Chapter 1
INTRODUCTION

As changes occur in the Fort Wayne-New Haven-Allen County Metropolitan Planning Area, the transportation system must be improved to respond to new and increasing travel demands. This report is the culmination of a process that has resulted in the update of the 2035 Transportation Plan which effectively responds to these changing needs. The update is titled the 2040 Transportation Plan and this technical report summarizes the work performed and the recommendations developed in the preparation of the transportation plan update. A 2040 Transportation Plan Brochure is also available for distribution.

Historical Background

The Fort Wayne Urbanized Area's geographical location is of prime importance to its significant role in providing a comprehensive transportation system. Located in the northeastern corner of Indiana, the urbanized area serves as the major economic center for northeastern Indiana, northwestern Ohio and southern Michigan.

The importance of Fort Wayne's location was understood by the earliest settlers who took advantage of the access afforded them by the junction of three major rivers - the St. Mary's, St. Joseph, and Maumee. The early development of the transportation system in Fort Wayne focused on the utilization of the three rivers as the primary means of travel. The eventual development of canals through Fort Wayne in the early 1840's further solidified the transportation importance of the area. The river and canal systems attracted businesses and industries in search of affordable access to existing and expanding markets.

When railroads were developed during the period from 1850 to 1870, they added a new dimension to travel. The use of the rivers and canals for transportation declined. The railroads began to take over as the major factor affecting commercial and industrial development as well as the growth of the urban area. During this period of the city's history, its population grew by 35 percent every 10 years.

Although the central city was growing rapidly, the road network as developed in its earliest days remained basically the same, with transportation movement within the city aided by a light rail system. In the city's earliest days the river and rail systems were an asset to its growth and development, but with the introduction of the automobile and truck, the very facilities which had once aided travel now hampered it with structures built for an earlier era.

The post-World War II era saw the establishment of federal loan mortgage insurance programs. The city then began to expand outward, pushing away from the solidarity of the central city. One response to the city's increasing size was to construct a bypass around the northern edge in the 1950's. The bypass re-

routed US 30, a historically important route originally developed as the Lincoln Highway. This route remains critically important not only to the local area, but also serves as a regionally significant corridor.

The bypass attracted many commercial and industrial developments north of the central city. This highway is known locally as Coliseum Boulevard (SR 930). Rural roads in the north quickly turned into major thoroughfares for residential and commercial traffic. This trend continues, although at a reduced pace.

The transportation plan for the Fort Wayne-New Haven-Allen County Transportation Planning Area is designed around a "bypass plus arterial" highway network and expansion of the radial transit system. In previous transportation plans, a major highway improvement project was proposed to develop a "bypass" around the eastern portion of the urbanized area. This project, now known as Interstate 469, was completed in 1995. The completion of Interstate 469 has significantly improved traffic flow around the urbanized area. The "arterial" component includes various improvements to the primary arterials such as Hillegas Road, Ardmore Avenue, Maplecrest Road and Adams Center Road.

Implementation of the "bypass plus arterial" concept has significantly reduced truck travel through the urban area and channeled vehicular traffic onto the arterial roadway system which is intended to carry the higher traffic volumes. The "bypass plus arterial" concept has reduced truck traffic within the urban core by diverting through trucks onto the interstate system. In fact, the interstate and expressway system now supports over 65% of the regional truck Vehicle Miles of Travel (VMT) and 27% of total Vehicle Miles of Travel. The arterial roadway system which once carried 70% of our regional truck VMT and 77% of total VMT now carries 32.5% truck and 60% total VMT. This correlates to shifting over half of the truck traffic from the arterial system to the interstate system.

In addition to the reduction of truck traffic, the benefits of implementing the "bypass plus arterial" concept include: lower total vehicle miles of travel; improved mobility for passenger and transit vehicles; reduced congestion on the arterial system; lower vehicle emissions that improve regional air quality; reduced energy consumption and vehicle operating costs; reducing traffic diverting through residential neighborhoods on local streets; encourages traffic to utilize roads designed for heavier traffic; and makes our neighborhoods more livable.

In 2018, the Fort Wayne urbanized area continues to be faced with a variety of transportation problems associated with the growth of the past few decades. The street system within the urbanized area is located on narrow rights-of-way. An insufficient number of bridges combined with a predominantly radial thoroughfare system result in a substantial amount of traffic traveling through the central business district of Fort Wayne. The Ardmore-Hillegas and Maplecrest-Adams Center corridor improvements have served to augment the grid system, limitations on river crossings continues to place a substantial burden on the

arterial roadway system.

The radial system creates hazardous diagonal intersections with acute entry angles. There is a lack of continuity for many of the major arterials flowing north to south and east to west. Narrow bridges and narrow railroad underpasses have served to restrict traffic flow in the urbanized area. Acknowledged to be a major industrial center, Fort Wayne has a large number of heavy trucks and trucking terminals. The area is also emerging as a warehousing and distribution center. These types of facilities place additional burdens on the transportation system. Figure 1 displays the current railroad system and rivers that affect mobility in the Metropolitan Planning Area.

Several major socioeconomic changes occurred in the region during the 1970's and 1980's. The closing of two International Harvester production facilities that for years served as a major employment base for the Metropolitan Planning Area seriously affected the economic base. The International Harvester facility was a major anchor to the East End Industries located between the Cities of Fort Wayne and New Haven. In the mid 1980's, General Motors built a light duty truck assembly plan in southwest Allen County near the interchange of Interstates 69 and 469. This location was in an area where farming and other agriculturally related land uses were dominant. The facility has undergone multiple expansion totaling approximately 5.0 million square foot assembly plant and accessory developments quickly altered the surrounding landscape and impacted the transportation system.

Fort Wayne's Central Business District continues to redevelop. Beginning in the early 1980's Fort Wayne's skyline changed with the construction of Summit Square, a multi-story office building. The downtown redevelopment efforts have gained additional momentum in the past few years. The Grand Wayne Convention Center and Allen County Public Library both underwent major expansion projects in downtown Fort Wayne. The Parkview Field and Harrison Square Project that included a new hotel, apartments, office space, commercial shops, and a new major league Class A baseball stadium has contributed to a more vibrant downtown. Several housing projects in the Fort Wayne Central Business District are increasing housing opportunities and are serving as a catalyst for additional housing projects. The Indiana Institute of Technology continues to expand its campus towards the Central Business District spurring additional redevelopment projects. Renaissance Pointe is a housing project just south of the downtown area that is serving as a neighborhood revitalization project and the initial stages of the "Riverfront" development project on the northern edge of the CBD is underconstruction and will support continued redevelopment of the urban core.

Other significant developments within the Metropolitan Planning Area have also affected socioeconomic growth and travel patterns. The Allen County War Memorial Coliseum and Exhibition Center continues to expand in the number of events held each year. The Indiana University Purdue University at Fort Wayne

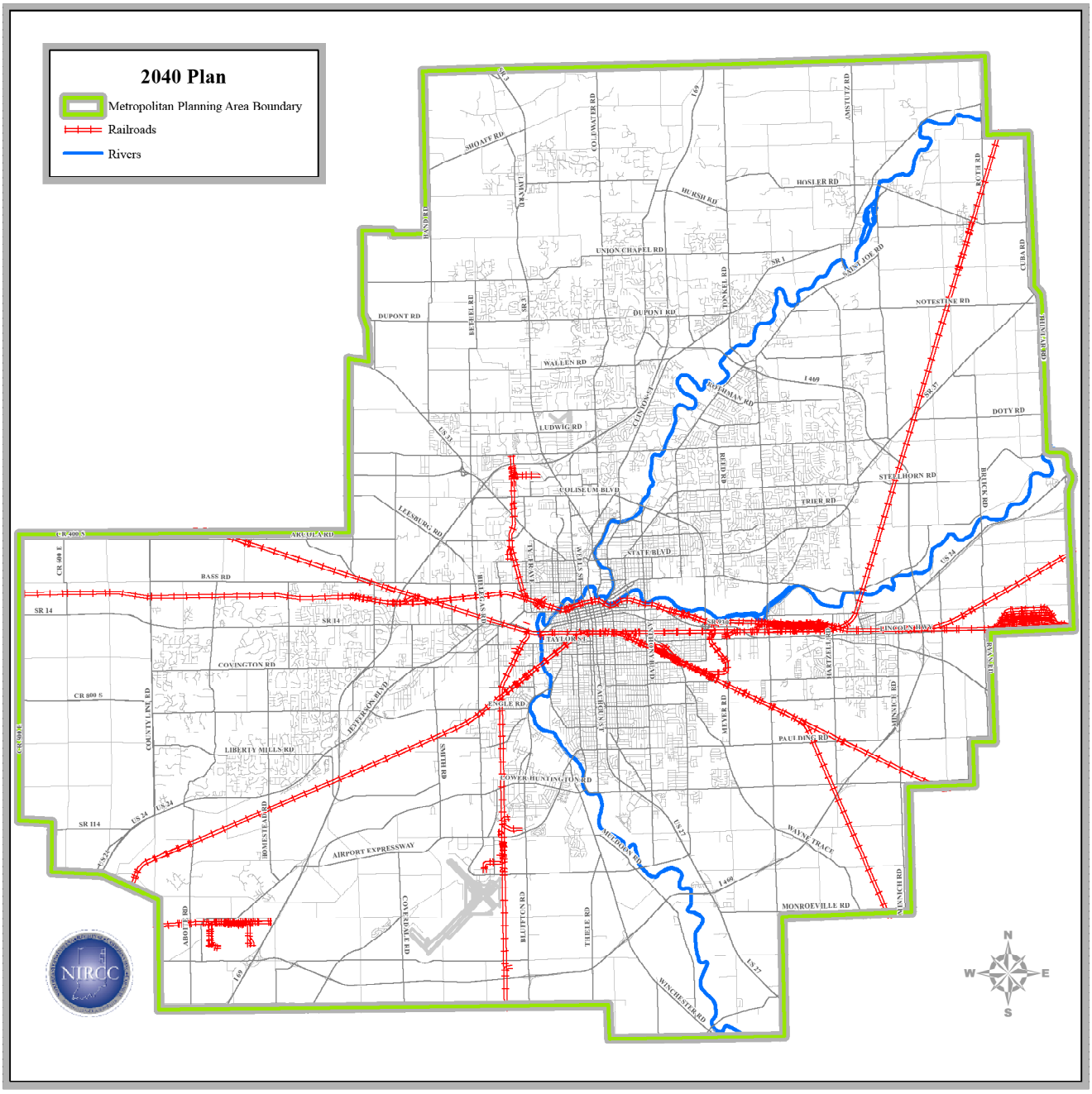

Figure 1

Railroad System and Rivers in the Metropolitan Planning Area

and Ivy Tech campuses continue to expand their facilities and educational programs. Recent expansion projects on the North Campus of Ivy Tech have impacted travel in the area. A major regional retail center that includes Jefferson Pointe, Apple Glen and Park West located at the intersection of Jefferson Road and Illinois Road, west of the Fort Wayne Central Business District, has developed into a major traffic generator and has continued to expand.

The construction of new housing in southwest and northern Allen County has been significant. New industrial parks have developed in several areas including northwest Fort Wayne and Allen County, the City of New Haven, southwest near the General Motors facility, and around the Fort Wayne International Airport. Commercial and retail development has proliferated along Interstate 69 and continues to develop. A substantial commercial and retail area along Coliseum Boulevard (SR 930), Coldwater Road and Clinton Street, that includes Glenbrook Square, Northcrest, Coldwater Crossing, Glenbrook Commons and other shopping centers, continues to be a major shopping, entertainment, and employment destination. The recent addition of a sports complex adjacent to the Glenbrook Shopping Area has influenced trip making characteristics.

The most notable changes in the metropolitan area is the continued expansion of the medical centers at the Interstate 69 and US 24 interchange and the Interstate 69 and Dupont Road/State Road 1 interchange. The major investments by the medical facilities at these two locations have caused substantial changes to travel patterns and are anticipated to serve as catalysts for future growth. Parkview Regional Medical Center fully opened in 2012 with a 450 bed hospital and full service emergency room. The Medical Center has expedited growth, both commercial and residential on the east side of Interstate 69 along the Dupont Road/State Road 1 Corridor. The hospital development has influenced a shift in land use development patterns and serve as a catalyst for growth in Northeast Allen County. Through Parkview's financial support, road and transit improvements have been implemented to help satisfy travel demands. A new interchange at Interstate 69 and Union Chapel Road provides access to the northern portions of the hospital campus. These medical facilities and related medical support services are expected to substantially expand in the area surrounding the two interchanges.

