Porter County
Land Use & Thoroughfare Plan

Prepared for:
Porter County, Indiana

By:

HNTB

PORTER COUNTY LAND USE AND THOROUGHFARE PLAN

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INTRODUCTION

A. INTRODUCTION

The Comprehensive Plan is a tool to guide Porter County into the future. It outlines the vision of the community, as expressed by its citizens; the goals, objectives, and policies that help steer the community to that vision; and the individual plans that make that vision a reality.

Plans of this nature make it possible for cities and counties to be in control of their own future. By creating a framework for smart planned growth, communities can approach land use development, public services and resources, and public investments in a positive manner.

The Comprehensive Plan is a policy document that sets the vision for the county for the next twenty years. Although it is not a zoning ordinance or a regulatory document, it is an official policy document that is adopted by the legislative bodies of the County. This document plans for the physical, social and economic growth and redevelopment for Porter County. The plan looks at a variety of areas including land use, transportation, infrastructure and utilities, drainage, environmental conservation, economic development, recreation and open space, and housing.

B. THE PLANNING PROCESS

The planning process began in November 1999, when HNTB Corporation was selected as the consulting team for the Comprehensive Plan.

The process for developing the Comprehensive Plan is reflected in the organization of this document. The first major phase of the Comprehensive Plan was gathering public input through various means, which included public meetings, key person interviews, focus groups and access to the County web site which devoted an area on the site to the development of the plan. Demographic and economic information was researched and studied, and projections for the future population and land use of the County were conducted. The findings provided a foundation for the guiding principles and aided in the development of the Land Use Alternatives. These alternatives were generated and later critiqued, which led into the development of the final Land Use Alternative. This alternative was then used to develop the Land Use Plan. The Plan contains several components, which form the elements of the plan, such as housing, transportation, economic development, and agricultural preservation. Once the elements were in place, implementation strategies were researched and developed and a policy plan was written.

C. PRINCIPLES OF LAND USE PLANNING

It is important to understand that land use planning at the County level can have serious implications on the fiscal health of both municipal and the County governments, and on the ability of municipalities and other entities to provide utilities and services. Studies[1] have shown that scattered patterns of low-density development (a.k.a. "sprawl") can result in an inefficient delivery of such services as education and roads, higher costs for delivering public services, and inequitable patterns of costing out infrastructure.

More compact development patterns also have benefits for residents, in lower transportation costs, faster response times for emergency services (police, fire, and medical), and more convenience to shopping and employment areas. Some public services (i.e., sanitary sewer and wastewater treatment) result in environmental preservation. Chapter V will discuss in more detail some of the quality-of-life impacts of the future land use plan, as well as its impacts on the overall character of the County.

These findings are intuitive – having a population spread out over a larger area results in more roadways, pipes, and vehicle miles traveled, than having that same population within a smaller area. Also, with a lower supply of developable land, the cost of land may rise under a compact development scenario. Land for industrial development may become more difficult to find in a compact scenario.

The final land use plan that resulted from this planning process represents a tradeoff between these interests. Thus, the final land use plan is a compromise that addresses the most fundamental concerns voiced by the public and the municipalities, as described in the next chapter.

D. PLAN COMPOSITION

The Porter County Land Use and Transportation Plan, herein referred to as "The Plan", is comprised of several remaining chapters.

Chapter II: Public Input will describe the planning process and the public involvement efforts used to create The Plan.

Chapter III: Community Inventory and Analysis will provide an overview of Porter County in 2000. Before determining where the County should go in the future, it is important to understand where the County is now. Therefore, this Chapter will highlight and explain the physical character of Porter County, addressing natural and environmental features. This Chapter will also present social influences and transportation facilities and circulation patterns, all which provide important trends that assist in the development of the future land use direction for the County.

[1] Northern Illinois University and the American Farmland Trust (1999), *Living on the edge: The Costs and Risks of Scatter Development*

Chapter IV: Vision, Goals and Objectives is the backbone of The Plan. This Chapter sets forth the desires of the Porter County citizens and provides the direction for the land use plan.

Chapter V: Land Use Plan describes the future character, growth and development pattern for Porter County. The mainstay of The Plan is to focus on preserving and protecting the existing character of the County while allowing managed and directed growth and development.

Chapter VI: Transportation Plan will provide more detail about the transportation network and the impact future land uses will have on the existing network and character of the County. Recommendations will be made as to which corridors should be highlighted as the most prominent, how treatments can be added to gateways and corridors to indicate an arrival into Porter County, and future improvements that will need to be made to support additional growth in those areas where the current network cannot support future growth.

Chapter VII: Recreation Plan incorporates the improvements and ideas from the Five Year Porter County Parks Master Plan. The information gleaned from this document will provide the guidance for recreation and open space land use and policy direction.

Chapter VIII: Implementation will provide the necessary policy steps for using and implementing this document. It will provide guidance for ensuring that The Plan remains a living document to be used by the leaders and decisions makers in the County.

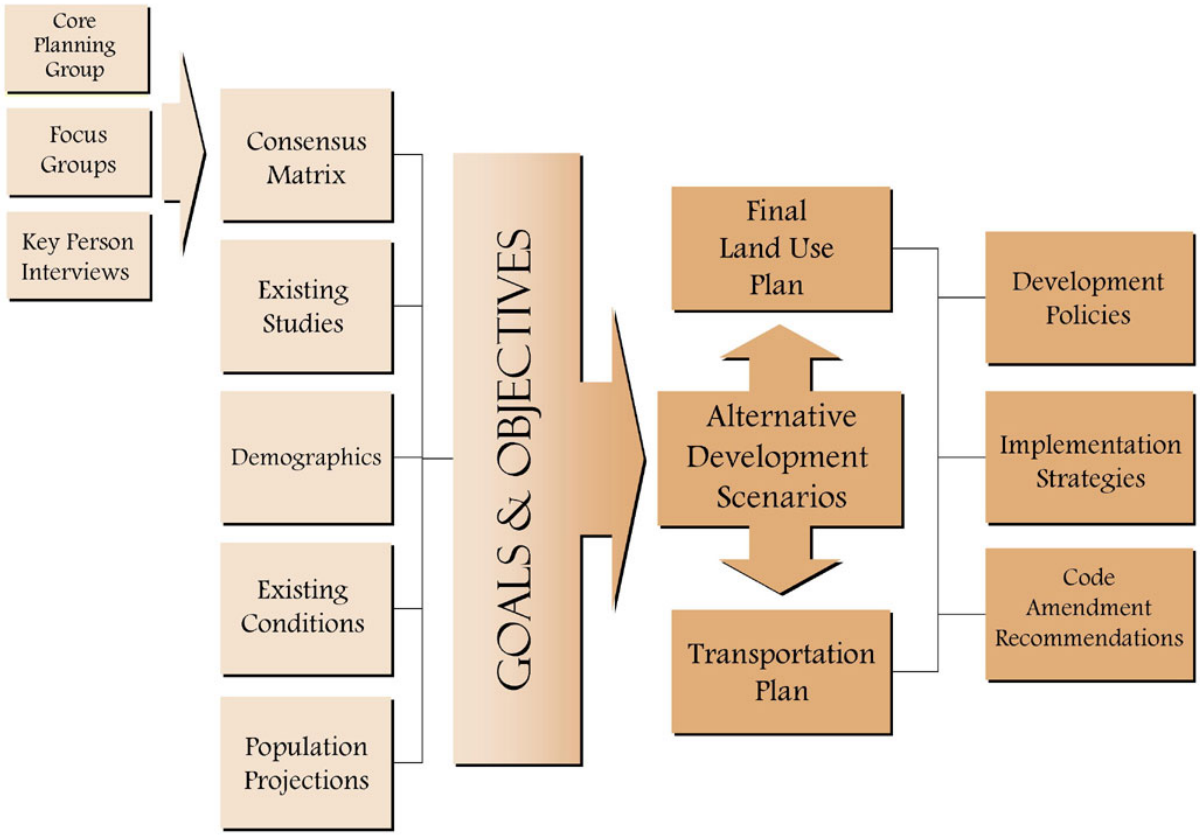
THE PLANNING PROCESS

A. THE PROCESS

To determine the future direction for The Comprehensive Plan, a process was developed that facilitated public input, allowed for guidance by the leaders and decision makers of the County, and incorporated past trends as a means of filtering and merging these ideals, values and information together. The result is a set of guiding principles to guide growth and development over the next twenty years.

As show in Figure 1, Comprehensive Plan Process, there were five steps in the process that was used to develop The Plan. The public's input into The Plan is important because it provides insight on a variety of issues the County is facing. The citizen input into this process took many forms including a core planning group that oversaw the development of The Plan, citizen input meetings, public Plan Commission meetings and key person interviews. This chapter will explain the planning process, the results of each step and how the public played a role in the shaping of this plan.

Figure 1: Porter County Comprehensive Planning Process



B. STEP 1: UNDERSTANDING PORTER COUNTY

The first step in the process was to start the project and to gain knowledge about Porter County and what The Plan means to its citizens. This included creating a Core Planning Group that provided continual guidance and input into the preparation of The Plan. The Group was an essential part of the process in the creation of the plan and the reviewing of the goals and objectives and drafts of The Plan. The Group represented the County's leaders and acted as a sounding board for issues and ideas.

Another part of this initial phase of the process was to obtain a broader understanding regarding the issues facing Porter County. These interviews were face-to-face meetings conducted by the consultant. The persons selected for these interviews included county leaders and decision makers as well as persons representing particular interests in the County and those with a broad knowledge about planning issues in the different jurisdictions. Their comments were very candid regarding major issues in Porter County but provided positive opinions and attitudes towards future growth and development within the County and the manner in which it should occur.

Following the initial data collection process, five focus groups were conducted to determine the strengths, weaknesses, opportunities and threats within Porter County. As part of the discussion, each focus group developed their vision statement of what The Plan should do.

The five focus groups included a communities group which represented the different communities within Porter County; an economic development group which included County leaders as well as local business persons, Chamber representatives and public and private utilitizes; a Development group which contained persons representing developers, builders; an agricultural group, which contained farmers who discussed the importance of farming within the community; and an Environmental and Parks group which concentrated on issues relevant to parks and environmental features.

The strengths, weaknesses, opportunities, and threats (SWOT) exercise conducted by the five focus groups eventually lead to the formation of questions for the exercise developed to gain input on policy issues from the public. The purpose of the SWOT and the later public exercise was to stimulate constructive conversation about which characteristics of the community the citizens liked or disliked. The issues that emerged were critical in determining the issues this plan addresses. A summary of the five most commonly mentioned issues discussed in the focus groups are illustrated in Table 1, Focus Group SWOT Analysis Exercise Results. Table 2, documents the vision statements that each focus group developed.

Table 1
Focus Group SWOT Analysis Exercise

What are Porter County's Strengths?
1. Biodiversity, Open Space, Natural Resources, Rivers & Wetlands
2. State & National Parks, Water Access and Trails
3. Location of the County as the crossroads to the north and to Chicago
4. High Standard of Living, Quality of Life and Character
5. School System (K-12)
What are Porter County's Weaknesses?
1. Lack of coordinated growth, vision in planning & leap frog development
2. Poor funding for County Parks & infrastructure, as well as property tax reliance
3. Lack of quality commercial development, industrial space & professional jobs
4. Inter-governmental cooperation & communication and fringe services
5. Pollution, marginal air/water quality, poor wellhead protections & watershed management
What are Porter County's Opportunities?
1. Set aside open space for parks
2. Cooperation between governments
3. Council of Communities
4. Area wide rules and regulations for development
5. Create local taxing method to purchase open space
What are Porter County's Threats?
1. Urban sprawl, uncontrolled growth, annexation as a revenue source & lack of vision
2. Pollution, ground water contamination, non-point pollution & non-attainment status
3. Non-diversified employment, steel industry reliance & flight of college graduates
4. Loss of prime farmland and no agricultural/open space preservation
5. Unfunded mandates & state formula for replacing excise tax

Source: Focus Group Meetings – January 18-20, 2000

Table 2
Focus Group Vision Statements

Communities Group
"By enhancing intergovernmental cooperation within our county & neighboring counties, we will continue to preserve open space & recreational activities while guiding growth."
Economic Development Group
"Porter County should build upon our unique character to provide an extraordinary quality of life."
Development Group
"Porter County should enhance & assure our quality of life by providing factual information and infrastructure and recognizing that adequate infrastructure is imperative for maintaining our school system and guiding growth."
Agriculture Group
"Porter County will maintain our quality of life through the retention of open space and good intergovernmental cooperation."
Environmental & Parks Group
"Porter County's biggest asset is Lake Michigan and the Indiana Dunes, but there are very few open space areas or public park areas set aside in the rest of the county. This presents Porter County with the ability for opportunities to create policies regarding open space and park areas, control sprawl and serious environmental threats that have to be addressed and corrected."

Source: Focus Group Meetings – January 18-20, 2000

C. STEP 2: TRENDS IN PORTER COUNTY

The second step in the planning process was to understand the trends in Porter County. This included holding public meetings to discuss with citizens their concerns and ideas, reviewing existing studies, reviewing demographic trends, documenting the physical conditions and determining the future population projections.

1. Public Meetings

To gain input from the public on key issues and concerns, a series of public meetings were conducted to further understand the issues and the perspectives of the residents of Porter County. Between February 21-23, 2000, three public meetings were held throughout the

County. These meetings were held in Valparaiso, Chesterton and Hebron. The purpose of these meetings was to build an understanding of what issues The Plan should consider in the form of goals and objectives.

Each meeting started off with a brief presentation about the Land Use and Transportation Plan Process and an illustration of the demographic and economic trends in the County. After the presentation, the citizens were broken into groups and asked to take part in an exercise formulated to gain public opinions. Each group was given a paper with a series of contrasting planning principals. Principle A was listed on the right and its opposite, principle B, was listed on the left. In the center of the principles, were columns titled "Strongly Agree"(with principal A), "Agree"(with principal A), "Undecided", "Agree"(with principal B), "Strongly Agree."(with Principal B). The group was then asked to discuss as a group which principle they agreed with and the extent to which they agreed. They were given a dot to place in one of the columns. See Figure 2 for an example of the form that the public use.

Figure 2
Planning Principle Exercise – Group Discussion

Principle A	Strongly Agree	Agree	Undecided	Agree	Strongly Agree	Principle B
[illegible]						
Allow development to occur in all parts of the county.					●	Focus development near existing cities and towns.
Place restrictions on the use of property to protect the rural character of the county.			●			Protect private property rights.
Maintain the character of existing towns.	●				●	Encourage new building styles in existing towns.
Promote the clustering of new houses in a subdivision to preserve open space		●				Allow new houses throughout an entire subdivision - Don't preserve any open space
Promote higher housing densities to conserve open space	●					Spread new houses and businesses out
[illegible]						
Focus on repairing and widening existing roads				●		Focus on building new roads
Reduce traffic jams by encouraging car pooling, bus use, walking or bicycling		●				Do not promote alternative to the automobile
Allow driveways anywhere along county roads				●		Manage access to county roads
New subdivisions should connect to each other	●					New subdivisions should not connect to each other

The final part of the exercise was to give each individual four dots to place on the four principles they individually thought were the most important issues in the County. See Figure 3 for an example of this exercise.

Figure 3
Planning Principle Exercise – Individual Opinion

Principle A	Strongly Agree	Agree	Undecided	Agree	Strongly Agree	Principle B	This is one of the most important issues to me
Urban Form							
Allow development to occur in all parts of the county.					●	Focus development near existing cities and towns.	●
Place restrictions on the use of property to protect the rural character of the county.			●			Protect private property rights.	● ●
Maintain the character of existing towns.	●				●	Encourage new building styles in existing towns.	
Promote the clustering of new houses in a subdivision to preserve open space		●				Allow new houses throughout an entire subdivision - Don't preserve any open space	●
Promote higher housing densities to conserve open space	●					Spread new houses and businesses out	
Infrastructure							
Focus on repairing and widening existing roads				●		Focus on building new roads	● ● ●
Reduce traffic jams by encouraging car pooling, bus use, walking or bicycling		●				Do not promote alternative to the automobile	
Allow driveways anywhere along county roads				●		Manage access to county roads	
New subdivisions should connect to each other	●					New subdivisions should not connect to each other	●

The results from these three public meetings were tallied to understand where the public as a collective whole falls on these planning principles. The top principles supported by the public include:

- ..Focusing development near existing cities and towns;
- Manage access to county roads;
- Economic development efforts should focus on increasing income and providing job training to County residents;
- Developments within the County should have public sewer and water systems;
- Protect private property rights;
- Do not allow any development around environmental sensitive areas including wetlands, floodplains, wildlife and vegetative communities;
- Expand public transit services to connect different areas of the county;
- Allow development to continue under current well and septic regulations; and

- Discourage cities and towns from annexing developments into their jurisdictions.

After the group findings were tallied, the individual dots were counted to determine which principles were the most important to individuals. Overall, when given the chance to voice their opinions, the individual results were quite different than the group results. The results of the individual voting are as follows:

- ..Protect farms from encroaching residential, business or industrial development through such measures as growth boundaries, large-lot zoning, etc.;
- ..Focus development near existing cities and towns;
- ..Require developers to pay impact fees to off set the cost of development to existing community services;
- ..Developers should pay a fair share of the extension or expansion of roads, water, sewer and parks;
- ..Promote higher housing and business densities to conserve open space; and
- ..Place restrictions on the use of property to protect the rural character of the County.

2. Reviewing Existing Studies

It is important that this plan acknowledge and embrace the discussions and information gathered through past planning processes. Those studies provided additional insight regarding issues experienced by Porter County and its residents. Though The Plan provides a series of guiding principles, objectives and policies that provide specific guidance to the decision makers, an understanding of past studies was needed to determine whether past issues have been minimized or if the plan needed to continue to incorporate those issues.

3. Documenting Physical Features

Just as important as understanding what the past issues were, it is important to map the physical conditions of the County. These conditions provide us an indication of where potential growth can and should occur and well as where it should not. The physical conditions that were examined included general soil types, utility service areas, parks and recreation suitability areas, prime agricultural lands, existing land use, environmental features and the transportation network. These maps are explained and discussed throughout the remaining Chapters of The Plan.

4. Population Projections

The basis for creating a future land use plan is population projections. From a land use planning perspective, absolute increased population is less meaningful than the impact the population change will have upon housing development and upon demand for retail goods and public services. Traditionally, projections of the population have been used to establish a growth rate that in turn is used to allocate housing units which can then be used to

determine how much residential land will be needed to support that population. This was the method used in developing the Future Land Use Plan for Porter County. The population projections can be found in Chapter III, Section D, Subsection 1a, Population Characteristics.

D. STEP 3: FORMULATION OF VISION, GUIDING PRINCIPLES AND OBJECTIVES

After the public meetings were completed, the vision, guiding principles and objectives were developed and submitted to the Core Planning Group for approval. After a few minor changes, the vision, guiding principles and objectives were presented to the Plan Commission at a public meeting. The Plan Commission and public provided input on changes that needed to be made. The changes were made and presented again to the Plan Commission at a public meeting for adoption. The Plan Commission adopted the goals and objectives. The adopted Vision, Guiding Principles and Objectives are in Chapter Four: Vision, Guiding Principles and Objectives.

E. STEP 4: DEVELOPMENT OF ALTERNATIVES AND FINAL LAND USE AND TRANSPORTATION PLAN

After the approval of the vision, guiding principles and objectives, three growth scenarios were created based on the input that was received from County residents and various discussions with the Core Planning Group. Each of the three alternatives forecasted different levels of growth and development for Porter County. The three alternatives were presented to the Core Planning Group and then the Plan Commission at a public meeting. At the meeting, the public was provided the opportunity to provide input on the three alternatives. This input was given through an exercise. The public was divided into groups and given the guiding principles and objectives. They were then asked to pick which alternative best met each guiding principle and objective. The public was then asked specific questions as to which alternative had the best location for specific land uses such as conservation areas, residential areas, gateways and commercial areas. From this public meeting a final alternative was created. Members of the Core Planning Group then took the final alternative around to the various city and town Plan Commissions in Porter County. The three alternatives and the Final Land Use Plan are discussed in further detail in Chapter V: Land Use Plan.

F. STEP 5: IMPLEMENTATION

The last step in the planning process is the implementation of the plan. This step includes the physical assembly of the plan and the adoption by the Plan Commission and County Commissioners at public hearings. The first four steps laid the foundation for the plan, and the final step turned it into language found in this Plan. The draft of the plan incorporated all the background information gathered, the vision, guiding principles and objectives policies, the land use plan and implementation measures. In Chapter Eight: Implementation, Development Policies, Implementation Recommendations and Code Amendment Recommendations are suggested to implement the physical land use plan and

policies set forth in The Plan. Following review by the Core Planning Group and public, The Plan will be presented at a pubic hearing held by the Plan Commission. At that time, the Plan Commission will forward a recommendation to the County Commissioners. The County Commissioners may then adopt the plan.

After the plan has been adopted, The Plan will be implemented by undertaking the implementation measures set forth in Chapter Eight: Implementation. Most of these implementation measures will occur when opportunities arise, but not all will occur at once. The implementation of the policies and physical recommendations should be considered as the annual budget of the County is prepared.

COMMUNITY INVENTORY AND ANALYSIS

A. REGIONAL CONTEXT

Potential land development and land use needs and opportunities are defined in part through an inventory of available resources. The inventory and analysis process examines environmental, cultural, and manmade resources within the county. These resources directly affect population growth patterns, available land, types of supportable development and the character of the community in which people choose to live. Once compiled, this information is used in conjunction with an assessment to determine future land uses and development patterns.

Porter County is located approximately 150 miles northwest of Indianapolis and 50 miles southeast of Chicago, see Figure 4, Regional Context Map. Nearly all of the northern portion of Porter County down to Valparaiso is consider part of the Chicago Metropolitan Statistical Area. The county is within 300 miles of many neighboring states, including Wisconsin, Illinois, Iowa, Missouri, Michigan, Ohio and Kentucky. Originally, Porter County included all of the land in neighboring Lake County. In 1836, the Indiana Legislature set the present boundaries of the county. The size of the county is about 272,000 acres, or 419 square miles, the 28th largest county in Indiana. Valparaiso, the county seat, is located near the center of the county. Other major incorporated areas include the City of Portage and the Town of Chesterton.

Porter County's population of 128,932 in 1990 was the 9th largest County population in Indiana. At that time, over 60 percent of the county population resided in incorporated areas. In the past 50 years, the population has increased by about 260 percent, from 40,076 in 1950 to 145,726 in 1998.

B. DEFINITION OF THE PLANNING AREA

The planning area for the Porter County Comprehensive Master Plan encompasses all of the unincorporated areas of Porter County. None of Porter County's cities and towns are under the jurisdiction of the Porter County Plan Commission. (See Figure 5, Planning Area Map)

C. NATURAL AND ENVIRONMENTAL FEATURES

The natural and environmental features of an area play a significant role in determining the final land use character of an area. Many land use decisions and housing decisions are based largely on the existing character of an area and the overall natural environment.

