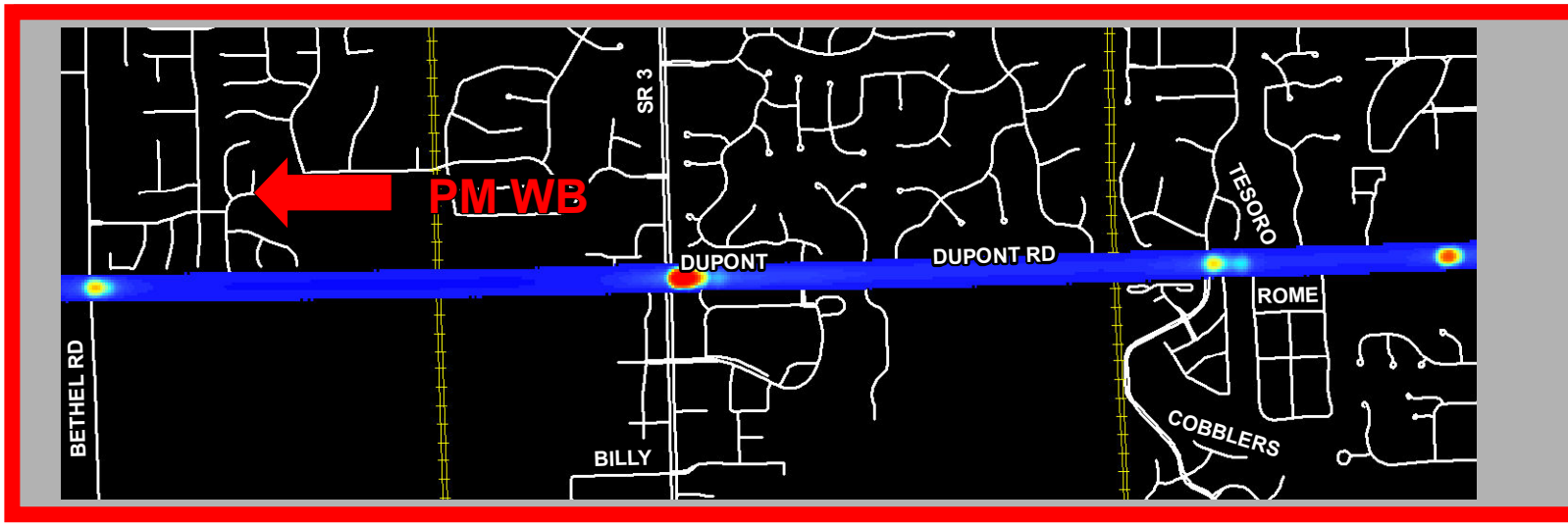
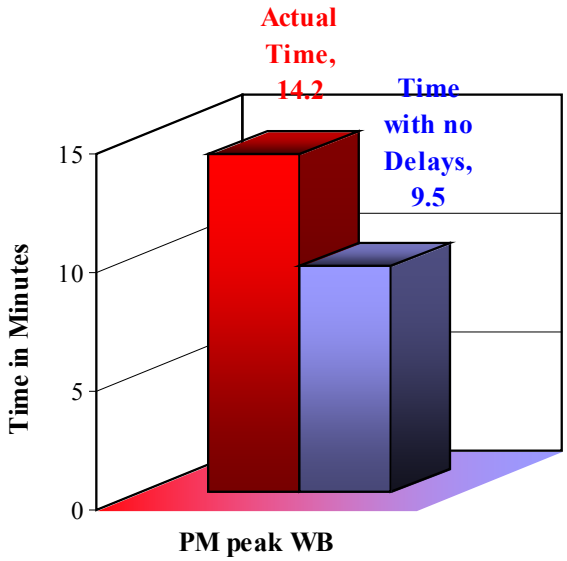
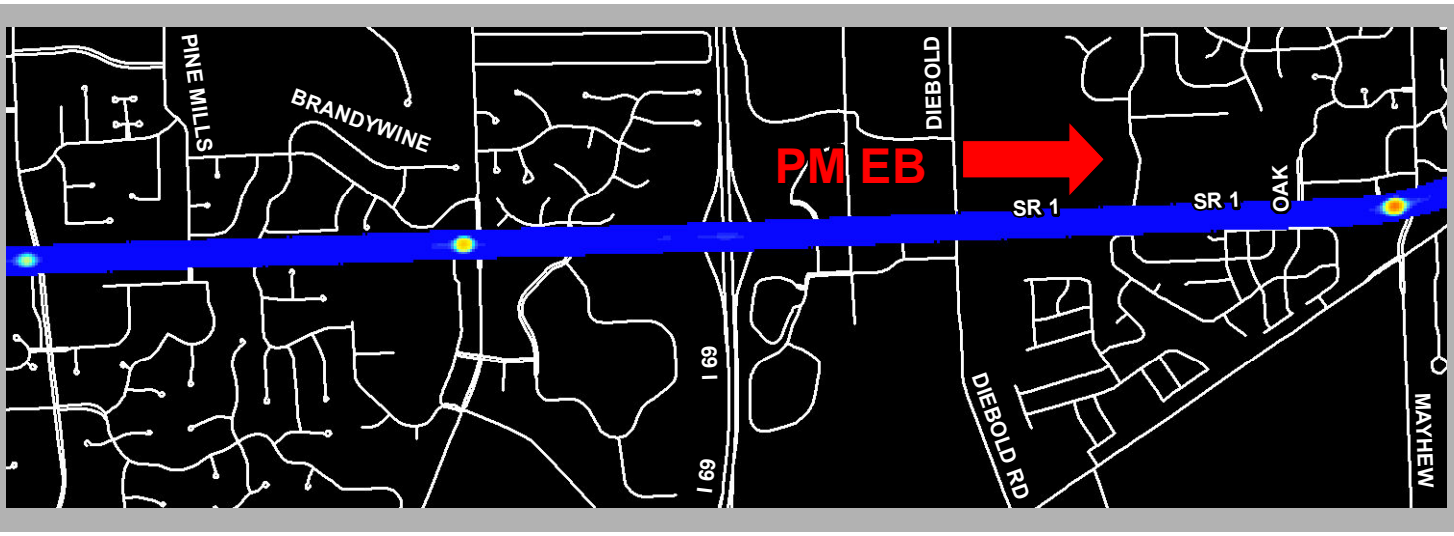


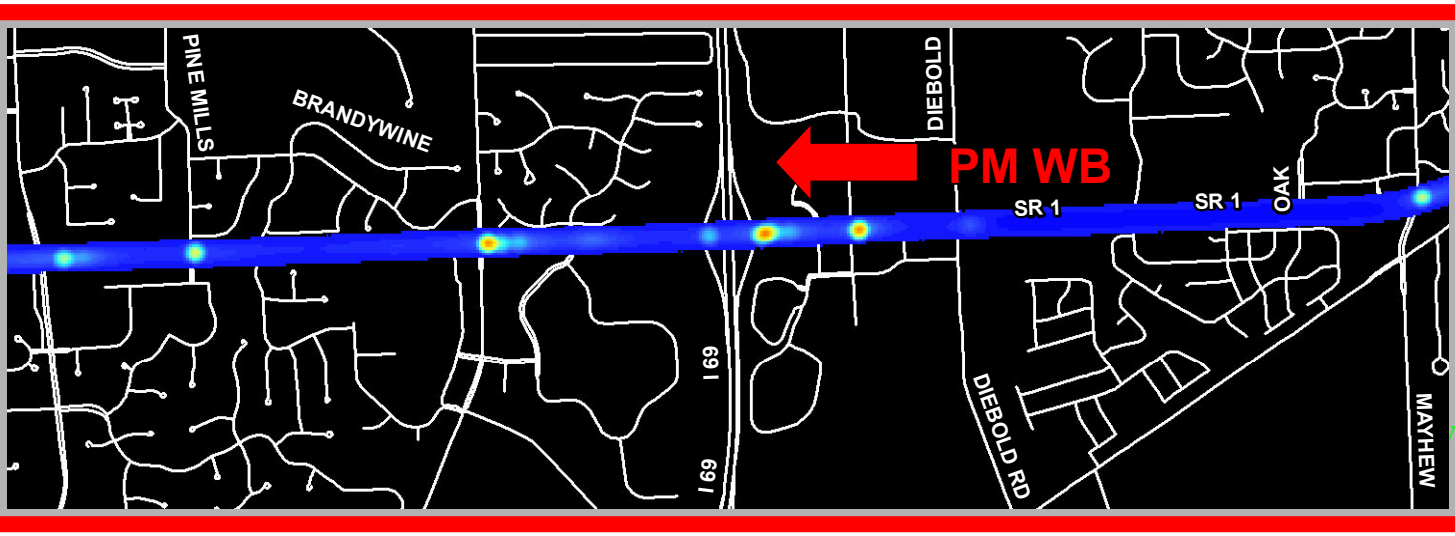
Figure 52
Dupont Road / State Road 1
PM Peak Westbound



Travel Time with the Greatest Amount of delay







Travel Speed with the Greatest Amount of delay

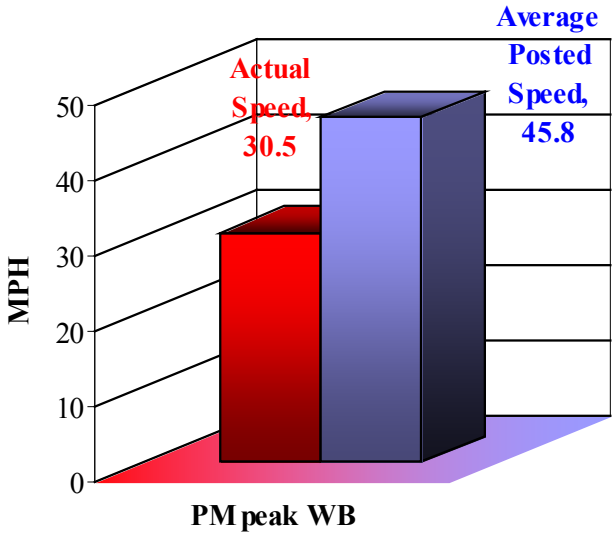
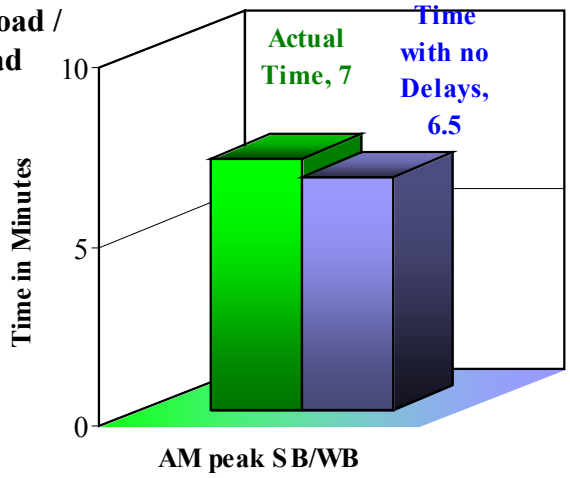


Figure 53

Kroemer Road / Haeman Road / Butler Road / Harris Road

AM Peak



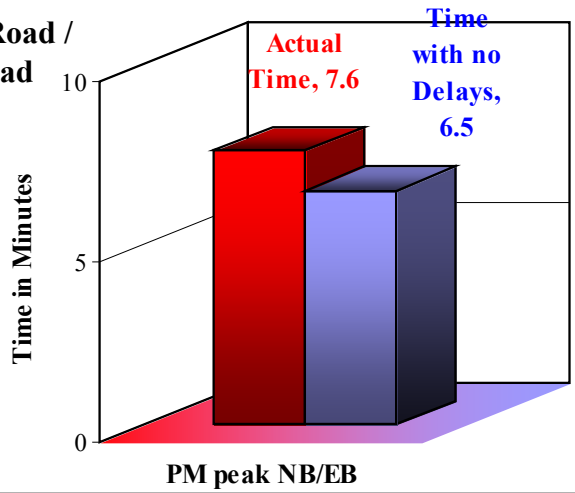
Travel Time with the Least delay

Travel Speed with the Least delay

Figure 54

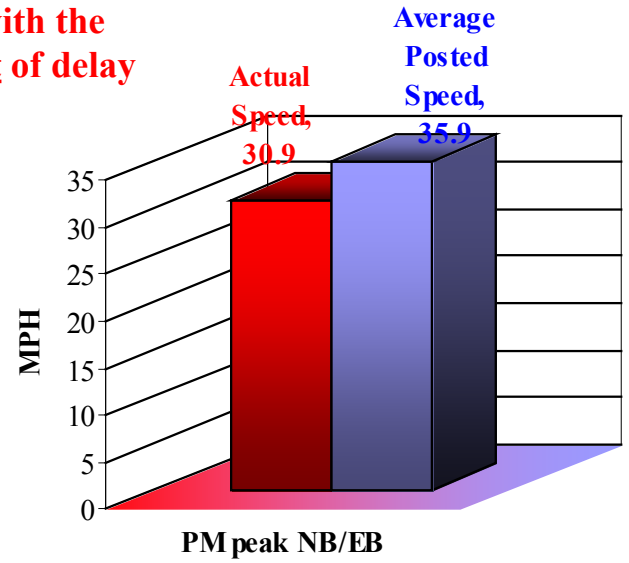
Kroemer Road / Haeman Road / Butler Road / Harris Road