The Community's vibrant growth and socioeconomic change fosters the need to reconsider and re-evaluate the future needs of the transportation system. A transportation plan serves as the dynamic tool necessary to guide decision making concerning project selection, implementation, and community growth. Therefore, it must be flexible enough to accommodate change, yet provide a solid base as decisions are made about our present and future transportation system. The long range transportation planning process, as administered for the Fort Wayne/New Haven/Allen County Metropolitan Planning Area (see Figure 2), strives to achieve such a balance between flexibility and commitment.

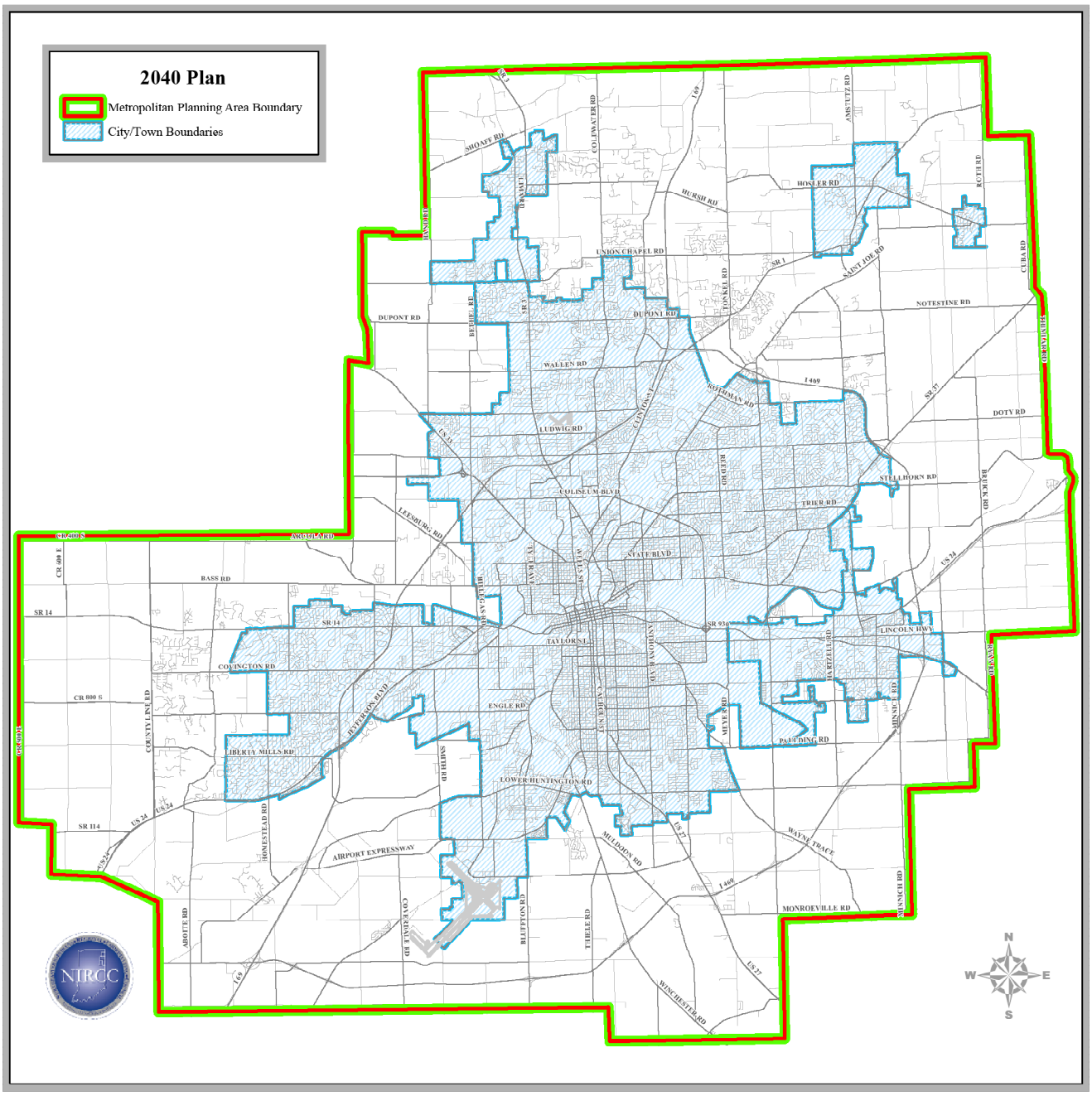

Figure 2

Fort Wayne/New Haven/Allen County Metropolitan Planning Area

The reality that limited resources and environmental concerns will not support massive highway improvement projects is a recognized concept of the transportation planning process. The emphasis on maximizing the efficiency of the existing system is evident in the policies and programs resulting from such a process. The development and implementation of the 2040 Transportation Plan seriously considers transportation policies that reduce congestion and improve system efficiency through non-traditional measures. Policies aimed at reducing congestion through better management of traffic operations, access management, bicycle\pedestrian facilities, and enhanced transit services were formulated. These policies are components of the Congestion Management System.

A complete and comprehensive review of previous transportation plans was undertaken as a component of the 2040 Transportation Plan update. Each project was scrutinized on its own merit as well as its ability to contribute to the efficiency of the overall plan. The plan represents a cooperative effort by the state, local governments, public transportation, and area residents. We are proud to present the "2040 Transportation Plan."

Transportation Planning Requirements

Fixing America's Surface Transportation Act (FAST Act) was signed into law on December 4, 2015. The FAST Act provides long-term funding certainty for surface transportation infrastructure planning and investment. The Act maintains a focus on safety, keeps intact the established structure of the various highway-related programs and continues efforts to streamline project delivery. The FAST Act, like MAP-2, promotes a streamlined and performance-based surface transportation program and builds on many of the highway, transit, bike, and pedestrian programs and policies established in previous transportation bills including the Intermodal Surface Transportation Efficiency Act, Transportation Equity Act for the 21st Century and Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users.

The FAST Act supports the establishment of a performance based planning process that includes the development of goals, objectives, performance measures and target setting. The 2040 Transportation Plan has been developed in accordance with performance planning concepts and the current metropolitan planning regulations. While performance measures have been components of the transportation planning process for the Fort Wayne-New Haven-Allen County Metropolitan Planning Area, they are now definitively identified in conjunction with the goals, objectives and implementation strategies in this Plan. The inclusion of the performance measures, and adherence to the FAST Act planning regulations, ensures the metropolitan planning process establishes a cooperative, continuous, and comprehensive framework for making appropriate transportation investment decisions. The broad areas are discussed below.

1)The metropolitan transportation planning process shall include the development of a transportation plan addressing no less than a 20-year planning horizon as of the effective date. In non-attainment

and maintenance areas, the effective date of the transportation plan shall be the date of a conformity determination issued by the FHWA and FTA.

The 2040 Transportation Plan was approved by the NIRCC board in 2018 establishing a 22-year planning horizon as of the effective date.

2) The transportation plan shall include both long-range and short-range strategies/actions that provide for the development of an integrated multimodal transportation system (including accessible pedestrian walkways and bicycle transportation facilities) to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demand.

The 2040 Transportation Plan includes both long- and short-range policies and projects integrating highway, transit, bicycle and pedestrian facilities. The integration of air travel, motor freight and rail transportation is recognized by the transportation planning process and addressed in the Transportation Plan. Products of the planning process such as the congestion management program and transit development plan and their strategies, policies and projects are included as components of the Transportation Plan. Policies such as access management and transit coordination are on-going implementation activities. Chapter 6 provides information on the highway, transit, bicycle and pedestrian facilities, and Chapter 9 includes a discussion on freight.

3) The MPO shall review and update the transportation plan at least every 4 years in air quality nonattainment and maintenance areas and at least every 5 years in attainment areas to confirm the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends and to extend the forecast period to at least a 20-year planning horizon.

The 2040 Transportation Plan was approved in 2018. The majority of the Metropolitan Planning Area is located in Allen County, and Allen County is an air quality maintenance area. The plan update meets the five year requirement.

4) In metropolitan areas that are in nonattainment for ozone or carbon monoxide, the MPO shall coordinate the development of the metropolitan transportation plan with the process for developing transportation control measures (TCMs) in a State Implementation Plan (SIP).

Allen County was designated nonattainment for the 1997 ozone NAAQS and was re-designated to attainment for the pollutant ozone in February 2007, and guidance indicated that conformity determinations were no longer required. Recently, the U.S. Court of Appeals for the D.C. Circuit issued a decision in South Coast Air Quality Management District v. EPA, No. 15-1115, which struck down portions of the 2008 Ozone NAAQS SIP Requirements Rule concerning the ozone National Ambient Air Quality Standards (NAAQS). The Court ruling has placed a shadow of uncertainty on the region's ability to advance transportation projects without demonstrating conformity. The Northeastern Indiana Regional Coordinating Council (NIRCC), with guidance from its stakeholders, has decided to perform an Air Quality Conformity Determination for 2040 Transportation Plan to address any potential backsliding of the 2008 ozone requirements and ensure project implementation can proceed on schedule. NIRCC will demonstrate that its transportation plan conforms to the 2020 air quality emission budgets established for the ozone precursor pollutants of volatile organic compounds (VOC) and nitrogen oxides (NOx). See Appendix M.

5) The MPO, the State(s), and the public transportation operator(s) shall validate data used in preparing

other existing modal plans for providing input to the transportation plan. In updating the transportation plan, the MPO shall base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity. The MPO shall approve transportation plan contents and supporting analyses produced by a transportation plan update.

The transportation planning process and development of the Transportation Plan includes participation by the State through representatives of the Indiana Department of Transportation and by the public transportation operator through representatives of Citilink. Representatives of these agencies are members of the Urban Transportation Advisory Board (UTAB), the Board that oversees the metropolitan transportation planning process and development of the Transportation Plan. The development of the 2040 Transportation Plan incorporates the latest available information for population, land use, travel, employment, congestion, and economic activity. The planning assumptions and socioeconomic data were presented to UTAB as part of the Transportation Plan development process. The data is well documented in the Plan. The MPO approved the planning assumptions as part of the development of the Transportation Plan, reference Chapter 5.

6) The metropolitan transportation plan shall, at a minimum, include:

a) The current and projected transportation demand of persons and goods in the metropolitan planning area over the period of the transportation plan.

The 2040 Transportation Plan utilizes land use development assumptions to forecast the 2040 socio-economic conditions to generate transportation demands of persons and goods in the metropolitan planning area. The demands are projected through a traditional travel demand forecasting model. Projects and strategies are developed to address future transportation demands within the requirements of fiscal constraint. See chapter 6 for the list of recommended projects and appendix F for project costs.

b) Existing and proposed transportation facilities (including major roadways, public transportation facilities, intercity bus facilities, multimodal and intermodal facilities, nonmotorized transportation facilities (e.g., pedestrian walkways and bicycle facilities), and intermodal connectors) that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions over the period of the transportation plan.

The 2040 Transportation Plan includes existing and proposed highway, transit, pedestrian and bicycle facilities to provide an integrated metropolitan transportation plan. Emphasis is placed on facilities that serve national and regional functions. Access to intermodal sites and intermodal connectors are addressed in the development of projects and strategies. See chapter 6.

c) A description of the performance measures and performance targets used in assessing the performance of the transportation system in accordance with § 450.306(d).

The performance measures and performance targets are presented later in this Chapter. Many of the performance measures are currently under development and target setting is underway. Future updates of the Transportation Plan will provide additional information.

d) A system performance report and subsequent updates evaluating the condition and performance

of the transportation system with respect to the performance targets described in § 450.306(d), including.

i) Progress achieved by the metropolitan planning organization in meeting the performance targets in comparison with system performance recorded in previous reports, including baseline data; and

ii) For metropolitan planning organizations that voluntarily elect to develop multiple scenarios, an analysis of how the preferred scenario has improved the conditions and performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified performance targets.