Figure 4: Regional Context Map

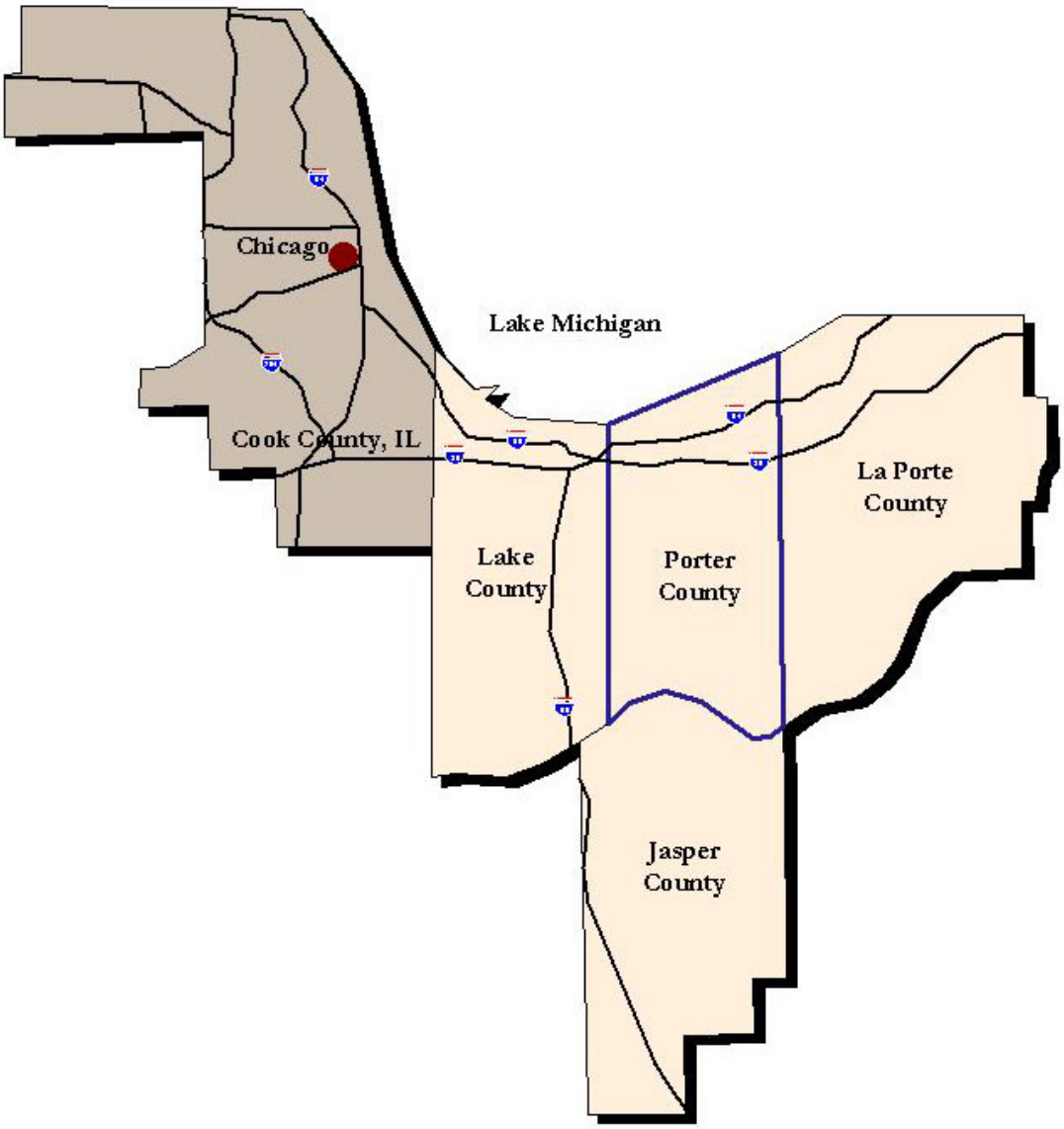
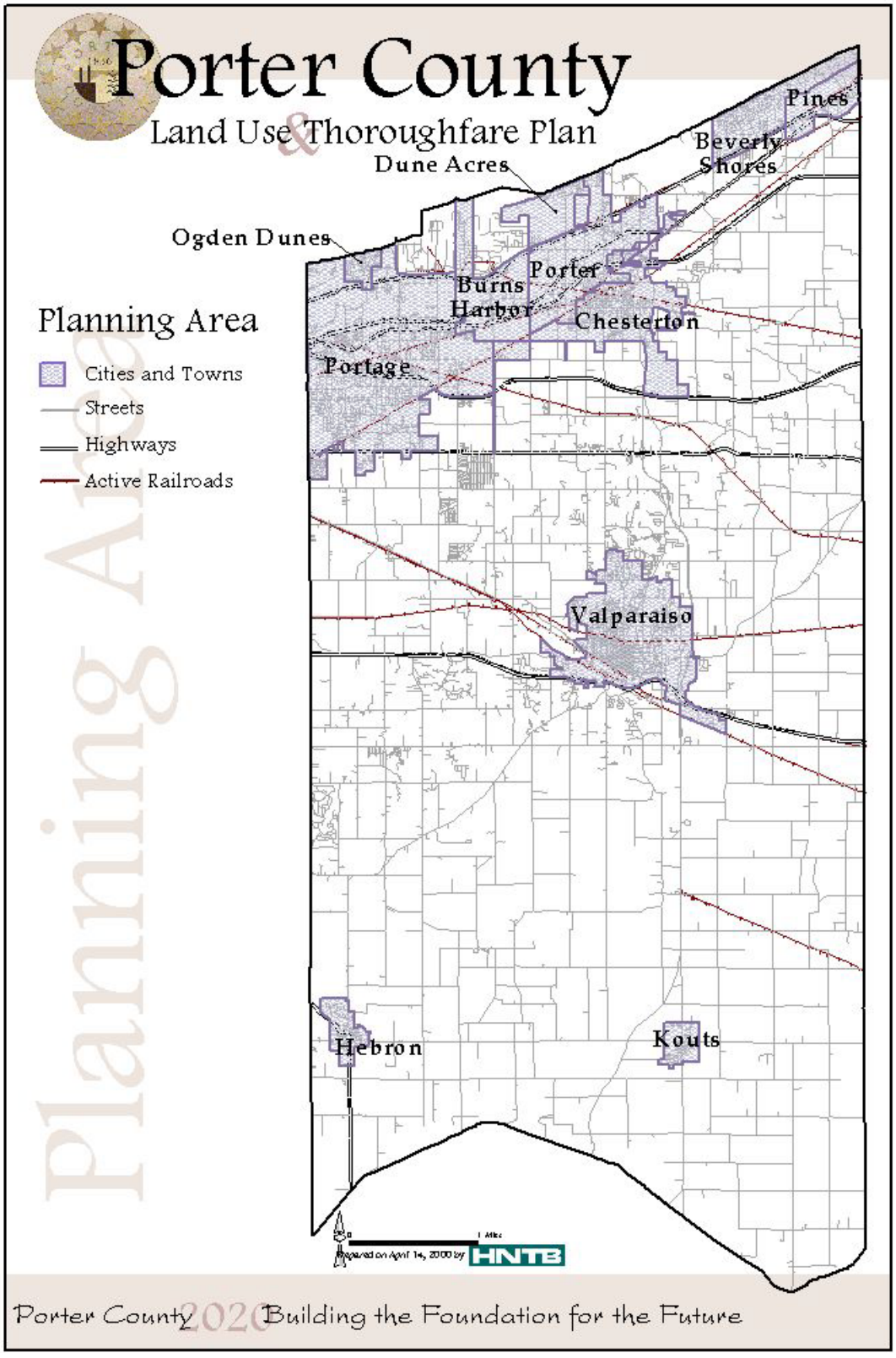


Figure 5: Planning Area Map



Since individuals make locational decisions based on their assessment of the area and its natural environment, care should be taken to assure that new development in the area has minimal impact on the character of the area. By carefully assessing the existing natural and environmental features, the County can develop its Comprehensive Plan to retain as much of the existing character of the area as possible.

Porter County is blessed with a variety of unique natural and environmental features which promote a special type of character rarely found in urban areas. This has been the reason cited by many residents during the planning process as to why residents move from other areas to Porter County. These features can also be considered as one of the recreational havens in Indiana.

The sand dunes offer a unique habitat. The beaches along the shores of Lake Michigan provide access to the water for swimming and boating activities, the marshes, rivers and streams, including the Kankakee River, provide habitat and nature watching. The "Valparaiso Moraine" is located within Porter County. The moraine includes features such as level plains, depressed hills, lakes, and wetlands. Many would also consider prime farmland as an environmental feature that adds to the character of the County.

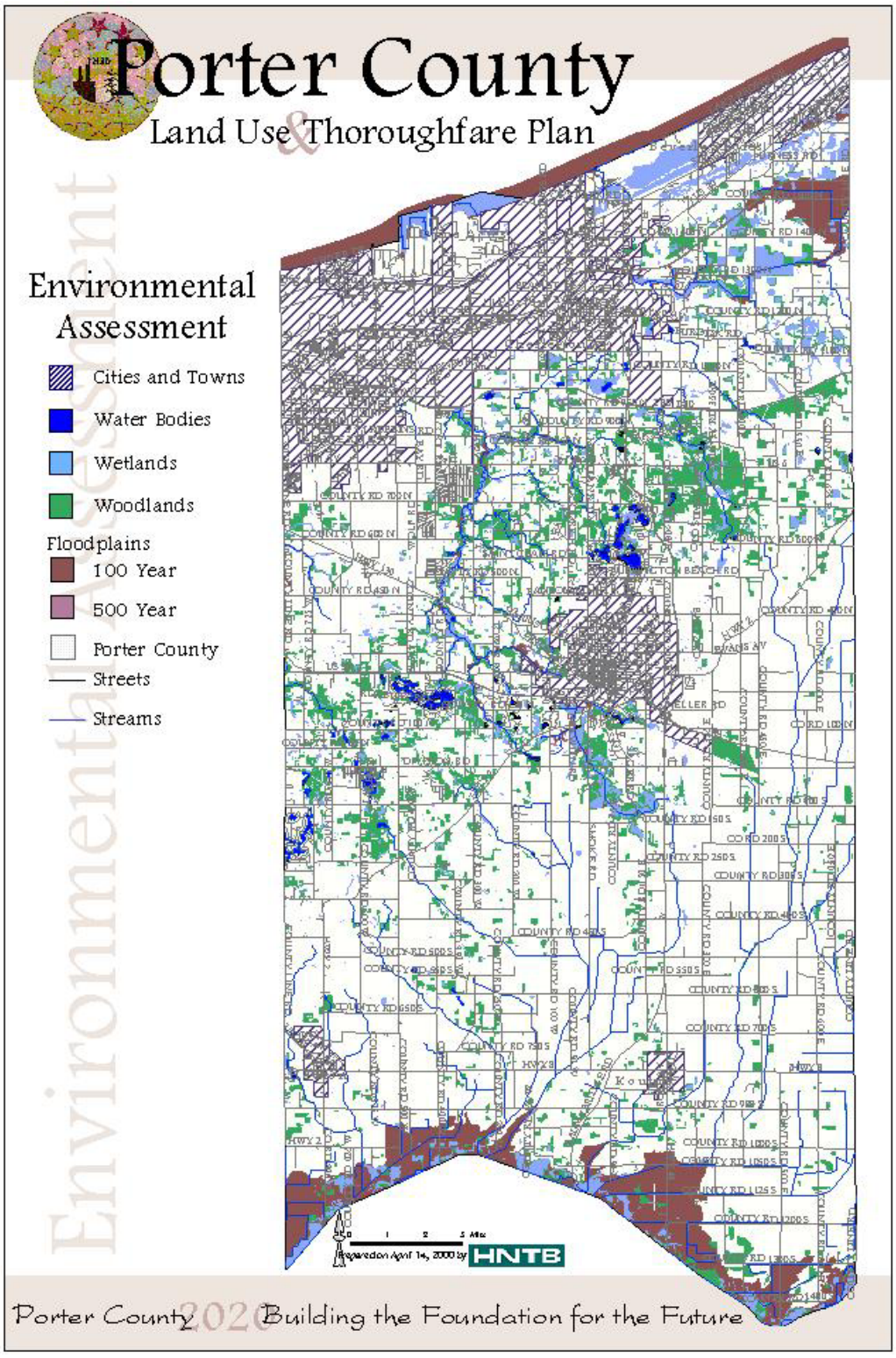
As shown in Figure 6, Environmental Assessment, many of the environmentally sensitive areas are located in the northern portion of Porter County. This map was comprised using governmental classification and maps. The areas in light blue indicate all the wetlands located within Porter County. These can generally follow rivers, streams and creeks and are generally located in depressed areas with poorly drained soils. Floodplains are noted on the map in brown. They are primarily located along Lake Michigan and the Kankakee River. In the central portion of the County, there are several woodlands, which are shown in green.

1. Climate

The County climate is generally considered continental, and seasonal fluctuations are typical for this area. In winter, the average temperature is 27 degrees F, and the average daily minimum temperature is 19 degrees. The lowest temperature on record, which occurred at Valparaiso on January 28, 1963, is –23 degrees. Much of this colder air can be attributed to the "lake affect" from Lake Michigan and the cold jet streams from Canada. This cold weather allows for significant snow and therefore promotes such winter recreation activities as sledding, cross-country skiing; hockey, skiing and ice-skating.

In summer the average temperature is 71 degrees, and the average daily maximum temperature is 82 degrees. The highest recorded temperature, which occurred on July 20, 1954, is 98 degrees. These more mild temperatures again can be attributed to the "lake affect" with the wind blowing from the north downward and providing a cooling affect.

Figure 6: Environmental Assessment



These temperatures allow wonderful summer recreational activities such as hiking, bicycling, running, swimming, etc.

The total annual precipitation is 39.3 inches. Of this, nearly 24 inches (about 60 percent) falls in April through September. Thunderstorms occur on about 45 days each year, mostly in the summer season.

The average seasonal snowfall is about 47 inches. The greatest snow depth at any one recorded time during the period since 1980 was 22 inches. On average, 20 days of the year have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year.

Prevailing winds are from the southwest and the average windspeed is highest in March at 12 miles per hour.

Overall, the climate in Porter County provides a definite change in the differing seasons. This in turn allows for many differing recreational opportunities and provides a desirable climate for the growing season for farmers and gardeners.

2. Topography, Drainage and Soils

The lowest point in Porter County, about 585 feet above sea level, is on the shore of Lake Michigan. The highest point, about 888 feet above sea level, is located approximately three and a half miles north of Valparaiso in the Valparaiso Moraine on a dissected ridge.

The soil survey inventories are compiled by the government and evaluate the general soil types in Porter County, indicating land use limitations and potentials of natural resources and the environment. Figure 7, General Soil Types, shows the soils within Porter County. In general, most of the soil types in Porter County are not conducive for sanitary facilities and building site developments. The significant issues include steep slopes, slow permeability, ponding, erosion, and poor drainage. If development, which is not connected to public water and sewer, occurs in these areas, extensive drainage systems may be required.

While soil considerations are important, and it is desirable for development to occur under ideal conditions, the majority of land in Porter County and in northwest Indiana as a whole are rated as not being conducive for private sanitary and building site development. Furthermore, soil suitability can vary greatly within these categories and even within a parcel of property. Soil testing of potential building sites is necessary in order to determine the actual limitations and mitigation measures required. The generalized soil limitations shown here should not disqualify an area from development, but should be utilized to ensure that proper testing and precautions are taken to overcome the physical limitations of the soil.

The majority of the western half of the county is Morley-Blount-Pewamo-Elliott-Markham-Pewamo. This type of soil is a nearly level to steep, well drained to very poorly drained silty soil. It is generally found on till plains and moraines. The slope can range from zero to 35

percent. The higher areas that are located on the swells and knolls are used for residential subdivisions. The lower areas are more suitable for corn and soybean crops and trees. Slow permeability, steep slopes and ponding are considered limitations.

The southeastern portion of the county is primarily Gilford-Maumee-Morocco-Bourbon-Gilford-Pinhook-Sebewa-Ailda-Pinhook. These soil types are nearly level, very poorly drained and somewhat poorly drained if they contain a mixture of loamy and sandy soils. They are generally found on outwash plains, lake plains, valley trains and terraces. They range in slope from no slope to two percent. The general uses encouraged on this type of soils are cultivated crops, woodlands, and pastures. These soil types are not recommended for trees. Pollution of the ground water is a major concern due to the limited drainage, slope and filtering qualities.

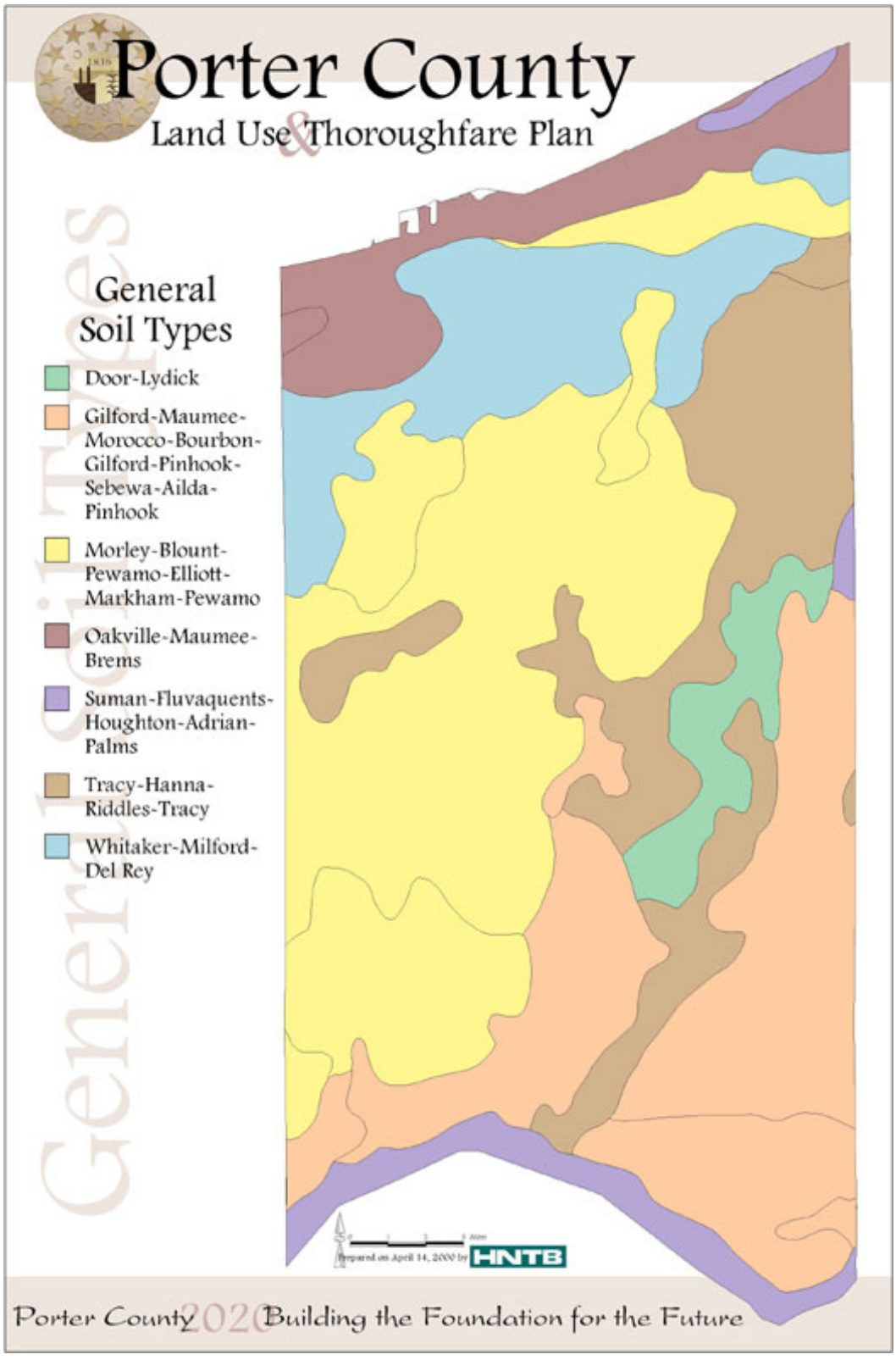
The most northern portion of the County along Lake Michigan is considered Oakville-Maumee-Brems. This soil is nearly level to very steep, well drained to very poorly drained in low areas and moderately well drained with compositions of sandy soils. This type of soil is generally found on outwashed plains, lake plains, beach ridges and sand dunes. Slopes can generally range from no slope to a very steep slope of 40 percent. This soil is conducive to trees because erosion is considered an environmental hazard.

Just south of this area is Whitaker-Milford-Del Rey. This soil type is nearly level, somewhat poorly drained and poorly drained if containing loamy and silty soils. This soil type is found on lake plains, terraces and outwash plains. It generally ranges in slope from zero to 2 percent. This type of soil is suited for cultivated crops, trees, woodland and permanent pasture.

Along the Kanakee River can be found the Suman-Fluvaquents-Houghton-Adrian-Palms. The soil type is nearly level, very poorly drained and somewhat poorly drained on soils that are silty and loamy. These are primarily found in flood plains, bogs and old lakebeds, till plains, lake plains, outwash plains and moraines. The slope ranges from zero to 2 percent. This soil type is suitable for cultivating crops, and a few of the swampy areas are suitable for woodland and pastures.

The other two soils, Tracy-Hanna-Riddles-Tracy, located in the eastern half of the County is nearly level to moderately sloping. They are generally well drained and moderately well drained loamy soils. They are found on outwash plains, till plains and moraines. The slope ranges from zero to twelve percent. These soils are suited to cultivated crops. However, because of the steep slopes, erosion can be a concern. These soils are also suited for trees.

Figure 7: General Soil Types



Door-Lydick, also located in the eastern half of the county, is a nearly level soil that contains gentle slopes. It is a well drained loamy soil that is found on outwashed plains. The slope for this soil generally ranges from zero to six percent. This soil is well suited for cultivating crops, trees, sanitary facilities and building site developments.

3. Water Supplies

Two main sources of water include groundwater within Porter County for households and surface water from Lake Michigan for industrial use. Most wells are not very deep, as the water table is fairly shallow. There are also small lakes, rivers, and streams that run throughout the county.

Besides wells, there are several service providers, Including cities and towns as well as private companies who provide water and sanitary sewer services to residents. As shown in Figure 8, Utility Service Areas, all the cities and towns, except those located in the northeast corner within Porter County are serviced by utility. Many of the areas in the unincorporated areas are provided by either a private company or a package plant, both of which are becoming fairly regular within Porter County. Some of the issues surrounding these plants are the maintenance and environmental contamination they can cause and the little control the county has over them. Another newer form of wastewater treatment facilities that some subdivisions have tried to promote is an alternative form such as wetlands. This provides a safer way to handle waste in areas where public water and sewer are not available.

4. Agriculture and Industry

A major natural resource for Porter County is its farmland, which makes up half of the county's area. In 1997, there were 134,505 acres of farmland, a decrease of 6 percent since 1992. As Figure 9, Prime Farmland illustrates, according to the United States Department of Agriculture, Soil and Conservation, the amount of prime farmland in the county, which is based on soil analysis and other factors, is limited to the east-central portion of Porter County. However, many of the farmers in the southern portion of the county have indicated that much of the land in the south is indeed suitable for many types of farming activities through the proper drainage techniques. It will be important for this plan to continue to balance the character of the county with the right of these farmers to be allowed to develop their property in accordance to their desires.

The average size of farms and number of full time farms decreased 1 and 11 percent, respectively, during the same time period since 1992. The market value of sold agricultural products has increased within that time by 22 percent, even while the size and number of farms has decreased.

Figure 8: Utility Service Areas

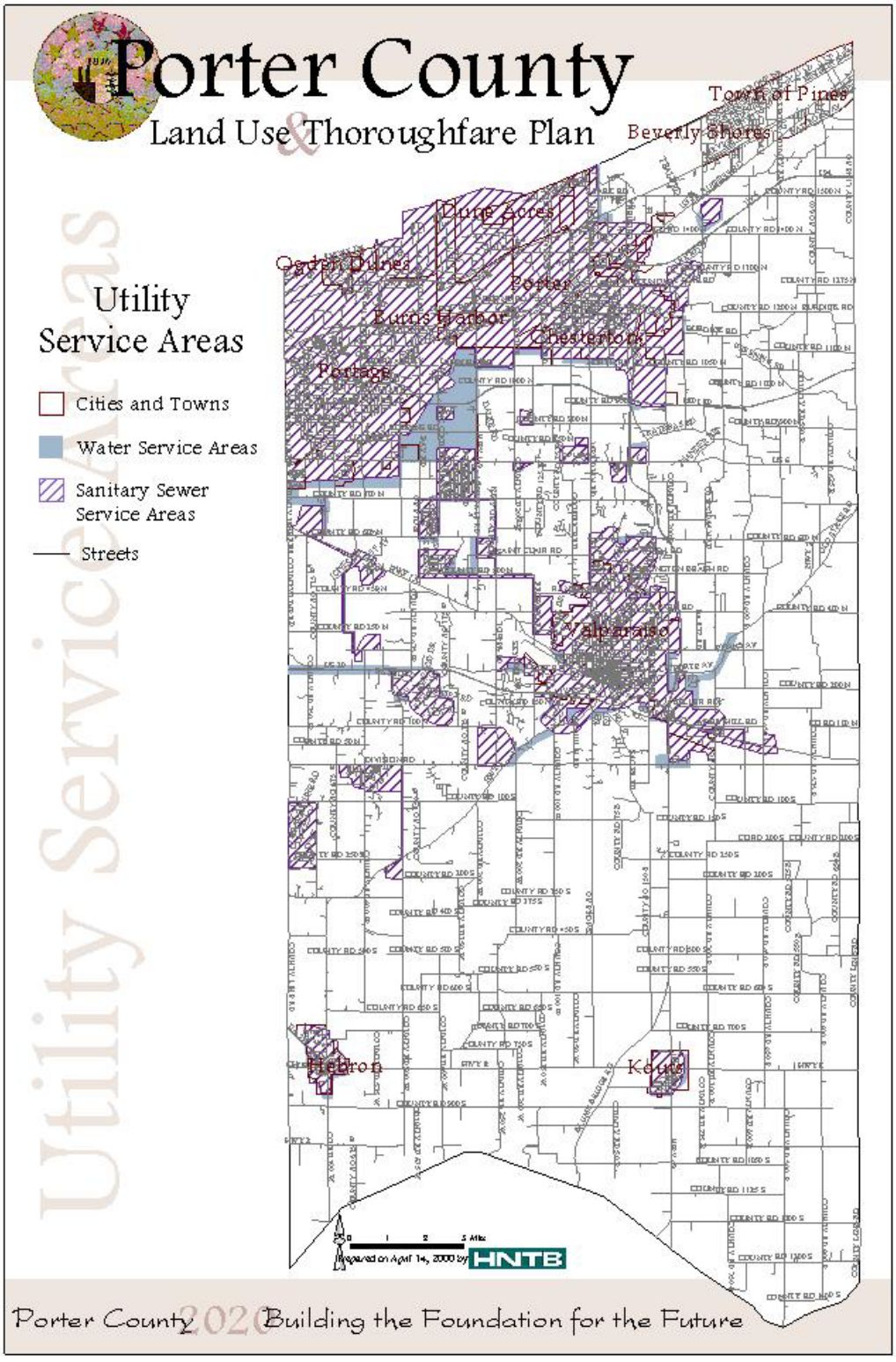
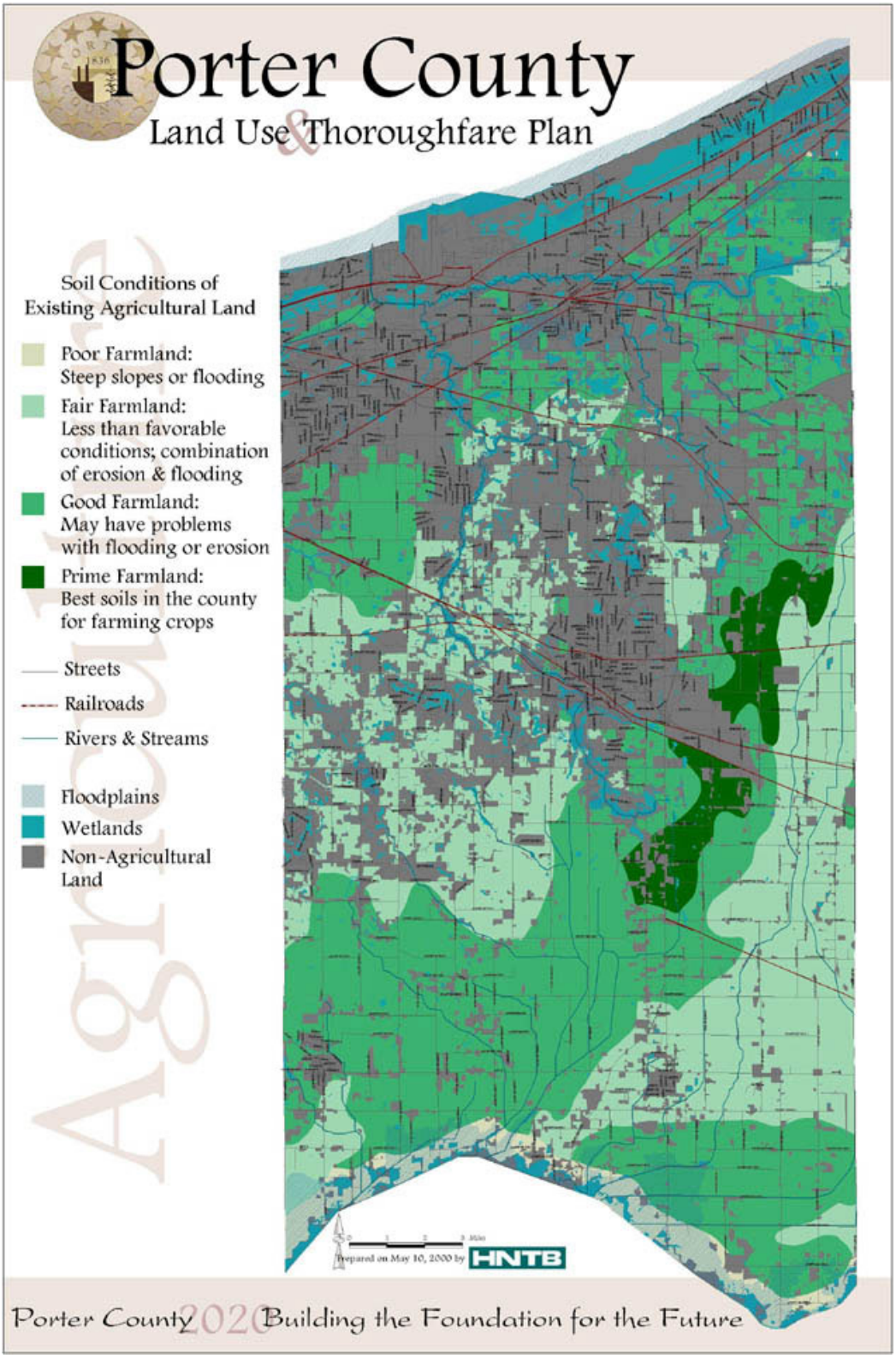


Figure 9: Prime Farmland



Industry earnings were the greatest for the manufacturing sector and the service sector in 1997. The primary metal industry exhibited one of the highest earnings in the manufacturing sector, and health and business services had the highest earnings in the services sector.