PM Peak



Travel Time with the Greatest Amount of delay

Travel Speed with the Greatest Amount of delay



Transportation Improvement Program

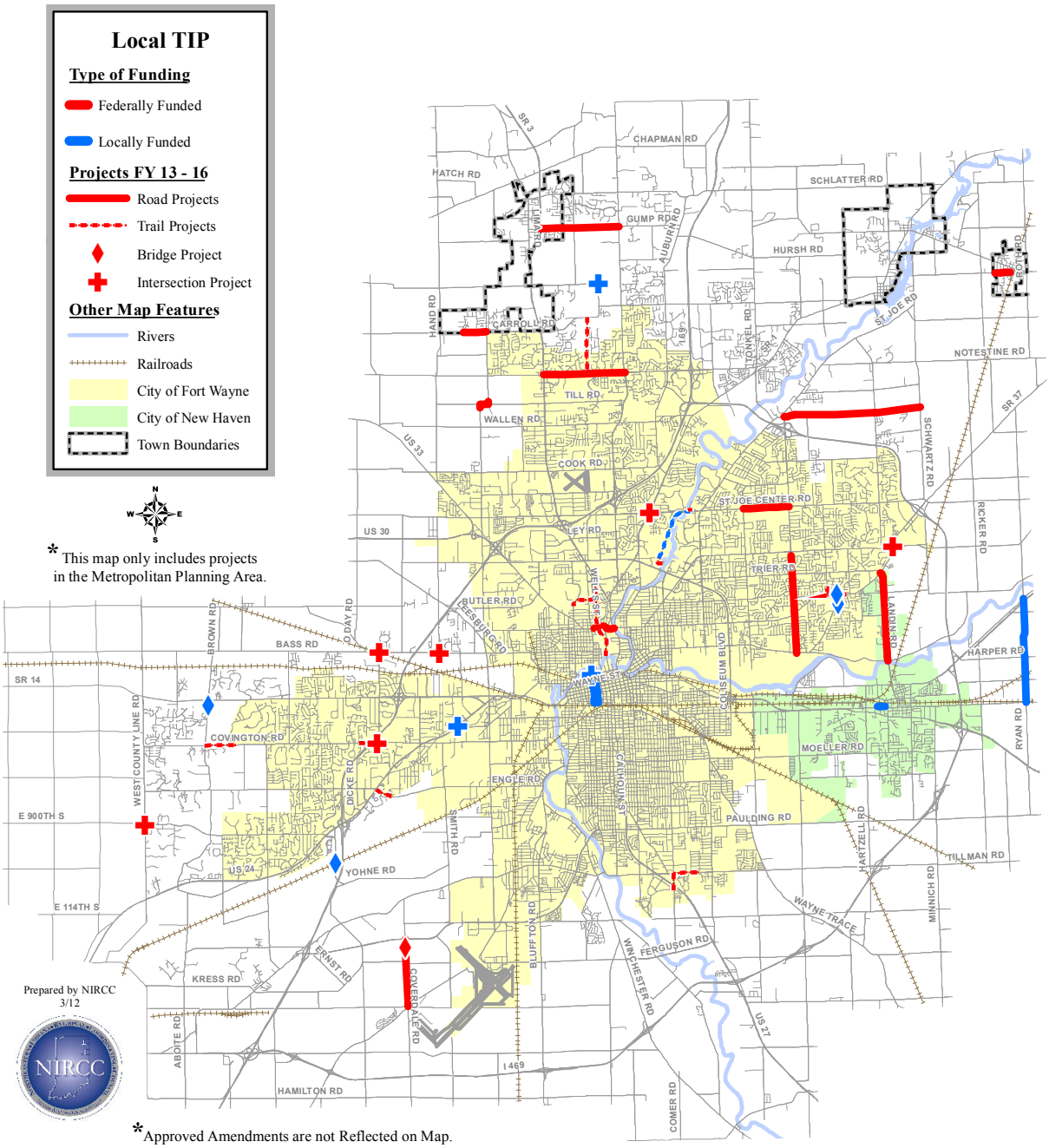
Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2012

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) PROJECTS

NIRCC prepared the Fiscal Year 2013-2016 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

Figure 55



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

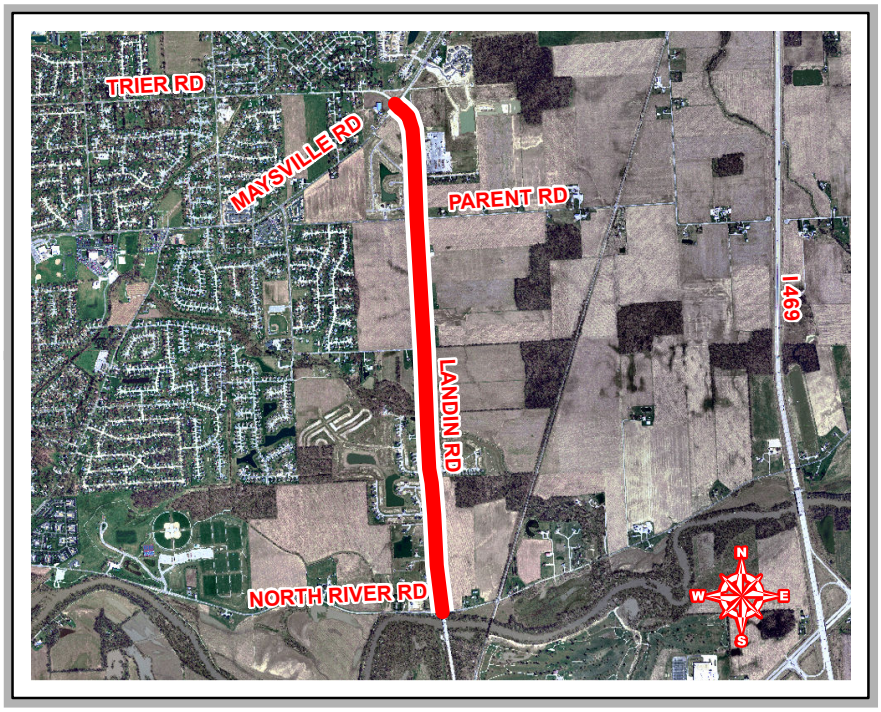


Figure 56

Each project typically goes through three different phases before construction completion. These phases include preliminary engineering (PE), right-of-way engineering and acquisition (RW), and construction (CN). The preliminary engineering includes 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 57

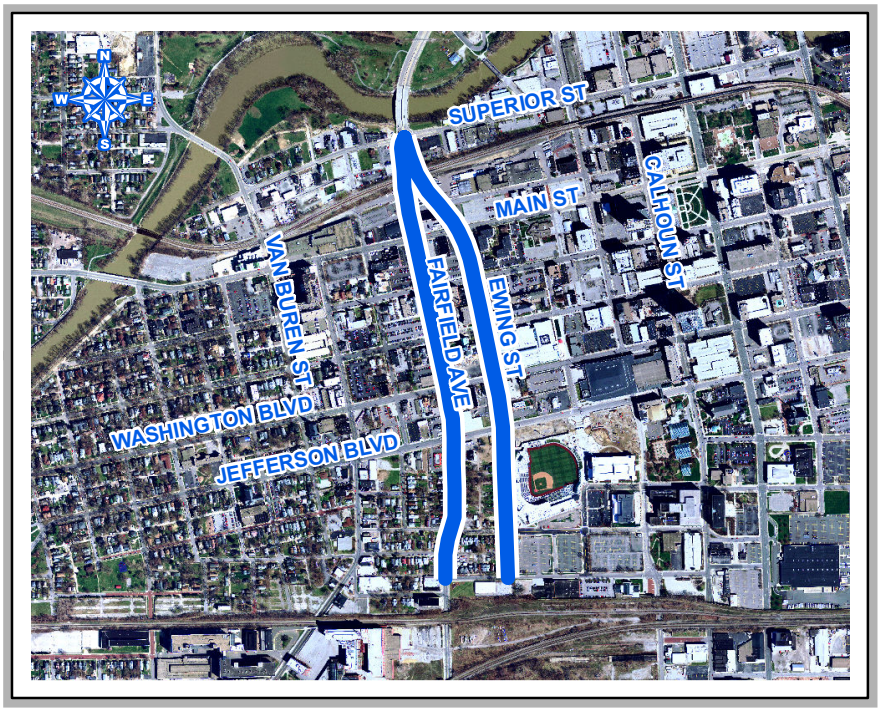


Figure 55 shows the locations of local TIP projects throughout the Metropolitan Planning Area. The local TIP map identifies projects that fit into two different categories. The projects that are colored blue identify projects that utilize only local funds whether it is City of Fort Wayne, City of New Haven, or Allen County. The projects colored red identify projects that utilize matching local funds with federal aid funds. Figures 56 and 57 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 73 through 74, and transit funding is listed on pages 75 through 77.

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) PROJECTS LISTED

FUNDING CLASSIFICATIONS

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

FY 13 TIP Local Highway Projects

ROAD PROJECTS-AREA OVER 200,000

Project	Phase	LPA	Funding Type
2nd Street: Shoal Ln to Main St	RW	GB	Group IV
Auburn Rd & Union Chapel Rd Intersection	CN	AC/ INDOT	CMAQ
Bass Rd & Hadley Rd	RW	AC	CMAQ
Bethel Rd / Huguenard Rd / Till Rd	RW	AC	CMAQ
Bridge Guardrail Treatments - various locations	PE/CN	AC	HSIP
Carroll Rd - Preserve Blvd to Bethel Rd	RW	HT	Group IV
Clinton St & Washington Center Rd	PE	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	CN	FW	CMAQ
Covington Rd Trail: Ladue Ln to I-69	CN	FW	CMAQ
Covington Rd Trail: Beal-Taylor Ditch to West Hamilton Rd	RW/CN	FW	TE
Diebold Rd & Union Chapel Rd Intersection	CN	AC/ INDOT	STP
Diebold Rd & Union Chapel Rd Intersection	CN	AC/ INDOT	CMAQ
Dupont Rd - Lima Rd (SR 3) to Coldwater Rd	RW	FW	STP
Engle Rd Trail: Jefferson Blvd to Towpath Trail	RW/CN	FW	CMAQ
Flutter Rd: Schwartz Rd to Maplecrest Rd	CN	AC	STP/CMAQ
Fort Wayne CBD: Special Pavement Markings (Piano Key)	CN	FW	HSIP
Gump Rd - SR 3 to Coldwater Rd	CN	AC	STP
Johnny Appleseed Park to Shoaff Park Trail (Phase 1B)	CN	FW	TE
Landin Rd: North River Rd to Maysville Rd	RW	NH	STP
Maplecrest Rd - Lake Ave to State Blvd	RW	FW	STP
Maplecrest Rd - State Blvd to Stellhorn Rd	PE	FW	STP
Pufferbelly Trail - Fourth St to Fernhill Ave	RW	FW	TE
Six Mile Creek Trail	RW	FW	TE
State Blvd - Spy Run Ave to Cass	RW	FW	STP
State Blvd, Lahmeyer Rd & Maysville Rd Sidewalk	CN	FW	SRTS
Wireless Vehicle Detection-68 intersections	CN	FW	CMAQ