The performance targets for safety were established for 2018. The safety targets represent the first set of performance targets that have been set by INDOT and supported by NIRCC. The targets are provided later in this chapter in the System Performance Report section. The System Performance Report will be augmented with additional information for the next Transportation Plan Update.

e) Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods;

The transportation planning process and development of the transportation plan includes provisions to promote efficient system management and operation. The process includes intelligent transportation strategies for both highway and transit systems, pavement management, transit operations, traffic incident management and alternate transit service options, safety management, congestion management and access management programs. In addition, many of the projects selected in the Plan include maintenance components such as intersection improvements and adding center turn lanes to existing corridors.

The intelligent transportation system strategies include motorist information sites, closed caption TV(CCTV), traffic operation improvements, and transit vehicle locator system with planned internet connectivity. The motorist alert dynamic message signs have been strategically placed on Interstate 69 to provide motorist advanced warning of pending traffic congestion so that they may alter their route to avoid lengthy delays. The City of Fort Wayne recently completed a major upgrade of their traffic signal operating system to improve efficiency. Projects continue to be developed to improve traffic flow through signal interconnection and intersection improvement. City of Fort Wayne has installed 17 CCTV traffic cameras on various arterials throughout the city to monitor and manage traffic as needed. These types of projects promote transportation system efficiency and operation. See chapter 5.

The management systems including pavement, bridge, safety and congestion all lend to improved system efficiencies. The Transit Development Plan, which serves as a transit management system, is a tool used to maximize system efficiency and improve transit operations. These programs are either administered directly through activities of the Metropolitan Planning Organization or conducted by the member local governments. The management systems attempt to maximize the efficiency of available resources by monitoring the condition of the transportation system, developing strategies to mitigate problems, and implementing solutions. The safety management system program, congestion management system and Transit Development Plan are two examples

of how these systems improve efficiency.

The Congestion Management Process (CMP), and companion access management program, develop and implement strategies to mitigate congestion and maximize the efficiency of the existing system. The CMP includes conducting corridor studies and developing corridor protection plans. The congestion management strategies identified in these plans may include traffic operation and intersection modifications, transit usage, access management, and other transportation improvements. The access management program maintains transportation system travel efficiency and corridor preservation. See appendix A.

Traffic Incident Management has been incorporated into the Congestion Management Process and Safety Management program. The program objective is to improve safety for first responders and motorists during incidents while mitigating the impact on traffic flow. Non-reoccurring congestion from traffic incidents have a negative impact on system reliability and safety. This training program targets responders from various disciplines to become more aware of safety and congestion issues related to all traffic incidents that alter the typical flow of traffic. Responders are provided with information and tools to improve how traffic is notified and channelized through incident scenes. These tools improve their safety as well as the safety of the traveling public. Implementation of Traffic Incident Management techniques can reduce the duration and impacts on traffic while improving roadway safety. The program helps all responders understand the importance of quick clearance, need for temporary traffic control for diverting traffic, protection for the back of the queue, and a multitude of other safety strategies.

The transit improvements identified through the Transit Development Plan accommodate the investigation of various types of transit service. Reviewing options for providing and expanding transit service allows for the evaluation of the most efficient method. Citilink has recently initiated service frequency improvement on selected routes and investigates methods to provide service to outlying suburban medical facilities and shopping centers. Citilink will continue to explore transit service provision options to improve transit service levels and maximize transit efficiency.

The safety management program monitors crash data and identifies hazardous locations through a process that incorporates both frequency and crash rates to identify and rank hazardous locations. Locations are reviewed by local officials, engineers, technical committees, and law enforcement officers. Safety improvements are identified and projects are initiated including the consideration of low-cost and/or short term solutions. Scheduled improvements are also reviewed to ensure safety strategies are included. See chapter 7.

These programs implement transportation improvements and investigate new approaches to solving transportation problems by engaging technological advances. Through the implementation of the management systems, transit improvements, and intelligent transportation technology, the transportation plan and planning process promotes safe and efficient system management and operation. See chapter 10.

f) Consideration of the results of the congestion management process in TMAs that meet the requirements of this subpart, including the identification of SOV projects that result from a congestion management process in TMAs that are nonattainment for ozone or carbon monoxide.

The results of the congestion management process are considered in the development of the

Transportation Plan. The corridor protection plans and corridor studies help to determine project need and project scope. Operational improvements are considered prior to added capacity. Single Occupancy Vehicle analysis was conducted on added capacity projects as part of the 2040 Transportation Plan. The Metropolitan Planning Area and Allen County were re-designated to "attainment" status in 2007.

g) Assessment of capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure, provide for multimodal capacity increases based on regional priorities and needs, and reduce the vulnerability of the existing transportation infrastructure to natural disasters. The metropolitan transportation plan may consider projects and strategies that address areas or corridors where current or projected congestion threatens the efficient functioning of key elements of the metropolitan area's transportation system.

The development of the Transportation Plan and selected projects include analyzing alternatives to determine the best capital investment. Operation and management strategies including ITS, traffic operation improvements, bridge management, pavement management, and transit operations are continually evaluated through the transportation planning process. Elements of this evaluation are incorporated into the Transportation Improvement program and Transportation Plan. Access management, bicycle and pedestrian facilities, transit service improvements and traffic operation improvements are examples of strategies and capital investments, decided by representatives throughout the Metropolitan Planning Area, based on regional priorities and needs. Land use development patterns and economic development activities directly influence the decision making process. Commitments by local and state governments and transportation agencies to maintain and preserve existing infrastructure (i.e. bridge management, pavement management, transit fleet replacement, etc.) support the preservation of existing and projected infrastructure.

The focus of this plan includes discussion on a wide array of strategies for alleviating future congestion in addition to the traditional solutions of new road construction and widening projects. The new strategies include scaled-down widening projects, such as adding a third or fifth lane for left-turning traffic instead of widening to four or six lanes. Access control measures and congestion management techniques are additional tools addressed as components of this plan. The inclusion of management systems projects and efforts to combine highway, land use and transit service together to relieve congestion and improve efficiency, represent additional strategies considered in the development of this plan, and are components of the planning process.

h) Transportation and transit enhancement activities, including consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption in a cost-effective manner and strategies and investments that preserve and enhance intercity bus systems, including systems that are privately owned and operated, and including transportation alternatives, as defined in 23 U.S.C. 101(a), and associated transit improvements, as described in 49 U.S.C. 5302(a), as appropriate;

The transportation planning process incorporates transportation and transit enhancement activities. NIRCC has prepared and documented a bicycle and pedestrian plan that provides the planning support to implement transportation enhancement activities. NIRCC supported the Transit Development Plan and incorporates the identified strategies and projects into the

Transportation Plan. When practical, identified enhancement activities are incorporated with other transportation improvements. The Transportation Improvement Program includes enhancement activities including bicycle and pedestrian projects, transit improvements, and highway projects.

The transportation planning process collects and analyzes transit data throughout the region with both current and potential connections to and from the urbanized area. Through the Transit Planning Committee (TPC), NIRCC collects and monitors service information from transportation providers operating in the region, including: Section 5311 Rural Public Transit providers operating in 9 of the 11 counties in the region; area non- profit providers; and intercity bus providers with service to and from the urbanized area. Currently, three (3) intercity bus carriers operate twelve (12) regional service routes six (6) days a week out of the Citilink Central Station, carriers include: Greyhound, Miller Trailways, and Baron Bus. The TPC has ongoing discussions to implement and improve regional connectivity utilizing existing service and potential new routes. Service requests from communities and employers within the region and travel pattern information from the Census and Big Data Analysis are utilized to help identify potential routes throughout the region.

i) Design concept and design scope descriptions of all existing and proposed transportation facilities in sufficient detail, regardless of funding source, in nonattainment and maintenance areas for conformity determinations under the EPA's transportation conformity regulations (40 CFR part 93, subpart A). In all areas (regardless of air quality designation), all proposed improvements shall be described in sufficient detail to develop cost estimates;

All transportation projects in the 2040 Transportation Plan are defined in sufficient detail to perform the necessary analyses for conformity determinations and develop cost estimates.

j) A discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the metropolitan transportation plan. The discussion may focus on policies, programs, or strategies, rather than at the project level. The MPO shall develop the discussion in consultation with applicable Federal, State, and Tribal land management, wildlife, and regulatory agencies. The MPO may establish reasonable time frames for performing this consultation;

The 2040 Transportation Plan includes Chapter 8 that addresses potential environmental mitigation activities that allowed for consultation with Federal, and State land management, wildlife, and regulatory agencies. This activity will be an on-going component of the transportation planning process.

k) A financial plan that demonstrates how the adopted transportation plan can be implemented;

i) For purposes of transportation system operations and maintenance, the financial plan shall contain system-level estimates of costs and revenue sources that are reasonably expected to be available to adequately operate and maintain the Federal-aid highways (as defined by 23 U.S.C. 101(a)(5)) and public transportation (as defined by title 49 U.S.C. Chapter 53).

Local governments predominantly rely on Motor Vehicle Highway (MVH), Local Roads and Streets (LRS), and local wheel tax funds for highway maintenance, administration, and construction expenditures. The Indiana legislature has recently increased the MVH, LRS and sustained the Community Crossings Grant Fund to the Local Public Agencies (LPAs). Additional funds such as Economic Development Income Tax (EDIT) and County Option Income Tax (COIT) are also used for highway maintenance and construction projects. The construction expenditures fund local construction and reconstruction projects, and provide local-matching funds for federally funded projects. The remaining funds are for operation, administration, and maintenance costs.

A forecast of federal funding available to the Fort Wayne urbanized area for the next 22 years was also completed at this time. This estimate was based on historical federal funding practices. Currently, the Fort Wayne urbanized area receives approximately 9.9 million dollars in federal funds each year. This equates to approximately 228-302 million dollars in federal funds for the urban area throughout the span of the transportation plan depending on the funding growth scenario.

Local governments including Allen County, City of Fort Wayne, and City of New Haven have annual revenues of approximately 76 million dollars dedicated to transportation operations, maintenance, and construction. In addition, Economic Development Income Taxes generate millions of dollars each year of which a substantial portion is dedicated to highway construction projects. The amount of these funds spent on transportation projects varies from year to year. On average, local governments spend at least 25 million dollars a year on construction and reconstruction projects. Depending on the growth of these funds, this equates to approximately 550-764 million dollars for the twenty-two year period of the plan. The majority of available funds (51 million annually) are utilized for maintenance and operation. These funds are sufficient to adequately maintain the existing and future infrastructure.

ii) For the purpose of developing the metropolitan transportation plan, the MPO, public transportation operator(s), and State shall cooperatively develop estimates of funds that will be available to support metropolitan transportation plan implementation, as required under § 450.314(a). All necessary financial resources from public and private sources that are reasonably expected to be made available to carry out the transportation plan shall be identified.

NIRCC, Citilink, and the Indiana Department of Transportation work cooperatively on the development of the Transportation Plan. This includes the estimation of available funds and projects that can reasonably be implemented. A major component of the 2040 Transportation Plan is a list of projects on the INDOT system based on revised project costs and revenue projections.

iii) The financial plan shall include recommendations on any additional financing strategies to fund projects and programs included in the metropolitan transportation plan. In the case of new funding sources, strategies for ensuring their availability shall be identified. The financial plan may include an assessment of the appropriateness of innovative finance

techniques (for example, tolling, pricing, bonding, public private partnerships, or other strategies) as revenue sources for projects in the plan.

The financial plan for the 2040 Transportation Plan utilizes traditional sources of highway and transit revenues. Non-traditional funding sources of additional financing strategies are not currently contemplated as revenue sources for the transportation projects identified in the Plan.

iv) In developing the financial plan, the MPO shall take into account all projects and strategies proposed for funding under title 23 U.S.C., title 49 U.S.C. Chapter 53 or with other Federal funds; State assistance; local sources; and private participation. Revenue and cost estimates that support the metropolitan transportation plan must use an inflation rate(s) to reflect "year of expenditure dollars," based on reasonable financial principles and information, developed cooperatively by the MPO, State(s), and public transportation operator(s).