The percentage of earnings by industry were extremely similar in 1987, with manufacturing providing the most earnings and services providing the next greatest earnings, although by 1997 the percent of earnings slightly decreased for manufacturing and slightly increased for services. According to the Bureau of Economic Analysis, the per capita income and average earnings per job have steadily increased since 1994.

5. Existing Land Use

Figure 10, Existing Land Use, shows the general pattern of existing land use in Porter County. The existing land use was prepared from aerial photographs and verified by the County. Table 3, presents the estimated acreage of the various land uses within Porter County.

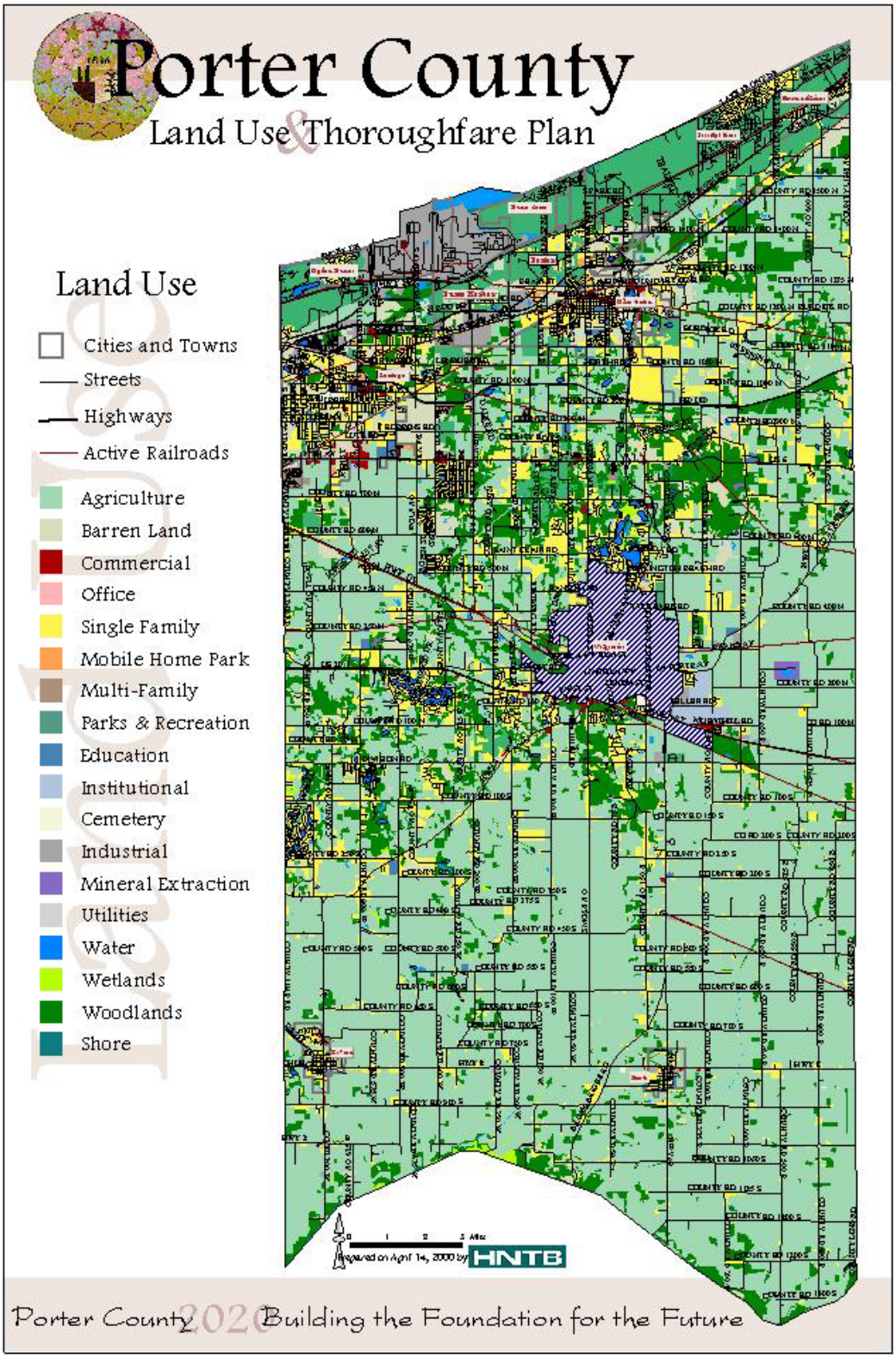
Table 3
Existing Land Use Acreages

Land Use	Acres	Percentage of Total
Agriculture	152,297	66.7%
Residential	24,251	10.6%
Industrial	3,744	2.0%
Commercial	646	0.3%
Undeveloped	38,117	16.7%
Other	9,225	4.0%
Total	228,280	100.0%

Porter County's unincorporated area is approximately 228,280 acres. The County can be characterized as an urban and rural mix of land uses. The County has been blessed with an abundance of recreational and natural areas. These are located primarily in the northern part of the County along the shoreline. Over 80 percent of the county can be described as rural in nature due to the agricultural land and this natural environment (woodlands, wetlands and national parks and shorelands), which is the largest land use classification for the County.

Absorbed into this agricultural land is a sprawling, non-compact residential development pattern that generally follows county roads. Also a majority of the residential development is seen as a band which transects the center of the County from just southwest of Valparaiso to the northeast quadrant of the County. Residents in these areas have no doubt taken advantage of the environmental characteristics of the moraine. This non-compact, sprawling development is located both in subdivisions and on large lots.

Figure 10: Existing Land Use



There is very little commercial (0.3 percent of total land uses) and industrial (2.0% of total land uses) development that has occurred in the County. The majority of these uses are located around Valparaiso, specifically along US 30 and to the southeastern side of Valparaiso. Other commercial and industrial development has occurred along US 6 and around Portage. To the north along the shore of Lake Michigan, are the steel mills which are the last of the remaining heavy industry in the County.

Other land uses, which constitute 4 percent of the total land uses, include cemeteries, educational and other institutional uses (libraries, fire stations, government facilities, etc.), ports, utilities and parks. These are located throughout the county in various locations.

D. SOCIAL INFLUENCES

In order to accurately determine the future needs of Porter County, a good understanding of past development and demographic trends is crucial. These trends are later extrapolated to enable planners to make projections for future growth in Porter County and thus to develop policies and determine guiding principals and objectives accordingly. Typically, such policies, guiding principals and objectives will relate directly to land use issues, including the future locations of residential areas versus non-residential areas like commercial, institutional and industrial uses.

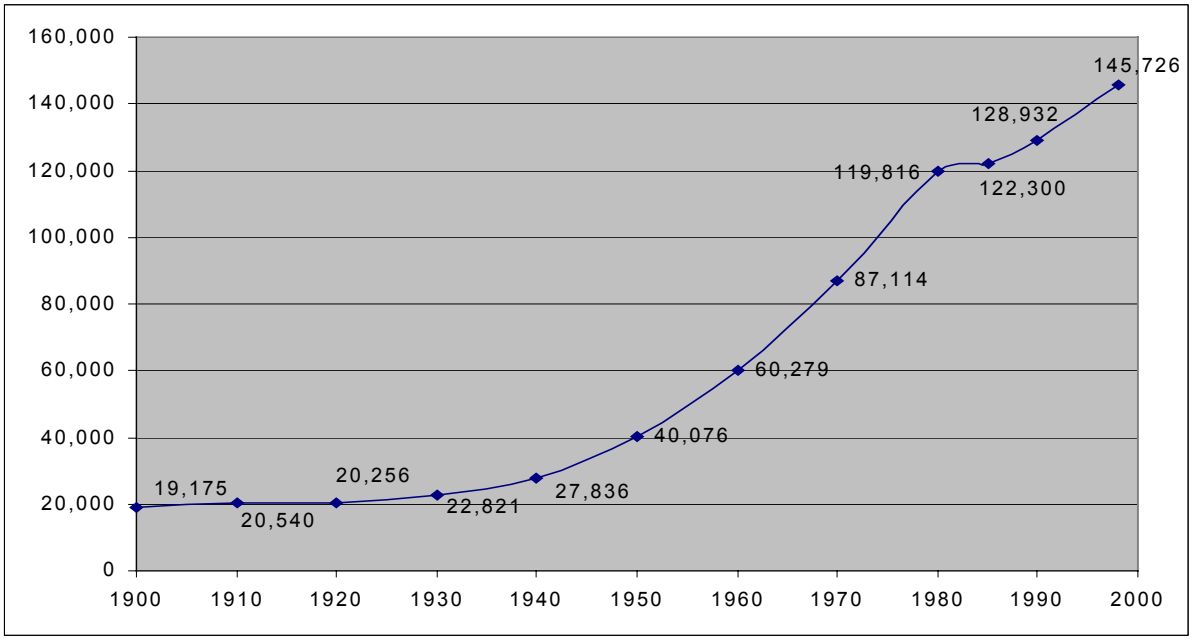
This section looks at the social influences in context of the existing conditions and trends that are present in Porter County as well as in the context of some of the conditions of the State that can influence those trends. It is important to note that, while some of these statistics are over ten years old and may not reflect an accurate picture of the existing County, the trends that have been established over time will foretell a pattern that will continue well into the future.

1. Social Considerations

a. Population characteristics

The historic population trends in Porter County between 1900 and 1998 (see Figure 11) have shown a steady growth rate. In 1950, Porter County's approximate population was 40,076, and by 1997 the population had increased to over 144,000 people, a 260 percent increase. Over that 47 year time period, the growth rate averaged 22 percent per decade, or roughly 2.1 percent per year since1950. It is important to note however that this growth rate has fluctuated substantially from year to year, especially during the 1980's and early 1990's. This can be due in part to the economic recession in the mid to late 80's and early 90's.

Figure 11
Porter County Population Change 1900-1998 (Total County)



During the last decade, from 1980 to 1990, Porter County's growth rate was 8 percent. The 1990 Census documented 128,932 people residing in both the incorporated and unincorporated areas of Porter County in 1990. The entire county increased in population by approximately 13% (18,826 people) between 1990 and 1999. According to population estimates from the Indiana Business Research Center, Porter County's population was 147,758 in 1999, making it the 8th largest populated county in Indiana.

Table 4, Population and Household Growth 1970 to 2000, indicates the long-term population trends anticipated in the county. The figures represent only the unincorporated areas in Porter County.

Table 4
Population and Household Growth 1970 to 2000

	1970	1980	1990	2000
Population	30,821	49,800	54,469	67,027[1]
Households	-	15,302	17,773	22,194[2]
Persons per Household	-	3.25	3.06	3.02[3]

1. Forecast generated as the average of building permits and linear regression
2. Calculated by HNTB using linear regression method
3. Calculated by HNTB

Source: U.S. Bureau of the Census

Over the last 30 years, neighboring Lake, LaPorte, and Jasper Counties experienced population changes of –7 percent, 13 percent, and 32 percent respectively as seen in Figure 12: Percent Change in Porter County and Neighboring Counties. Compared to the neighboring counties, Porter County has had an extremely high rate of population increase. This population increase in Porter County can be inferred as part of the influx of people leaving the other surrounding counties and possibly the Chicago area to live in Porter County due to its character, cost of living and other amenities, including recreation and proximity and easy access to Chicago and Indianapolis.

Figure12: Percent Change in Porter County and Neighboring Counties' Population

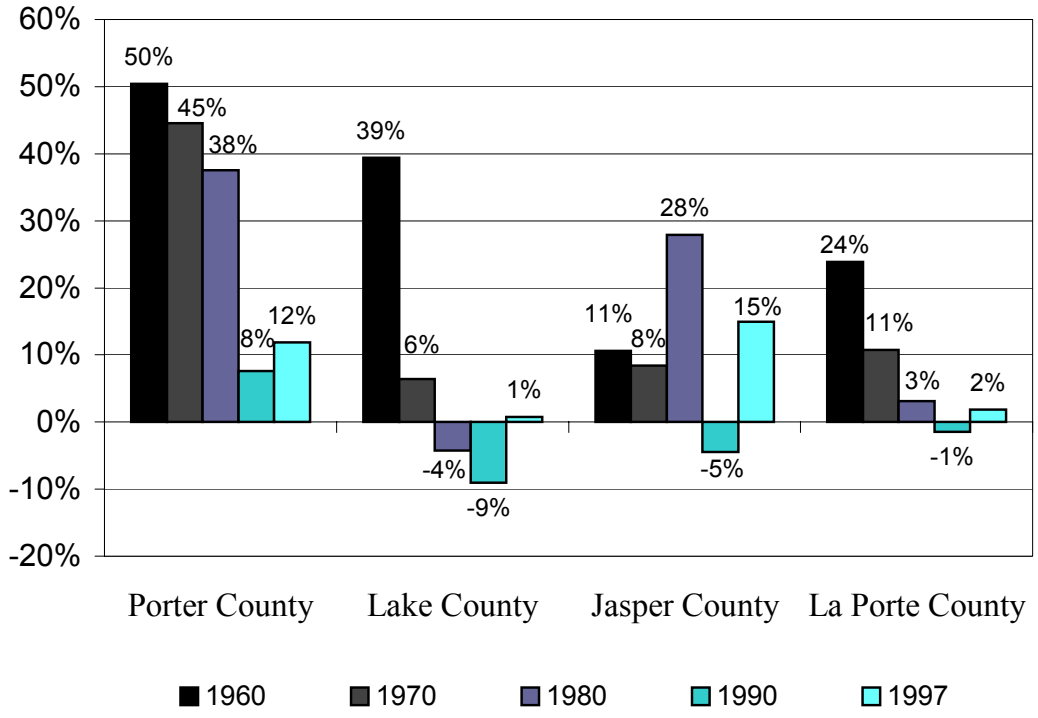
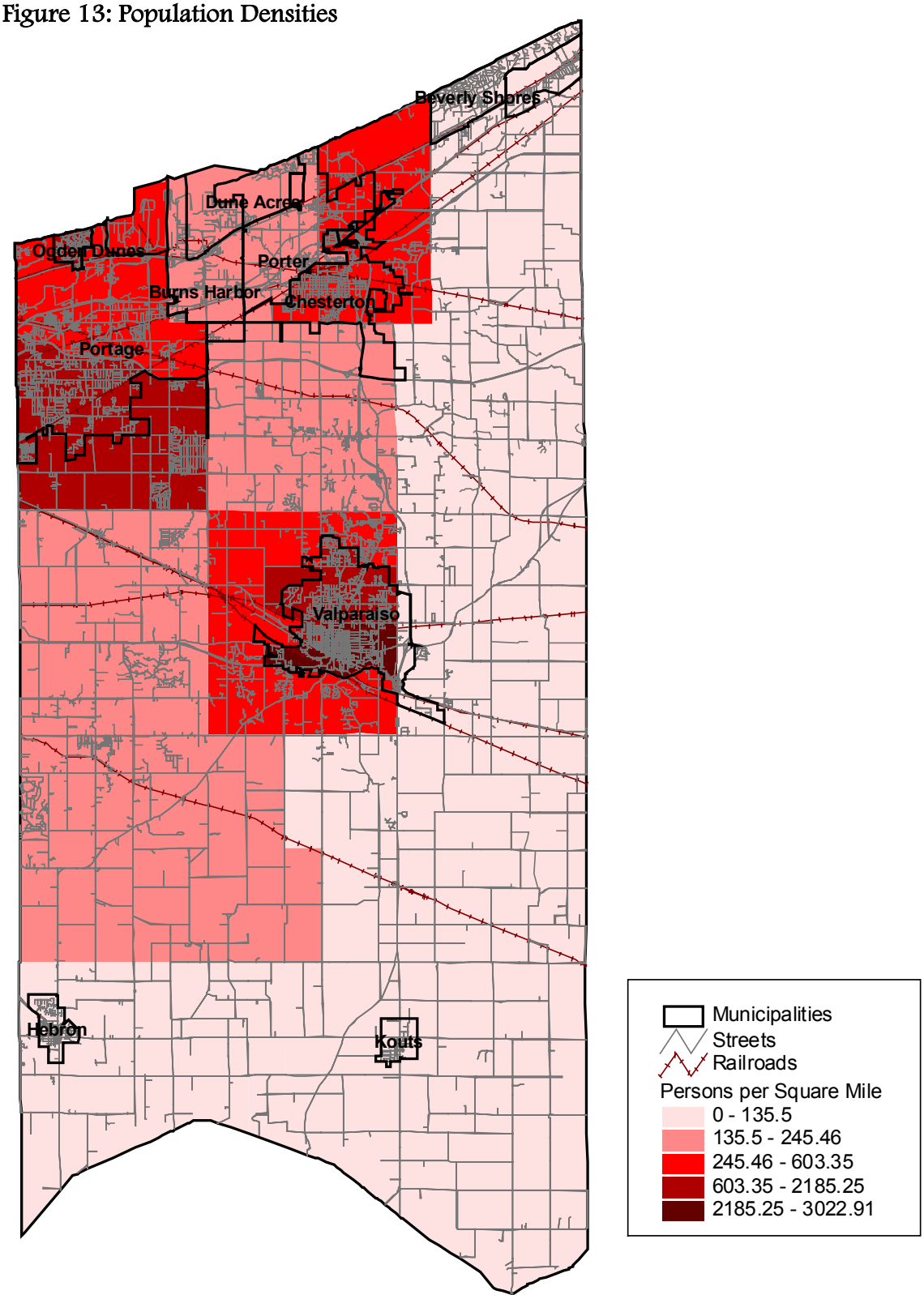


Figure 13: Population Densities



As illustrated in Figure 13, Population Density the densest townships are located in the northern and central areas of the County, especially concentrated in Portage, Center and Westchester. The rank in population for Porter County townships remained the same from 1990 to 1998. Portage, Center, and Westchester, located in the northwest, central, and north central portions of the County, respectively, had the greatest populations. Washington, Pine, and Morgan, in the eastern portion of the County had the least populations. However, the three townships with the most people increased by an average rate of 14 percent, while the three townships with the least population increased an average of 12 percent, only slightly less. The increase in population density in the northwestern areas again supports the findings that people are moving from the Chicagoland area to Porter County. The northern townships especially have access to mass public transportation so that people who live in Porter County can work in Chicago and travel there in a reasonable time.

This increase in population density throughout the county also means that people will demand more recreational opportunities as well as water and sewer services across Porter County, and not just in the highly populated areas near the larger municipalities.

b. Population Projections

In general, population forecasts are more accurate for shorter time periods than longer ones. Using assumptions pinpointing the exact period when growth will occur is very difficult due to unforeseen market fluctuations and changes in the economy. Therefore, it is important to recognize that growth will inevitably occur, and managing the location rather than the time period in which growth takes place is the best course of action.

Table 5, Population and Household Growth 1970 to 2020, indicates the long-term population trends anticipated in the county. For purposes of projecting population, the figures represent only the unincorporated areas in Porter County. Between 2000 and 2020, the population of the county is expected to grow by 27 percent. This increase is overshadowed by the approximate 29 percent increase in the number of households. This increase drives the demand for new housing units. Between 2000 and 2020, there is a demand for 8,860 additional housing units in the unincorporated areas. Figure 14, Porter County Population Growth from 1970 to 2020, graphically depicts past population trends and the anticipated population growth by 2020.

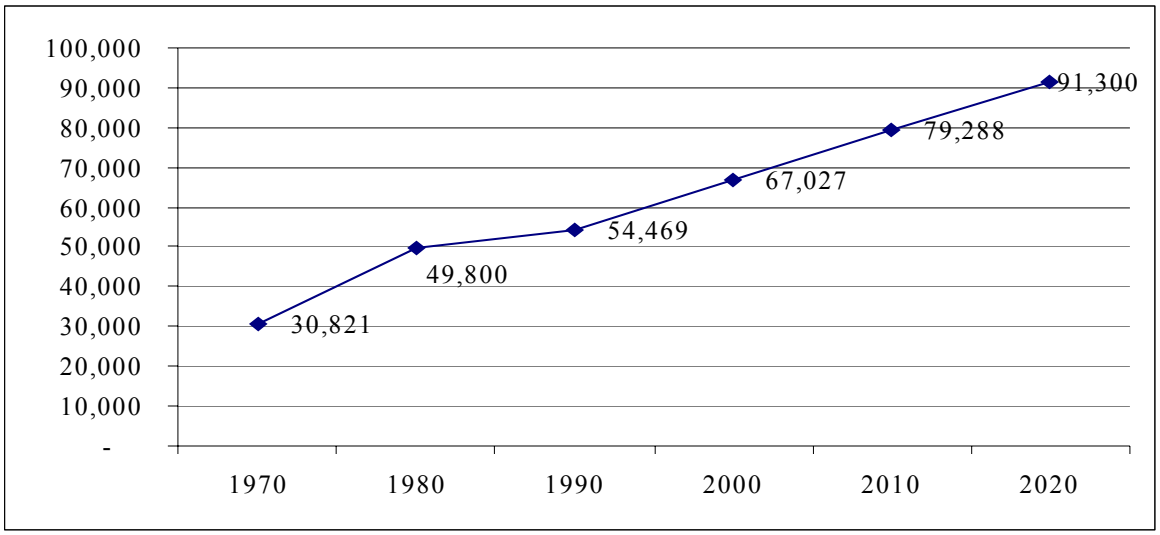
Table 5
Population and Household Growth 1970 to 2020

	1970	1980	1990	2000	2010	2020
Population	30,821	49,800	54,469	67,027[1]	79,288[1]	91,300[1]
Households	-	15,302	17,773	22,194[2]	26,606[2]	31,054[2]
Persons per Household	-	3.25	3.06	3.02[3]	2.98[3]	2.94[3]

1. Forecast generated as the average of building permits and linear regression
2. Calculated by HNTB using linear regression method
3. Calculated by HNTB

Source: U.S. Bureau of the Census

Figure 14
Porter County Population Growth from 1970 to 2020 (Unincorporated Areas)



The anticipated population growth and decreased persons per household rate will strongly influence the amount of dwelling units needed to house the future population. Using the persons per household rates and population forecasts listed on Table 5, the amount of dwelling units needed is listed in the table below.

Table 6
Housing Units Forecast by Time Period

Time Period	Porter County Housing Units
2000-2010	4,412
2010-2020	4,448

Source: HNTB Corporation

The amount of land that should be devoted to future residential development is directly influenced by the number of housing units forecasted. As show in Table 6, Housing Units by Time Period, from 2000 to 2020, 8,860 households are forecasted. Assuming a three percent vacancy rate, there will be approximately 266 vacant dwelling units. Therefore, 8,594 dwelling units will be needed to meet the 2020 demand. To translate this demand into the amount of future acreage needed for these residential uses, some assumptions have been made. Based on existing land use trends, the split between future multi-family residential and single family residential development has been determined to be approximately 12 percent and 88 percent respectively. Using this assumption, by 2020, there will be approximately 1,031 multi-family residential dwelling units and 7,563 single-family dwelling units. Current zoning trends indicate that there will be approximately 3.5 dwelling units per acre for multi-family developments and 1.5 dwelling unit per acre for single family developments. Applying these trends to the number of multi-family and single family dwelling units leads to the absorption of 295 acres for multi-family residential units and 5,042 acres for single family residential uses by 2020.

c. Age groups

A breakdown of the population by age, as reported in the 1990 Census (Table 1-3), is useful in providing information about those who live in the Porter County and for giving insight about the services they may demand now and in the future. Population pyramids for the State of Indiana and Porter County are shown in Figures 15 and 16, respectively. Indiana's pyramid shows relatively even distribution among the different sectors of the population. This indicates that the bulk of the community services should be geared toward the younger population, including school-aged children, teenagers, young adults and middle-aged persons. Though elderly services are needed, the existing demand for such is not very large. However as the population begins to get older and live longer, the demand will increase. The shape of Indiana's pyramid, with the middle and lower portion nearly rectangular in shape, indicates that the population growth rate is slowing and will not grow as fast as past decades.