FY 14 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
Bass Rd & Kroemer Rd	RW	AC	STP
Bethel Rd / Huguenard Rd / Till Rd	CN	AC	CMAQ
Carroll Rd - Preserve Blvd to Bethel Rd	CN	HT	Group IV
Clinton St & Washington Center Rd	RW	FW	CMAQ
Liberty Mills Rd & County Line Rd	PE	AC	CMAQ
Maplecrest Rd - Lake Ave to State Blvd	CN	FW	STP
Maysville Rd & Stellhorn Rd	PE	FW	CMAQ
Pufferbelly Trail - Fourth St to Fernhill Ave	CN	FW	TE
Pufferbelly Trail - Dupont Rd to Carroll Rd	CN	FW	RTP
St Joe Center Rd: Reed Rd to Maplecrest Rd	PE	FW	STP
Six Mile Creek Trail	CN	FW	TE
State Blvd - Spy Run Ave to Clinton St (Phase 1)	CN	FW	STP

FY 15 TIP Local Highway Projects

ROAD PROJECTS-AREA OVER 200,000

Project	Phase	LPA	Funding Type
Bass Rd & Kroemer Rd	CN	AC	STP
Dupont Rd - Lima Rd (SR 3) to Coldwater Rd	CN	FW	STP
Dupont Rd - Lima Rd (SR 3) to Coldwater Rd	CN	FW	CMAQ
Landin Rd: North River Rd to Maysville Rd	CN	NH	STP
State Blvd - Clinton St to Cass St (Phase 2 - bridge)	CN	FW	STP
State Blvd - Clinton St to Cass St (Phase 2)	CN	FW	HSIP
State Blvd - Clinton St to Cass St (Phase 2 - ped bridge)	CN	FW	CMAQ

FY 16 TIP Local Highway Projects

ROAD PROJECTS-AREA OVER 200,000

Project	Phase	LPA	Funding Type
Clinton St & Washington Center Rd	CN	FW	CMAQ
Liberty Mills Rd & County Line Rd	RW	AC	CMAQ
Maplecrest Rd - State Blvd to Stellhorn Rd	RW	FW	STP
St Joe Center Rd: Reed Rd to Maplecrest Rd	PE	FW	STP

FEDERAL TRANSIT ADMINISTRATION
Section 5307 / Section 5309 - Funds
Fort Wayne Public Transportation Corporation

FY 2013

Capital Equipment Purchases (Section 5307 Funds)

Three (3) Replacement modified minivan Supervisor vehicles
One (1) Replacement maintenance truck
Rehab/Renovate Admin/Maintenance Facility
AVL/Communication Hardware/Subscription Cost
Other Maintenance Equipment
Computer/Office Equipment
Transit Enhancements

Additional Operating Funds

CMAQ - Transit Awareness
JARC
New Freedom

Operating Funds and Preventative Maintenance Expenses

Capitalization of Maintenance Costs (Section 5307)
Complimentary Paratransit Costs (Section 5307)

FEDERAL TRANSIT ADMINISTRATION
Section 5307 / Section 5309 - Funds
Fort Wayne Public Transportation Corporation

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
Transit Enhancements

Capital Equipment Purchases (Section 5309 Funds)

Hybrid option for four (4) buses - funds requested

Additional Operating Funds

CMAQ - Transit Awareness
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 5307 / Section 5309 - Funds
Fort Wayne Public Transportation Corporation

FY 2015

Capital Equipment Purchases (Section 5307 Funds)

Four(4) Heavy Duty Replacement Hybrid Buses
Four (4) Replacement Minibus (Body on Chassis) FLEX Route
Five (5) Replacement Minibus (Body on Chassis) ACCESS
Computer/Office Equipment
AVL/Communication Hardware/Subscription Cost
Other Maintenance Equipment
Transit Enhancements

Capital Equipment Purchases (Section 5309 funds)

Hybrid option for four (4) buses - funds requested

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 5307 / Section 5309 - Funds
Fort Wayne Public Transportation Corporation

FY 2016

Capital Equipment Purchases (Section 5307 Funds)

Three (3) replacement light-duty transit vehicles
One (1) replacement minbus (body on chassis)
Computer/Office Equipment
AVL/Communication Hardware/Subscription Cost
Other Maintenance Equipment
Transit Enhancements

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 5311 Funds

FY 2013

2012 Funding Cycle

Allen County Council on Aging

Operating Funds

FEDERAL TRANSIT ADMINISTRATION - Section 5310 Funds

FY 2013

2012 Funding Cycle

1. **Community Transportation Network**

   One (1) Medium Transit Vehicle

2. **Community Transportation Network**

   One (1) Large Transit Vehicle

Quarterly Review Meetings

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2012

QUARTERLY REVIEW MEETINGS

Each quarter the Northeastern Indiana Regional Coordinating Council (NIRCC) schedules a quarterly review meeting for all federally funded Local Public Agency (LPA) projects in our Transportation Improvement Program (TIP). The Indiana Department of Transportation's (INDOT) quarterly report is due the 20th of the month following the end of the quarter. NIRCC's quarterly review meeting is scheduled 10 days to 2 weeks after the INDOT date.

The INDOT quarterly report is filled out by the consultant and submitted to the LPA for review and approval. Once the LPA approves the report it is then sent to the Fort Wayne District office of INDOT and a copy is also sent to NIRCC.

Information from the INDOT quarterly report is reviewed by NIRCC staff and then inputted into the NIRCC quarterly review sheet. The INDOT and NIRCC quarterly review sheets are very similar. The most noted difference is that at the top of the NIRCC quarterly review sheet is the project's funding information as it is programmed in the TIP. See an example of NIRCC's quarterly review sheet in figure 58 on the next page.

All the projects are reviewed in one day. Fifteen minutes are allotted per project. The LPA and consultant are requested to attend the meeting. If the consultant is located outside of Fort Wayne they are able to call into the meeting rather than attending.

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

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

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

Figure 58

Bethel-Huguenard-Till Intersection

DES # 1005320

TIP
2013-2016
CMAQ

Project Phase	Estimated Cost	Year	Federal Share	State Share	Local Share
PE*	264,800	2011	211,840	0	52,960
RW	200,000	2013	160,000	0	40,000
CN	1,575,000	2014	1,260,000	0	315,000
Total	2,039,800		1,631,840	0	407,960

*includes supplemental

	Initial Report	Previous Report	Current Report	Current Change	Overall Change
Project Cost	**Apr-11**	**Jul-12**	**Oct-12**		
a. Preliminary Engineering	$243,050	$264,800	$264,800	$0	$21,750
b. Right of Way Acq cost	$150,000	$200,000	$200,000	$0	$50,000
c. Reimbursable Utility cost					
d. Construction cost	$1,435,000	$1,336,670	$1,336,670	$0	-$98,330
e. Constr. Eng & Inspect. cost	$215,000	$200,500	$200,500	$0	-$14,500
f. Contingency			$76,860		
Total cost	**$2,043,050**	**$2,001,970**	**$2,078,830**	$0	-$41,080

Schedule	**Jul-12**	**Oct-12**
Ready for contracts date	Oct 2013	Oct 2013

Environmental document
Type: **Federal CE** est. completion date: 5/25/2012

Land acquisition		**Jul-12**	**Oct-12**
est. completion date: 8/9/2013	Total # parcels **10**	# secured 0	# secured 0

Permits				
needed:	401	404	Rule 5
approved:			

ERC
LPA: *Mike Thornson* Certified thru: *5/10/2014*
Consultant: *Aaron Ott* Certified thru: *5/10/2014*

Milestones	Actual Start Date	Actual Completion Date	Actual Days	LPA Initiative Days	Percent Complete/Comment
Project Authorized	3/4/10	8/24/10	173	180	100%
Start Plan Develop	11/12/10	11/12/10	0	30	100%
Stage 1 Design	11/12/10	5/11/11	180	90	100%
Prelim Field Check	8/12/11	9/7/11	26	30	100%
Stage 2 Design	5/11/11	11/23/11	196	215	100%
Environmental Doc.	11/10/10	5/25/12	562	365	100%
RW Clear	5/13/12	8/9/13	453	180	0%
Stage 3 Design	7/12/12	8/9/13	393	180	0%
Ready for Contracts		10/23/13		60	0%
Letting		1/15/14			

July 2012 The environmental document received final approval on May 25, 2012, therefore right of way activites are now progressing. The "original estimate" project costs derived from the first quarterly report generated for project (3rd quarter 2010).

ADA (Americans with Disabilities Act) Transition Plans

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2012

ADA (AMERICANS WITH DISABILITIES ACT) TRANSITION PLANS

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

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

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

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

During FY 2012 the Northeastern Indiana Regional Coordinating Council (NIRCC) reached out to help LPAs (Local Public Agencies) become familiar with ADA requirements and assisted them with creating ADA Transition Plans. To remain eligible for federal transportation funding, LPAs were reminded that they need to be in compliance and have updated their transition plans. The goal was to ensure that LPAs had a specific plan of action by December 2011, and have reviewed and completed their updated ADA transition plans by December of 2012.

To accomplish this NIRCC researched and collected information on current ADA standards and procedures. NIRCC met with staff of Allen County, Fort Wayne, New Haven DeKalb County, and Wells County to discuss ADA procedures and what they need to do for compliancy. Also, NIRCC assisted LPAs with ADA requirements via phone and emails.

To help with the process NIRCC developed a template for a transition plan, grievance procedure, non-discrimination notice, and resolution of ADA coordinator for LPAs to use. Also NIRCC assisted in the collection of sidewalk and ramp inventories and the creation of transition plans for communities in DeKalb and Wells Counties. Figures 59 - 61 give examples of some of the inventories created for the transition plans and how grades were given for compliance of ADA standards.

Figure 59

CR 11A

Ramps				Assessment					Compliance Date
CR 11A	Grade	Location	Description	Pts for Rating	Ped Destinations	Public Interest	Local Priority	Total	
1 A	B	CR 11A & CR 23	Ramp leads pedestrians into the middle of the intersection	1	1	0	2	4	
2 G	F	CR 11A ramp across from Auburn Auction Park	Completely broken up and falling apart	3	1	0	2	6	

Sidewalks				Assessment					Compliance Date
CR 11A	Grade	Location	Description	Pts for Rating	Ped Destinations	Public Interest	Local Priority	Total	
1 N	A	North side of CR 11A from I-69 to 200' West of CR 23							
2	B	North side of CR 11A from 200' West of CR 23 to CR 23	Cross slope 2.25%-2.95%	1	1	0	2	4	
3	B	South side of CR 11A from I-69 to CR 23	Cross slope 2.25%-3.6%	1	1	0	2	4	

DeKalb County Bridges

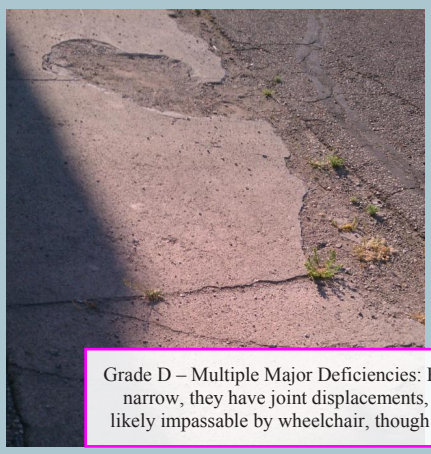
Sidewalks				Assessment					Compliance Date
Bridge	Grade	Location	Description	Pts for Rating	Ped Destinations	Public Interest	Local Priority	Total	
1 N	B	Bridge #16 near intersection of CR 23 & Auburn Rd	Cross slope 2.1%-3%	1	0	0	0	1	
2 N	A	North side of Bridge #502 on 1st St in Auburn							
2 S	A	South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

Figure 60
Examples of Sidewalk Grade Ratings

Grade A – Complies with all standards.

Grade B – Minor Deficiency: For instance, the sidewalk shown here has a cross slope greater than 2%.

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

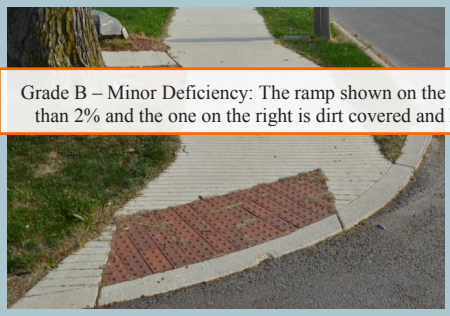


Grade D – Multiple Major Deficiencies: For instance, the sidewalks shown here are too narrow, they have joint displacements, rough/cracked surfaces, and gaps making it likely impassable by wheelchair, though a fit walker could still navigate the sidewalk.

Grade F – Not present, broken, and/or impassable.

Figure 61
Examples of Curb Ramp Grade Ratings

Grade A – Complies with all standards.