The financial plan for the 2040 Transportation Plan includes all proposed projects and strategies. The financial plan for the 2040 Transportation Plan identifies specific costs for each project and related phase of project development. The project costs and available revenues are developed utilizing current dollars. This process is considered understandable, reasonable and defendable when compared to a financial plan that attempts to speculate future project costs and estimate future available revenues. The financial plan developed for future transportation plans will consider alternative revenue and cost estimation procedures that use an inflation rate(s) to reflect year of expenditure project costs and anticipated revenues.

v) For the outer years of the metropolitan transportation plan (i.e., beyond the first 10 years), the financial plan may reflect aggregate cost ranges/cost bands, as long as the future funding source(s) is reasonably expected to be available to support the projected cost ranges/cost bands.

The financial plan for the 2040 Transportation Plan identifies specific costs for each project and related phase of project development. These include projects that will be designed and constructed utilizing local dollars. Projects under local governmental jurisdictions were identified and the cost of each project was developed. Costs were estimated for preliminary engineering, right-of-way acquisition, and construction activities. Projects were banded for the years of 2019 through 2025, 2026 through 2034 and 2035 through 2040. Project cost estimates were adjusted based upon an average annual growth rate of 1.6% for 2020 through 2034 and 1.5% for projects in the 2035 to 2040 band.

vi) For nonattainment and maintenance areas, the financial plan shall address the specific financial strategies required to ensure the implementation of TCMs in the applicable SIP.

The Metropolitan Planning Area is an attainment area. The State Implementation Plan does not include any specific TCMs for Allen County negating a need for addressing any specific financial strategies for implementation.

vii) For illustrative purposes, the financial plan may include additional projects that would be included in the adopted transportation plan if additional resources beyond those identified

in the financial plan were to become available.
The 2040 Transportation Plan includes a list of illustrative projects and these projects are not included in the financial plan.

viii) In cases that the FHWA and the FTA find a metropolitan transportation plan to be fiscally constrained and a revenue source is subsequently removed or substantially reduced (i.e., by legislative or administrative actions), the FHWA and the FTA will not withdraw the original determination of fiscal constraint; however, in such cases, the FHWA and the FTA will not act on an updated or amended metropolitan transportation plan that does not reflect the changed revenue situation.
This situation is not currently applicable to the 2040 Transportation Plan.

k) Pedestrian walkway and bicycle transportation facilities in accordance with 23 U.S.C. 217(g);
The Transportation Plan includes a conceptual Bicycle and Pedestrian Plan that supports the expansion of trails, sidewalks, and other bicycle facilities including the development of bike lanes. See chapter 6.

7) The MPO shall consult, as appropriate, with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan. The consultation shall involve, as appropriate:
(1) Comparison of transportation plans with State conservation plans or maps, if available; or
(2) Comparison of transportation plans to inventories of natural or historic resources, if available.

The current planning regulations expand the environmental factor to "Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns." The goal of the 2040 Transportation Plan is to achieve an efficient and safe transportation system for the movement of people and goods while simultaneously improving the economic and environmental conditions of the community. The implementation of such a system will minimize energy consumption and reduce air pollution. Reductions in vehicle hours of delay, vehicle miles of travel, accident rates, and accident severity are measures by which the system can be evaluated. Energy conservation, protection of the environment and quality of life considerations are standard principles that guide project development and the decision-making process that's part of the transportation planning process. Engaging local land use planning and economic development agencies, and ensuring consistency with land use and economic development plans, is established in the planning assumptions that serves as the foundation of the Transportation Plan. The consultation process and environmental mitigation strategies will build upon these relationships.

The Northeastern Indiana Regional Coordinating Council has developed a Participation Plan that includes a process for consulting with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan. The development of Transportation Plans has always included consultation with local land use management agencies and in consistent alignment with

comprehensive plans. Transportation Plans have also been developed with due consideration for natural resources, environmental protection, conservation and historic preservation. The planning process has been expanded to include opportunities for consultation and a documented discussion of environmental mitigation strategies. The environmental mitigation process includes the comparison of transportation plans with maps of conservation areas, inventories of natural and historic resources, and other potential environmental areas. The Participation Plan is documented in appendix H in the 2040 Transportation Plan. The Environmental Mitigation process is discussed in Chapter 7.

8) The metropolitan transportation plan should include a safety element that incorporates or summarizes the priorities, goals, countermeasures, or projects for the MPA contained in the Strategic Highway Safety Plan, including the SHSP required under 23 U.S.C. 148, , the Public Transportation Agency Safety Plan required under 49 U.S.C. 5329(d), or an Interim Agency Safety Plan in accordance with 49 CFR part 659, as in effect until completion of the Public Transportation Agency Safety Plan, and may incorporate or reference applicable emergency relief and disaster preparedness plans and strategies and policies that support homeland security, as appropriate, to safeguard the personal security of all motorized and non-motorized users.

The current planning regulations separate transportation safety and security into two distinct factors: 1) increase the safety of the transportation system for motorized and non-motorized users; and 2) increase the security of the transportation system for motorized and non-motorized users. NIRCC has initiated the separation of these factors in the transportation planning process.

The Northeastern Indiana Regional Coordinating Council maintains a Safety Management System/Process that collects and monitors crash information to develop strategies that improve transportation safety. The safety process is discussed in the 2040 Transportation Plan. See Chapter 7. The Safety Management System/Process is consistent with the Indiana Strategic Highway Safety Plan. The Indiana Strategic Highway Safety Plan contains statewide priorities and goals but does not identify specific priorities, goals, countermeasures, or projects for the Metropolitan Planning Area. NIRCC has developed a solid working relationship with the Indiana Department of Transportation on safety programs and implementing safety projects and policies.

The transportation planning process has consistently championed safety as a major concern. The Safety Management System (SMS) routinely reviews hazardous locations on the transportation system through cooperative efforts with local governments. Highway crash data is also obtained from the Indiana Department of Transportation to review and identify hazardous locations. Accident data is compiled from throughout the metropolitan area to determine high hazard locations. Accident studies are conducted for the high hazard locations, solutions developed, and recommendations are made to improve safety. Hazard elimination and safety funds (HSIP) are sought for the appropriate projects.

The SMS program also monitors rail-highway grade crossings and maintains an inventory of pertinent data for each location. This information supports the Indiana Department of Transportation rail-highway improvement program. Selected rail-highway crossing improvements in the metropolitan area are annually included in the Transportation Improvement Program. New rail-highway grade separation projects are also included in the transportation plan. These projects will

improve safety for transit passenger, children riding school buses, passenger vehicles, pedestrians, and bicyclists.

The transportation planning process acknowledges the importance for improving pedestrian and bicycle safety. Projects developed in the Pedestrian and Bicycle Plan are designed to improve the safety for these modes of transportation. Recently completed projects such as the Towpath Trail and pedestrian bridge over the St. Joseph River north of Coliseum Boulevard provide pedestrians and bicyclists new pathways eliminating the need to cross and travel along high volume roadways. Proposed pedestrian/bicycle projects will promote safety in similar fashion. A project proposed to extend the River Greenway from Johnny Appleseed Park to Shoaff Park will provide a safe pathway linking activity centers including parks, residential housing, Memorial Coliseum, Memorial Stadium, Indiana University Purdue University Fort Wayne, and athletic\soccer fields to each other and existing pedestrian\bicycle paths.

Safety improvements to the highway system have corresponding safety benefits to the transit system. In addition, Citilink addresses safety issues concerning the transit system and is aware of the importance safety plays in overall passenger comfort. The recently completed Citilink Transfer Center was designed with safety and security features. The perception of a safe transit system is a great marketing tool and Citilink strives to maintain a safe transit system.

The Northeastern Indiana Regional Coordinating Council has established a working relationship with the Fort Wayne-Allen County Office of Homeland Security. The Fort Wayne-Allen County Office of Homeland Security maintains and reviews evacuation plans and identifies critical transportation infrastructure. NIRCC provides assistance as requested and incorporate emergency relief and disaster preparedness plans and strategies as appropriate into the Transportation Plan and planning process.

NIRCC has identified the National Highway System (NHS) and Strategic Highway Network (STRAHNET) within the Metropolitan Planning Area. The National Highway System includes all primary routes that will likely be used for evacuation purposes. Interstate 69 is the only highway facility in the MPA on the Strategic Highway Network. Due to the importance of these primary routes, they are adequately addressed in the Transportation Plan. NIRCC periodically reviews the NHS and Functional Classification System to ensure they remain up-to-date.

9) An MPO may, while fitting the needs and complexity of its community, voluntarily elect to develop multiple scenarios for consideration as part of the development of the metropolitan transportation plan.

a) An MPO that chooses to develop multiple scenarios under this paragraph (i) is encouraged to consider:

i) Potential regional investment strategies for the planning horizon;
ii) Assumed distribution of population and employment;
iii) A scenario that, to the maximum extent practicable, maintains baseline conditions for the performance areas identified in § 450.306(d) and measures established under 23 CFR part 490;
iv) A scenario that improves the baseline conditions for as many of the performance measures identified in § 450.306(d) as possible;
v) Revenue constrained scenarios based on the total revenues expected to be available over the forecast period of the plan; and

vi) Estimated costs and potential revenues available to support each scenario.

b) In addition to the performance areas identified in 23 U.S.C. 150(c), 49 U.S.C. 5326(c), and 5329(d), and the measures established under 23 CFR part 490, MPOs may evaluate scenarios developed under this paragraph using locally developed measures.

NIRCC utilizes the Comprehensive Land Use Plans for guidance on land use development. The development of the Comprehensive Plans investigated different development scenarios, that were based upon the community's vison. After a significant series of community workshops and public involvement meetings, consensus was achieved and the Comprehensive Plan was finalized.

10) The MPO shall provide individuals, affected public agencies, representatives of public transportation employees, public ports, freight shippers, providers of freight transportation services, private providers of transportation (including intercity bus operators, employer-based commuting programs, such as carpool program, vanpool program, transit benefit program, parking cashout program, shuttle program, or telework program), representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation plan using the participation plan developed under § 450.316(a).

The Northeastern Indiana Regional Coordinating Council maintains an open planning process that encourages citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation plan. The Participation Plan documents the process NIRCC will follow in administering the Metropolitan Transportation Planning Process including the development of the Transportation Plan and Transportation Improvement Program. All groups and interested parties are encouraged to attend and special efforts are directed at the identified groups above to ensure they are notified of opportunities to participate and comment. See chapter 9.

11) The MPO shall publish or otherwise make readily available the metropolitan transportation plan for public review, including (to the maximum extent practicable) in electronically accessible formats and means, such as the World Wide Web.

The 2040 Transportation Plan is available in electronically accessible formats and posted on the NIRCC website. Maps and other supporting documents are also posted on the site. These documents, including the 2040 Transportation Plan, are posted in a manner that allows them to be easily downloaded.

12) A State or MPO is not required to select any project from the illustrative list of additional projects included in the financial plan under paragraph (f)(11) of this section.

The illustrative list of projects in the 2040 Transportation Plan is intended to demonstrate

transportation need and gain public comment. The State or MPO will not be required to select and implement any project from the list.

13) In nonattainment and maintenance areas for transportation-related pollutants, the MPO, as well as the FHWA and the FTA, must make a conformity determination on any updated or amended transportation plan in accordance with the Clean Air Act and the EPA transportation conformity regulations (40 CFR part 93, subpart A).

Allen County was designated nonattainment for the 1997 ozone NAAQS and was re-designated to attainment for the pollutant ozone in February 2007, and guidance indicated that conformity determinations were no longer required. Recently, the U.S. Court of Appeals for the D.C. Circuit issued a decision in South Coast Air Quality Management District v. EPA, No. 15-1115, which struck down portions of the 2008 Ozone NAAQS SIP Requirements Rule concerning the ozone National Ambient Air Quality Standards (NAAQS). The Court ruling has placed a shadow of uncertainty on the region's ability to advance transportation projects without demonstrating conformity. The Northeastern Indiana Regional Coordinating Council (NIRCC), with guidance from its stakeholders, has decided to perform an Air Quality Conformity Determination for 2040 Transportation Plan to address any potential backsliding of the 2008 ozone requirements and ensure project implementation can proceed on schedule. NIRCC will demonstrate that its transportation plan conforms to the 2020 air quality emission budgets established for the ozone precursor pollutants of volatile organic compounds (VOC) and nitrogen oxides (NOx). See Appendix M.