Figure 15
Indiana Population Pyramid

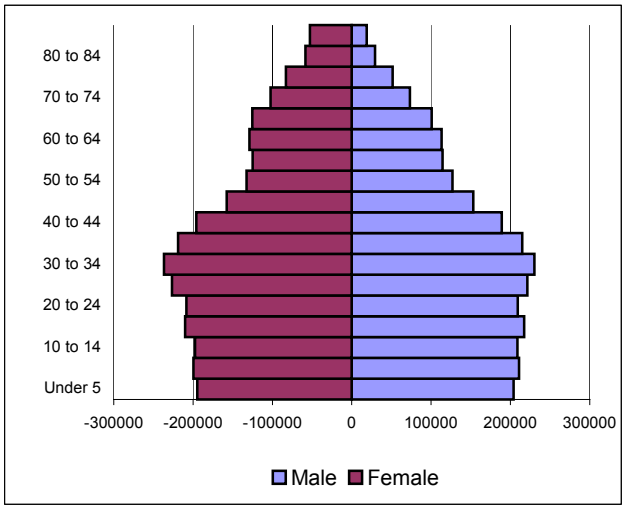
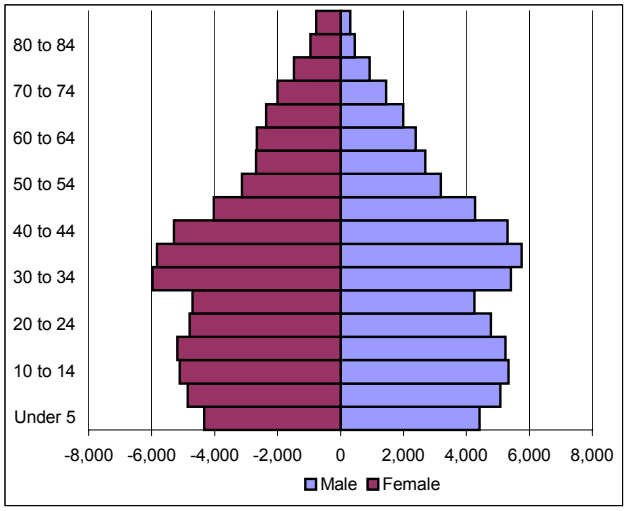


Figure 16
Porter County Population Pyramid



Porter County has a similar concentration of people in the age group categories as compared to the State of Indiana. It does, however, have a slightly higher percentage of children over the age of five but under the age of 14 and a higher concentration of people in their peak earning years (35-54 years of age) relative to the state.

The general shape of Porter County's population pyramid follows that of Indiana with the following exceptions. Indiana and Porter County's population pyramids show a dominate 30 to 34 age group, but Porter County has a smaller percentage of persons below that group than Indiana, especially in the years from 18 to 34. This indicates that Porter County is not retaining its college graduates. Most likely, after graduating from college, many of the young adults move off to other areas in the State and Country and then later in life return back to Porter County. This is supported by many of the comments by the public in the fact that the County needs to concentrate on keeping its college aged children by luring technology and office type jobs into the county.

Furthermore, Porter County's pyramid shows that in the coming decades, the baby boomer population will be moving toward retirement, which means that those older residents will demand certain types of services including recreation, community facilities and assisted living and care facilities. The County will need to consider these people when planning future policies and programs regarding land use locations.

d. Household Size

Household size is the number of persons living in a household unit. It indicates how many future housing units will be needed and helps to determine future population. These population and household trends will determine the impact upon future land uses and will be instrumental in determining appropriate residential mixes.

Table 7
Household Size

	Porter County	Indiana
1970	3.54	3.23
1980	3.06	2.85
1990	2.86	2.68
1995	2.96	2.75

Source: U.S. Census Bureau, Government Information Sharing Project and HNTB Corporation

Many different factors affect household size, including age and marriage patterns. As shown in Table 7, Household Size, the number of persons per household in Porter County and Indiana has continued to decrease since 1970. This follows a national trend toward smaller families, which can partially be explained by the decline of the farming industry. Households in rural farming communities tend to be larger than their urban and suburban counterparts because larger families made managing a farm much easier. In general, people are also living longer, which increases the number of elderly households. The elderly households are generally smaller because children have grown up, moved out of the home and into their own households. Many families are having fewer children or are divorcing. Finally, due to the shifting of marriage patterns, more young single adults prefer to live alone or with a roommate. All of these social changes have impacted household size. As seen in the table, the steady reduction in household size in Porter County and the State of Indiana has resulted in an increase in dwelling units, and this trend will continue well into the future. The impact it will have on land use is that more residential land will be needed to support these additional housing units.

e. Minority populations

The minority population of Porter County in 1996 equaled less than 2 percent of the total population, and people of Hispanic origin equaled less than 4 percent of the total population. This small percentage of population indicates that there is probably not a great need for special considerations, such as Spanish language materials or special cultural accommodations. Trends may change and more special consideration may be needed in the future if more people of minority backgrounds move into Porter County. Further, cultural programs may be an appealing addition to the Porter County Recreational programs regardless of the size of the minority population.

f. Poverty and single parent households

Within the population, there are other special groups in the county that might require special consideration for in terms of land use. According to the 1990 Census, 1,605 families were below the poverty line, and 22 percent of all single parent female-headed families were below the poverty level. Of all the Porter County residents living below poverty level, 34 percent were children under 18 years of age, and 10 percent were people over the age of 65 years. Total persons in poverty in 1993 equaled about 6 percent of the

total population, compared to almost 12 percent in the whole state in 1993 (Government Information Sharing Project).

These figures indicate that special consideration may be required for the programming and facility needs of single-parent households and children in poverty. This can include providing areas within the county for low-income and multi-family housing located close to schools and commercial centers. Increasing numbers of single parent households may have less free time, which will make it more difficult to designate regular weekly periods for recreation opportunities as well. In 1970 the percent of married couples in Porter County was 80 percent and by 1990 it had decreased to 65 percent. From 1980 to 1990, the number of single parent families increased from 9 percent in 1980 to 11 percent in 1990 (Government Information Sharing Project).

2. Economic Considerations

Economic statistics measure the economic behavior of a County, which impacts the health of the economy. The health of the economy is directly related to the area's quality of life and the amount of land devoted to non-residential uses. If the County economy lacks diversity, a potential downsizing in the economy can have a negative financial impact on the government as well as on the residents of the County. Therefore, examining the different employment sectors and projecting future employment trends is key in determining the mixture of land uses in Porter County.

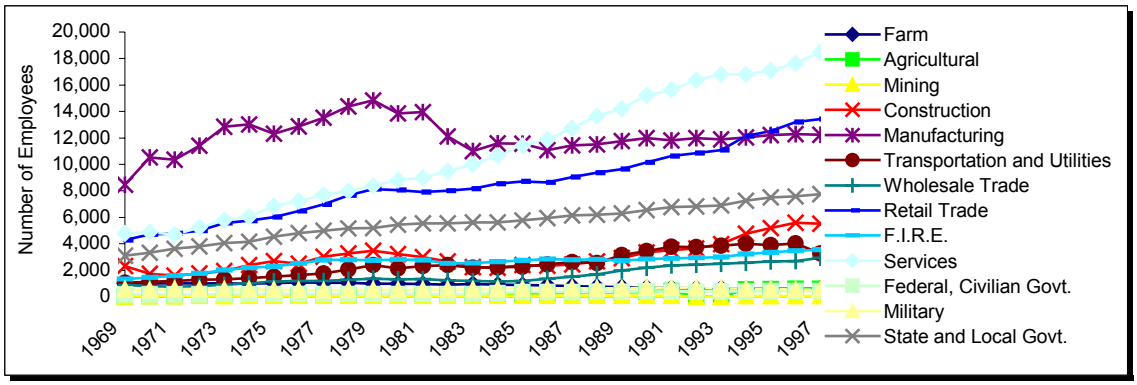
The amount of land devoted to commercial or industrial uses will also impact the amount of taxes the residents of Porter County will pay as the community continues to develop and require more services. Therefore, ensuring the appropriate amount of land uses that will keep taxes low and keep the economy diverse and in good health is a necessary goal of this plan.

a. Employment Characteristics and Trends

The economy in Porter County has been fairly stable over the past several decades. Like the national and state trends, Porter County's unemployment rate has been on a steady decline since around 1992. It is likely that if the economy remains healthy, these rates will continue to decrease. As show in Figure 17, Employment Trends in Porter County, an analysis of the total number of employees by each sector illustrates a correlation between Porter County's economy and that of the national economic trend. Since the early 1900's, manufacturing has been the primary industry in the United States. Manufacturing was the highest employer both in the State and in Porter County at the end of the 1960's and beginning of the early 1970's. The manufacturing trend flourished until the end of the 1970's when it peaked and then began to fluctuate and decline in both the County and the State. As this occurred, the number of people employed by service industries steadily increased. Services consist of businesses that are necessary to support the general population. They include hotels, restaurants and professional services. Services surpassed manufacturing as the leading employer in Porter County around the mid 1980's. The employment demand in the services industry increased as did Porter County's population.

The most recent count of manufacturing employment shows that it is about 66 percent of service employment in Porter County.

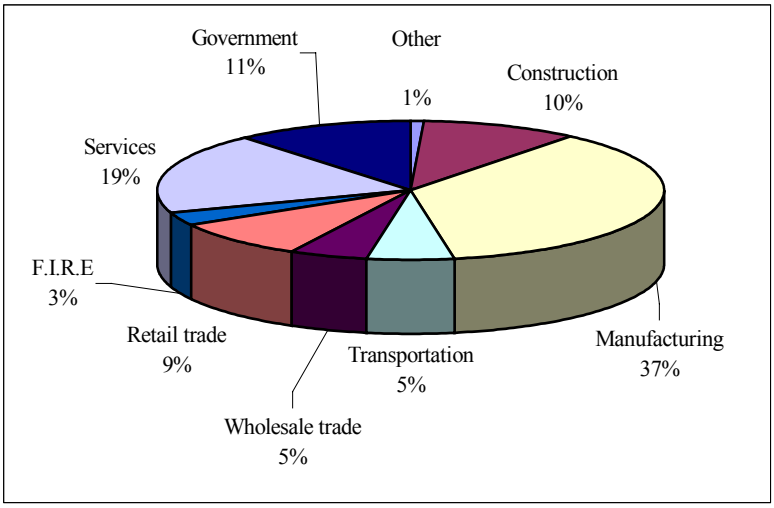
Figure 17
Employment Trends in Porter County



The retail trade sector continues to employ more people, and is now Porter County's second leading employment sector. The retail trade has exceeded the manufacturing trade in Porter County, but has not yet done so in the State of Indiana. Retail will probably also overtake manufacturing in the State within the next decade. The retail sector has more than tripled in Porter County in the past 28 years, and it has increased by more than two and a half times in the State.

The manufacturing industry has stabilized its employment numbers since the early 1990's, and is now Porter County's third largest employment sector. However, the decline in manufacturing is a concern when one considers personal income by industry, as shown in Figure 18, Total Personal Income by Industry. Manufacturing supplied 37 percent of the personal income in Porter County in 1997, while services supplied only 19 percent. This indicates that although manufacturing jobs are not as plentiful as service sector positions, they pay significantly higher salaries. Therefore, a future dependence on a manufacturing based market that is declining could eventually jeopardize Porter County's economy.

Figure 18
Total Personal Income by Industry in 1997



The other major employment sectors such agriculture, construction, transportation and utilities, wholesale trade, F.I.R.E. (finance, insurance, real estate) and federal and state government services have also seen a slow and steady growth that correlates closely with population growth. The number of farming jobs has decreased steadily since 1980 in Porter County and since 1983 in Indiana overall.

b. Education and Income Considerations

The demographic characteristics shown in Table 8, Socioeconomic Characteristics demonstrates a population that is somewhat different from the overall population in the State of Indiana. Table 8 shows that Porter County has a higher percent of residents whom have graduated from high school and college, as well as a lower unemployment rate. This is an important statistic because Porter County provides an employee base for new and existing businesses and can be competitive with surrounding counties.

Table 8
Socioeconomic Characteristics

Socio-economic Characteristics	Indiana	Porter County	Date of data
% High School Grads	75.6	82.4	1990
% w/Bachelor's Degree	15.6	18.5	1990
% Unemployed	4.1	3.8	1996
Per Capita Income	$20,273	$21,845	1994
Median Household Income	$31,055	$43,386	1993
% Below Poverty Level	11.9	6.1	1993

Source: US Census Bureau

The per capita income is also shown as slightly higher than Indiana, and the median household income is much higher for Porter County than the State. The estimated 1994 per capita income was $22,907, which increased to $27,758 in 1998. The $27,758 per capita income figure in 1998 was 110 percent of the statewide average per capita income, and was also slightly higher than the United States average. The Porter County per capita personal income was the 6th highest in Indiana in 1997, and the total personal income for the county was ranked 8th in the state. This indicates that the population in Porter County has more disposable income to spend on additional goods and services as compared to the population in the State as a whole. Overall, this provides a good indicator that the economy and the people who live in Porter County have strong financial health.

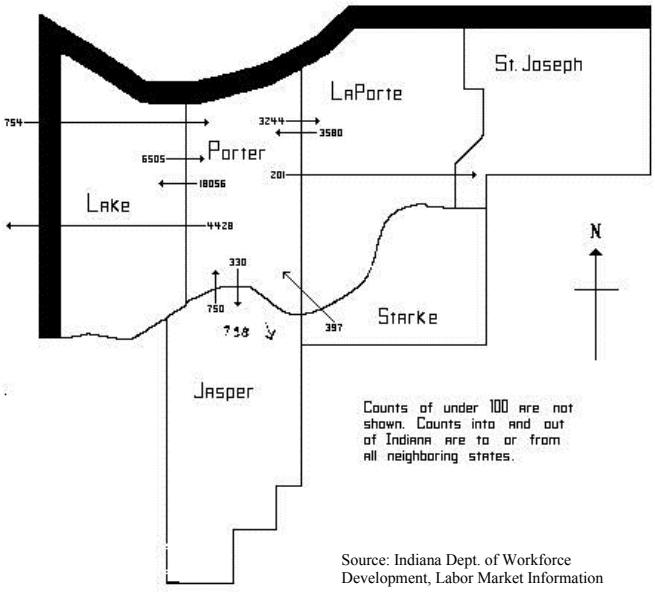
Household income data gives another clear indication of Porter County's strong economy. In 1989, more than 50 percent of its households earned more than $35,000 a year, as compared to about 38 percent for the State. About 23 percent of Porter County households earned less than $15,000 per year, compared to 24 percent for the State. Porter County's median household income was $43,386, nearly 51 percent higher than the state average of $28,797 (U.S. Census Bureau). The higher manufacturing wages help to boost the median income for the County. In 1993, the county led not only the state in the median household income, but the three surrounding counties as well. Porter County was 30 percent higher than Lake County, 26 percent higher than Jasper County and 34 percent higher than LaPorte County.

New upscale residential developments such as the Coffee Creek P.U.D. (Planned Unit Development), St. Andres and Whitethorne Woods in Jackson Township, and Aberdeen reflect these higher wages. It is important to consider however, that the higher paying jobs that result in increased median household income levels may not necessarily remain constant in Porter County.

c. Commuting and Labor Force Considerations

Commuting is another factor that is significant to the County's employment health. In Porter County 31.5 percent of the labor force commuted out of the county in 1997 (Stats

Figure 19
Commuting Patterns



Source: Indiana Dept. of Workforce Development, Labor Market Information

Indiana), as shown in Figure 19, Commuting Patterns. The labor force is all members of the civilian non-institutional population in Porter County who are age 16 and over, who have a job or are actively looking for one. As the number of jobs in the County increases or decreases, the number of people who will stay in the County to work or migrate out will change. In examining the labor force statistics in Porter County, there is tremendous fluctuation in the labor force, which can be attributed to the number of people commuting into and out of Porter County. The labor force in 1997 in Porter County totaled 93,168. Of those, 62, 405 (60 percent), live *and* work in Porter County, while 30,763 (29 percent) live in Porter County *but* work outside the county. While the income of that proportion of the labor force is earned in another County, it is basically spent in Porter County where that percent of the population resides, which only strengthens the economy. There is also an influx of 11,963 people who work in Porter County but live elsewhere. In short, nearly one-third of Porter County residents earn their salaries outside the county but spend their money they have earned in the County, leading to a stronger economy.

3. Housing Considerations

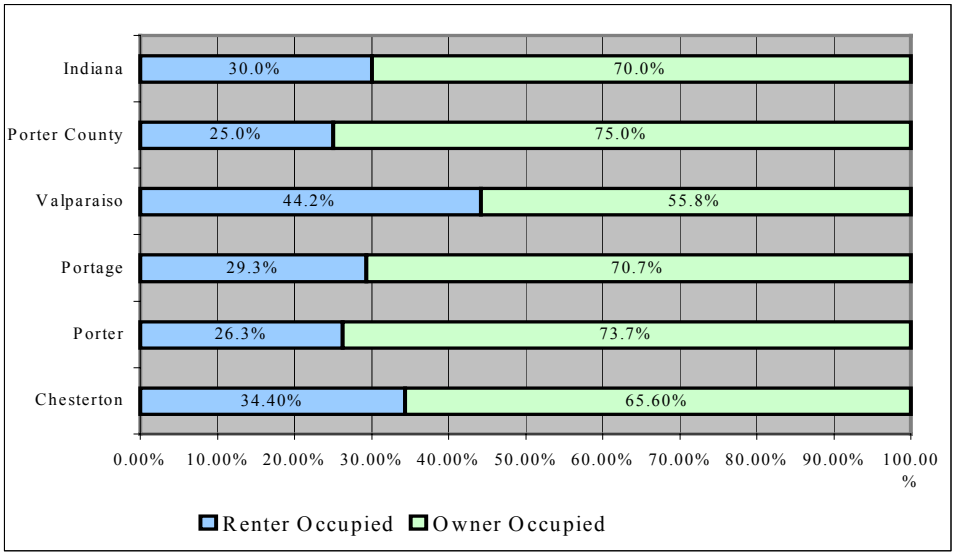
Examining the different housing characteristics explains the residential composition in the County. Homeownership is what many persons strive to achieve in their lifetime as part of the "American Dream." In today's societal standards, by working harder, wealth and social status can be attained, which can be exemplified by the type of home one has. A declining homeownership rate in a County can signal a decline in wealth and overall economic well-being of the persons in the County.

The housing market has changed considerably over the last fifty years. Older homes built before the 1970's were typically smaller and had less single function rooms and therefore required less land. The exception to this rule is the farm house that, due to the function of land use, does require more land. When families first moved into a community and into these smaller homes, the dwelling units met the demand. However, as times have changed, homeowners today want larger homes, which require larger tracts of land. So the market has responded by changing the size of the structure to satisfy the demands of the market. The trend in the suburbs is that generally larger and more spacious homes have been built in the last twenty to thirty years, with many single purpose rooms such as a laundry room, family room, office, etc. Even apartments, which tended to be smaller, are now larger to

provide options for singles, young couples and the elderly, an ever-growing population. What this means for Porter County is that more land will need to be devoted to residential uses than previous decades, and decisions will need to be made about the density and character within certain areas of the County.

According to the 1990 Census, there were 47,240 total housing units in Porter County. Of these units, 33,963 were owner-occupied and 11,196 were renter-occupied. This owner/rental split compares to three municipalities in Porter County and Indiana in the following manner as shown in Figure 20, 1990 Housing Tenure in Porter County.

Figure 20
1990 Housing Tenure in Porter County.



Valparaiso has a much lower homeownership rate than that of the State, the county and two other Porter County municipalities, Porter and Portage. Porter County, Porter and Portage have higher homeownership rates than the State of Indiana. According to the 1990 census, Valparaiso's renter occupied units totaled 3,972 of 8,978 total housing units. Cities and Counties generally prefer a higher rate of homeownership because owners tend to remain in one place longer, take more pride in the neighborhood, are more stable and are overall vested in the community where they live. The number of students currently enrolled at Valparaiso University is approximately 3,700 students, which could explain a reason for the higher percent of renters in Valparaiso. Obviously some of the students live on the university campus, but older students may prefer to rent an apartment or a house. Valparaiso has to consider those students' needs, as well as the needs of lower income families as well as seniors who cannot afford or do not wish to own and maintain a home.

E. TRANSPORTATION FACILITIES AND CIRCULATION

Porter County is served by an extensive road network system, rail systems and bike and pedestrian trails. The road network and other modes of transportation provide Porter County with the ability to connect with the rest of the United States to provide goods and services outside the surrounding states of Ohio, Kentucky and Illinois. The physical impact of land use activities on the transportation network affects where specific land uses can and should occur.

The quality and extent of transportation facilities that provide access to both Porter County and to the areas within its boundaries will have a significant effect on future land uses. Location of certain non-residential uses are affected by the geographic location of the county residents and if transportation is nearby. If a non-residential use generates too much noise and traffic, it may not be suitable within a certain distance of residential uses.

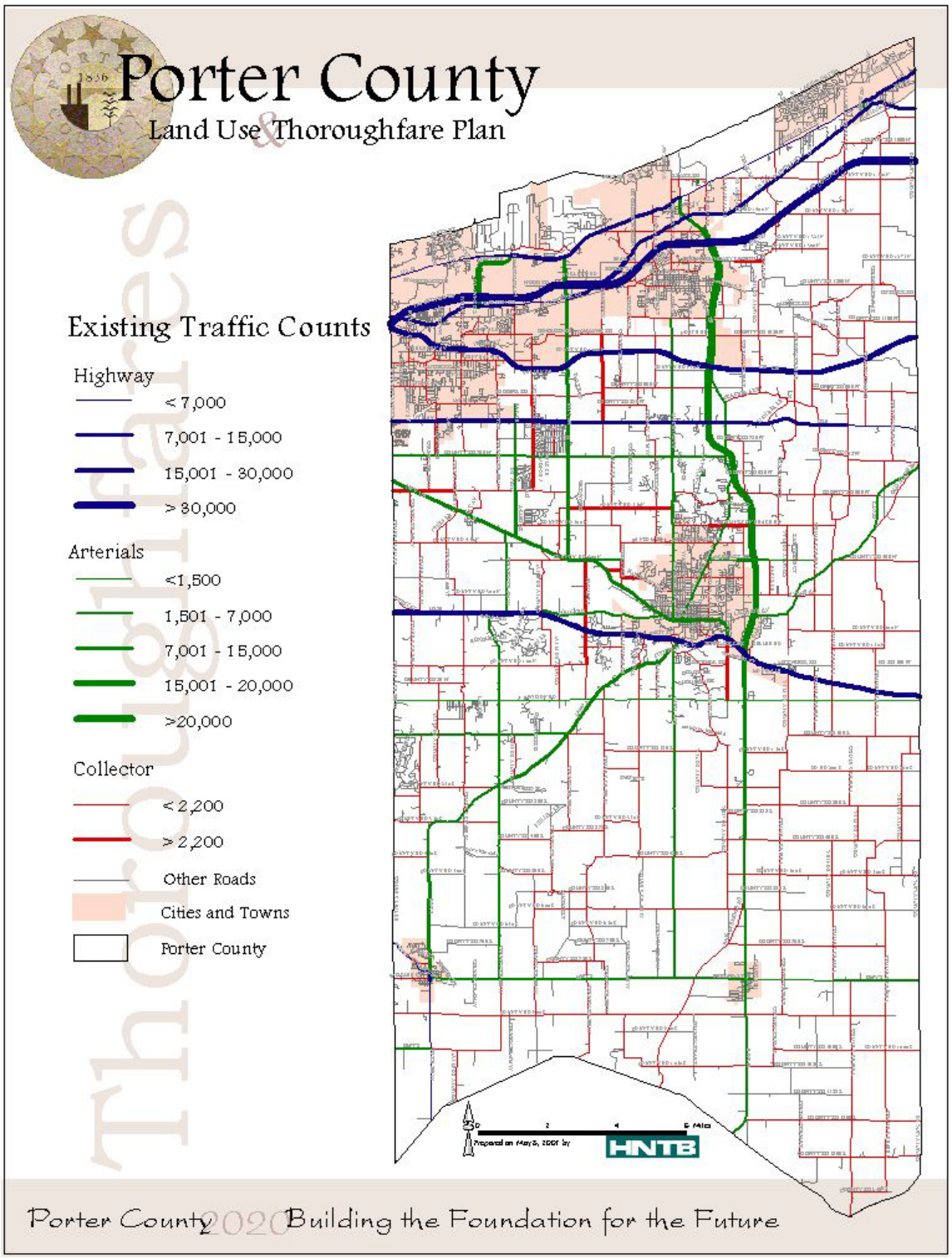
1. Automobile

As the prime mode of individual transportation, the tremendous impact of the automobile on American culture compels planners to include it as a major consideration in planning efforts.

According to the February 1981 County Soil Survey, the majority of the roads in the county are paved, with good access to all parts of the county. There are only about 20 miles of roads that are unimproved throughout the county.

As shown in Figure 21, Thoroughfares, the majority of major thoroughfares are located in the northern portion of Porter County. The map also illustrates the hierarchy of roads and the average daily traffic counts on major roads within Porter County. S.R. 49 and S.R. 2 cross the county in a north-south direction and are considered arterials and provide the greatest movement of traffic from the southern portion of the County to the northern portion. Highway 8, another arterial that connects Hebron and Kouts, serves as an east-west route through the southern part of Porter County. U.S. 30, which is classified as a highway runs east and west through the middle of the county through Valparaiso and is considered the major transportation route across the center portion of the County. U.S. 6, I-80/90, I-94, U.S. 20, and U.S. 12 serve east-west traffic in the northern section of Porter County. Most of these highways also serve as gateways to Porter County, and regionally link Chicago (Illinois), Merrillville (Indiana), and South Bend (Indiana). These highways provide opportunities for shipping goods to and from other local areas, as well as transportation for county residents.

Figure 21: Thoroughfares



2. Railroads

There are several east-west connecting railroads, as well as railroads or passenger trains connecting Porter County to Chicago. "The South Shore Line," is available throughout the northern parts of Porter County near Lake Michigan allowing people to commute to Chicago for work, or on weekends for entertainment. The Northern Indiana Commuter Transportation District (NICTD) runs "The South Shore Line" and offers park and ride locations.