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

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

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

Grade F – Not present, broken, and/or impassable.

Safety Management System

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2012

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 2012 NIRCC obtained all crash records that occurred in Allen County during 2011. 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 2011 crash data and included it in the crash database, NIRCC combined the 2011 crash data with the 2009 and 2010 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 62, 63, and 64 display the densities of crash frequencies for the Fort Wayne, New Haven, and the Allen County area.

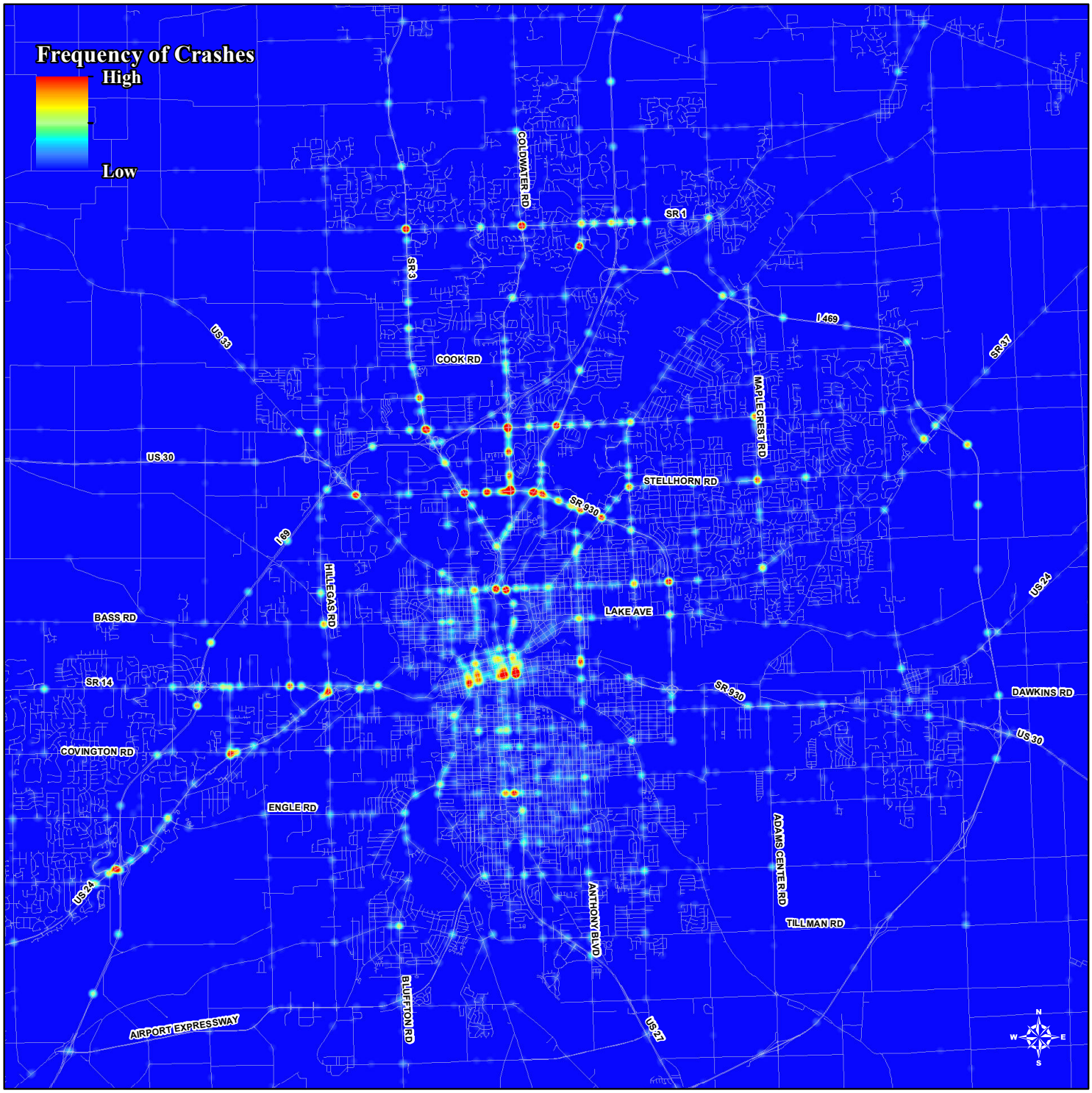
Annual Summary and Listing of Crash Locations

The annual crash record database is first used to provide an annual crash summary report for local jurisdictions (Allen County - all cities and towns, Fort Wayne, and Allen County - outside incorporated areas). The summaries include statistical data that focuses on detailed crash information from the crash reports. The information provides engineers,

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

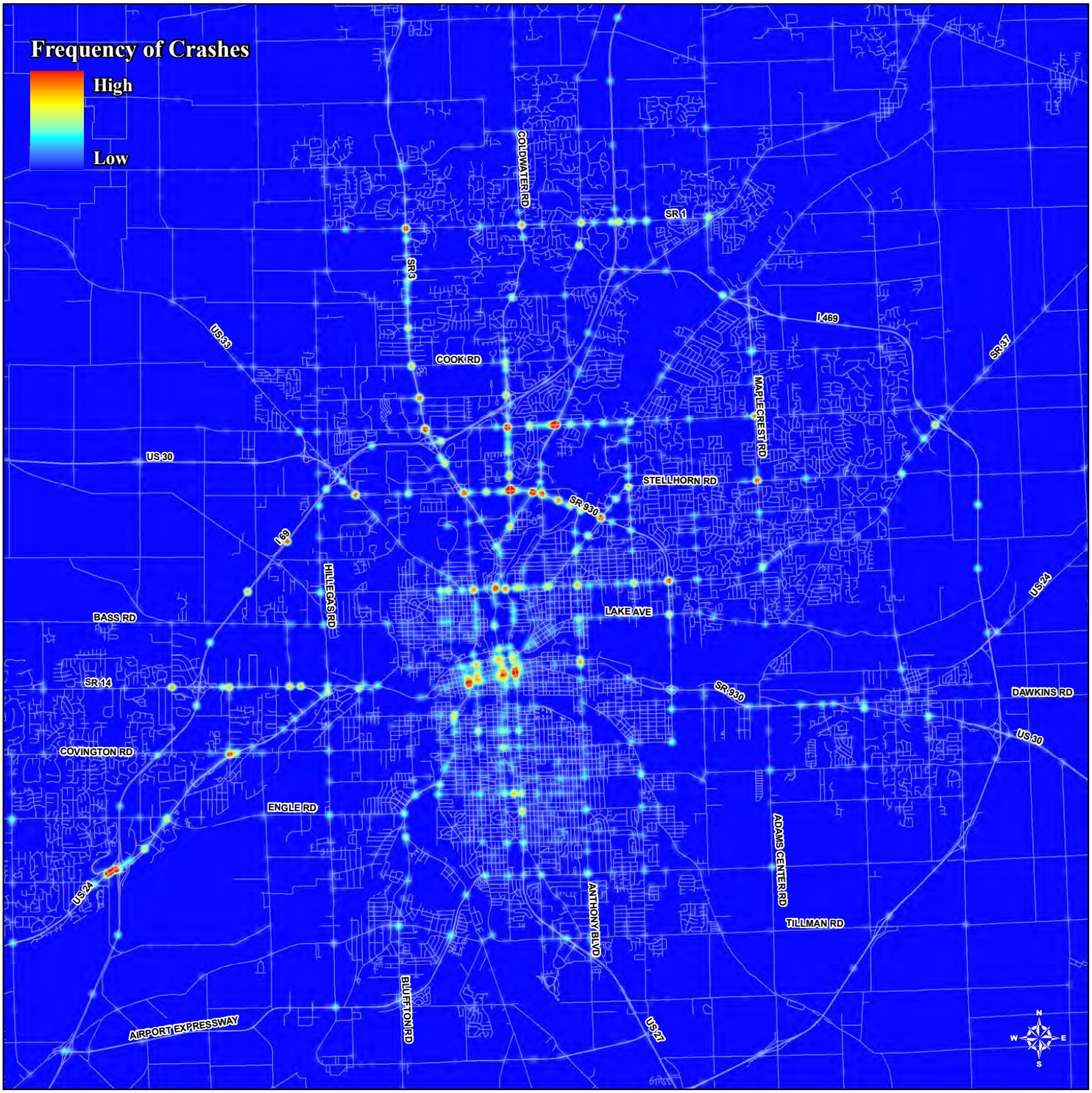
Figure 62 - 2011 Crash Data



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

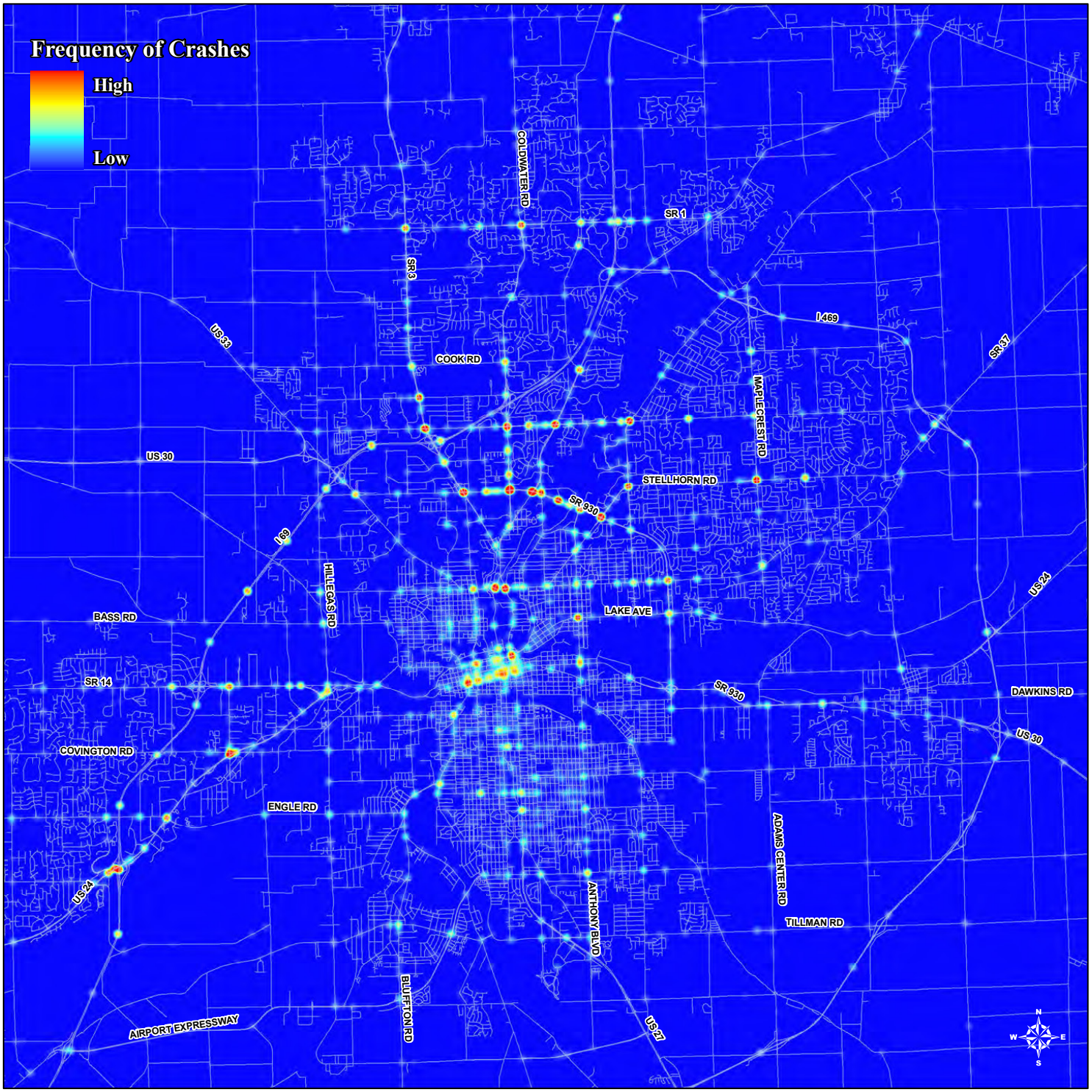
High frequency crash locations were defined as those with an annual crash frequency greater than or equal to seven (7).

Figure 63 - 2010 Crash Data



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

Figure 64 - 2009 Crash Data



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

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

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 2012 staff reviewed all the crash location listings created for 2009, 2010, and 2011 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 2009, 2010, and 2011. These locations were then reviewed using crash rates and HAT (Hazard Analysis Tool) software developed by the Indiana Department of Transportation and Purdue University.