The formulation of goals, objectives and performance measures are intended to guide the development of the long range transportation plan and influence the design and operation of the transportation system. The Transportation Plan addresses how the urban area can meet the mobility needs of our growing and changing population, make the economy more competitive, build a livable and sustainable community and preserve the human and natural environment. The goals and objectives are designed to ensure that our transportation system is safe and secure, and to provide guidance on how transportation investments should be focused, and how both public and private transportation partners can work collectively to achieve these goals. The goals and objectives have been developed in accordance with the ten planning factors identified in the FAST Act. The planning factors are requirements of the Metropolitan Transportation Planning Process and provide the basic tenets on which the Transportation Plan must be implemented.

Performance Based Planning and Programming

Performance-based planning and programming (PBPP) provides data to inform decisions aimed at achieving desired outcomes for the region's multimodal transportation systems. The Northeastern Indiana Regional Coordinating Council identified desired outcomes for each required planning factor in the 2040Transportation Plan. The planning factors are based on the requirements for the metropolitan transportation planning process as indentified in 23 CFR 450.306. Each outcome has associated objectives, actions and measures that support the specific planning factor. In addition, federal planning requirements include the development of transportation performance measures, performance target setting and system performance reporting. The federal transportation performance management procedures and the regional

goals, objectives, actions and measures are the components that comprise NIRCC's performance based planning and programming process and are described below.

The primary goal of the Transportation Planning Process is to develop a safe, cost-effective transportation system that ensures mobility to all persons, enhances the quality of life in the region, supports planned growth, promotes economic development, and preserves the integrity and enhances the vitality of the human and natural environment. The process includes engaging evolving technology to support safe and equitable mobility that promotes a sustainable, healthy, livable and economically vibrant region. The transportation planning process is primarily governed by the planning activities of the Unified Planning Work Program. Data collection, transportation analyses and sustainable program development are components of the planning activities.

The Transportation Plan serves as the basis for a twenty-year transportation infrastructure and capital investment portfolio from which projects and programs will be refined and implemented. As projects and programs are readied for implementation, the investments are programmed in the Transportation Improvement Program (TIP). The TIP presents a four-year capital improvement plan for transportation investment for transit, highway and bicycle/pedestrian infrastructure. The TIP is updated bi-annually in accordance with the Indiana Statewide Transportation Improvement Program (INSTIP).

The Transportation Plan, Transportation Improvement Program and Unified Planning Work Program form the structure for a Performance Based Planning and Programming processes. While performance measures are not new to the transportation planning and programming processes and have been used for many years to guide investment decisions on project development and selection, there are new federal regulations that mandate specific performance measures, setting targets and reporting requirements. The performance based planning process is cyclical in nature and generally includes setting goals and objectives; select performance measures and set targets for performance outcomes; gather data and information to monitor and analyze trends; incorporate performance measures into project selection and development; document decisions and project selection designed to achieve performance targets; document progress toward target attainment; re-evaluate targets; and set new targets. The intent of the performance-based planning and programming (PBPP) process is to ensure investment in transportation infrastructure and programs, is consistent with key national transportation goals.

The anticipated outcomes of utilizing a performance based planning process, including the prescribed performance measures and INDOT/MPO target setting, is to achieve a higher level of system performance. The anticipated outcomes of the PBPP are numerous and while most are included in the following list, it is unlikely the list is all inclusive.

- Reduce number and severity of crashes, all modes
- Reduce serious injuries and fatalities from transportation

- Protect transportation customers and employees from safety and security threats
- Improve condition of on- and off-system bridges
- Improve pavement conditions on all roadways
- Maintain and modernize capital assets, including transit assets, throughout the system
- Prioritize projects that support a resilient and sustainable transportation system
- Promote the efficient transportation of freight within and through the region
- Improve transportation system reliability for transit and highway travel
- Implement roadway management and operations strategies
- Improve bicycle and pedestrian infrastructure
- Increase percentage of population and employment within one-quarter mile of transit service
- Increase percentage of population and places of employment with access to bicycle facilities
- Improve access to and accessibility of transit and active modes
- Support community-based and private-initiative services and programs to meet last mile, reverse commute and other non-traditional transit/transportation needs, including those of the elderly and persons with disabilities
- Eliminate bottlenecks on the freight network
- Enhance intermodal connections
- Emphasize capacity management through low-cost investments; give priority to projects that focus on lower-cost operations and management type improvements such as intersection improvements and Complete Streets solutions
- Reduce transportation-related pollutants
- Minimize negative environmental impacts of the transportation system
- Support land use policies consistent with smart growth
- Target investments to provide equitable benefits to all populations
- Minimize any burdens associated with MPO-transportation funded projects in low-income and minority areas

Federal Transportation Performance Management

The Federal Transportation Performance Management (TPM) process encompasses performance-based planning and programming. It is a systematically applied, ongoing process that provides information to decision makers so they understand the consequences of investment decisions across transportation assets or modes. The intent includes improving communication between decision makers, stakeholders and the traveling public and ensuring targets and measures are developed in cooperative partnerships and based on data and objective information.

The key feature of TPM is the development and implementation of a performance- and outcome-based program to guide investment of federal funds toward the achievement of national policy objectives. These policy objectives are conveyed in the form of national transportation goals. The end result is for States and Metropolitan Planning Organizations to invest resources in projects that collectively make progress toward achieving the national goals, with an increased focus on accountability and transparency of the planning, programming and decision-making process.

The national performance goals are identified for seven areas including: 1) Safety, 2) Infrastructure

Condition, 3) Congestion Reduction, 4) System Reliability, 5) Freight Movement and Economic Vitality, 6) Environmental Sustainability and 7) Reduce Project Delivery Delays. Additional information regarding the transportation goals for the highway network have been established. They include:

- Safety - To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- Infrastructure Condition – To maintain the highway infrastructure asset system in a state of good repair.
- Congestion Reduction – To achieve a significant reduction in congestion on the National Highway System.
- System Reliability – To improve the efficiency of the surface transportation system.
- Freight Movement and Economic Vitality – to improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- Environmental sustainability – To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- Reduce Project Delivery Delays – To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

The national goals also relate to the transit system with similar considerations for safety and infrastructure condition. They include reducing the number of fatalities and serious injuries related to transit service and maintaining the condition of transit infrastructure in a state of good repair.

To ensure movement is made towards achieving the national goals, methods to measure performance need to be engaged. Performance measurement is the use of statistical evidence to determine progress toward specific defined organizational objectives. This includes both evidence of actual fact, such as measurement of pavement surface smoothness, and measurement of customer perception. In transportation, the performance measurement process starts by defining precisely the services that the system should provide, including the quality or level of service such as transit on-time performance or highway travel time reliability to be delivered. The performance measurement process starts by defining the performance measures and desired service levels. Based on available resources, realistic targets are set to move the transportation service towards the desired goal, within a specific timeframe and with consideration of external factors. Transportation investments are programmed in accordance with achieving the performance targets. The transportation system is then monitored and evaluated to report progress for achieving established targets. Performance measures targets provide information to managers about how well that bundle of services is being provided. Performance measures should reflect the satisfaction of the transportation service user, in addition to those concerns of the system owner or operator.

Highway Performance Measures

The transportation performance measures have been established for the highway system. The system

performance measures and infrastructure measures are virtually complete and target setting is underway. The implementation of the safety performance measures and initial target setting was the first to be completed. NIRCC has collaborated with INDOT and other planning partners on the development of performance measure data and target setting. The three sets of highway performance measures are:

System Performance Measures

1. Percent of Person-Miles Traveled on the Interstate System that are Reliable (Interstate Travel Time Reliability measure)
2. Percent of Person-Miles Traveled on the Non-Interstate NHS that are Reliable (Non-Interstate Travel Time Reliability measure)
3. Percent Change in Tailpipe CO2 Emissions on the NHS (this system performance measure is currently suspended)
4. Percentage of Interstate System Mileage Providing for Reliable Truck Travel Times
5. Annual Hours of Peak-Hour Excessive Delay Per Capita
6. Percent of Non-Single Occupancy Vehicle Travel
7. Total Emissions Reduction

Infrastructure Performance Measures

1. Percentage of Pavements of the Interstate System in Good Condition
2. Percentage of Pavements of the Interstate System in Poor Condition
3. Percentage of Pavements of the Non-Interstate NHS in Good Condition
4. Percentage of Pavements of the Non-Interstate NHS in Poor Condition
5. Percentage of NHS Bridges Classified as in Good Condition
6. Percentage of NHS Bridges Classified as in Poor Condition

Safety Performance Measures

1. Number of fatalities
2. Rate of fatalities per 100 million miles traveled
3. Number of serious injuries
4. Rate of serious injuries per 100 million miles traveled
5. Number of non-motorized fatalities and non-motorized serious injuries

Transit Performance Measures

Under the final Transit Asset Management rule, transit providers must collect and report data for four performance measures, covering rolling stock, equipment, infrastructure, and facility condition. For these measures, transit providers are required to annually set targets for the fiscal year, develop a four-year Transit Asset Management Plan for managing capital assets, and use a decision support tool and analytical process to develop a prioritized list of investments. Each provider of public transportation is required to adopt targets for the performance of their transit assets. Subsequently, MPOs need to adopt transit asset targets for their metropolitan planning area.

Citilink is considered a Tier 2 provider since they operate less than 100 transit vehicles in their regular

service. There are four transit asset performance measures, two of which are age-based and two are condition-based. The age-based measures apply to rolling stock (transit vehicles) and non-revenue generating equipment (service vehicles). Condition based measures apply to infrastructure (rail, fixed-guideway track, signals, and systems) and stations/facilities (transfer stations, administrative buildings, garages, bus shelters). Citilink does not operate any rail, fixed-guideway track or signals. Within each performance measure, assets are further divided into asset classes. For example, distinct asset classes for buses can be 30-foot, 35-foot, 40-foot, articulated, etc. Each asset class is measured separately for performance and for target-setting. In addition, for the age-based performance measures, providers may set their own standards, and the useful life benchmark (ULB) for each asset class.

Transit Asset Management Plan

The Federal Transit Administration (FTA) and the U.S. transit industry having been working to improve the understanding and practice of transit asset management. There is considerable evidence that this is a critical area of focus. Improving transit asset management is now a national policy.

Transit asset management (TAM) is a business model that prioritizes funding based on the condition of transit assets, in order to achieve or maintain transit networks in a state of good repair (SGR). Federal Transit Administration guidance requires transit agencies to maintain and document minimum transit asset management standards. The standards will help transit agencies keep their systems operating smoothly and efficiently within the constraints of available funds.

Transit asset management is the strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and costs over their life cycles, for the purpose of providing safe, cost-effective, and reliable public transportation. Asset management processes are ongoing and involve evaluating and managing the relationships between costs, risks, and performance over the asset's lifecycle. Asset management addresses the two concepts of customer level of service and lifecycle management. Asset management can affect level of service by improving on-time performance and vehicle cleanliness and by reducing missed trips, slow orders, and service and station shutdowns. It also can improve safety, security, and risk management. Asset management provides accountability and communicates performance and asset condition to customers. The core of asset management is understanding and minimizing the total cost of ownership of an asset while maximizing its performance (lifecycle management). Transit asset management integrates activities across departments and offices in a transit agency to optimize resource allocation by providing quality information and well-defined business objectives to support decision-making within and between classes of assets.

Customer service levels and lifecycle management are addressed at the enterprise level and for each class of assets. Enterprise level refers to management or decision-making activities that occur at the higher

levels of an organization and apply across the entire organization. Asset class-level activities, on the other hand, refer to the management activities that are associated with a particular asset class. Through asset management, Citilink can more effectively use available funds to improve the physical condition and performance of their system. This, in turn, has the potential to increase ridership.