As railroad use continues to decline and railroad companies reduce rail traffic or consolidate lines, abandoned railway corridors hold vast opportunities for recreation both locally and regionally. Abandoned railroad corridors can be converted into bike and pedestrian trails that can be used throughout the county and as connectors to other neighboring counties.

3. Bike trails

The Porter County Bikeway System has been developed within the county to provide recreational and alternative transportation opportunities. There are 9 looping trails with over 100 estimated miles that connect with one another, thereby enabling nearly the entire county to be accessible by bike.

Five rails-to-trails pathways are available for public use in Porter County. The trails are mostly paved and include: Chesterton trail (3 miles), Prairie Duneland Trail (9 miles), Iron Horse Heritage Trail (5 miles), Calumet trail (9.2 miles), and Marquette Trail (3 miles). Additional trails are available at Imagination Glen Park in Portage, Rogers Lakewood Park in Valparaiso, and the Outback BMX Trail in Porter County.

4. Water

Water has played a major role in shaping trade to and from Porter County as well as providing recreation within the county due to the proximity of and easy access to streams, the Kankakee River and Lake Michigan, the third largest of the Great Lakes. Lake Michigan has been used for transport since the 1500s by early North American explorers, as well as by Native Americans who lived near the shores. As a part of the Great Lakes chain, Lake Michigan has attracted commerce and economic opportunity, provided recreational opportunities, supplied shipping for freight, and was a focus for industry. It made sense for industrial plants to locate near Lake Michigan because there was easy access for shipping goods to and from the plant's location. However, as time passed, it became clear that the proximity of that industry has had a significant environmental impact upon the Great Lakes.

GUIDING PRINCIPLES AND OBJECTIVES

A. INTRODUCTION

The guiding principles and objectives will serve as the foundation of the Porter County Land Use and Thoroughfare plan. To develop this foundation, past county planning efforts were reviewed. Public input was also solicited on many different levels including; key person interviews, focus groups, and public meetings. The Land Use and Thoroughfare Plan will provide a series of guiding principles, objectives and policies that will provide specific guidance to the community decision makers. This plan will be uniquely different from other planning studies done in Porter County for the following reasons:

First, this plan builds upon what was created through previous studies. It is important that this plan acknowledge and embrace the discussions and information gathered through these processes. Those studies provide additional insight regarding issues experienced by Porter County and its residents. Comprehensive and specific recommendations in the Land Use and Thoroughfare Plan have resulted after reviewing these studies.

Second, this Land Use and Thoroughfare Plan sets forth a mission, guiding principles, objectives and development policies that will help Porter County guide and manage growth and development. A future land use map will graphically display the desired future land use patterns for Porter County and support the mission, guiding principles, objectives and development policies.

Third, the plan will adhere to the Indiana Planning Law. The Indiana State Code requires three elements to be addressed in a comprehensive plan and several permissible elements that can be included to support the basic three elements. The required elements as documented in Title 36-7-4-502 include:

1) A statement of objectives for the future development of the jurisdictions;
2) A statement of policy for the land use development of the jurisdiction;
3) A statement of policy for the development of public ways, public places, public lands, public structures and public utilities.

In addition to the elements required by the Indiana State Code, the Porter County Land Use and Thoroughfare Plan will include a transportation element and a parks and recreation element which will make the county eligible for park and recreation grants.

It is evident from the previous planning efforts and the current process, that the high quality of life in the county is one of the major reasons that people remain in the county and why there is immigration from other surrounding counties. Porter County's high quality of life is captured by the natural resources, the people, the schools, the rural character of the area, and the strong economy. The premise for this plan is to continue to build upon the strengths and opportunities of the county.

Citizen input has been solicited through a specific public participation and planning process. The citizens of Porter County have provided their thoughts about where the county is heading and where it should go in the future. These ideas have been captured in a mission statement that will provide a foundation for the goals, objectives and policies.

The mission statement below describes the direction the County will take in the future. The mission statement builds on natural and man made resources, residents' values and priorities, and opportunities for new developments and activities to enhance the County. This mission is essentially the ideal conditions of Porter County that the residents envision twenty years from now. The mission statement is the overall theme of the Land Use and Transportation Plan as well as a summary of the policy directions of the plan. The mission statement is as follows:

Mission Statement:

The mission of the Porter County Land Use and Thoroughfare Plan is to continue a commitment to preserve and enhance the unique and diverse character of the County. This plan will emphasize a compact urban form while recognizing that adequate infrastructure is imperative for guiding growth. The plan embraces the essential elements of the extraordinary quality of life by setting forth recommendations to promote intergovernmental cooperation and efficiency, preserve open space, agriculture and natural resources, provide additional recreation opportunities and ensure an efficient transportation and infrastructure network.

To implement this vision, a series of guiding principles and objectives have been developed. These are the foundation on which the entire plan will be based. The guiding principles and objectives answer the questions of how and why the County should develop, and provide the foundation to direct and manage growth and development. The guiding principles are broad-based statements that express the values and desires of the residents of Porter County. They are ideal conditions or outcomes that the community desires. The objectives are specific guidelines that expand upon the guiding principles. They may be either a direct course of action or a decision-making policy.

B. GUIDING PRINCIPLES AND OBJECTIVES

The draft guiding principles and objectives will be used to develop the three alternative future land use and transportation maps. Specific policy statements and recommendations will assist the county in the implementation of the mission statement, guiding principles and objectives after the final land use and transportation scenarios are selected.

The guiding principles and objectives are presented below, organized by major planning categories including: Government; Land Use; Parks and Recreation; Community Services; Economic Development; Natural Resources; and Transportation and Infrastructure. The topic areas provide an orderly way to address the issues and present policies because of their familiarity to the residents and officials. However, it should be noted that many of the principles, will transcend from one category to another. Many of these planning categories encompass and make use of past planning efforts. Because these issues that have been of great concern to the County in past planning efforts as well as in this present process, they deserve to be re-expressed and built upon.

1. GOVERNMENT

Porter County should strive to openly communicate and efficiently coordinate all governmental efforts to ensure efficient and non-duplicative services to all residents of the County.

- Provide for opportunities for coordination and on-going communication regarding development plans and other major land use decisions.
- Continue strong leadership within Porter County and its governments.
- Promote a compact, contiguous development pattern through the use of zoning controls and capital expenditures.
- Establish design standards to ensure quality new commercial and industrial development which is compatible with the future land use pattern and enhances the existing character of the County.
- Encourage developers to off-set the costs that development incurs on existing community services.

2. Land Use

Porter County should promote a development pattern that is compact in nature and focused near existing cities and towns. The land use pattern should have a mixture of agriculture, open space, residential, commercial and industrial uses that reflect the surrounding rural character while preserving and enhancing the visual landscape created by natural and man made features.

- Focus development near existing cities and towns.
- Encourage development that is contiguous to existing development.
- Foster higher housing and business densities near existing communities to conserve open space.
- Manage the type and use of development while respecting the development rights of property owners.
- Encourage a mix of uses within new developments.
- Establish standards that promote buffering and transition areas between differing land uses.
- Encourage the clustering of housing units within subdivisions to conserve open space.
- Discourage residential and commercial strip development along County roads.

3. Parks and Recreation

Porter County should create a park and recreation system that coordinates with services provided by other park systems, which primarily contains passive recreation that interconnects within the county and links to systems outside the county. The parks and recreation system should protect and manage natural features, resources and open space and encourage the development of community parks and non-motorized paths that are accessible and located where they can be enjoyed by many people in the county.

- Continue to promote a system of county-wide trails.
- Continue to pursue the acquisition of parkland that contains unique natural features and/or that is located in areas of the County that currently lack public parks.
- Provide enhanced public access to lakes, rivers, streams and creeks throughout the County.
- Promote the development and maintenance of passive recreation sites throughout the County.
- Create a means for private development to fund the acquisition of public park land.
- Enhance environmental education and historical programs on public park sites.
- Continue to develop and promote cultural and recreational programs within public park sites.

4. Community Services

Porter County should plan and provide adequate, desirable and quality services and community facilities to its residents in an efficient, equitable and cost effective manner without sacrificing the existing level of services.

- Conveniently locate services and facilities so they serve the residents of Porter County.
- Establish a plan for growth of services that coincides with the anticipated growth of the County.
- Encourage the development of family oriented recreation facilities, public parks, gathering areas and open spaces.
- Work with affected townships to assure adequate emergency services to serve all areas of the County.
- Support open communication between the County and other local jurisdictions to estimate costs and set priorities for capital improvements.

5. Economic Development

Work with organizations to foster a County that has a vibrant, diverse, strong and healthy economy that contains a mixture of business opportunities that support the existing labor force, attract college graduates and young adults, enhance the tax base and are located in close proximity to support services.

- Designate areas in the County suitable for commercial and industrial uses.

- Recommend potential industry types the County should pursue to ensure economic vitality well into the future.
- Establish a partnership with universities and Porter County communities to foster economic growth throughout the County.
- Foster economic diversity through the broadening of the employment and enterprise base.
- Establish a County wide economic development agency to assist with economic development marketing.
- Develop a program to retain and expand existing business.
- Pursue high tech "white collar" jobs.

6. Natural Resources

Ensure that Porter County preserves, maintains and enhances environmental and man made resources and features including the Dunes, wetlands, woodlands, wildlife habitats, ground water recharge areas, prime soils, river and stream corridors and water sheds. In areas that have been designated as prime farmland, the county should protect the character provided by prime farm land and support an agriculturally based lifestyle.

- Limit types and intensities of development around environmentally sensitive areas.
- Protect prime farmland and other agricultural businesses and resources to support continued agriculture production.
- Preserve and protect prime farmland and lands containing significant natural resources.
- Preserve scenic road, river and stream corridors.
- Protect the natural resources in Porter County by supporting sound conservation practices.
- Require measures to reduce pollution.

7. Transportation

Porter County should have an efficient transportation network that ensures the safe movement of people through a diverse array of multi-modal connections within and outside of the County. This network should have minimal impact to land use patterns, natural resources, and the quality of life that Porter County residents enjoy.

- Promote the use of modes of transportation other than single occupancy vehicles to reduce traffic flow and reduce pollution.
- Promote the connection of subdivisions.
- Build road connections that are consistent with the character of the area.
- Focus on the improvement and repair of existing roadway systems.
- Improve local connections to the regional transportation system.
- Ensure that new commercial and major residential development has access to major County thoroughfares.

- Explore additional bike and pedestrian linkages to create a comprehensive county-wide pathway system.
- Investigate a public transit system.
- Promote access management on County roads.
- Investigate the feasibility of north-south connectors.

8. Infrastructure

Ensure that Porter County works with other jurisdictions to promote orderly growth through efficient and cost-effective expansion of infrastructure. Ensure that all types of infrastructure systems have minimal impact on the environment and do not limit future growth opportunities.

- Plan for the extension of infrastructure into unincorporated areas of the County with the possibility that cities and towns will later annex these areas into their jurisdictions.
- Explore the use of impact or development fees to fund infrastructure improvements.
- Establish criteria for land use decision based on infrastructure and transportation access.
- Promote alternative wastewater treatment techniques.
- ....Require measures to provide new major subdivisions with public/private water and sewer services.

LAND USE PLAN

A. INTRODUCTION

The purpose of the land use plan is to provide guidance to the Plan Commission and the County Commissioners and those wishing to develop land in Porter County as to the desired future growth pattern of the County. A future land use plan is *not* zoning and in no way imposes legal limitations to land development. The plan is simply one of many tools that the County uses to implement its desired vision of the future. Thus, the County should consult the plan whenever future development is proposed in order to give recommendations about location, density, and other relevant factors; and the County should decide rezoning requests based on the plan's recommendations. Further, the land use plan is a flexible document, open to new interpretation in light of changing circumstances over the next twenty years. Thus, the actual growth areas may prove to be smaller or larger than shown, depending on future demand for land.

The future land use plan is designed to guide expected future growth of the County into a pattern which meets the future development goals of the County, as defined by the public earlier in this Comprehensive Planning process.

In creating this future land use plan, the County carefully examined all of the information and public comment developed through the Comprehensive Planning process and has attempted to balance a significant expected population increase (over 24,000) without completely changing the current character of the County. As part of this process, the County not only has a desire to preserve the unique aspects of Porter County that citizens have asked to have preserved, but has also tried to balance this preservation of character with concern for personal property rights. This is done with the understanding that significant additional residents will have to be assimilated into the area and services will need to be provided for them.

In order to arrive at this balance between character preservation, an increasing population and individual property rights, the County first attempted, through the public hearing/input process to identify those items that the County's residents felt were most important in preserving Porter County's unique character. During the public input process, residents expressed concerns about preserving the County's relatively open, rural character (outside of the major urban areas) and transition with the continued degradation of that character by increasing traffic, strip development along roads, impacts on natural areas, and the loss of agricultural land. Residents noted that the significant open areas, both natural areas and agricultural lands, played a significant role in defining the character of the County as well as making it unique. Porter County was viewed as an oasis in the Chicago metro area. It was also noted that it is often this uniqueness that is attracting more residents to the County.

In order to assist the County in examining the impacts of the expected population increase to the County's character, HNTB developed several computer models of the County based on the economic forces that help determine residential development, placement and style. To facilitate this modeling, the non-incorporated areas within the County were divided into three (3) tiers. These corresponded to an Urban Fringe located mainly adjacent to major urban areas, a Suburban Development area surrounding smaller towns and concentrations

of non-incorporated residential development, and a Rural tier consisting of areas of primarily agricultural land uses and natural areas. (See Figures 22, 23, 24)

Computer simulations were developed of the expected development patterns based on three different scenarios designated the Status Quo Development scenario, the Modified Status Quo scenario, and the Urban/Rural Character Scenario. All of these development scenarios contain identical numbers of new residential dwellings, however, the manner, location and style of the residential development vary significantly, as does the development's impact on the character of Porter County.

B. STATUS QUO DEVELOPMENT

The Status Quo Development scenario attempts to handle the expected population increase with the existing zoning and subdivision regulations and standards. While this scenario does allow for significant, subdivision-type development in the Urban and Suburban tiers, development in the rural tier is primarily single lots stripped along the roads. (See Figure 22) While the scenario retains significant acreage for agricultural uses, this style of residential development is recognized as perhaps the least compatible mix of residential and agricultural development.

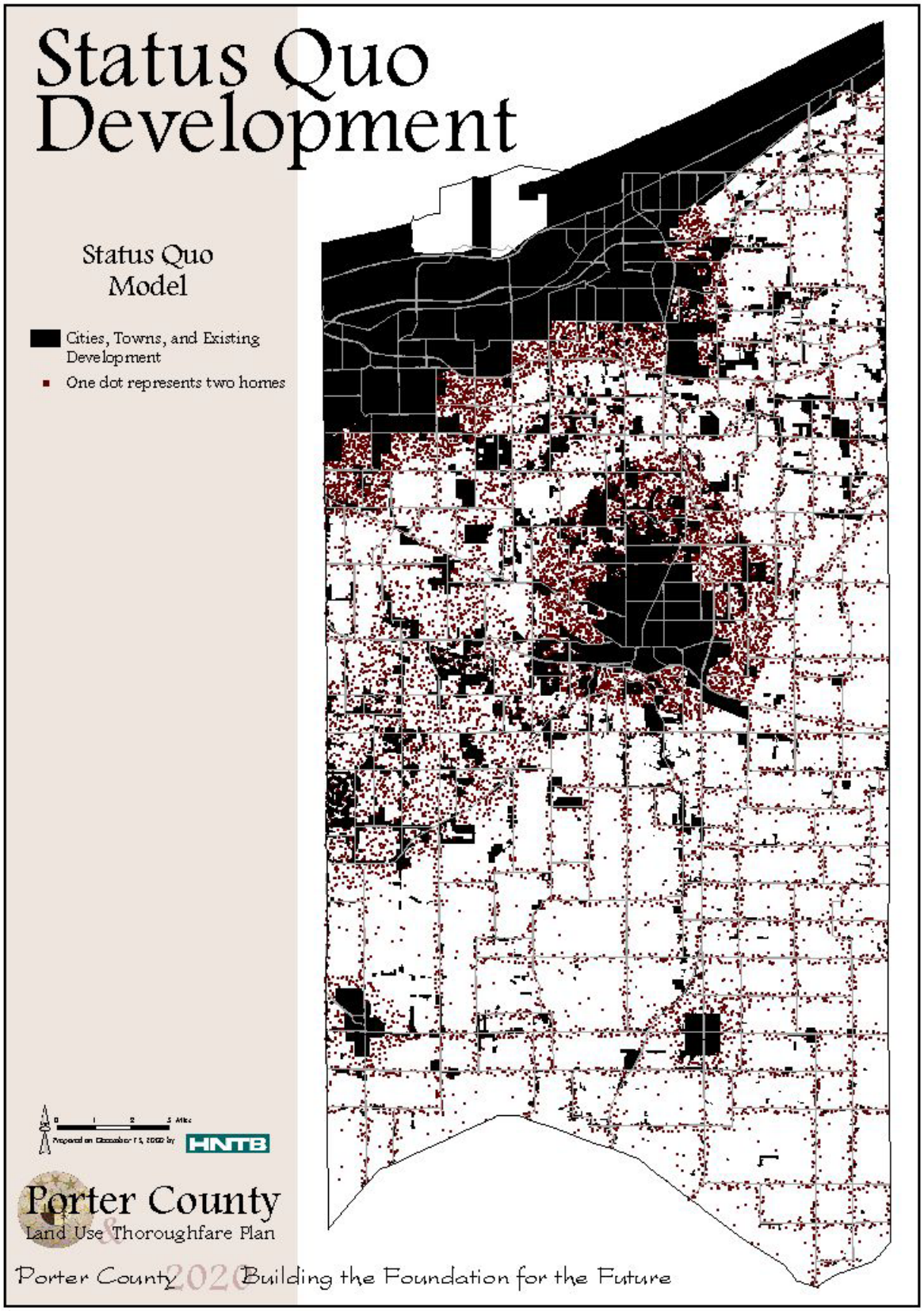
Lots stripped along roadways lead to numerous driveway access points with vehicular turning movements occurring virtually everywhere. This situation leads to numerous traffic conflicts and significantly increased accident rates. This is further exacerbated by the fact that most County roads are designed to be utilized as thoroughfares, with minimal turning movements except at intersections. Due partially to these turning movements, this type of development also tends to reduce the capacity of the roadways as well as make it more difficult to move agricultural equipment.

Numerous, scattered development also greatly increases the transportation costs for education. In the Midwest, this type of development generally increases the transportation costs by an average of $275 per student per year over more concentrated subdivision type development.[1] There is also an increased potential for the deterioration of the pavement edge since this type of residential development rarely includes paved driveways, and the vehicles driving from a paved roadway to an unpaved drive can cause rapid deterioration of the pavement edge.

Most of this rural development will also occur on roadways with adjacent drainage ditches. The standard culverts placed where driveways cross these ditches can cause extensive loss of stormwater capacity and flows. This type of development also causes the maximum amount of residential/agricultural boundary per dwelling unit, maximizing the potential for conflicts between these uses, including trespassing onto agricultural property, noise, dust and chemical conflicts.

[1] Northern Illinois University and the American Farmland Trust (1999), *Living on the Edge: The Costs and Risks of Scatter Development*

Figure 22: Status Quo Development Model



While this type of strip residential development is typically less expensive initially, its long-term costs to the County include the loss of agricultural uses, increased road and drainage ditch maintenance costs, lower traffic capacity and higher school transportation costs. Indeed, if the actual costs of this type of development where passed on to the new dwellings, this type of strip development would actually be one of the most expensive forms of residential development. In most communities, however, because of the difficulty in quantifying these costs on an individual dwelling basis or the extremely high per dwelling costs of mitigation measures (paved individual driveways, specially designed and installed culverts, special buffers between residential and agricultural land uses, etc.) most of these costs are borne by County taxpayers.

C. MODIFIED STATUS QUO DEVELOPMENT

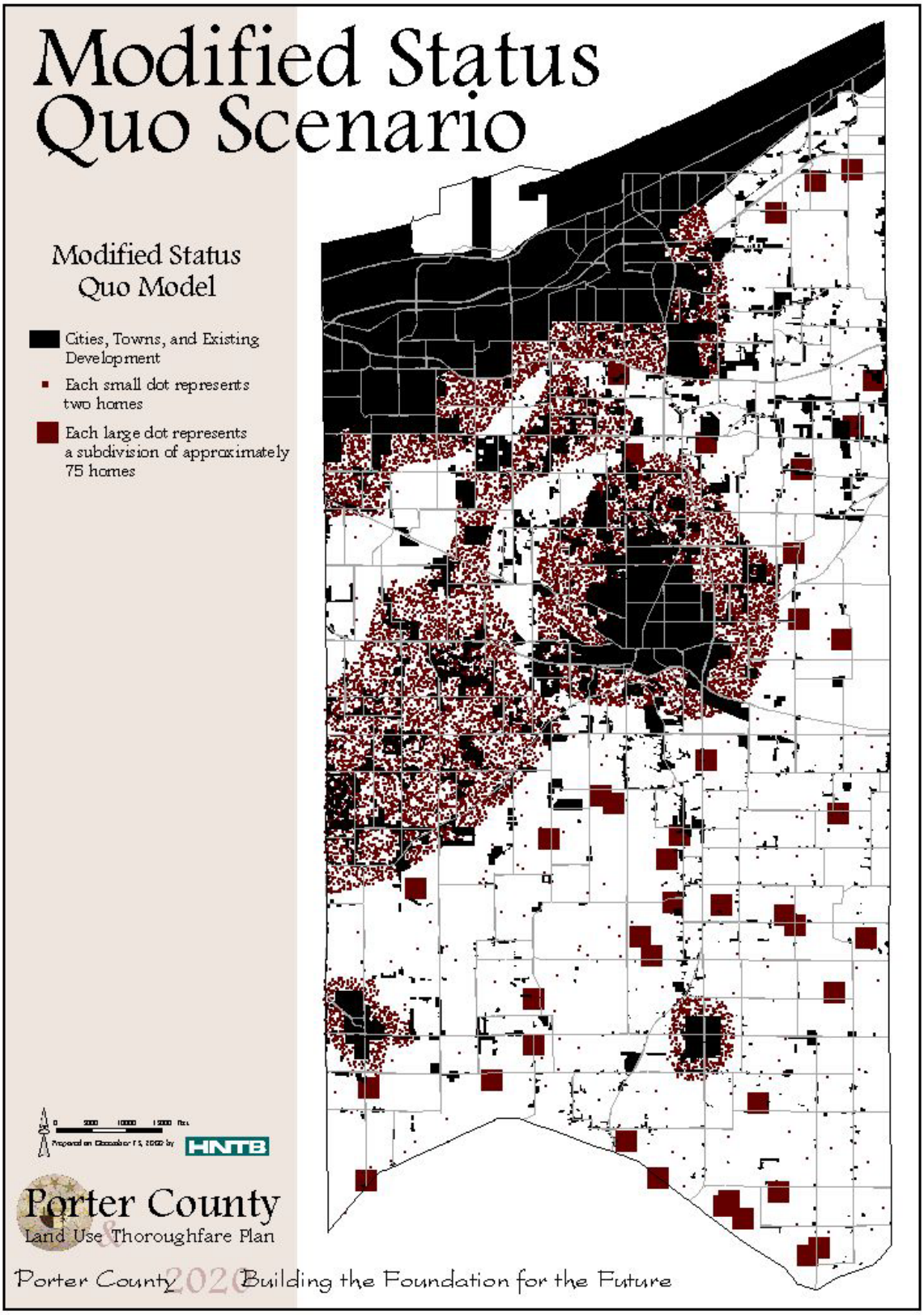
With the Modified Status Quo Development scenario, the model was changed to move a significant number of strip type residential dwellings into subdivisions. Under this model the assumption was made that the County would use a combination of increased regulations to mitigate some of the strip residential development's impacts and costs to the County by encouraging moderately sized subdivisions in the rural tier. (See Figure 23) The rationale behind this switch is that these subdivision type residential developments offer several advantages over strip residential development in terms of impacts on agriculture, infrastructure, character, and benefits to residents living in them through increased amenities.

These subdivisions would generally have only two paved entrances, thereby minimizing pavement deterioration and vehicular turning movement locations. Centralized student pick up locations would reduce the cost per student for transportation, and the reduced number of drainage ditch crossings per dwelling would allow for a more expensive culvert structure that should minimize flow disruptions.

Also, subdivisions naturally have significantly smaller borders between residential and agricultural uses per residence since many properties are completely internal to the subdivision. This allows for fewer impacts on both residential and agricultural properties and the ability to have greatly enhanced buffers between residential and agricultural uses. This development pattern results in fewer development costs (roads, school costs, infrastructure, land use conflicts, etc.) being passed along to existing residents. Combining properties into subdivisions (typically with slightly smaller lot sizes) also allows for a greater perception of open space, enhancing the desired character residents noted during public input process.

A disadvantage of subdivisions, especially as lot sizes get smaller, is the increasing impact on the environment of private well and septic systems. The County would have to reserve the smallest lot sizes (and therefore the highest per acre development yields) to those developments that either have access to public water and sewer or can create a separate private utility system for the subdivision.

Figure 23: Modified Status Quo Development Model



It should also be noted that these changes in assumptions, while aimed primarily at the residential tier, also have the impact of causing a slightly larger percentage of new residential units to locate in the suburban tier. This is not necessarily the result of smaller lots in the suburban tier, but simply the result of economics balancing out the initial lot development costs between tiers, resulting in a higher absorption rate in the suburban tier.

D. URBAN/RURAL CHARACTER DEVELOPMENT

Under this scenario, the assumptions were changed to further regulate strip type residential development and increase incentives for larger residential subdivisions. (See Figure 24) While the intent of this scenario is not to eliminate the ability of a property owner to sell off individual lots for residential development, this scenario would simply encourage the County to adopt regulations and ordinances that would minimize or eliminate the subsidization of strip type residential development by existing County taxpayers.