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

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

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

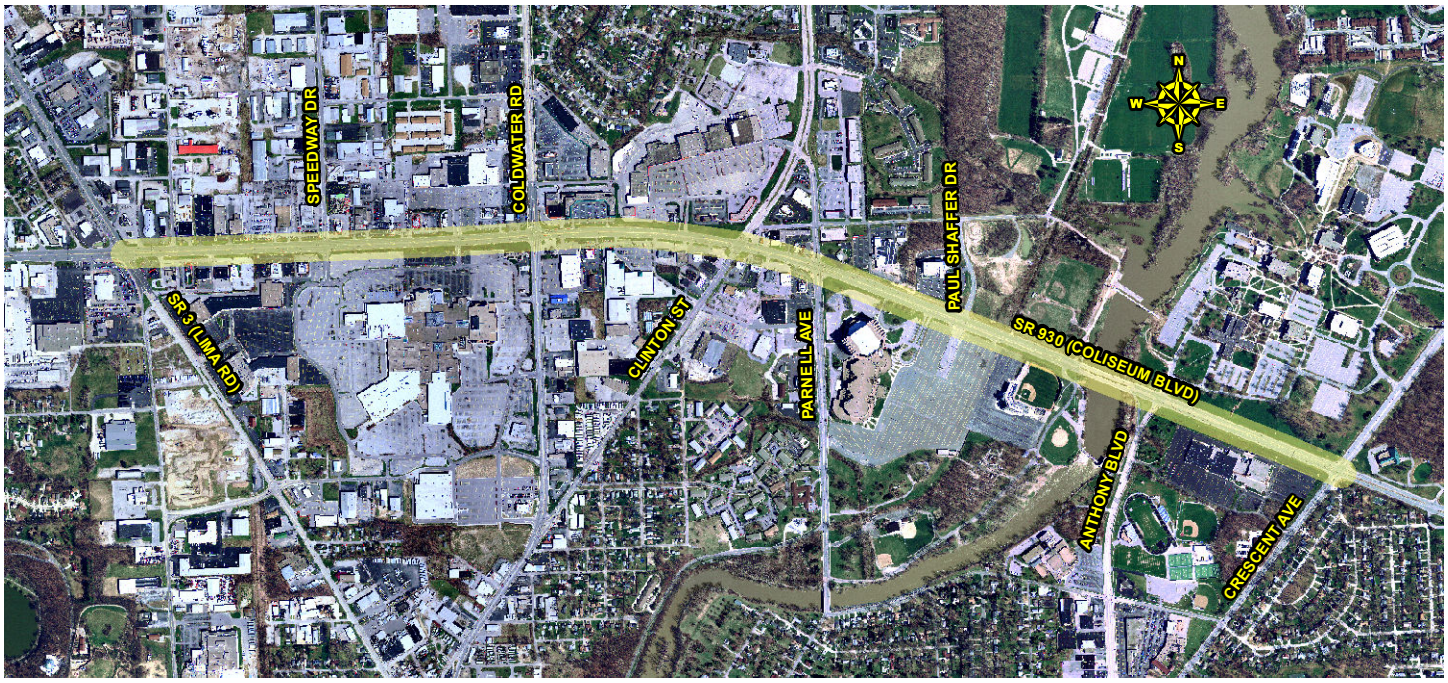
State Road 930 (Coliseum Boulevard) Analysis

Every year NIRCC staff reviews specific crash locations or corridors where there seems to be an unusually high frequency of crashes occurring. In fiscal year 2012 NIRCC completed an analysis of crashes along State Road 930 (Coliseum Boulevard) from State Road 3 (Lima Road) to Crescent Avenue (figure 65). The analysis was part of an ongoing evaluation of hazardous locations within Allen County. In recent years the Indiana Department of Transportation identified a number of intersections along this corridor in their annual Five-Percent Report. NIRCC has also found that the frequency of crashes at various locations along this corridor is above an acceptable level.

The analysis was also completed at this time to review the changes made by the Indiana Department of Transportation (INDOT) to signals along the corridor. INDOT changed the timing of the left turn phases on this section of roadway to a 'lag-left'. This change was to address congestion and improve safety. Staff wanted the evaluation completed to review the before and after crash data. The change was made during late summer of 2009.

This section of State Road 930 (Coliseum Boulevard) is one of the most heavily traveled arterial corridors in the county. The roadway intersects with five other roadways that are also primary north-south arterials. Retail shopping

Figure 65



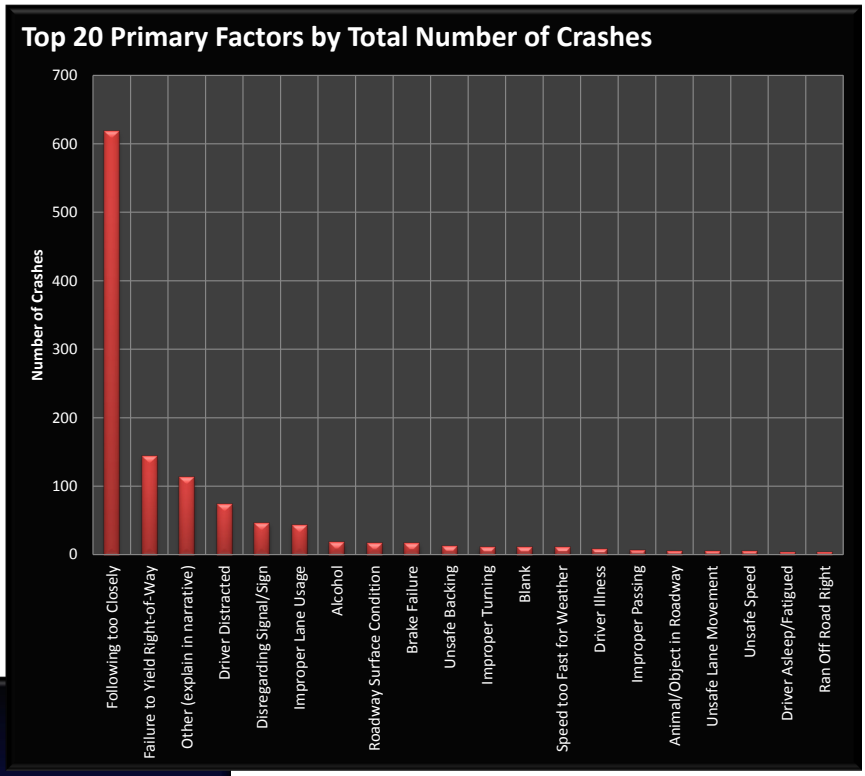
along the corridor is the primary traffic generator on the western portion of this corridor while the Allen County War Memorial Coliseum, Indiana-Purdue University of Fort Wayne and Ivy Tech comprise a significant amount of trips on the eastern portion. The Allen County War Memorial Coliseum is the largest indoor event facility in northern Indiana which attracted 1,130,000 visitors in 2011.

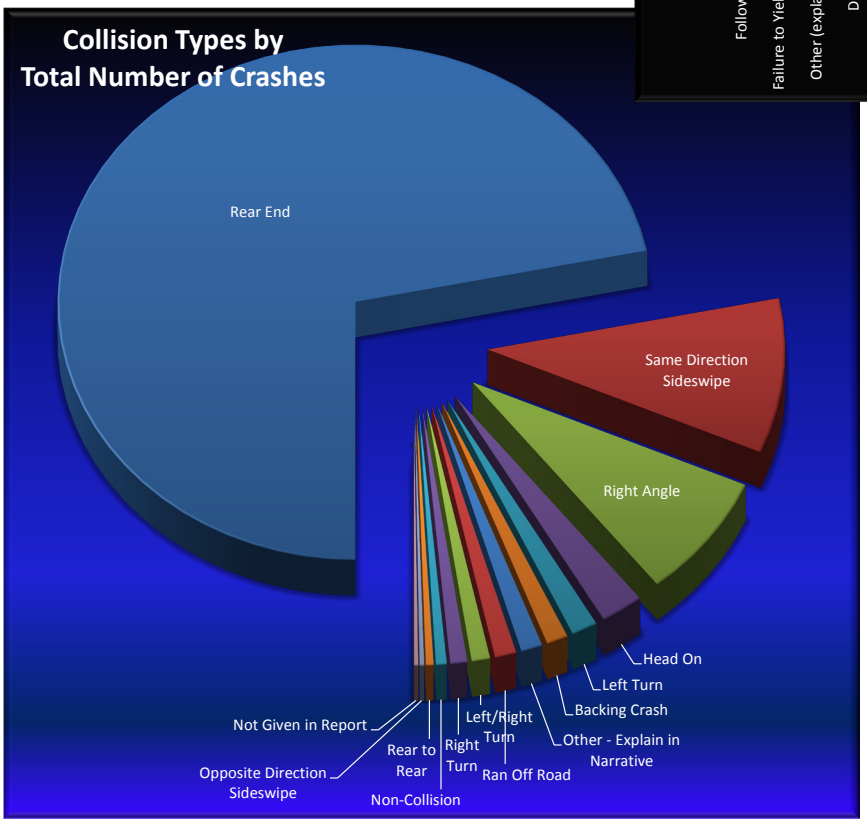
State Road 930 (Coliseum Boulevard) is three lanes in each direction from Lima Road to Parnell Avenue. Westbound State Road 930 (Coliseum Boulevard) is also three lanes from e/o Paul Schaffer Drive to Parnell Avenue. The remaining portion of the roadway is two lanes in both directions.

Figure 66

Crash data was reviewed for 2008, 2009, and 2010 for this corridor. Over this time period there were 1,202 collisions. Each collision that occurred over the analysis period was diagramed on paper aerials and scanned to make digital copies. An example of these diagrams can be seen in figure 66 on the previous page. This is the intersection of Coldwater Road and Coliseum Boulevard. You can see all the types of collisions that occurred from 2010 in this diagram. The charts in figure 67 show some of the data that was gathered along with each collision. Figure 67 shows the "Collision Types" that occurred along the State Road 930 (Coliseum Boulevard) corridor and the top 20 "Primary Factors" for collisions.

Figure 67





Congestion Management Process

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2012

CONGESTION MANAGEMENT PROCESS

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, the Transportation Equity Act for the 21st Century (TEA-21) of 1998, and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) of 2005 mandated that TMA's with population greater than 200,000 establish a Congestion Management System (CMS) (ISTEA and TEA-21) / Congestion Management Process (CMP) (SAFETEA-LU). In December 1993, final interim guidelines were developed which established general requirements for the CMS and identified deadlines for work plan submission and for the CMS to become operational. In August 1994, Purdue University, INDOT and FHWA published the draft final report for development of a prototype congestion management system for the State of Indiana as a Joint Highway Research Project. The study delineated a comprehensive set of guidelines and a nine-element work plan to be undertaken in developing the CMS in a consistent manner statewide.