Citilink, as a recipient of public transit funds, is required to establish performance targets for safety and state of good repair; develop a transit asset management and transit safety plans; and report on their progress toward achieving targets. Citilink is directed to share information with NIRCC and state so that all plans and performance reports are coordinated. Citilink and NIRCC have collaborated on the development of a transit asset management plan (TAMP) and will continue working on this cooperative effort. The plan must be submitted by October 1, 2018. Baseline performance measures and targets associated with the TAMP were developed for 2017 and are provided in the System Management Report section. The 2019 targets will be set prior to the end of 2018, and the cycle for target setting and reporting will commence. Guidance for transit safety performance measures and safety plans has not been published by the Federal Transit Administration. When guidance is final, Citilink and NIRCC will collaborate on the safety performance process.

System Management Report

The FAST Act planning regulations direct MPOs to develop Transportation Plans and Transportation Improvement Programs through a performance-driven, outcome-based approach to planning. It required states, MPOs, and operators of public transportation to establish targets for performance measures in key performance areas, and to coordinate and collaborate when setting these targets. In response to the existing federal mandate, over the next several years, NIRCC will continue to set targets for specific required performance measures and coordinate on performance based planning process activities with the Indiana Department of Transportation, Citilink and other stakeholders.

Target Setting

NIRCC is required to establish performance targets no later than 180 days after the state or public transportation operator sets their performance targets. For each roadway performance measure, NIRCC can decide to commit to support the INDOT target, Citilink target, or to establish a quantifiable target specific to the Metropolitan Planning Area. Both INDOT and NIRCC's targets for roadway performance measures will be set at two-year and four-year intervals. NIRCC, INDOT and Citilink must coordinate their respective targets for performance measures with each other to ensure consistency to the maximum extent practicable.

Reporting

NIRCC's and INDOT's Transportation Plans must describe the performance measures and targets used

to assess system performance, evaluate the performance of the transportation system with respect to the federally required performance targets, and report on progress made. NIRCC's TIP and INDOT's Statewide Transportation Improvement Programs (STIPs) must link investment priorities to the targets in their respective Transportation Plans and describe, to the maximum extent practicable, the anticipated effect of the program toward achieving established targets. NIRCC must report baseline roadway transportation system condition and performance data and progress toward the achievement of targets to INDOT if regional targets are set. The Federal Highway Administration and Federal Transit Administration will determine whether INDOT and Citilink met or have made significant progress towards meeting targets for their respective systems. Progress would be considered significant if an actual outcome is either equal to or better than the established target, or better than the baseline condition. Federal Highway Administration and Federal Transit Administration will not directly assess MPO progress towards meeting targets for required performance measures. Instead, these agencies will review NIRCC's performance as part of ongoing transportation planning process reviews, including Transportation Management Area certification reviews.

The transportation performance target setting schedule is currently underway. To date, the Safety Performance Targets and Baseline Transit Asset Targets have been established. NIRCC has elected to support the INDOT Statewide Safety Targets for 2018 and collaborated with Citilink on the development and setting of Transit Asset Management Targets. The Safety Targets and Transit Asset Management Targets along with additional information is provided on Tables 1, 2 and 3. The targets that were endorsed by NIRCC are displayed in red. At this time, only targets have been set, and the respective target time periods are in progress, and a determination of target achievement is not possible. Future updates to the

Table 1: NIRCC - Statewide Crash Performance Targets

	2012	2013	2014	2015	2016	2017	Target 2018
Number of Fatalities	781	784	745	821	822	841	846
Number of Fatalities - (5 year rolling average)	759.8	752.6	763	776.4	790.6	802.5	**814.9**
Fatality Rate per 100 million VMT	0.99	1.001	0.941	1.042	1.061	1.071	1.065
Fatality Rate per 100 million VMT - (5 five year rolling average)	1.005	0.974	0.982	0.991	1.007	1.023	**1.036**
Number of Serious Injuries	3,816	3,441	3,338	3,434	3,505	3,544	3,577
Number of Serious Injuries - (5 year rolling average)	3,449.20	3,459.20	3,491.10	3,486.90	3,506.90	3,452.50	**3,479.80**
Serious Injury Rate per 100 million VMT	4.835	4.394	4.215	4.357	4.394	4.39	4.379
Serious Injury Rate per 100 million VMT - (five year rolling average)	4.555	4.478	4.491	4.451	4.439	4.35	**4.347**
Number of Non-Motorized Fatalities and Serious Injuries	400	382	362	368	364	494	497
Number of Non-Motorized Fatalities and Serious Injuries (5 year rolling average)	385	388	392.8	383.6	375.2	394	**417**

Transportation Plan will provide information on attaining performance targets and additional target setting activities.

The Safety Targets for 2018 include: annual number of fatalities; rate of fatalities per 100 million vehicle miles traveled; annual number of serious injuries; rate of serious injuries per 100 million vehicle miles traveled; and annual number of non-motorized fatalities and non-motorized serious injuries. The targets were developed through a collaborative process between NIRCC and INDOT. The 2018 safety target setting process considered the impacts of economic recovery and increased vehicle mile of travel on crash rates and frequencies. As the economy rebounds in Indiana and throughout the nation, business growth, employment opportunities and freight distribution to satisfy sales of durable and non-durable goods all increase travel on the transportation system. This increase in vehicle miles of travel in turn increases the likelihood vehicular conflicts, with a likely result of more crashes.

The Transit Asset Management Plan for Citilink assessed the Useful Life Benchmarks (ULB) for the transit rolling stock and evaluated facilities utilizing the Transit Economic Requirements Model (TERM). TERM is a capital needs analysis tool developed by the Federal Transit Administration. It was developed to provide a consistent process to assess the current physical condition and future investment needs of a transit operators assets. TERM provides methodology for determining the State of Good Repair for rolling stock and transit facilities, assessing the backlog of investment and provides a 20-year projection of reinvestment need, and evaluates the impacts of variations in funding.

The process was applied to Citilink's rolling stock and facilities to establish a 2016 baseline and set performance targets for 2017. Tables 2 and 3 display the 2017 targets for rolling stock and facilities.

Table 2: Citilink and NIRCC – Transit Rolling Stock Performance Targets

Rolling Stock	2017 Percent that Meet or Exceed ULB	2017 Target Percent that Meet or Exceed ULB	2017 Percent in State of Good Repair	2017 Target Percent in State of Good Repair
Large Buses	12.50%	**12.50%**	100%	**90%**
Medium and Light Duty Buses	69%	**69%**	100%	**90%**
Specialized Vans	0%	**0%**	100%	**90%**
Non-Revenue Service Vehicles	64%	**64%**	86%	**80%**

Table 3: Citilink and NIRCC – Facilities Performance Targets

Facilities	2017 Percent Below Acceptable TERM Rating	2017 Target Below Acceptable TERM Rating	2017 Percent in State of Good Repair	2017 Target Percent in State of Good Repair
Facilities	0%	**0%**	100%	**90%**
Passenger Shelters	0%	**0%**	100%	**80%**

The rolling stock includes: catagories for large buses; medium and light duty buses; specialized vans used primarily by social service agencies for transporting elderly and/or disabled individuals; and non-revenue service vehicles. The amenities included in the facilities category are: administrative building; maintenance garage; storage barn; and passenger transfer station. A category for passenger bus shelters is provided independent of the other facilities.

The System Management Report will be expanded to cover the highway system and infrastructure performance measures in future updates of the Transportation Plan. The report will include additional information on target setting activities and the success of the transportation planning and project programming process to meet the respective targets. The assessment of meeting performance targets will be discussed including the re-evaluation and establishment of new targets.

Regional Goals, Objectives, Actions and Measures

NIRCC's transportation planning process engages in activities that support a performance based planning and programming process. As the MPO, NIRCC has followed a collaborative process to set goals and objectives that align with national goals, and utilizes the Transportation Plan and Transportation Improvement Program to integrate goals and objectives into planning and programming activities. The Congestion Management Process (CMP) and use of performance measures for planning and analysis is one application of this process. Traffic and crash data collected and analyzed by NIRCC will assist in the monitoring and evaluation of performance measures. In conjunction with the federal performance management process, regional goals, objectives, actions and measures have been in place for several years. The regional process was designed to be consistent with the national performance measure process and current planning regulations.

Primary Goal of the Transportation Plan and Transportation Planning Process

> ***Develop a safe, cost-effective transportation system that ensures mobility to all persons, enhances the quality of life in the region, supports planned growth, promotes economic development, and preserves the integrity and enhances the vitality of the human and natural environment.***

Individual goals have been developed with recognition of the need for balance between safety, security, mobility and accessibility, cost, and environmental impact in accordance with the prescribed planning factors. Planning and project development decisions will inevitably require the prioritization of goals and objectives through diverse methods to ensure consistency with preferred outcomes. Compromises and trade-offs will be necessary to achieve the desired balance of a safe and efficient multi-modal transportation system. The strategies and measures of effectiveness may require additional thought and refinement. The Transportation Technical Committee and Transit Planning Committee, as part of the on-going transportation planning process, can provide more explicit details on the strategies and measures of effectiveness, including benchmark values and definitive standards for evaluating success.

Goals for each planning factor were developed in conjunction with objectives, implementation strategies, performance measures and the appropriate/responsible parties. While most of the goals and objectives are transportation oriented, a number are directed at land use and economic development policies that influence the performance of the transportation system and how the community grows. These policies are outside the jurisdiction of the Metropolitan Planning Organization, but are within the jurisdiction of its member agencies. The performance measures will be monitored to evaluate the success of each objective towards achieving the stated goal. Collectively, the more successful the region is in attaining the stated objectives and implementation strategies, the more successful the transportation system will be in meeting future travel demands in an effective and efficient manner.

Planning Factor 1:
Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency

PF1 – Desired Outcome
Provide Economic Development Opportunity Areas with site appropriate multi-modal transportation infrastructure that ensures safe and efficient access.

Objective 1:
Ensure efficient travel on preferred access routes connecting Opportunity Areas to one another and the Interstate System.

Actions:
- Evaluate signal timing and implement signal timing improvements where appropriate.
- Evaluate intersection radii and program intersection improvements as needed for safe and efficient truck turning movements.
- Assess need for additional capacity on access routes when acceptable service levels are not attainable through other congestion mitigation strategies.
- Assess the need for new roadways where necessary and appropriate to improve accessibility to Opportunity Areas.
- Evaluate and ensure the provision and enforcement of well-marked local truck delivery routes serving opportunity areas.
- Promote vehicular connectivity between developments within Opportunity Areas.

Selected Measures:
Travel time on access routes between Opportunity Areas and Interstate System.
Travel time on access routes between Opportunity Areas.

Objective 2:

Plan for and ensure multi-modal access to and between opportunity areas.

Actions:
- Encourage the establishment of public transit routes connecting developed areas and Opportunity Areas.
- Coordinate and plan for the provision of connecting rail infrastructure within Opportunity Areas adjacent to rail corridors.
- Evaluate and coordinate the provision of transportation infrastructure that provides efficient access between Opportunity Areas and the Fort Wayne International Airport.
- Encourage the provision of pedestrian and bike infrastructure connecting Opportunity Areas to adjacent residential areas.

Selected Measure:
Increase the number of Opportunity Areas with efficient multi-modal access.

Objective 3:

Provide well-marked local delivery truck routes to Opportunity Areas.

Actions:
- Review and revise truck routes that provide access to Opportunity Areas.
- Designate truck routes with proper signage.

Selected Measure:
Provide local delivery truck routes to primary access points of all Opportunity Areas.

PF1 – GOAL 2

Compact and mixed-use development supported by a multi-modal transportation network should be principal considerations for new development and redevelopment projects in the urbanized area to promote a walkable, sustainable and efficient development patterns.

Objective 1:

Increase gross densities in urbanized areas by supporting and encouraging the establishment of compact mixed use development and supportive multimodal transportation infrastructure within and between new and existing mixed use developments.

Actions:
- Promote zoning, subdivision and traffic and street engineering standards that encourage compact mixed use development and multi-modal transportation infrastructure within existing urbanized areas.
- Coordinate the establishment of street and traffic engineering standards which require the provision of multi-modal transportation infrastructure within existing urbanized areas.
- Encourage redevelopment and infill development projects in areas already supported by multi-modal infrastructure that include mixed uses and increased land use density.