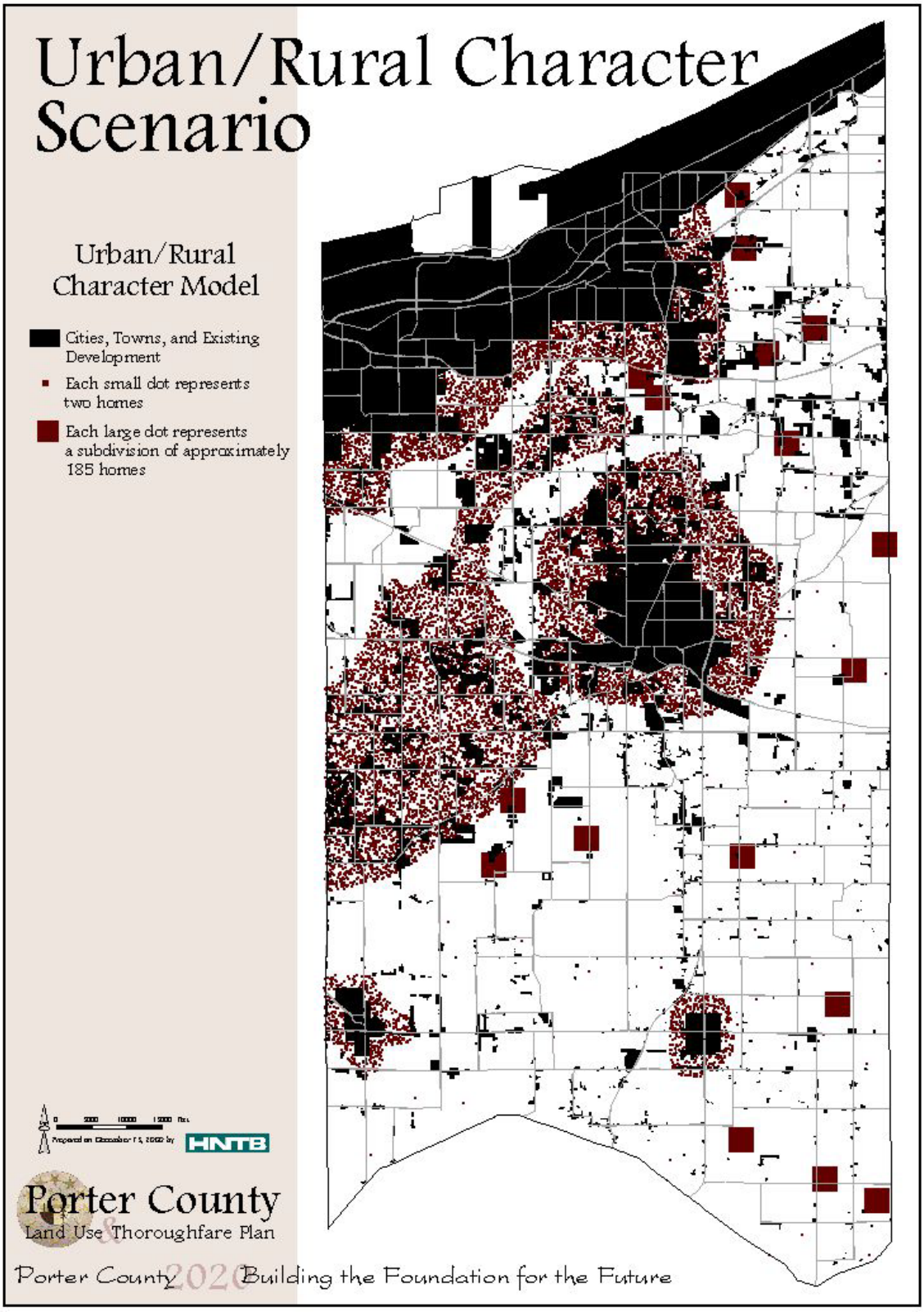
This scenario has the effect of creating fewer, but larger, residential subdivisions, without completely eliminating the possibility of single-lot residential development. In this way personal property rights are still maintained, but the impacts on the character of the County and costs to existing taxpayers are reduced.

As was noted before, a disadvantage of subdivisions, especially as lot sizes get smaller, is the increasing impact on the environment of private well and septic systems. With the even larger emphasis placed on subdivisions under this scenario, the County would have to reserve the smallest lot sizes (and therefore the highest per acre development yields) to those developments that either have access to public water and sewer or can create a separate private utility system for the subdivision. A benefit of this scenario, however, is that as the subdivisions get larger in size, it becomes increasingly possible to build separate, stand-alone private water and wastewater systems, allowing these subdivisions the option of spreading out and helping to maintain a open character in the County.

The absorption rates of the suburban and urban tiers for residential development is essentially the same as with the Modified Status Quo Development scenario, however, by combining residential units in the rural tier into larger subdivisions, the perception of open space in the rural tier is enhanced by better maintaining the character of the County.

It should also be noted that under this scenario some of these subdivisions could become large enough to not only allow a mix of residential uses (various size single-family lots and dwellings, duplex units, multiple-family, etc.) but also some limited commercial type uses as well. The County should carefully craft regulations that would allow this commercial development without negatively impacting existing commercial properties especially, in smaller incorporated areas.

Figure 24: Urban/Rural Character Development Model



E. FUTURE LAND USE CLASSIFICATIONS

After considering these three alternatives, the Porter County Plan Commission decided that a future land use plan based on the Urban/Rural Character scenario provided the best solution for managing future population growth, maintaining personal property rights, meeting the expressed concerns of residents, and maintaining the unique character of the County. The future land use plan for Porter County classifies land for future development into the following categories. (See Figure 25)

1. Urban Fringe Development

Urban Fringe areas are located adjacent to existing cities and towns and are proposed to encompass future urban expansion. These areas are proposed for primarily residential growth of a density comparable to that of the adjoining urban areas. In addition to single family residential uses, these areas may include multi-family developments, institutional uses (such as churches, schools, libraries, etc.) and some neighborhood commercial uses oriented to the neighborhoods in which they are located (i.e. day care centers, dry cleaners, drug stores, dentist offices, florists, etc.). Recommended densities are between 4 dwelling units per acre and 6 dwelling units per acre for single family developments and up to 10 dwelling units per acre for multi-family developments. Connections to public water and sewer systems are required for this land use category.

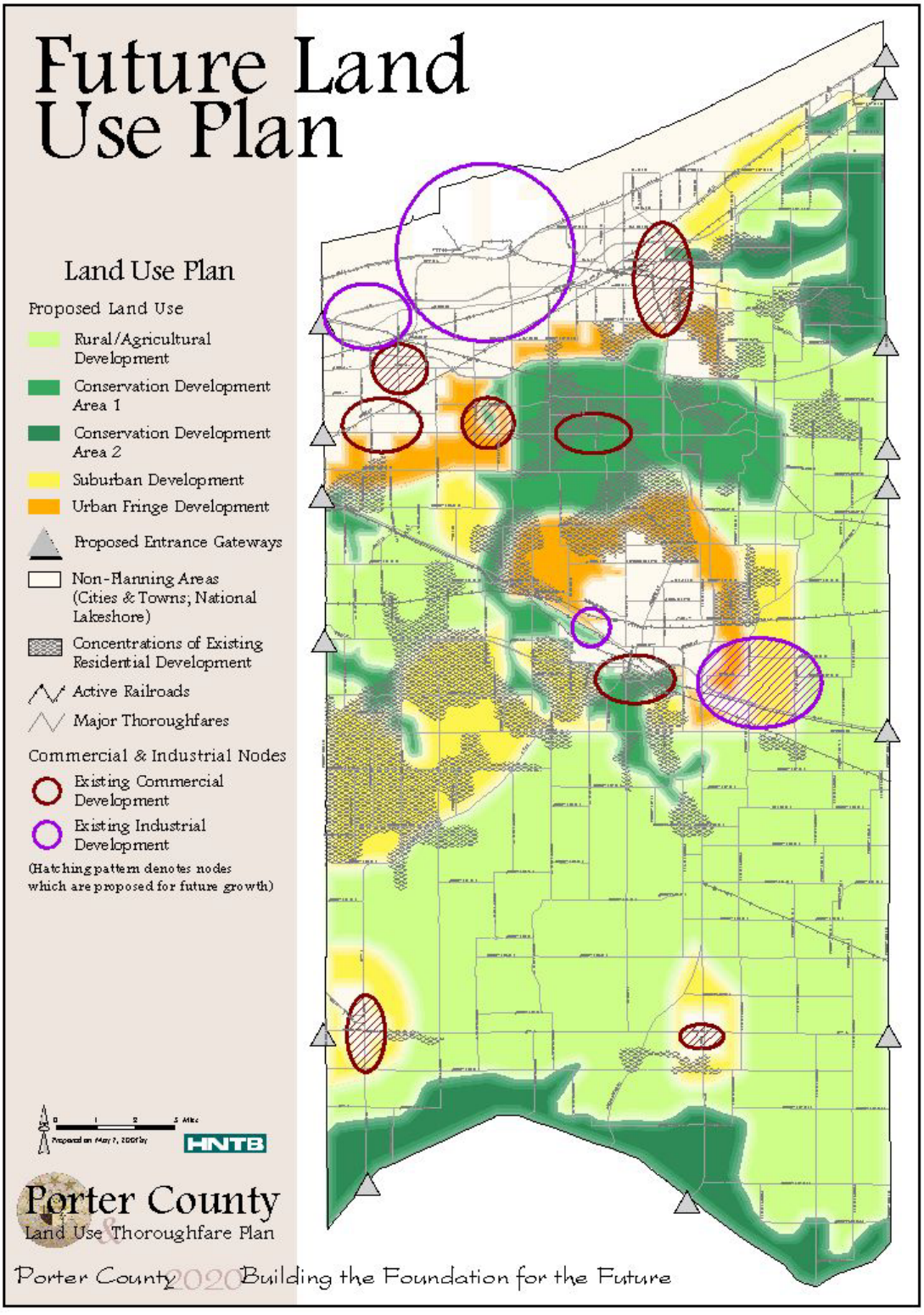
2. Suburban Development

Porter County's attractive landscape has served as a backdrop for a great deal of quality residential subdivisions on the outskirts of the urban areas. Areas denoted for low density residential on the land use map are the best locations for continued development of this type. These areas are situated around existing similar development and along important thoroughfares for access to the nearby commercial centers. Densities are kept lower than those in the urban fringe in order to encourage the use of open space within and surrounding these neighborhoods. Recommended densities are between 2 and 3 dwelling units per acre in areas with public utilities and no greater than 1 dwelling unit per 2 acres in areas not supplied with water and sewer. Some neighborhood or community type commercial development would also be acceptable and perhaps even encouraged along major (and some minor) arterials.

3. Conservation Development

The land use plan recommends the protection of Porter County's significant environmental features through the use of innovative subdivision design, which preserves open space, environmental features, and the general character of the area. The land use plan recommends that the County adopt incentives to encourage the clustering of homes and the preservation of open space within this land use classification, with the possibility of mandating clustering or conservation subdivisions in especially sensitive areas.

Figure 25: Future Land Use Plan



Conservation Development Area 1

The location of this area is next to urban areas, which has the potential to develop with connections to water and sewer systems. The use of such systems will be encouraged within this district as well as conservation design to protect the sensitive areas that might be found within this area. Recommended densities if utilities are provided are between 1 unit per acre to 2 units per acre. If conservation design or cluster development is used these densities could be greater through adopted incentives that would protect the sensitive areas. The incentives will protect wetland/wildlife habitat, agriculture, floodplains and other similar designations.

Conservation Development Area 2

The location of this area is within the rural/agricultural development. In order to maintain the character of this area and to preserve significant environmental features the recommended overall density of the conservation area 2 is one dwelling unit per 20 acres. This is a recommended density and not a lot size. Lots allowed within a subdivision are expected to be approximately an acre with the use of incentives to cluster homes for protecting sensitive features. Cluster homes and conservation designs will be encouraged to protect the wetlands, floodplains and tree stands within this district.

4. Rural/Agricultural Development

Porter County has voiced a desire to protect a substantial portion of its farmland from encroaching residential development and its impacts. Since the expected growth in population will require some use of this land for residential development, the County has determined that the best way to minimize impacts to agriculture is to adopt regulations that discourage (but not necessarily eliminate) single-lot strip development and encourage most residential development in this area to locate in larger subdivisions. Regulations will still be necessary in order to minimize the impacts of these subdivisions, including buffering requirements, open space provisions, roadway and road access requirements, and careful control of the residential and non-residential mix of uses. While subdivisions are encouraged in this land use category, their exact location should be the subject of significant Plan Commission review. Subdivisions should be located along major arterials to minimize the impact on surrounding land uses and roads, while helping to maintain the rural character of the area. The Plan Commission should carefully consider the productivity of the land being proposed for subdivision development, placing a preference on developing less productive agricultural land. The potential for impacting surrounding agricultural uses or the potential impacts of surrounding agricultural uses on the proposed development should also be a prime consideration. Clustering several subdivisions together to create a de facto new urban area may not be seen as maintaining the overall rural character of the County unless the County is convinced that by allowing multiple subdivisions to locate in close proximity, it would significantly reduce the possibility of further development in the rural category, thereby preserving larger tracts of open areas.

It is the intent of the County to maintain a rural character for this development area. Subdivisions allowed in this area will be expected to be designed with consideration to the adjoining properties agricultural rights. Residential development will be encouraged to concentrate within developments that protect surrounding properties through appropriate controls, buffering between uses and open space.

Further, it is the intent that residential development in the rural category be used to assist the County in meeting the needs of its population growth. Therefore, regulations should be adopted to assure that development in this land use category is a supplement to development in the Urban Fringe and Suburban Development categories and not a substitute for development in these areas. The County should carefully monitor where development is occurring and stand ready to adjust its regulations and ordinances if the rural category begins to assume the status of a preferred development location instead of a supplemental development alternative. In addition, all plats for subdivisions in this area should be required to include the following Right-to-Farm statements, "The property owner and all subsequent owners hereby recognize the development is in an area primarily dominated by pre-existing rural and agricultural uses. These uses may generate dust, noise, odor and lights at levels significantly beyond those found in urban areas and therefore recognize the right of these uses to continue."

It is also the intent of this district to discourage the stripping out of county roads with single-lot residential development. While the County does not intend to eliminate this development alternative altogether, the County should adopt regulations and ordinances designed to assure that this type of development is minimized and, as much as possible, pays for the actual cost of the development so that the long-term costs of the strip development are not passed on to County taxpayers and residents.

5. Other Notations on the Land Use Map

Besides the allocations of land described above, the land use map includes the following.

a. Commercial & Industrial Nodes

While the Urban Fringe Residential areas do incorporate some neighborhood oriented commercial uses, most commercial as well as industrial development is encouraged to occur in what the plan refers to as commercial and industrial "nodes". These are areas where transportation access and a grouping of businesses create ideal locations for shopping and business centers. (The term *business* refers to both industry and office development.)

Existing concentrations of these uses are indicated on the land use plan with a circle or an oval. Those circles or ovals with a hatch pattern are proposed for future expansion. These nodes are generally located at the commercial centers of cities and towns and/or at major thoroughfare intersections. It is recommended that future commercial and industrial development be located in these designated areas rather than dispersed throughout the County. No recommended densities are provided. Instead, the plan recommends the use of

design and performance standards to dictate how these distinctly different locations will develop.

b. Gateways

The land use plan recommends the use of various design techniques to provide entrance gateways into the County along primary thoroughfares. The special treatment of these corridors may include a "welcome" sign, some special landscape plantings, or design standards for buildings within the designated gateway area. Regardless of how the County chooses to design its gateways, they will serve as a signal to the driver that he/she has entered Porter County.

TRANSPORTATION PLAN

A. INTRODUCTION

A community's land use pattern and transportation system interact with one another. Different types of land uses have different transportation needs; for example, single-family residential uses require local and collector streets for collecting and breaking up traffic flow, while commercial uses require arterial streets for handling major traffic volumes caused by shoppers. Conversely, the transportation system may have an impact upon the types of land uses that predominate in a particular area; for example, ready rail and interstate access are important for industrial uses.

Unless well planned, the transportation needs of one land use may conflict with and impede the transportation needs of an adjacent land use. The relatively high volumes of traffic generated by large commercial and residential areas can quickly reach the point where traffic virtually stops unless road access and turning movements are controlled. Numerous road access points may be incompatible with agricultural uses of roads for transport of large machinery and grain, since the numerous turning movements generated by these multiple access points can significantly slow down and reduce road capacity.

The Northwestern Indiana Regional Planning Commission (NIRPC) coordinates transportation planning and policy for the Lake, Porter, and LaPorte Counties in Northwestern Indiana. The NIRPC has the status of a Metropolitan Planning Organization (MPO) under the rules of the U.S. Department of Transportation, and therefore has access to TEA-21 funds and other transportation funds.

Porter County is designated as an area of severe non-attainment for O_3. The Indiana Department of Environmental Management (IDEM) has adopted a State Implementation Plan (SIP) that includes strategies to enable northwest Indiana to move toward attainment of the NAAQS. The long-range and short-term projects proposed by NIRPC in its 2020 Vision Plan and 2001- 2005 TIP are required to comply with the air quality requirements established by IDEM. Though NIRPC has no control over locally-funded projects, they normally incorporate, into their environmental study, local and county projects which would have a significant impact on air quality.

Porter County's transportation network is composed of a multi-modal system, including thoroughfare, commuter rail, buses and trails. Encouraging the multi-modal development of the network is important in order to improve the air quality in the County. The following section describes the thoroughfare system and the other modes of transportation in Porter County.

B. THOROUGHFARE SYSTEM

1. Thoroughfare System Description

Of all the modes of transportation in Porter County, the thoroughfare system (surface transportation) is the most important and visible. Figure 26 shows the thoroughfare system, broken down by major roadway classification and traffic counts.

The classification system may be described as follows[1]:

- *Highways* are devoted to high-speed, long-distance traffic movement with (ideally) little or no access to adjacent land. Federal highways (i.e.: I-80/90 and I-94) are multi-lane, and have controlled access. State highways may be multi-lane or single-lane, and may, according to the policy of INDOT, have curb cuts.

- *Arterials* move traffic between principal traffic generators. Direct residential access is generally discouraged, but access to commercial or industrial areas is allowed.

- *Collectors* serve internal traffic functions within the urban area, and generally function to connect local streets (below) to arterials. They can also provide direct access to property.

- *Local streets* exist primarily to provide access to adjacent land. They may be found in grid, loop, or cul-de-sac systems.

2. Highways

Several federal and state highways service the County. I-80/90 and I-94 cross the northern portion of the County, and are under the purview of the U.S. Department of Transportation, Federal Highway Administration. U.S. Highways 12, 20, 6 and 30 also cross the County (east to west) with U.S. 12 following the Lake Michigan shoreline and the others crossing respectively further south, with U.S. 30 bisecting the center of the County just south of Valparaiso. U.S. 231 just clips the far southwestern portion of the County running north/south. State Roads 49, 149, 249, 520, 130, 8 and 2 also provide access to the County and its communities, and are under the purview of the Indiana Department of Transportation (INDOT). The highest and lowest Average Daily Traffic (ADT) counts along these routes and their projected traffic in the Year 2020, are listed in the following table:

[1] After Kaiser, Gottshcalk, and Chapin (1994:231).

Figure 26: Thoroughfares and Existing Traffic Counts

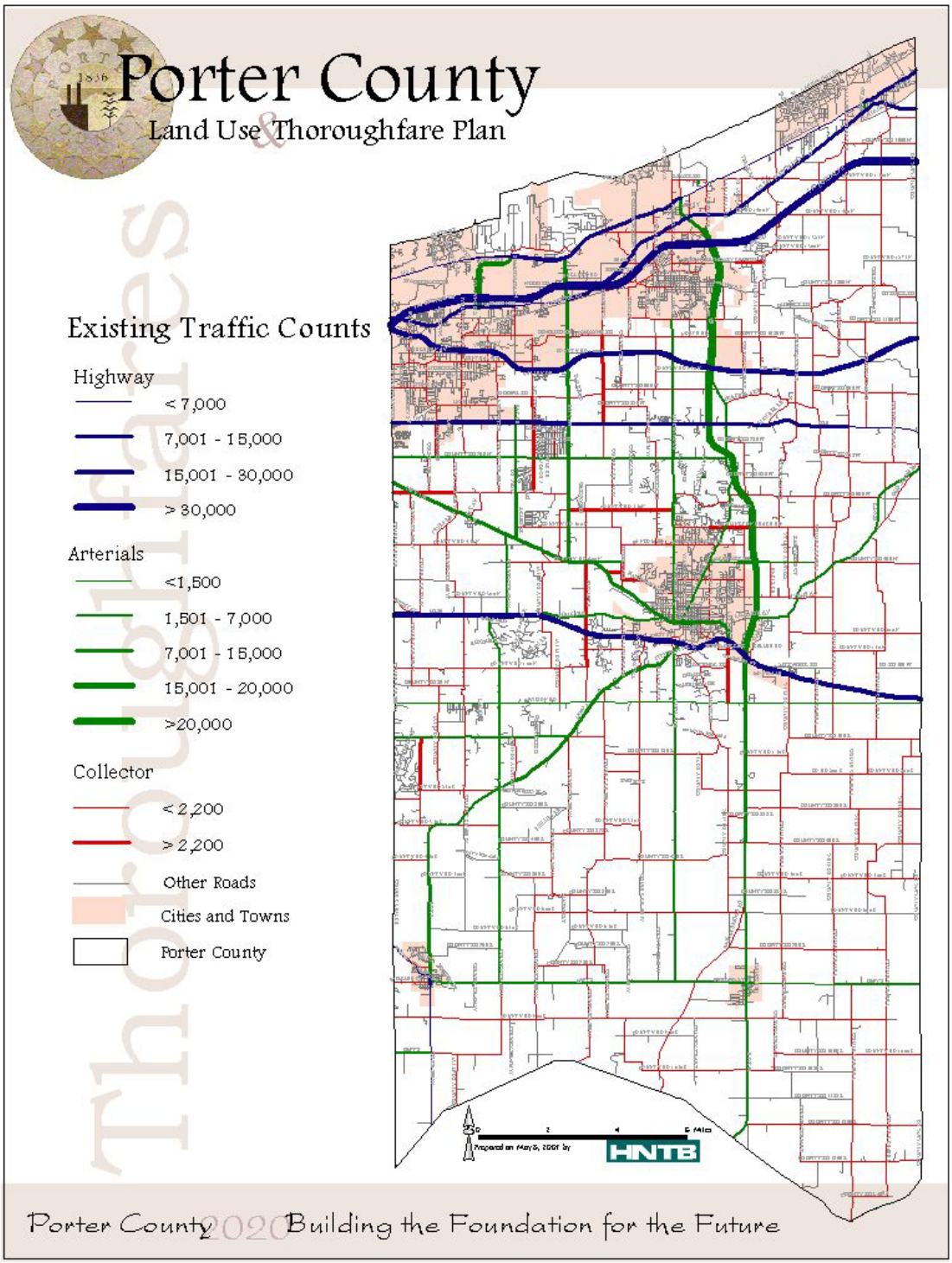


Table 9: State Highway Traffic Counts

Route	Highest Segment Average Daily Traffic (1999)	Lowest Segment Average Daily Traffic (1999)
I-94	68,770	35,140
I-80/90	38,810	24,460
U.S. 12	9,960	3,970
U.S. 20	27,220	10,360
U.S. 6	18,160	6,590
U.S. 30	25,430	15,150
U.S. 231	13,600	5,200
S.R. 49	27,500	1,160
S.R. 149	10,860	7,330
S.R. 130	16,560	8,470
S.R. 8	6,810	2,580
S. R. 249	22,180	6,120
S.R. 520	5,220	5,220
S.R. 2	24,850	4,630

Traffic volumes on all of these roadway segments are projected to grow by more than 20% over the next twenty years. This will result in traffic volumes on some of the major state routes approaching the current volumes on I-80/90.

3. Arterials

Several arterial roads serve the County and provide additional access for residents and visitors. These include Calumet Avenue, Campbell Street, Joliet Road, Division Road, Smoke Road, 500W, 100S and 700 N. Average Daily Counts were calculated for the total length of each route listed in the table below. Since certain segments along the route may have a significantly higher traffic count than the average, the highest traffic count segment found along the route is also listed.

Table 10: Porter County Arterial Traffic Counts

Route	*Total Route Average Daily Traffic (1999)*	Highest Traffic Count Segment along the Route
Calumet Ave.	3,924	7,340
Meridian Road between Vale Park Road and CR 1100N (Campbell Street)	5,371	7,940
Joliet Road	2,485	3,470
Division Road	1,144	3,360
Meridian Road between SR 2 and US 8 (Smoke Road)	2,922	5,906
CR 500 W	2,277	6,955
CR 100 S	2,376	6,930
CR 700 N	4,084	9,105

4. Porter County Road Improvement Projects

Porter County is undertaking major highway improvement projects. Some have been approved like the CR 300 west (SR149) extension from SR 130 to US 30 (R/W phase). This project has been included in NIRPC's Vision Plan and is programmed for implementation by the year 2007. The CR 300 west project currently has $3 million of demonstration money as a start in cooperation with INDOT. Some projects are still awaiting approval such as the CR 300 west (SR 149) extension from US 30 to SR 2 and others are still in the preliminary engineering phase:

- Meridian Road construction from US 6 to CR 1050 north (Preliminary engineering phase). This project will create a north-south link and will cross US 6 and I90/80.
- CR100 south reconstruction from Lake County Line to SR2 (Preliminary engineering phase).

These projects are still at the preliminary engineering phase and are on hold. Federal STP-Group 4 money will be used on these projects. INDOT is unlikely to fund new STP-Group 4 projects for 10 years due to backlog of projects.[2]

5. The 2020 Vision Plan Programmed Projects, including amendments adopted January 25, 2001

The Vision 2020-Northwestern Indiana Regional Transportation Plan was created by NIRPC (Northwestern Indiana Regional Planning Commission). The plan is used to guide development of a multi-modal transportation network which will improve access and mobility to the region while complementing land use growth patterns adopted in local plans, preserving the existing network and minimizing negative environmental impacts.

After analyzing demographic forecasts, land use and transportation interactions and transportation deficiencies, the Regional Transportation Planning Committee established a planning and policy framework.