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

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

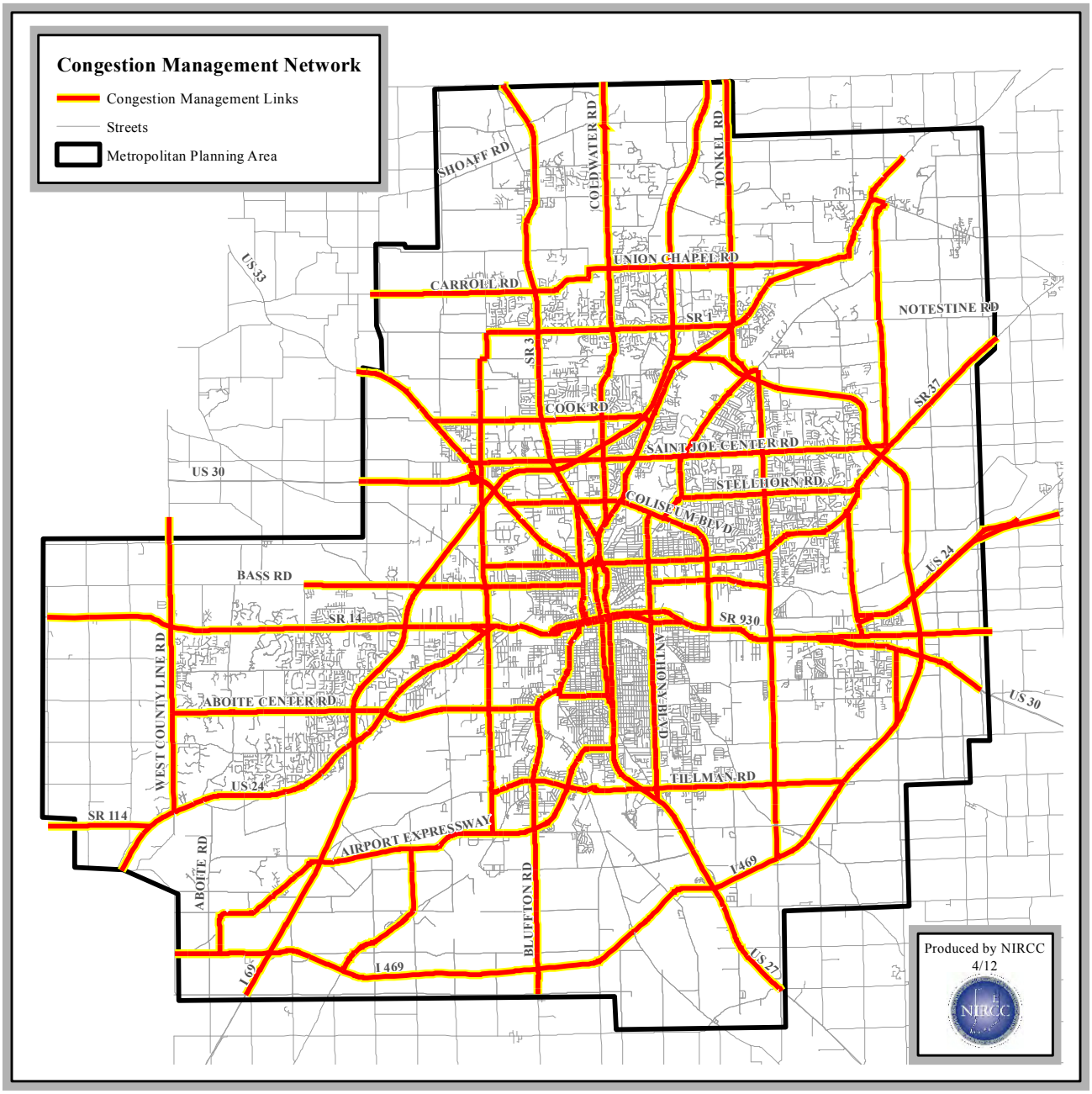
NIRCC's original Congestion Management System Work Plan was completed in May 1995 and adopted by the Urban Transportation Advisory Board at its June 6, 1995 meeting. The work plan was submitted to the Indiana Department of Transportation, and an updated work plan was submitted at the conclusion of Fiscal Year 1996 and adopted in Fiscal Year 1997. The Fiscal Year 2012 CMP continues to utilize the work plan elements listed above to address the requirements of SAFETEA-LU.

The Fort Wayne / New Haven / Allen County Metropolitan Planning Area or Transportation Management Area boundaries were established as the geographic study area for the Congestion Management System. Urban areas with

populations over 200,000 have been directed to use the Metropolitan Planning Area boundaries for the Congestion Management Network. The current congestion management network is displayed in figure 68.

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

Figure 68



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

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

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

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

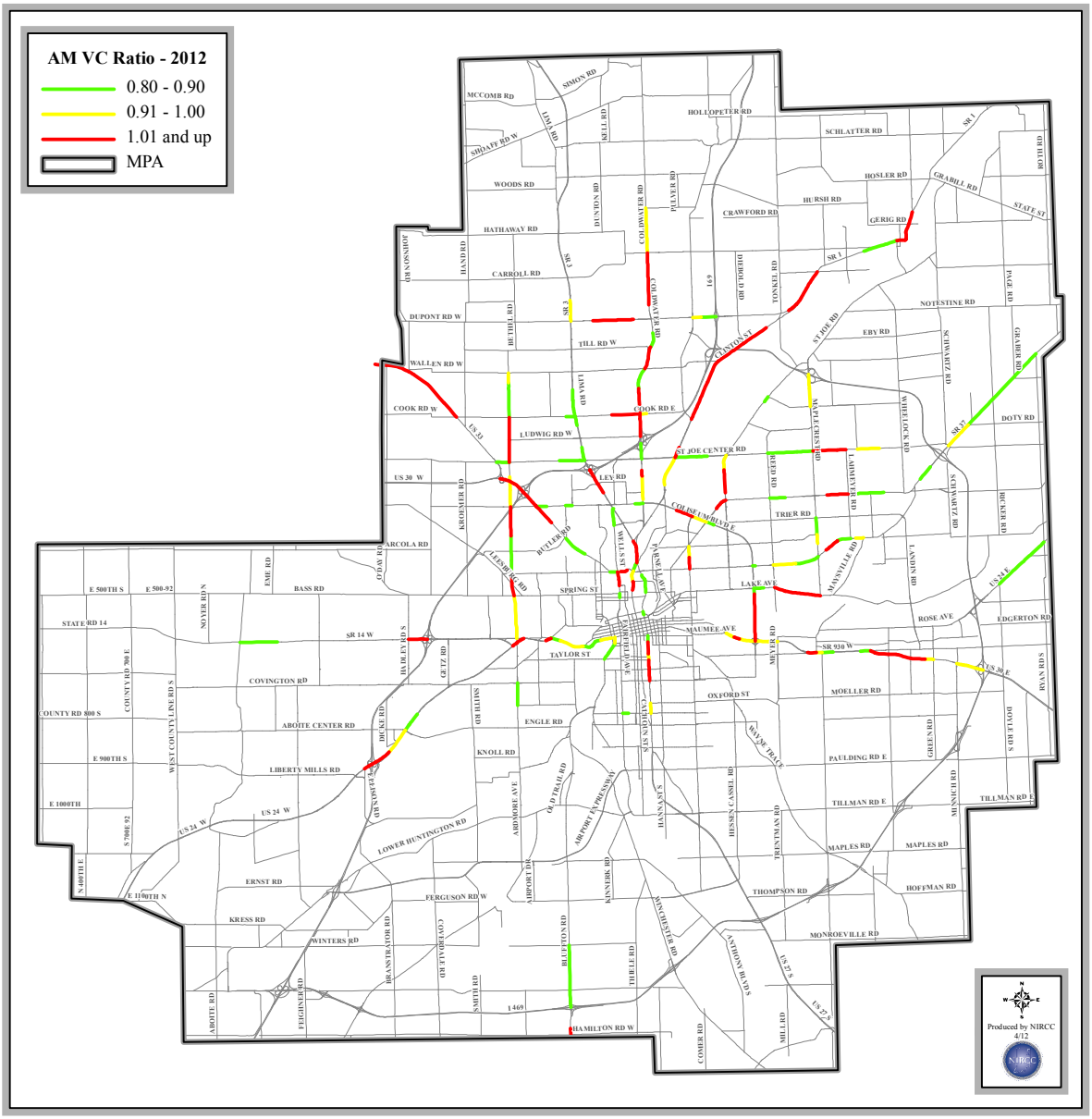
When analyzing the highway system for roads classified as collector or higher, the traffic monitoring program provides the majority of the data needed for a macro analysis. Existing traffic count data for all links within the study area is analyzed according to lane capacities. Roadway volume to capacity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

The volume to capacity ratio is a key indicator of the degree to which the highway system is being utilized, and is

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

All road segments in the TMA with V/C ratios greater than 0.80 (the most restrictive ratio) were identified, mapped, and color-coded according to levels of congestion (0.80 - 0.89; 0.90 - 0 .99; 1.0 +). The macro-level analysis identified some road segments not included on the congestion management network. As a result of the analysis, all roadways in the TMA exhibiting V/C ratios exceeding 0.80 were considered as additional components of the congestion management network. The roadways with AM and PM V/C ratios exceeding 0.80 of their respective lane capacities based upon the macro analysis are displayed in figure 69 and figure 70. Segments that have V/C ratios greater than 0.80; 0.90;

Figure 69



and 1.0 have been separated by color.

In evaluating changes in congestion over time, it is important that each hour be evaluated, not just the peak hour. In locations where the V/C threshold has been exceeded, congestion generally worsens through the spreading of the peak. If hourly information is not provided, the ability to evaluate changes in congestion over time is lost. An analysis was completed to identify the duration of the congestion beyond the peak hours. Several corridors within the congestion management network were identified for experiencing high levels of congestion (V/C ratios greater than 0.90) an extended number of hours (figures 71 and 72). Corridors where V/C ratios were found for multiple hours were reviewed to determine the number of continuous hours. These corridors have been designated as "high risk" for congestion issues and will be monitored closely. Micro-level analysis will be performed on these corridors when warranted.

Figure 70

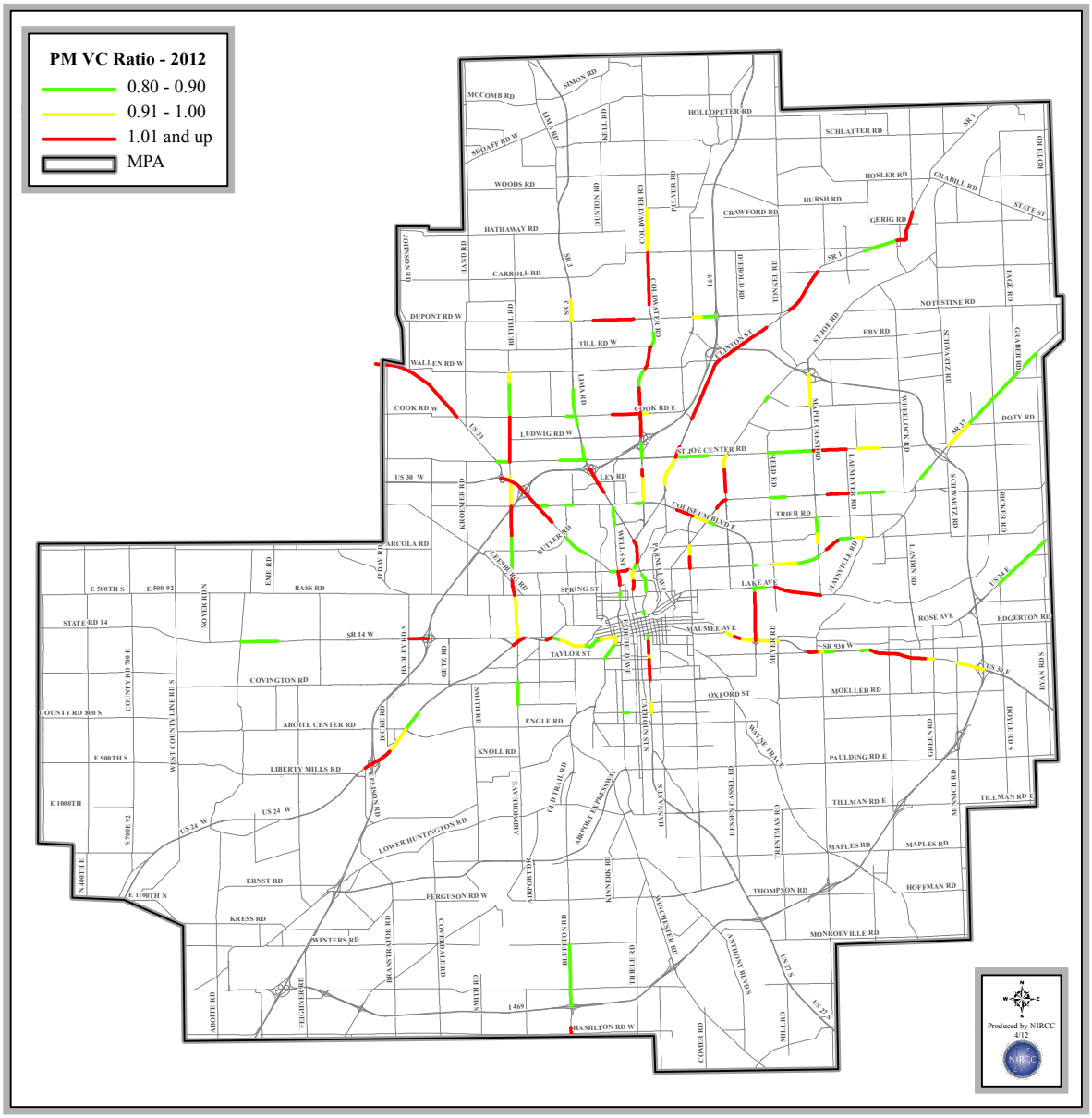
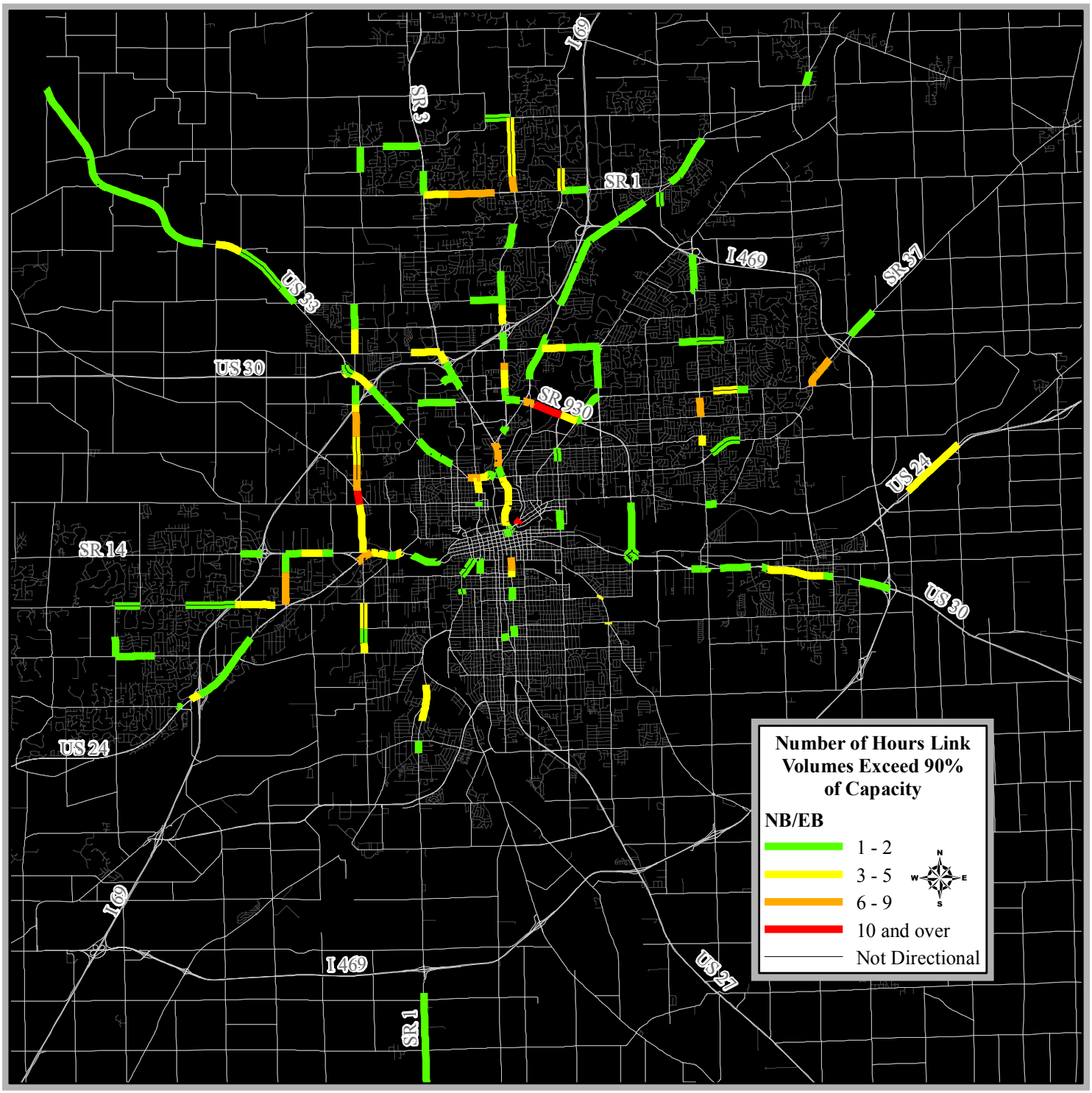