- Encourage Transit Oriented developments.
- Promote zoning and subdivision standards that incorporate transit friendly infrastructure.

Selected Measures:
Increase in gross population and housing density in urbanized areas by 2025.
Increase in number of mixed use areas and transit oriented developments.

PF1 – GOAL 3

Support and promote transportation improvements in central business districts that enhance livability, tourism, and other economic development opportunities.

Objective 1:

Encourage the maintenance and enhancement of existing public right of way infrastructure to align with existing plans and design standards.

Action:
- Ensure that transportation improvement plans and projects are consistent with downtown and business district plans and policies.

Selected Measure:
Number of projects in the downtown and business areas that have been reviewed and constructed in accordance with the goals and policies of relevant plans.

Objective 2:

Ensure that street improvement projects are designed to be consistent with and contribute to the economic vitality of downtown and business areas.

Action:
- Ensure that transportation improvement projects include elements that promote livability, are aesthectic, support pedestrian traffic, and provide for short-term on-street parking where possible.

Selected Measure:
Number of projects that increase access to businesses located in the Central Business District.

Objective 3:

Encourage a balance of travel modes in the downtown and business areas.

Actions:
- Ensure that transportation improvement plan designs include appropriate speed control and traffic calming features such as lane widths and streetscape enhancements.
- Evaluate loading zone locations to improve freight distribution and efficiency.

- Ensure that transportation improvements plans and projects are reviewed in alignment with the goals and policies of downtown and business district plans.
- Continue building on-street bike facilities and enhancing pedestrian and transit friendly infrastructure.
- Analyze the need and potential market for transit improvements in downtown and business areas.

Selected Measures:
Reduction of vehicle speeds on selected streets.
Number of completed bike and pedestrian infrastructure projects.
Completion of transit improvements studies for downtown and business areas.

Planning Factor 2:

Increase the safety of the transportation system for motorized and non-motorized users

PF2 - GOAL

Ensure transportation facilities for all modes of travel are safe

Objective 1:

Reduce the number of public roadway motor vehicle crashes.

Actions:
- NIRCC will maintain crash data and prepare crash analyses for problematic areas.
- High crash locations will be reviewed and evaluated for appropriate crash reduction strategies, strategies will be implemented through safety projects.
- Support improved driver education and safe driving campaigns.
- Implement systematic safety improvements at various locations in the metropolitan area to address safety issues that attribute to crashes.
- Develop/promote training for law enforcement officers to enhance data collection for crash incidents.

Selected Measure:
Total motor vehicle crashes per 100 million VMT. (MPA)

Objective 2:

Reduce the number of severe injury and fatal motor vehicle crashes.

Actions:
- NIRCC will maintain crash data and prepare crash analyses for serious injury and fatal crashes.
- Crash locations with unusually high serious injury and fatal crashes will be reviewed and evaluated for appropriate crash reduction strategies.
- Deploy safety improvements that show right-angle and head-on crash reduction attributes including cable barriers, center-line rumble strips, roundabouts and stronger

enforcement of traffic control violations.

Selected Measures:
Total number of fatalities
Rate of fatalities per 100 million miles traveled
Total number of serious injuries
Rate of serious injuries per 100 million miles traveled

Objective 3:

Reduce the number of fatal and serious injury crashes involving bicyclists and pedestrians.

Actions:

- NIRCC will maintain crash data and prepare crash analyses for crashes involving bicyclists and pedestrians.
- Crash locations with unusually high bicyclist and/or pedestrian crashes will be reviewed and evaluated for appropriate crash reduction strategies.
- Work with law enforcement agencies to address problem areas common violations that attribute to crashes involving bicyclist and pedestrians.
- Coordinate with local pedestrian and bicycle plans to close sidewalk and bicycle network gaps along major roadways.
- Support bicyclist and pedestrian safety education programs.
- Implement appropriate "complete street" concepts to provide safe bicycle and pedestrian facilities with roadway improvement projects.
- Support and promote the provision of adequate street lighting along streets in developed areas.
- Improve transit stops by provided adequate access and pedestrian facilities.
- Support and encourage sidewalk connectivity near schools and universities.
- Design street and intersection improvements with safety features to improve.

Selected Measures:
Total number of non-motorized fatalities.
Total number of non-motorized serious injuries.

Planning Factor 3:

Increase the security of the transportation system for motorized and non-motorized users

PF3 - GOAL

Develop a transportation system that remains secure and operational during natural and man-made disasters.

Objective 1:

Include transportation related security projects in the regional ITS Architecture.

Actions:

- Continue implementation for the ITS Architecture.
- Consult with appropriate agencies to review and update ITS Architecture with appropriate security related projects.

Selected Measure:
Number of security related ITS projects implemented.

Objective 2:

Work with area emergency preparedness and disaster response agencies to identify high priority emergency and evacuation routes.

Actions:
- Utilize travel demand modeling capabilities to help identify safe and efficient emergency and evacuation routes.
- Identify transportation improvements that will facilitate safe and efficient emergency and evacuation routes.

Selected Measure:
Identify and map high priority emergency and evacuation routes.

Objective 3:

Identify strategic transportation infrastructure and available resources needed to improve emergency preparedness.

Actions:
- Consult with transportation agencies, emergency responders and emergency preparedness agencies to identify strategic infrastructure and needed resources.
- Identify transportation projects that improve security of strategic infrastructure and support emergency response.

Selected Measure:
Maintain lists of available resources and identify strategic infrastructure.

Planning Factor 4:

Increase the accessibility and mobility of people and freight

PF4 – GOAL 1

Transportation system users will have convenient and efficient multi-modal access within and through the metropolitan area

Objective 1:

Maintain level of service "D" or better during peak travel periods on major traffic corridors.

Actions:

- Utilize Congestion Management Process to conduct systemic analyses on "major traffic corridors" to assess peak service levels.
- Implement signal upgrades, re-timings and coordination projects to improve traffic flow based on service level assessments that incorporate impacts on transit service and freight movement within the region.
- Encourage multiple modes of travel in place of personal vehicle use.
- Continue to expand network of bicycle and pedestrian infrastructure as a mechanism to reduce motor vehicle traffic.
- Provide additional travel lanes on major traffic corridors when additional capacity is warranted.

Selected Measures:

Duration of unacceptable service levelson defined "major traffic corridors."
Peak hour travel times on defined "major traffic corridors."

Objective 2:

Improve pedestrian facilities throughout the metropolitan area by expanding access to the transportation network in ways that respect the diverse levels of physical ability in the community.

Actions:

- Promote compliance with local development standards that require sidewalks as part of new development.
- Support development standards that require dedicated pedestrian facility infrastructure that connect the public right of way with building entrances.
- Continue to install and replace curb ramps in accordance with the Public Right of Way Accessibility Guidelines (PROWAG) standards.
- Fill gaps in the sidewalk and trail infrastructure and repair deteriorated and non-compliant sidewalks according to local and state pedestrian and trail plans.
- Install actuated count-down audible pedestrian signals with piano key style crosswalks at intersections with high traffic and pedestrian volumes.
- Prioritize the development of sidewalk and trail access to transit stops.

Selected Measures:

Number of replacement and new curb ramps constructed.
Number of accessible sidewalk and trail improvements.
Number of transit stop improvements that include sidewalk facilities to the stop, shelters and/or pedestrian facilities to the curb.
Linear feet of newly constructed sidewalk and trail.
Number of intersections improved by installation of actuated count-down audible pedestrian signals and piano-key style crosswalk markings.

Objective 3:

Continue and improve reliable and convenient fixed-route and demand-response transit service in the Urban Area. Specific improvements include, reducing headways, expanding service hours,

expanding service distribution and improving transit stop facilities.

Actions:

- Construct bus shelters at high-use stops on fixed route transit lines with appropriate sidewalk access
- Use smart-phone and other technology to provide real-time service information for fixed route transit service and explore application for demand response service.
- Identify and secure sustainable funding sources to reduce fixed-route headways, extend service hours, and expand service areas.
- Review and evaluate service delivery options to maximize service efficiency and coverage.

Selected Measures:

Number of transit trips per service provider
On-time service performance by route.
Transit headways by route.
Number of service hours per week.
Number of high-use bus shelter improvements.
Percentage of urban population within ½ mile of the fixed-route transit network.

Objective 4:

Improve truck and freight mobility and distribution within the urban area that minimizes disruption to residential neighborhoods and reduces impacts to other modes of transportation.

Actions:

- Continue to provide a well-defined local truck route delivery system.
- Periodic review and evaluation of the truck route system.
- Evaluate loading zones in Central Business Districts to improve freight distribution and efficiency.

Selected Measure:

Truck volumes and truck percentages on selected corridors.

Objective 5:

Improve connectivity and access to the trail network, develop and maintain additional bicycle infrastructure to support active modes of travel.

Actions:

- Continue strategic expansion of trail system.
- Provide additional bike lanes, bike routes and shared lanes in the metropolitan area.
- Repair and maintain existing bicycle infrastructure.
- Measure intersection service levels for bicyclists and pedestrians at locations that relate to existing and planned bike facilities.
- Install bike racks and other storage facilities at strategic destinations in the Metropolitan Area.

Selected Measures:
Miles of new bicycle infrastructure.
Miles of repaved and repaired bicycle infrastructure (trails and bike lanes).
Number of major destinations that provide secure bike storage.

Planning Factor 5:

Protect the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns

PF5 – GOAL 1

Improve the safety and convenience of multi-modal transportation options to reduce single occupancy vehicle trips.

Objective 1:

Increase the miles of bicycle and pedestrian facilities.

Actions:

- Construct new and maintain existing facilities and make provisions for future connectivity.
- Implement recommendations of state and local bike, trail, and pedestrian plans.
- Collaborate with Fort Wayne Trails and other private sector partners to promote bike-ped facilities.

Selected Measures:
Miles of trails.
Miles of bike lanes.

Objective 2:

Provide transit service within ½ mile for 90% of the population within the Urban Area.

Actions:

- Encourage, compact redevelopment and infill within ½ mile of transit routes.
- Expand the Citilink service area to include the entire urban area.

Selected Measures:
Population, households and employment within ½ mile of transit routes.
Number of new or expanded transit routes.

Objective 3:

Ensure new developments within the Metropolitan Area provide sidewalks and/or trails along

roadway frontages (internal and external) through construction of, or a reservation of land and funds for construction.

Actions:
- Support subdivision ordinances and enforcement of sidewalk or trail requirements in new commercial and residential developments.
- Encourage redevelopment and infill development adjacent to existing pedestrian facilities.

Selected Measure:
Miles of new sidewalks and trails constructed.

PF5 – GOAL 2

Apply sustainable principals to transportation planning and engineering activities that promote environmental stewardship and energy conservation.

Objective 1:

Continue to maintain air quality attainment status and remain below the National Ambient Air Quality Standards.

Actions:
- Promote alternative transportation modes including transit, cycling and walking.
- Evaluate ridesharing, bike sharing, car sharing and park and ride programs in the urban area.
- Reduce vehicle emissions through intersection improvements and constructing roundabouts at appropriate locations.

Selected Measure:
Number of annual occurrences where regional air pollutants exceed the National Ambient Air Quality Standards.

Objective 2:

Support infill development and redevelopment efforts within the Urban Area.

Actions:
- Provide appropriate transit, bicycle, pedestrian and vehicular access to undeveloped sites in the Urban Area.
- Provide appropriate transit, bicycle, pedestrian and vehicular access for redevelopment of selected locations.

Selected Measure:
Number of transportation projects associated with infill and redevelopment projects.

Objective 3:

Improve water quality by controlling stormwater and mitigating salt, oil and fuel contamination.

Actions:

- Limit development and transportation projects that alter floodplains and wetland habitats.
- Reduce and mitigate non-point sources of roadway related pollution.
- Install green infrastructure (rain gardens etc.) into transportation design as a means to mitigate and cstormwater.

Selected Measures:

Water Quality Reports and impaired waterways.
Number of transportation projects that implement "green" stormwater infrastructure.

Planning Factor 6:

Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight

PF6 – GOAL

Provide transportation system users with an integrated transportation network that provides access to and between street, trail, transit, sidewalk, rail and air transportation infrastructure and ensure connectivity within, and between the various networks.