The 2020 Plan identifies "hot spots" for residential, commercial and industrial development. Most of them are consistent with the areas proposed for future growth in the Porter County Land Use Plan. (see Figure 27 and Figure 28)

The Committee identified regional priority corridors which were part of the framework for evaluating proposals for inclusion in the plan. The multi-modal regional priority corridors encompass the most significant transportation facilities within the region. These include Interstate 90/94, US 6 and U.S. 30. Project proposals located within the corridors were given priority.

NIRPC considered the results of the analyses for all thirteen alternative transportation networks and chose a preferred alternative. Table 13 lists the projects located in Porter County and Figure 29 shows the location of these projects.

6. Congestion Management

The NIRPC Congestion Management System Committee analyzed the causes of traffic congestion and attempted to find alternative ways to mitigate the problem. "The highway network improvements recommended by the Vision 2020 plan are indicative of the effort to concentrate investments within the existing developed corridors to increase the potential for redevelopment and infill and to minimize the notion that building extensive new highway facilities is the solution to network congestion and air quality concerns." [3]

The congestion management strategy included in the 2020 Vision Plan is sensitive to the issue of urban sprawl and aims to resolve congestion problems not only by traditional means (enlargement of roads) but also by alternative methods. The plan supports the development of public transportation, but also suggests reducing travel demand by

[2] David W. Schelling P.E. Porter County Highway Engineer.
[3] Vision 2020 plan, chapter 3 page 8.

encouraging ride sharing at peak hours, implementing intelligent transportation system technology and transportation system management schemes which improve traffic flow with signal timing and coordination, intersection channelization, construction of auxiliary lanes and access controls.

Congestion thresholds were calculated by volume over capacity of a road. In the rural areas, the system is considered congested when the roadway segment traffic volumes reach 70 percent of capacity. In the urban and suburban areas, the system is considered congested when the roadway segment traffic volumes reach 80 percent of capacity. In the vicinity of major traffic generators, the system is considered congested when the roadway segments traffic volume reach 90 percent (see Figures 30 and 31).

The plan shows the congested areas of the road network. The road sections identified as being congested in Porter County are:

Table 11: Congested Roads in Porter County

Road	Section Location	Factor (volume over capacity ratio)
US 6	SR 149 to Mander Road	1.10
US 30	CR 250 W to SR 2	1.36
SR 2	Division Road to SR 130	1.18
SR 49	I 94 to Old Porter Road	1.30
SR 49	CR 1050N to CR 400N	1.30
SR 130	SR 51 to Campbell Street	1.07
Vale Park Road	Sturdy Road to SR 49	1.12
Calumet Avenue	Bullseye Lake Road to SR 130 (Valparaiso)	1.24

Table 13 lists projects recommended for congestion management in Porter County and Figure 32 shows their location.

7. Transportation Improvement Plan – TIP 2001-2005 adopted by NIRPC January 25, 2001 (more amendments in progress)

TIP is the short-range program of projects derived from the long-range list of transportation improvements recommended in the regional transportation plan.

Tables 14, 15, 16 and 17 summarize the projects to be implemented between 2001 and 2005, as shown in the TIP.

Figure 27: 2020 Vision Plan "Hot Spots"

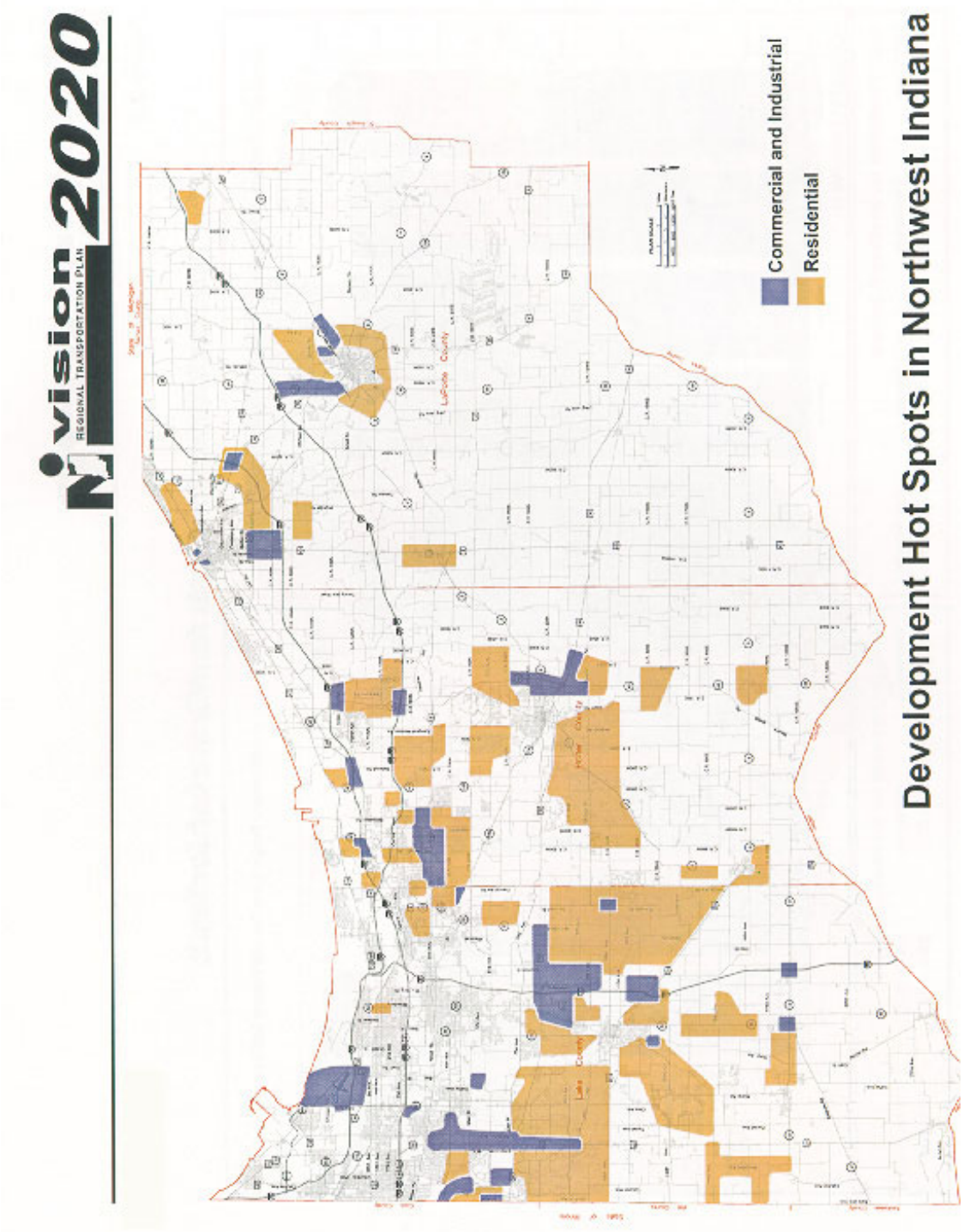


Figure 28: Final Land Use Plan

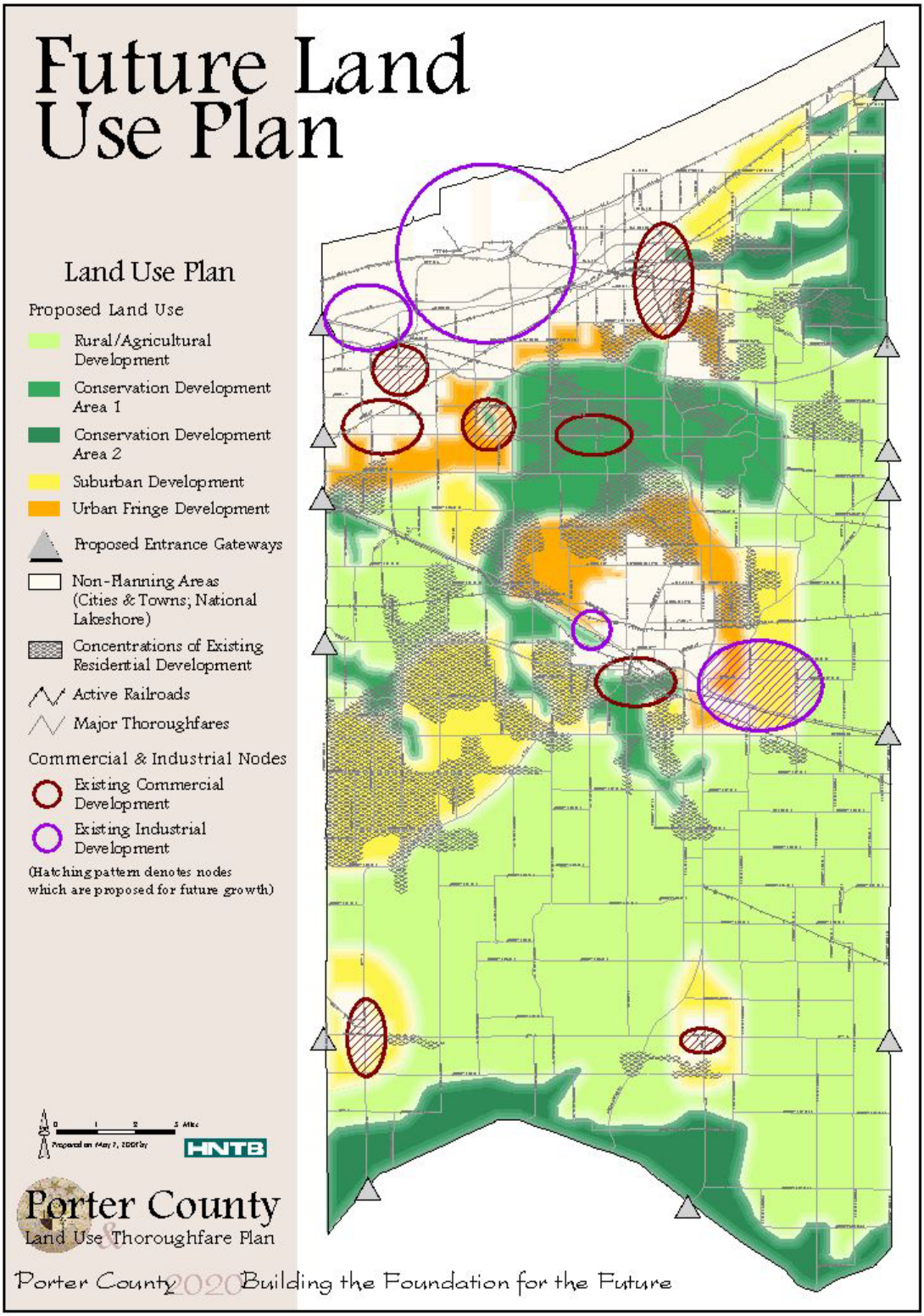


Figure 29: 2020 Vision Plan Preferred Alternative Transportation Network

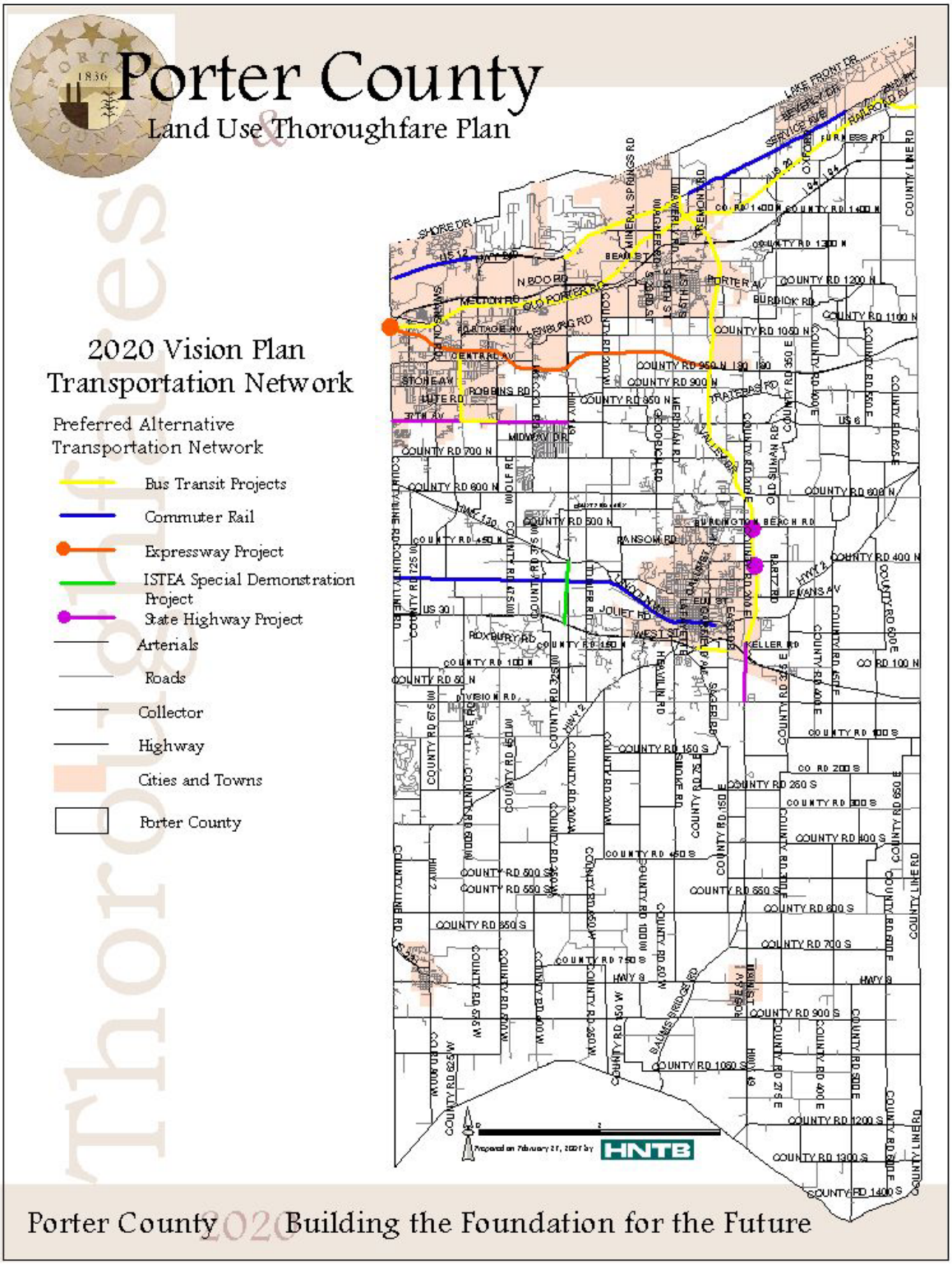


Table 12: 2020 Vision Plan, amended January 25, 2001 Preferred Alternative Transportation Network

Reference	Mode	Submitting Agency	Project Title	Starting Point	Ending Point	Description	Implementation	Total Cost	Fund Source	Status
Projects to be Implemented by 2005										
01-11 (148-149)	State Highway	INDOT	Indiana Route 49	US Route 30	Division Road	Reconstruction and widening from 2 to 4 travel lanes	1999-2004	$1,000,000	INDOT	Completed
	Bus Transit		Dune Park Shuttle Startup (3years)	Dune Park South Shore Station	Valparaiso	Transit Service between Valparaiso and South Shore Commuter Rail Service	1999-2004	$1,836,000	CMAQ	New Sponsor LCEOC
	Bus Transit	Portage	Portage Transit Start-up	Portage Mall	South Haven	New fixed route service from Portage Mall to South Haven via Willowcreek Road and US 6	2001-2005	$193,000	S5307	Project added to reflect implement ation
Projects to be Implemented by 2007										
50-01 (254-145)	Local Highway	Porter County	Porter County Road 300 west Phase I	Indiana Route 130 at Indiana Route 149	US Route 30	New two-lane highway	1999-2006	$3,000,000	HPPP	
50-01 (254-145)	Local Highway	Porter County	Porter County Road 300 west Phase I	Indiana Route 130 at Indiana Route 149	US Route 30	New two-lane highway	1999-2006	$9,250,000	STP IV	
01-15 (89-258)	State Highway	INDOT	US Route 6	Scottsdale Road	Indiana Route 149	Reconstruction and widening from 2 to 4 travel lanes	1999-2006	$9,200,000	INDOT	
01-16 (89-258)	State Highway	INDOT	US Route 6	Indiana Route 51	Scottsdale Road	Reconstruction and widening from 2 to 4 travel lanes	1999-2006	$10,800,000	INDOT	
01-21(144-271)	State Highway	INDOT	Indiana Route 49 Interchange	Porter County Road 400 N		Replace existing at-grade intersection with new interchange	1999-2006	$8,000,000	INDOT	
02-02 (214-214)	Interstate	INDOT	Interstate 80/94 Interchange	Interstate 90		Interchange ramp modification	1999-2006	$40,000,000	Toll	
02-03a (185-51)	Interstate	INDOT	Interstate 90	Cline Avenue	SR 49	Reconstruction and widening from 4 to 6 travel lanes	1999-2006	$120,000,000	Toll	Eastern Termini change to SR 49
	Commuter Rail	NICTD	South Shore Additional Rail cars	Randolph Street Terminal, Chicago	Michigan RT Center, South Bend	New rail cars for 350 additional a.m peak passenger capacity	1999-2006	$11,000,000	S5309NS/SA	
11-C1 (00-00)	Commuter	NICTD	South Shore	Randolph	Michigan RT	Acquire additional rail cars to increase	1999-2006	$20,000,000	S5309NS/SA	

Reference	Mode	Submitting Agency	Project Title	Starting Point	Ending Point	Description	Implementation	Total Cost	Fund Source	Status
	Rail		Additional Rail cars	Street Terminal, Chicago	Center, South Bend	a.m peak passenger capacity on South Shore Line by 550				
Projects to be Implemented by 2015										
01-20 (270-270)	State Highway	INDOT	Indiana Route 49 Interchange	Porter County Road 500 N		Replace existing at-grade intersection with new partial interchange	2007-2014	$6,000,000	INDOT	
11-05 (51-53)	Commuter Rail	NICTD	Double Tracking Wilson to Wagner	Wilson Siding	Wagner Siding	Construct second track to increase service reliability	2007-2014	$2,400,000	S5309RM	Moved from 1999-2006 period
11-10 (133-133)	Intermodal	NICTD	Parking Structure at Dune Park Station	US Route 12 at Indiana Route 49		Construct parking structure to accommodate 250 additional vehicles at Dune Park Station park and ride lot	2007-2014	$3,000,000	S5309RM	Moved from 1999-2006 period
11-08 (125-133)	Commuter Rail	NICTD	Double tracking Tremont to Wilson	Tremont Siding	Wilson Siding	Construct second track to increase service reliability	2007-2014	$6,600,000	S5309RM	
14-02 (57-154)	Bus Transit	GPTC	Porter/Michigan City Express Startup (3 years)	Adam Benjamin Metro Center	Michigan City	New fixed route service from Adam Benjamin Metro Center to Michigan City via US 20 and US Route 421	2007-2014	$500,000	CMAQ/S5307	
11-02 (00-120)	Commuter Rail	NICTD	Westlake VALPO Line Startup	Chicago Loop	Valparaiso	Commence Westlake commuter rail service with initial a.m. peak passenger capacity of 1,750	2007-2014	$250,000,000	S5309NS/SA	Moved from 1999-2006 period
Projects to be Implemented by 2020										
11-09 (133-136)	Commuter Rail	NICTD	Double Tracking Tamarack to Tremont	Tramarack Siding	Tremont Siding	Construct second track to increase service reliability	2015-2020	$3,600,000	S5309RM	
Projects to be Implemented by 2025										
No additional projects are scheduled for implementation during this time frame as part of the plan amendment process.										
TOTAL								$506,379,000		