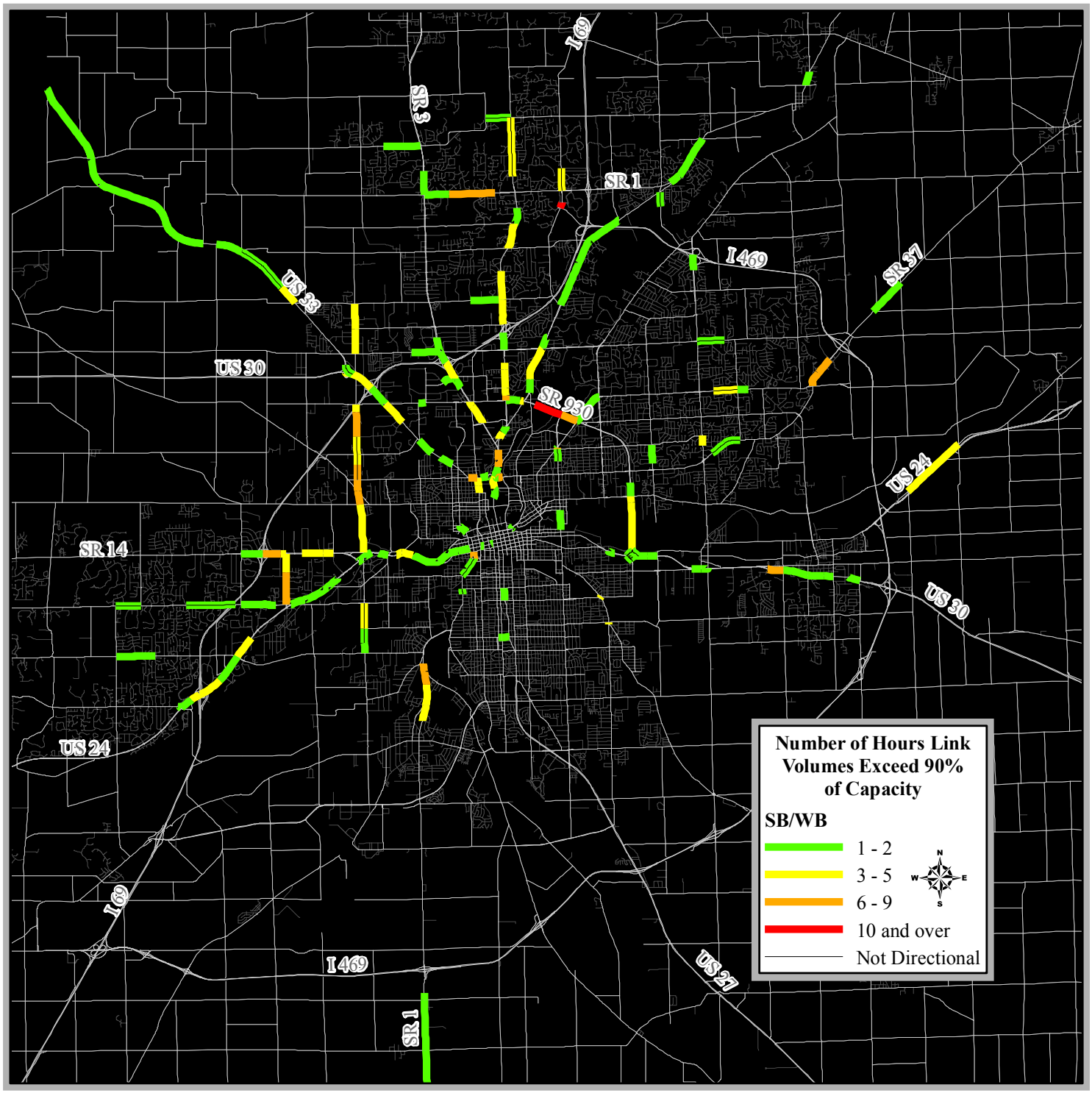
Figure 71



Intelligent Transportation Systems

Another part of the Congestion Management Process is updating Allen County's Regional ITS (Intelligent Transportation Systems) architecture. ITS is the use of communications, electronics and information processing to help improve the efficiency and safety of surface transportation systems. Due to the nature of information technology being most effective when systems are integrated and interoperable the USDOT developed the National ITS Architecture. When referring to architecture, it is best described as a tool that assists in organizing complex entities and relationships. It

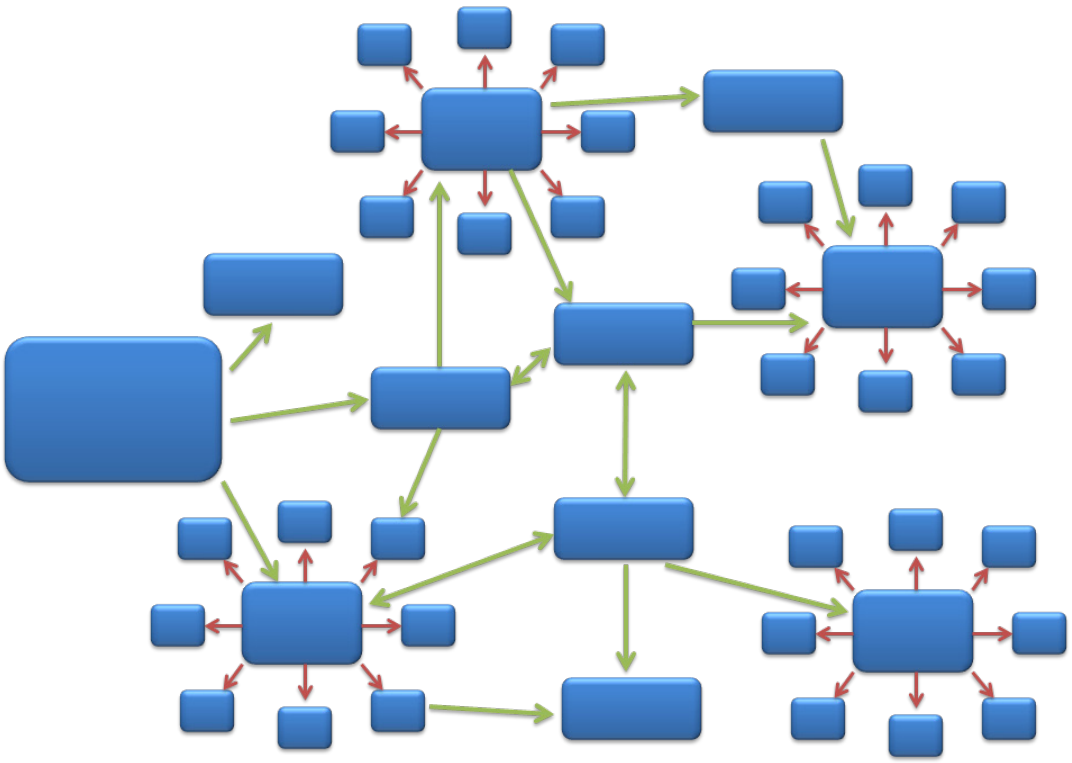
Figure 72



helps identify system functions and informational flows, and guides development of functional requirements for new systems and improvements.

The National ITS Architecture is designed to provide a common structure for which ITS projects could be based on. The National Architecture specifies what type of interface could exist between the many different components of ITS and also to show the different types of information exchanged. Processes and data flows are grouped to form particular transportation

management functions and are represented graphically by data flow diagrams, or bubble charts, which decompose into several levels of detail. In these diagrams, processes are represented as bubbles and data flows as arrows.



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

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

In 2012 the architecture was once again updated to the most current version of the national architecture. This update saw the removal of all elements which involved personnel at all agencies. FHWA did not see a reason to have them in the architecture anymore because they were the users of the technology and the architecture represents only technology. NIRCC staff met with the current stakeholders in the architecture to inquire as to the accuracy of their information flows. By doing this NIRCC was able to eliminate some flows that were planned for implementation but never made it to fruition, while others changed from a status of planned to existing. For example the Citilink bus station has information kiosks that were originally set as planned but with the new station now exist. In total there were only 4 additional information flows that were added to the regional architecture.

Bicycle and Pedestian Planning

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2012

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 73) 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 73 and 74.