Objective 1:

Improve highway, trail, bicycle and sidewalk infrastructure by filling gaps and constructing new links to provide for system connectivity.

Actions:

- Identify and prioritize gaps and important links in accordance with local bicycle and pedestrian plans to improve system connectivity.
- Develop a schedule for construction of trail, bicycle and sidewalk infrastructure.
- Identify and secure funding to meet objectives.

Selected Measure:

Number of system gaps removed.
Number of new links connecting to existing infrastructure.

Objective 2:

Provide safe and efficient highway access to truck, transit, air and rail terminals for freight and passenger service.

Actions:

- Review access to major truck, transit, air and rail terminals for accessibility and mobility issues and determine appropriate improvements.
- Build and modify transportation infrastructure to improve access and mobility.

Selected Measures:

Corridor and intersection level of service near terminals.
Number of accidents along primary access routes.

Objective 3:

Provide a transportation system that integrates the needs of freight, transit, cycling, walking, passenger rail, and passenger vehicle travel.

Actions:

- Review programs, plans and projects for opportunities to integrate transportation systems.
- Develop and implement programs and projects that improve system integration.

Selected Measure:

Number of projects that integrate multiple transportation modes.

Planning Factor 7:

Promote efficient system management and operation

PF7 – GOAL

Minimize travel impedance and maximize available system capacity through well maintained infrastructure and efficient operations to ensure dependable and reliable service.

Objective 1:

Properly maintain transit, street, bridge, sidewalk, trail and bicycle infrastructure in safe operating conditions to prevent travel inefficiencies.

Actions:

- Maintain pavement and surface management for streets, sidewalks and bicycle systems.
- Ensure all bridges are in safe operating conditions for the intended users.
- Ensure regular transit vehicle inspections and appropriate maintenance.

Selected Measures:

Pavement (streets, sidewalks and trails) in good condition.
Bridge Inventory and Sufficiency Rating.
Transit vehicle breakdowns.
Percent of transit vehicles in good “state of repair.”

Objective 2:

Minimize impacts of construction activities and non-reoccurring incidents to system users (transit, trail, sidewalk, bike, freight, rail and passenger vehicle).

Actions:

- Promote and implement incident management techniques such as quick clearance, work zones, weather management systems and traditional traffic operations and processes.
- Manage construction schedules within the region amongst state and local agencies to minimize transportation disruptions.

Selected Measures:

Number of road closures due to crash incidents.
Duration of road closure due to crash incidents.

Objective 3:

Build sustainable infrastructure that is not prone to natural hazards and recurring maintenance/ construction activities.

Actions:

- Utilize modeling and analytical tools to determine cost effective and sustainable construction designs based on infrastructure type and use.
- Promote cost effective construction design that minimize maintenance and replacement costs.
- Promote cost effective capital procurement to minimize maintenance and replacement costs.

Selected Measure:

Compare miles of roadway with pavement conditions that are at or above good.

Objective 4:

Eliminate at-grade rail crossings along primary corridors and at other locations where conflicts exist.

Action:

- Work with cities, counties and rail companies to evaluate and propose improvements or elimination of at-grade crossings.

Selected Measure:

Number of at-grade crossings improved or eliminated.

Objective 5

Promote the use of transit, rail, bike and walking to decrease congestion at peak hours.

Actions:

- Market the benefits of transit, bike, and walking versus passenger vehicle travel to the

community.
- Encourage increased walking, transit and bike use through the installation of infrastructure such as transit stop improvements, bike racks and lanes, and sidewalks.

Selected Measure:
Number of transit stop improvements, bike racks, bike lanes and sidewalk infrastructure projects.

Objective 6:

Develop and deploy Intelligent Transportation System (ITS) technologies to improve system performance and traveler information.

Action:
- Utilize tools such as incident management, work zones, weather management systems and traditional traffic operations to improve efficiency

Selected Measure:
Travel time along primary corridors.

Planning Factor 8:

Emphasize the preservation of the existing transportation system

PF8 - GOAL 1

Maintain the existing transportation infrastructure and capital resources to maximize and exceed their expected useful life.

Objective 1:

Rehabilitate, reconstruct and replace transit, street, bridge, sidewalk, trail and bicycle infrastructure and capital as appropriate to maintain safe and efficient operating conditions.

Actions:
- Pavement and surface management for streets, sidewalks and bicycle systems.
- Inspect and maintain all bridges to safe operating conditions for the intended users.
- Transit vehicle inspection, maintenance and repair program.

Selected Measures:
Miles of repaved and reconstructed roadways.
Number of rehabilitated and replaced bridge structures.
Increase in number of transit vehicles in-service hours.
Miles of trail and sidewalk repaired/replaced.

Objective 2:

Promote maintenance programs that extend the useful life of transportation capital and infrastructure.

Actions:
- Administer pavement and bridge preservation and maintenance programs.
- Administer sidewalk and trail preservation and maintenance programs.
- Administer transit vehicle maintenance and preservation programs.

Selected Measures:
Age and mileage of replaced transit vehicles.
Bridge age and sufficiency rating.
Age and condition of roadway surface at time of resurface/replacement.

Objective 3:
Maximize available highway capacity before considering adding travel lanes.

Actions:
- Signal improvements and modernization.
- Continue implementation of access management and control measures.

Selected Measures:
Peak period level of service.
Volume to capacity ratio.

Objective 4:
Promote infill development in densely populated urban areas through infrastructure preservation projects.

Action:
- Identify and construct transportation improvement projects that support infill developments in the urban area.

Selected Measures:
Increase in property values in urban areas.
Number of transportation projects in densely populated areas.

Planning Factor 9:
Improve the resiliency and reliability of the transportation system and reduce or mitigate storm-water.

PF9 - GOAL 1
Maintain the existing transportation infrastructure and capital resources to maximize and exceed their expected useful life, minimize damage from disasters and reduce storm water runoff and its environmental impacts.

Objective 1:

Promote pavement and bridge management plans infill development in densely populated urban areas through infrastructure preservation projects.

Action:

- Identify and construct transportation improvement projects that support road, bridge and trail maintenance.

Selected Measures:

Miles of preventative surface treatments on roads, bridges and trails.
Miles of resurfaced and reconstructed roads and trails.
Number of rehabilitated bridges.

Objective 2:

Promote the maintenance and preservation of transit vehicles.

Action:

- Support routine inspection, maintenance and repair activities for all transit and para-transit vehicles.

Selected Measures:

Miles between major maintenance occurrences.
Years beyond useful life expectancy that vehicle remains in a Good State of Repair.

Objective 3:

Promote infrastructure investment that minimizes infrastructure damage from likely natural and manmade disasters.

Actions:

- Build and protect infrastructure from flooding events.
- Maintain contingency plans for utilizing transit infrastructure for evacuation purposes.

Selected Measures:

Number of projects designed to elevate infrastructure above anticipated flood levels.
Current contingency plan for transit vehicle use in evacuation operations.

Objective 4:

Promote green infrastructure that reduces and treats storm water runoff.

Actions:

- Incorporate storm water management strategies into infrastructure design.
- Properly manage storm water during infrastructure construction.

Selected Measures:
Number of projects that include effective storm water management provisions.
Number of project construction areas the properly manage storm water.

Objective 5:

Maintain a Continuation of Operations Plan (COOP) to assist in disaster recovery efforts.

Action:

- Ensure COOP is current and relevant to potential threats.

Selected Measure:
Up to date COOPs and disaster recovery procedures.

Planning Factor 10:
Enhance travel and tourism.

PF10 - GOAL 1
Maintain a multi-modal transportation system that affords mobility and access to alternative travel modes for visitors to the metropolitan area.

Objective 1:

Promote transit, pedestrian and bicycle accessibility and mobility to areas of interest to tourists visiting the metropolitan area.

Actions:

- Develop, enhance and promote wayfinding signs and systems to direct residents and tourists to points of interest.
- Maintain information on transit system usage and routes that provide access to regional points of interests

Selected Measures
Number of wayfinding signs and systems.

Study Process

The study process used to develop the long-range transportation plan update was based upon the following work phases.

1. Forecast of Socioeconomic Data - Year 2040
2. Forecast Year 2040 Travel Demand
3. Develop and Evaluate Alternative Projects
4. Refine the Selected Plan
5. Selection of the Recommended Plan

An inventory and analysis was conducted of existing and future socioeconomic data necessary to set the stage for plan development. The projected socioeconomic data allowed for the forecasting of future travel demands. These demands were analyzed on the transportation system as adopted in the current 2035 Transportation Plan and ultimately on the transportation system as proposed by the selected 2040 Transportation Plan.

As a result of these analyses, projects were identified which would eliminate or significantly improve problems with the existing road and transit networks. The list of projects were reviewed and screened by the Urban Transportation Advisory Board (UTAB). Alternative plans and concepts were developed and evaluated. Based upon the findings of this evaluation and the planning, policy, and engineering judgments of the Urban Transportation Advisory Board, Transportation Technical Committee, and Transit Planning Committee, a final plan was selected.

The technical work phases of the 2040 Transportation Plan are documented more thoroughly in the following chapters. This report serves as a guide to, and a summary of, the technical background information produced during the plan update. For a comprehensive review of the long-range transportation planning process as it has evolved for the Fort Wayne/New Haven/ Allen County area, please consult the following documents.

- 2035 Transportation Plan
- 2030-II Transportation Plan
- 2030 Transportation Plan
- 2025 Transportation Plan
- Technical Report for the Fort Wayne-Allen County-New Haven Planning Area May 2000
- 2015 Transportation Plan
- Technical Report for the Fort Wayne-Allen County-New Haven Planning Area, June 1996
- Allen County 2010: A Transportation Plan for the Metropolitan Area
- Technical Report, May 1992
- Fort Wayne/New Haven/ Allen County Long-Range Transportation Study Update(2005 Plan)
- Final Report, June 1986
- Fort Wayne/New Haven/ Allen County Long-Range Transportation Study Update (2000 Plan)
- Final Report, April 1981
- Fort Wayne-New Haven-Allen County Transportation Study,(1990 Plan), 1971.

All of these reports were prepared by the Northeastern Indiana Regional Coordinating Council as part of the metropolitan transportation planning process.

Report Organization

The technical report documents the process for the long-range transportation plan as well as the plan itself. The report is organized into nine chapters:

Chapter 2 – discusses the base year and planning year socioeconomic data used to forecast future transportation needs and to identify improvements to meet those needs.

Chapter 3 – presents the travel forecasting procedures for the year 2040 transportation system. It describes in detail how these travel forecasts were developed and the significance of the findings.

Chapter 4 – documents the evaluation of the alternative transportation sketch plans. This section includes a discussion of new road projects and transit proposals, and the results of the network testing of the alternatives.

Chapter 5 – discusses the public and government agency input obtained throughout the development of the plan update. Factors that affected the selection of the recommended plan are presented. This chapter includes sections on public participation, environmental justice, MAP-21 broad areas, and livable communities.

Chapter 6 – presents the selected 2040 long-range transportation plan and recommended policies and improvements. This chapter includes the Pedestrian and Bicycle Plan and a discussion on Intelligent Transportation System technology for the metropolitan area.

Chapter 7 – Safety Management

Chapter 8 – Environmental Mitigation

Chapter 9 – Freight Management

Chapter 10 – presents some future implications and effects of the long-range transportation plan, status of previous plan implementation, and discusses new strategies for managing urban congestion.

Appendix A – Congestion Management Program
Appendix B – 2015 Socioeconomic Data
Appendix C – 2040 Socioeconomic Data
Appendix D – Access Standards Manual 2011
Appendix E – Roadway Design Standards
Appendix F – Local Project Cost
Appendix G – Bus Fort Wayne Plan
Appendix H – The Coordinating and Transportation Services Guide
Appendix I – Coordinated Public Transit-Human Services Transportation Plan for Allen County
Appendix J – Public Participation – Comments and Responses
Appendix K – Pedestrian component of the Transportation Plan\Bicycle Parking Recommendation Policy

Appendix L – Environmental Document Data Citations
Appendix M – Air Quality Conformity Determination