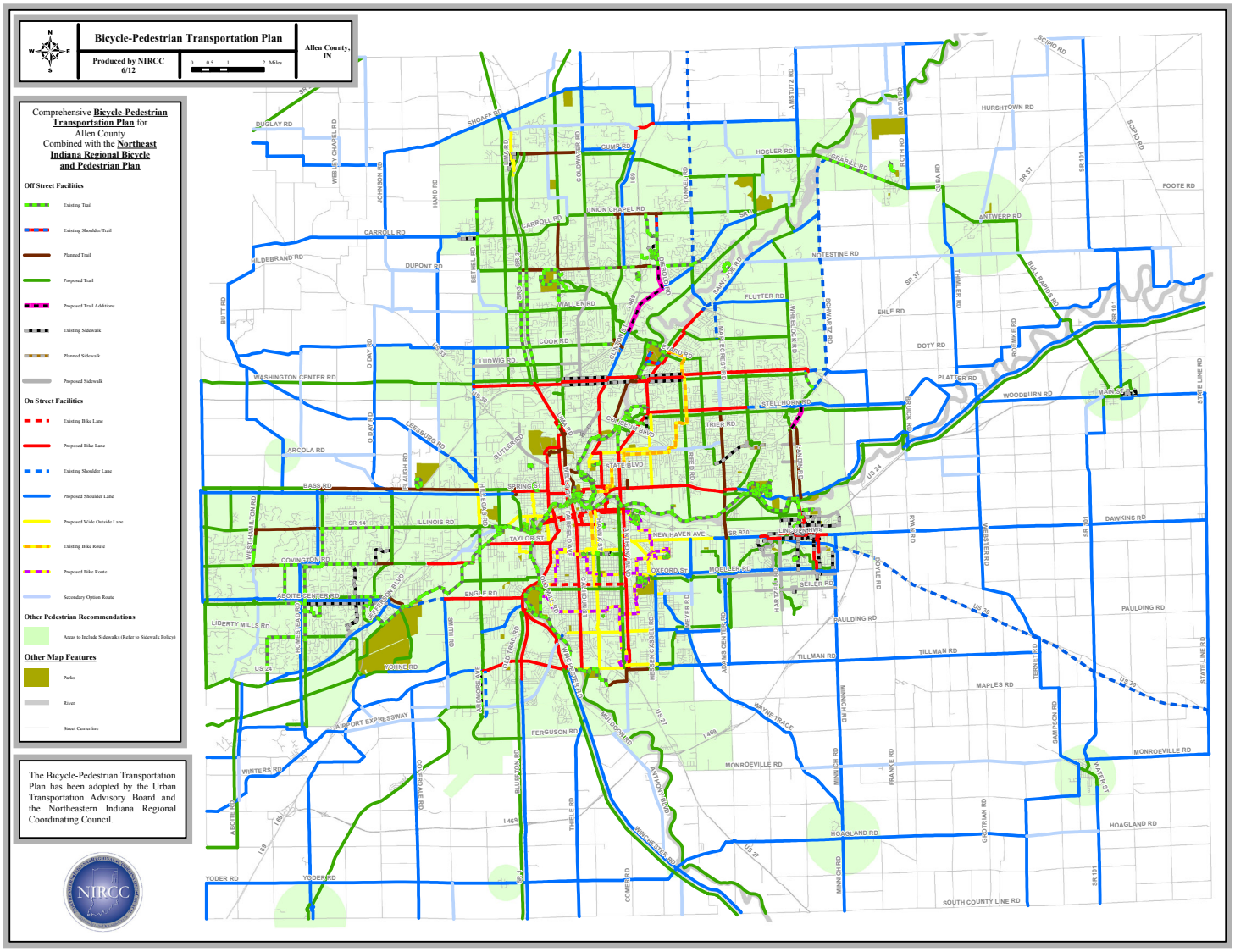
During the last transportation plan update NIRCC enhanced the bicycle and pedestrian plan with a prioritization of local planning efforts. NIRCC, along with the Fort Wayne Greenways Manager, asked local trail advocacy groups and governmental agencies to prioritize their planning efforts to give a better 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 75 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 73

The Comprehensive Bicycle-Pedestrian Transportation Plan



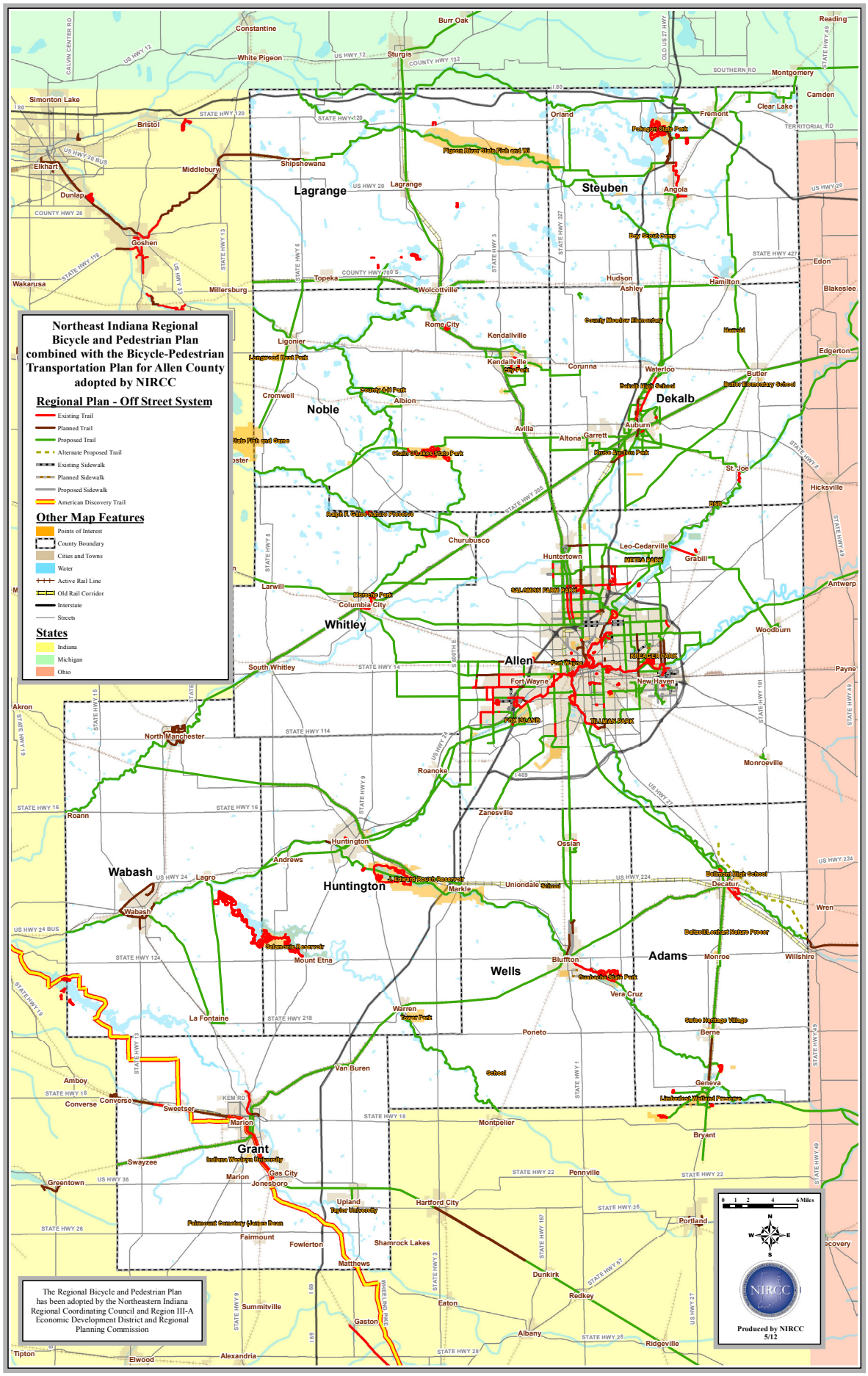
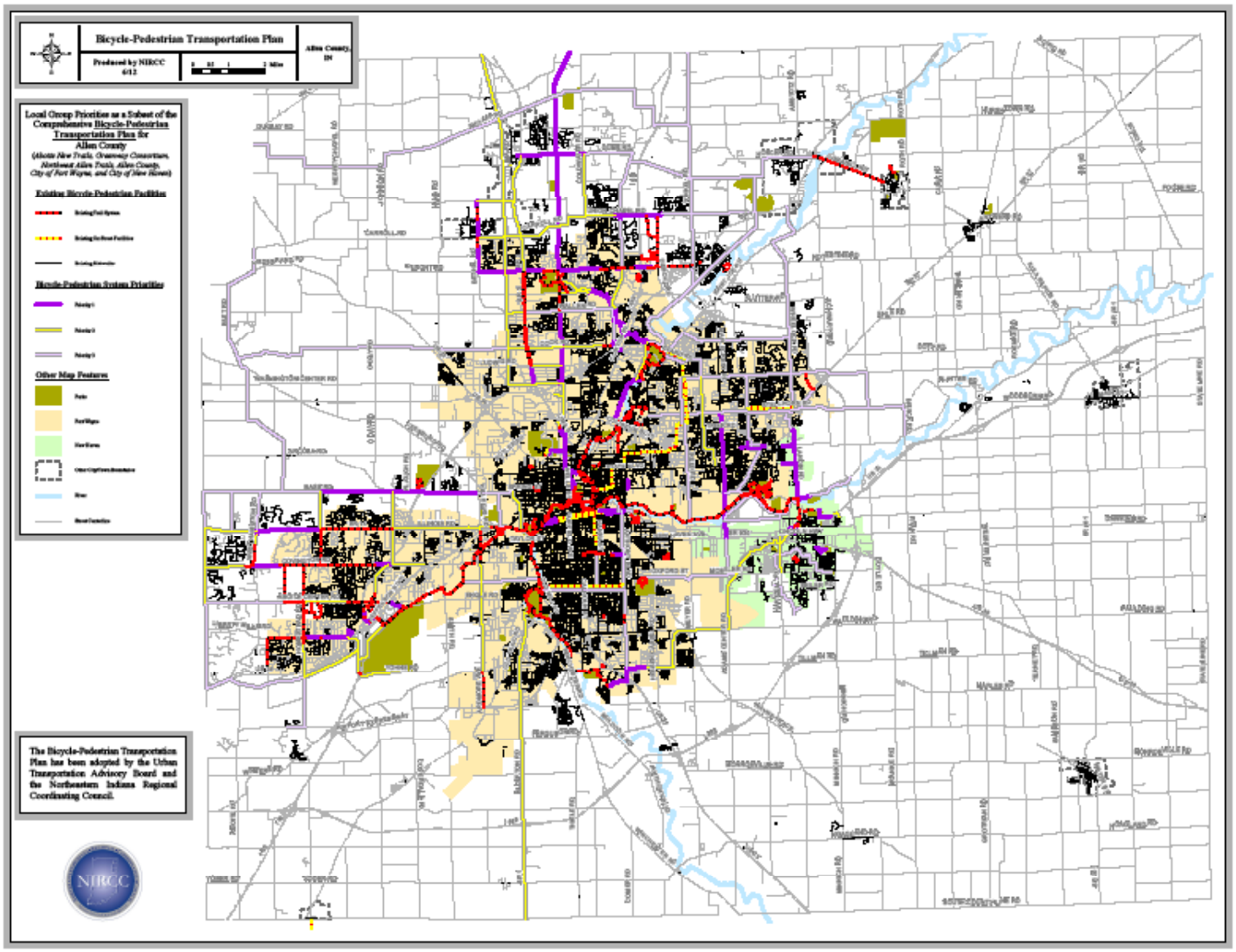


Figure 74

Regional Bicycle and Pedestrian Plan

Figure 75

Local Group Priorities of The Comprehensive Bicycle-Pedestrian Transportation Plan



Priority 3 corridors, identified by the light purple color, 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 a planning effort lead by the City of Fort Wayne to develop the Trails Fort Wayne Plan. This 15-year plan will provide guidance on how and where to develop trails within Fort Wayne. The Plan will review the proposed trail network and look for strengths and deficiencies in the proposed system. It will provide the City of Fort Wayne and Fort Wayne Trails, Inc. with a framework for prioritizing trail projects. It will also focus on design guidelines; legislation; funding; reinforcing the public health value of trails; marketing and promotion to increase trail usage; creating maintenance standards and expectations; and creating public awareness of trail benefits.

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 2012. The Summary Report highlights a majority of the transportation planning activities conducted and the products produced by NIRCC during Fiscal Year 2012. 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 2013-2016 Transportation Improvement Program (TIP) represent the improvements selected for implementation. The Fiscal Year 2013-2016 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 2012

Northeastern Indiana Regional Coordinating Council
200 East Berry Street, Suite 230
Fort Wayne, IN 46802
Phone: 260-449-7309
Fax: 260-449-8652
Website: www.nircc.com

Northeastern Indiana Regional Coordinating Council