Figure 30: 1996 Congestion

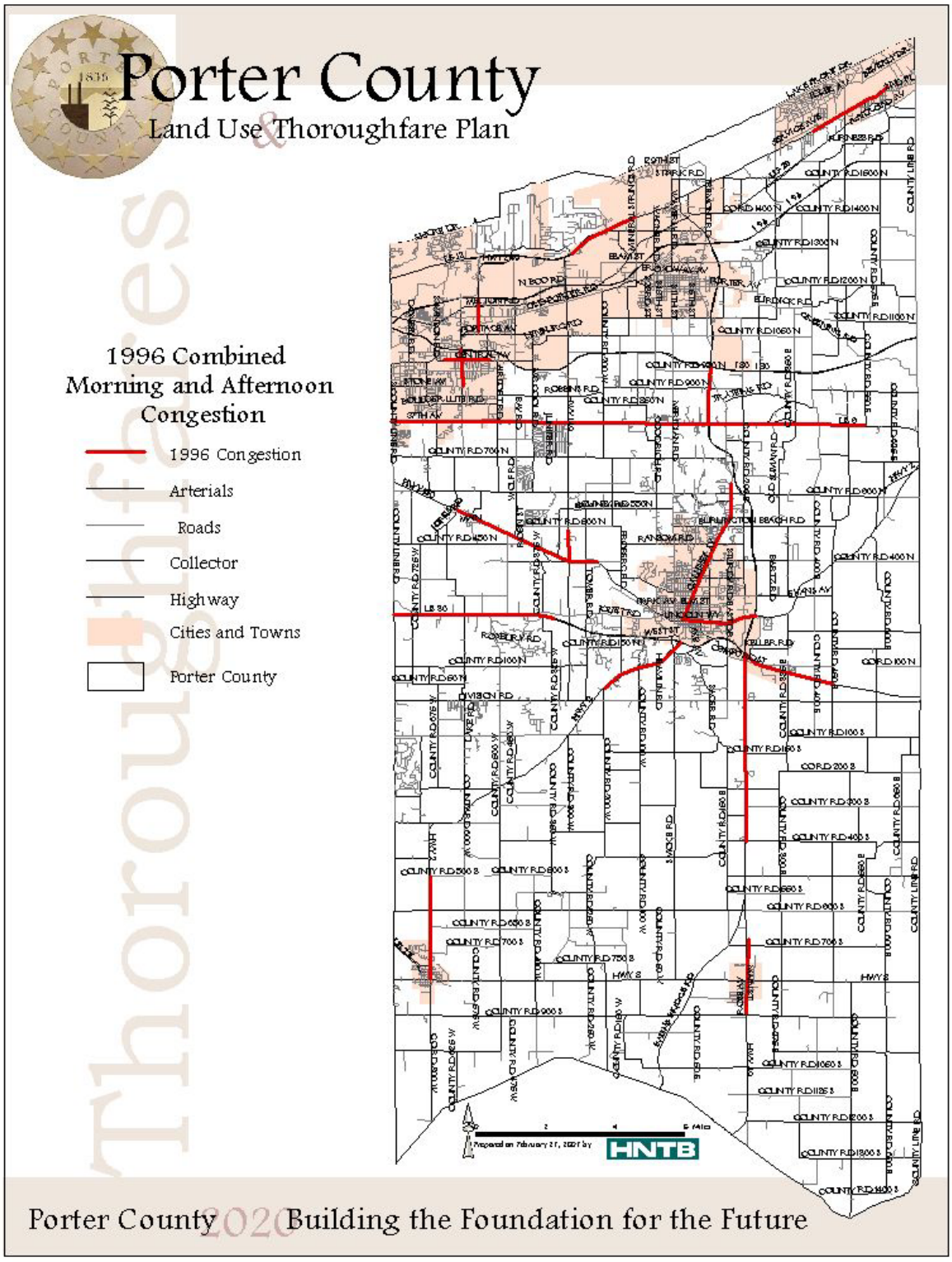


Figure 31: 2020 Projected Congestion

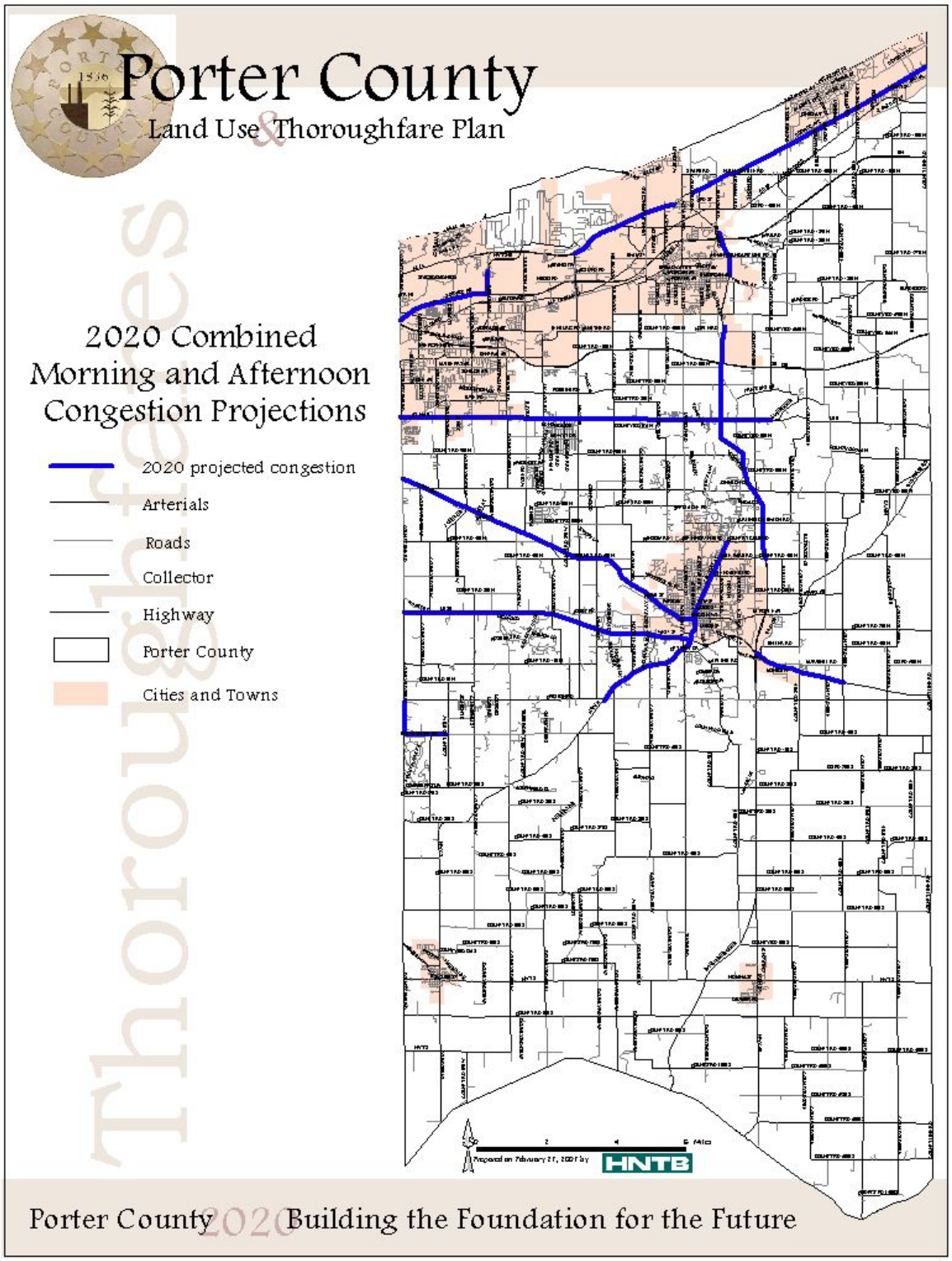


Figure 32: Recommended Transportation Network Improvements

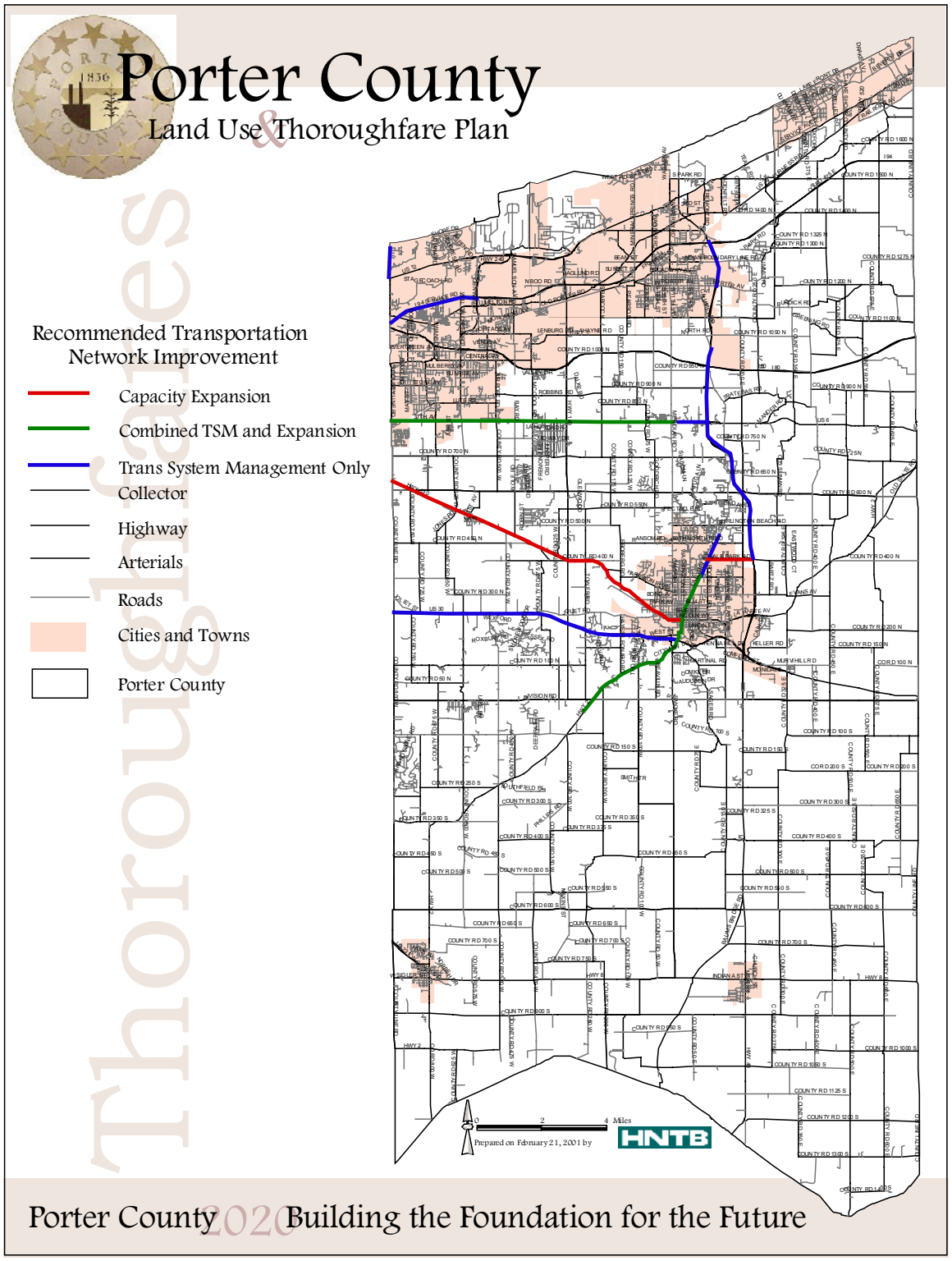


Table 13: 2020 Vision Plan Congestion Management System Recommended Projects

	Signal Timing/Coordination	Intersection Turn Lanes	Acceleration Lanes	Parallel Parking Removal	Rail Crossing Improvements	Lane Alignment	Driveway Controls	Median Controls	Incident Management/ITS	Capacity Expansion
US 6 from SR-51 to SR-149	X	X					X	X	X	X
US 6 from SR 149 to Mander Road								X		X
US 6 from Meridian Road to SR 49								X		
US 30 from Randolph Street to SR 2	X	X					X	X	X	
SR 2 from Division Road to SR 130							X	X		X
SR 49 from I 94 to Porter Avenue	X	X	X						X	
SR 49 from CR 1050N to CR 400N	X	X	X						X	
SR 130 from SR 51 to Campbell Street										X
I 94 from Central Avenue to SR 249			X							
Calumet Avenue from Glendale Boulevard to Bullseye Lake Road	X	X					X			
Calumet Avenue from SR 130 to Glendale Road	X	X					X			X
Vale Park Road from Calumet Avenue to SR 49										X
County Line Road from Oak Street to US 12		X					X	X		

Note the capacity expansion of interstate 90 from 4 to 6 lanes is not included because it was part of the amendments adopted January 2001.

Table 14: TIP 2001-2005, amended January 2001 - INDOT Funded Projects in Porter County
(all costs are in $1000s and include PE, RW and CN phases)

Project	Reference	Sponsor	Description	Location	Phase	Program	Federal Amount	State Amount	Local Amount	FY 2001	FY 2002	FY 2003
SR 2	8144600	INDOT	SR 2, Intersection Improvement	CR 400N, 4.4 miles E of SR 49	RW, CN	Safety Improvements	118	29		32		115
SR 2	9901940	INDOT	SR 2, Auxiliary Lanes	CR 200W, 2.4 miles S of W junction with US 30	PE, RW	Safety Improvements	8	2			5	5
US 6	9703410	INDOT	US 6, Intersection Improvement	Porter/LaPorte County Line Rd, 1.14miles W of SR 2	PE, RW	Safety Improvements	16	4		10	10	
US 6	9800210	INDOT	US 6, Bridge Rehabilitation	Bridge over Coffee Creek, 2.1 miles E of SR 49	CN	Bridge Preservation	170	42			212	
US 6	9901920	INDOT	US 6, Auxiliary Lane Construction	1.1 miles W of SR 49, Elmwood Park	PE, RW	Safety Improvements	16	4			10	10
US 6	9901980	INDOT	US 6, Auxiliary Lanes Construction	1.54 miles E of SR 49, Mander Rd and Whitethorne Woods Sub	PE, RW	Safety Improvements	8	2			5	5
SR 8	9610480	INDOT	SR 8, Bridge Rehabilitation	Bridge over Cobb's Creek, 0.54 miles E of US 231	CN	Bridge Preservation	224	55		279		
SR 8	9611280	INDOT	SR 8, Drainage Ditch Correction	From 0.5 miles W of SR 49	RW	Roadside Improvements	176	44		220		
US 12	8764095	INDOT	US 12, Small Structure Replacement	4 miles E of SR 49	CN	Roadside Improvements		145				145
US 12	8915240	INDOT	US 12, Small Structure Replacement	1.1 miles E of SR 49	CN	Roadside Improvements		12		12		
US 12	8915285	INDOT	US 12, Small Structure Replacement	1.3 miles W of SR 49	RW	Roadside Improvements		9		9		
US 12	9136340	INDOT	US 12, Intersection Improvement	Broadway, 3.7 miles W of LaPorte County Line	PE, RW	Safety Improvements		10		5		5
US 12	9702430	INDOT	US 12, Bridge Rehabilitation	Bridge over Burns Ditch, 0.94 miles W of SR 249 EB and WB	CN	Bridge Preservation	507	127		634		
US 12	9702590	INDOT	US 12, Bridge Rehabilitation	Bridge over Amtrak and Bethlehem Street Entrance Road	CN	Bridge Preservation	1,609	401		'	'	'
US 12	9801970	INDOT	US 12, Small Structure Replacement	Over Ditch, 05 miles E of SR 49	PE, RW		49	12		5	56	
US 20	9136335	INDOT	US 20, Intersection Improvement	SR 149	PE, RW	Safety Improvements		270		40		230
US 20	9610380	INDOT	US 20, Bridge Replacement	Norfolk Southern over US 20, 1.91 miles W of SR 149	PE	Bridge Preservation	42	10		52		
US 30	9406130	INDOT	US 30, Bridge Replacement	NS Railroad over US 30, 0.93 km E of W junction with SR 2	CN	Bridge Preservation	8,491	2,122			10,613	
US 30	9600130	INDOT	US 30, Traffic Signal Modernization	CR 300 W	CN	Safety Improvements	40				40	
SR 49	0014390	INDOT	SR 49, Traffic Signal Modernization	US 6, S of Chesterton (SB ramp)	CN	Safety Improvements	51			51		
SR 49	9610490	INDOT	SR 49, Bridge Rehabilitation	Bridge over Ahlgrim Ditch, 3.10 miles N of SR 8	CN	Bridge Preservation	36	9		45		

Project	Reference	Sponsor	Description	Location	Phase	Program	Federal Amount	State Amount	Local Amount	FY 2001	FY 2002	FY 2003
SR 49	9701840	INDOT	SR 49, Bridge Replacement	Bridge over Crooked Creek, 2.5 miles S f SR 8	RW	Bridge Preservation	24	6		30		
SR 49	9702510	INDOT	SR 49, Bridge Replacement	Bridge over Cook Ditch, 4.01 miles S of SR 8	CN	Bridge Preservation	168	42		210		
SR 49	9901740	INDOT	SR 49, Bridge Replacement	Bridge over Pleasant Township Ditch, 1.96 miles S of SR 8	PE, RW	Bridge Preservation	54	14			18	50
I 80	9805683	INDOT	I 80, Safety Revisions	Hoosier Helper Van Program in Lake and Porter Counties	CN	Intelligent Transportation	528	132		660		
I 80	0065790	INDOT	I 80 New Bridge Construction	WB I80 Ramp over Toll Rd & EB Travel Plaza Exit in Lake Station	PE		210					Completion
I 80	0065950	INDOT	I 80 Road Replacement	Borman Expressway (I 94) from E or SR 51 to E of Bridge in Lake Station	PE		104	26				Completion
I 90	0065700	INDOT	I 90 Interchange modification	Borman Expressway (I90/80)	PE		320			completion		
I 90	0065740	INDOT	I 90 Bridge Rehabilitation/Repair	Bridge over Toll Rd on Domby Rd in Portage	PE		20					Completion
I 90	0065925	INDOT	I 90 Sign Modernization	Borman Expressway (I 94) at Toll Rd in Lake Station	PE		40					Completion
I 94	9829910 982991X	INDOT	I 94, Pavement Rehabilitation	Toll Road to 0.56 km W of SR 49	CN	Interstate Preservation	6,993	777		7,770		
I 94	0065720	INDOT	I 94 Bridge Deck Reconstruction & Widening	Bridge over US 20 Willow Creek & CSX RR in Portage	PE		40	10				Completion
SR 130	8351540	INDOT	US 130, Intersection Improvement	Lake/Porter County Line Road	CN	Safety Improvements	174	44			218	
SR 130	9800910	INDOT	US 130, Intersection Improvement	LaPorte Street	PE, RW	Safety Improvements	428	107		120	415	
SR 130	9904980	INDOT	US 130, Resurfacing	SR 149 to US 30	CN	Non-Interstate Preservation		1,529		1,529		
SR 130	9600120	INDOT	US 130, Traffic Signal Modernization	SR 149 Connector	CN	Safety Improvements	40				40	
SR 149	9702580	INDOT	SR 149, Bridge Replacement	Bridge over Little Calumet River 0.14 miles S of US 12	PE	Bridge Preservation		50			50	
SR 149	9901870	INDOT	SR 149, Bridge Rehabilitation	Bridge over I-94, 0.39 miles N of US 20	CN	Bridge Preservation	742	185			927	
SR 149	9600110	INDOT	SR 149, Traffic Signal Modernization	US 30 connector	CN	Safety Improvements	40				40	
US 231	9136310	INDOT	US 231, Intersection Improvement	SR 2 and CR 1000S, 2.0 miles S of SR 8	PE, RW	Safety Improvements		15			5	10
SR 249	9800440	INDOT	SR 249, Bridge Rehabilitation	Bridge over Muck Pocket, 0.24 miles S of US 12	CN	Bridge Preservation	974	243			1,217	
SR 249	9901790	INDOT	SR 249, Bridge Rehabilitation	Bridge over Calumet River, 0.71 miles N of I-94	CN	Bridge Preservation	309	77			386	
SR 520	9703430	INDOT	SR 520, Intersection Improvement	US 12	RW	Safety Improvements	29	7		36		

Project	Reference	Sponsor	Description	Location	Phase	Program	Federal Amount	State Amount	Local Amount	FY 2001	FY 2002	FY 2003
Bridge Preservation Program		STP Group I fund (TEA 21)	Porter County Bridge Inspection Program				52	13			65	
Other	0090270	STP Group I fund (TEA 21)	75 W Clifford Rd. at CSX AAR#522871A	Upgrade crossing from stop sign to flashers and gates				30	7.5		37.5	
Other	9983610	INDOT	County Road, Railroad Protection	NS crossing near Pine Village	CN	Safety Improvements	190			190		
Other	9304880	INDOT	Bike/Pedestrian Facilities	Between Dune State Park and MC Calumet Trail	CN	Transportation Enhancement	80	110		190		
						TOTAL	27073.5 (=$27,073,500)					

Table 15: TIP-Demonstration Project

				TEA 21 (High Priority Projects)			Next Act	
Agency	Reference	Description	Status	2001	2002	2003	2004	2005
Porter County	9287055	County Road 300 W	FONSI- 03/16/99	$1,250,000	$2,500,000			

Table 16: TIP -Urbanized Area Grant Program for Public Transit.
There are a number of preventive maintenance. Specific projects include:

Applicant	Fund	Criteria	Score	Project	Year	Total	FTA	Environmental	Air Quality Status	In ADA Plan?
Portage	**5307**	**5**	**55**	**New Service within Portage & Portage Township 2**	**2002**	**180,350**	**144,280**	**771.117©(14)**	**Exempt T2-21**	**NO**
LCEOC	**5307**	**5**	**50**	**New Service- Valparaiso Local Service 2**	**2002**	**72,188**	**57,750**	**771.117©(14)**	**Exempt T2-21**	**NO**

Table 17: TIP -Transportation Enhancement Projects

TE Category	Applicant	Project Proposal	TE Funds	Local Total	Total
Trail	Town of Porter	Prairie Duneland/Calumet Trail Connection	1,944,000	606,000	2,550,000
Commerce (non-trail project)	Porter County Convention/Recreation/Visitors Bureau	Joint Visitor's Center (with National Park Service)	1,560,000	870,000	2,430,000

C. COMMUTER RAIL

Active railroad companies which operate through the county include the CSX, Norfolk Southern, Chicago South Shore and South Bend including freight and passenger services, CN North America and Amtrak.

1. South Shore Line

The Northern Indiana Commuter Transportation District (NICTD) manages the South Shore Line which connects between Chicago and South Bend and runs through the Northern part of Porter County. Some residents who work outside the County use transit to travel. Many of these residents use the South Shore Line to commute to downtown Chicago. Since 1977, ridership has constantly increased to reach nearly 3.6 million passengers in 2000. That same year there was a 3.6 percent increase in ridership. The average annual weekday ridership increased from 12,287 to 12,793 passengers as compared to 1999. Rush hour trains operate in excess of their seated capacity, and most parking facilities are completely filled during weekdays. To achieve any increase in ridership, NICTD must add capacity to both rail car fleet and parking lots.

With the financial assistance from federal and state governments, NICTD has embarked on a six-year capital improvement plan totaling $166,100,000. This investment will be split as follows: Six bridge replacements, $15,000,000; modernization of the power distribution system, $34,000,000; signal system modernization, $41,300,000; rehabilitation of rolling stock, $51,400,000; station upgrades, $20,000,000; and improvements to the right-of-way, $4,400,000.

The stations located in Porter County are Ogden Dunes, Dune Park and Beverly Shores. Dune Park was completed in 1986. $450,000 have been invested and parking has been expanded three times. Beverly Shores station is a rehabilitated historic station completed in 1998. $650,000 have been invested and available parking has been doubled. Other improvements, to the section of the rail crossing Porter County, are underway and will increase the capacity of the line. They include creating double track segments in order to correspond with the rest of the western segments of the line (see Table 12 and 15 for other improvements).

2. Commuter Rail Extension

Due to the projected increase in demand and present capacity overload of the commuter rail, NICTD has planned for an extension of its service. NICTD has considered several options for the extension of the South Shore service. The preferred alignment is the CN line starting in Chicago and ending in Valparaiso. The estimated capital cost of the new line is $249,985,000 (see Table 12).

"Northwestern Indiana has become an extension of the Chicago Metropolitan area with nearly 5 percent of its daily work trips to downtown Chicago. In 1995, this amounted to 12,065 daily work trips (out of 260,246 generated), of which approximately 39 percent

(4,660 Indiana riders) were by commuter rail. The total number of daily work trips, including all modes of transportation, is expected to increase approximately 23 percent to 320,114 by the year 2020."[4]

Without additional lines, the South Shore Line will have to accommodate an increased ridership of 30 percent. The CN line would alleviate the burden placed on that line and attract more commuters. The total boardings projected for 2020 are 7,934 (inbound passenger/day) with 3,776 for the new CN line service. It is projected that 57 percent of work trips to Chicago Central area would be via rail by the year 2020, compared to the current 39 percent.

The commuter rail alleviates the road network from rush hour traffic and helps reduce potential air pollution. The new CN line will help in relieving the existing congestion along corridors identified in the 2020 Vision plan. They include the I 80/94, US Route 30 and US Route 41(north of US 30).

D. HIGHWAY AND RAIL FREIGHT

Heavy industrial activity is still prominent along the Lake Michigan Shoreline. The Chicago Metropolitan area also generates significant freight transportation. Statistics show that in the State of Indiana approximately $178.7 billion and 285.8 million tons of freight are transported annually. Approximately 74 percent (by weight) is shipped via truck and 15. 2 percent via rail. The shipments include petroleum, coal, non-metallic minerals, agricultural products and primary metal products.

INDOT in its Statewide Long-Range Multimodal Transportation Plan (1995) identified the highways that accommodate the majority of highway freight movement. Investment was prioritized on a 2,393 mile network. In Northwest Indiana these routes include Interstates 65, 80, and 90 and US Routes 30 and US 41. Interstate 65 and US 41, though, are not located in Porter County.

The local rail freight assistance program and the grade-crossing improvement fund help rehabilitate railroad tracks and improve rail-crossing improvements. INDOT administers an advisory group that examines future use opportunities for rail corridors that are likely to be abandoned. These include the potential for continued active use by other railroad companies, right-of-way to accommodate widening of adjacent highway facilities, development for commuter rail facilities or pedestrian and bicycle facilities.

E. TRANSIT

The 2020 Plan identifies the completion of a regional transit needs analysis as a high priority. The final public review of recommended strategies, published by NIRPC, identifies some objectives for Porter County. These are:

[4] West Lake Corridor- Major Investment Study- Executive Summary, July 2000 p.3

- Introduce new services for Valparaiso, including a bus route along Route 49, with service to NICTD station, a downtown circulator, and a transit hub.
- Serve Portage with local shuttle and employer-based services.
- Expand demand-response service throughout Porter County.
- Consider planned-demand routes in low-density areas that serve specific destinations on different days of the week.

The programmed transit projects are listed in Tables 12 and 16. When these projects are complete, the first objective listed above will be fulfilled.

F. AIR TRANSPORTATION

Porter County has one airport, the Valparaiso-Porter County Municipal Airport. It serves primarily private aircraft. Porter County Airport is actively engaged in a program to reconstruct and upgrade all existing infrastructure in the airport. The construction of a new terminal building and the reconstruction and extension of the primary runway have already been completed. Secondary taxiways and hangars are currently being built and will enhance the use of the airport. Corporate aircraft already exists at the airport and should be encouraged for the positive impact it could have on the economic development of the County.

G. IMPACTS OF THE LAND USE PLAN

1. Increased traffic

Much of the new residential development takes place in areas around Valparaiso, Portage and Chesterton. Much of the access in these areas is via U.S. 30 and 6, and S. R. 149, 130, 49, and 2. Estimated additional traffic volumes are listed in the following table:

Table 18: Additional Residential Trip Generation

Corridor	Projected Additional Residential Units Along Corridor[5]	Additional Daily Trips Generated
U.S. 30	525	4,250
U.S. 6	565	4,465
S.R. 149	440	3,750
S.R. 130	425	3,275
S.R. 49	450	3,950
S.R. 2	335	2,750
TOTAL	**2,740**	**22,440**

[5] Consultant's estimate based on the effects of growth in the County and region, based on the future land use implications of the County's Comprehensive Master Plan.

The expected growth in the County and the Land Use Plan's suggested location for that growth substantially impacts upon several corridors. Improvements to these corridors, in addition to major modifications of the thoroughfare system, will be required to accommodate these land uses.

The projected highest and lowest traffic counts for the road network are represented in the following table and shown in Figure 33.

Table 19: Projected Traffic Counts

Route	Projected Highest Traffic Segment (2020)	Projected Lowest Traffic Segment (2020)
I-94	101,779	52,007
I-80/90	57,438	36,200
U.S. 12	14,740	5,875
U.S. 20	40,285	15,332
U.S. 6	30,327	11,005
U.S. 30	42,468	25,300
U.S. 231	20,128	7,696
S.R. 49	45,925	1,937
S.R. 149	18,136	12,241
S.R. 130	27,655	14,144
S.R. 8	10,078	3,818
S. R. 249	32,826	9,057
S.R. 520	7,725	7,725
S.R. 2	41,499	7,732

Table 19 (Continued)

Route	Projected Total Route Average Daily (2020)	Projected Highest Traffic Count Segment along the Route
Calumet Avenue	5,807	10,790
Meridian Road between Vale Park Road and CR 1100 N (Campbell Street)	7,949	11,750
Joliet Road	3,705	5,130
Division Road	1,710	4,970
Meridian Road between SR 2 and US 8 (Smoke Road)	4,383	8,740
CR 500 W	3,405	10,290
CR 100 S	3,540	10,256
CR 700 N	6,085	13,475

The projected traffic counts for the arterials (table 19.a) are lower than those projected for the highway network, but the capacity of the roads must also be taken into consideration.

The 2020 vision plan identifies congested segments of the network (see Figures 30 and 31) and recommends improvement projects for Calumet Avenue and Vale Park Road (see Table 13). Another road which might present a congestion problem in the future is Joliet road.

The main streets going into Hebron (SR 2) and Kouts (SR 49) are identified in the NIRPC plan as being congested but are not treated (see Figure 30).

The projected traffic counts for Meridian Road, Division Road, CR 500 W, CR 100 S, and CR 700 N are based on the average traffic count for each entire route. Traffic increases significantly along these routes around Valparaiso, the north and the north-west portions of the county were development is concentrated. These important arterials will have to be monitored for potential significant increases in congestion and studied for upgrade and improvements. Meridian Road, between US 6 and CR 1050 N (Campbell Street), and CR

100 S are already being studied for construction (see section 4. Porter County Road Improvement Projects).

Figure 34 identifies the major traffic carriers which constitute the backbone of the roadway system of the County and will have to be studied for potential improvement and capacity increase in order to support future growth. This major thoroughfare system includes: US 12, US 20, I90/94, I 80, US 6, SR 130, US 30, SR 49, SR 2, SR 149, US 8, CR 700 N between Lake County Line Road and SR 149, Division Road between 500 W and SR 49, CR 500 W between US 8 and US 30, CR 475 W between US 30 and SR 130, CR 450 W between SR 130 and I 80/90, CR 100 S between Lake County Line Road and SR2, Meridian Road between SR 2 and US 8, Meridian Road between Vale Park Road and 1100 N, Calumet Avenue, and CR 400 N between SR 130 to SR 2.

2. Impact of the NIRPC Plan

NIRPC's Vision 2020 regional transportation plan is consistent with several of the County's comprehensive plan objectives:

- The transportation improvements of the regional plan focus growth near existing development.
- The congestion management strategy is a clear effort in improving the condition of existing roadway systems and encouraging alternative methods such as ride sharing to decrease traffic flow and pollution.
- The bus transit and commuter rail projects, if successfully used, will alleviate traffic and pollution.

a. Congestion Mitigation

The congestion management section of the 2020 vision plan recommends network improvements through road expansion and/or transportation system management. Some of the recommendations were followed others were not. It is important to note that amendments to the TIP are still, being made and new projects being submitted[6].

After reviewing the thoroughfare recommended improvements, the major road congestion problems along SR 49, US 6 and Interstate 90 are addressed through road expansions. The expansion of SR 49 from 2 to 4 travel lanes have been completed. US 6 and Interstate 90 are programmed for expansion and to be implemented by 2007 (see Table 12).

[6] NIRPC statement

Figure 33: 2020 Project Traffic Counts

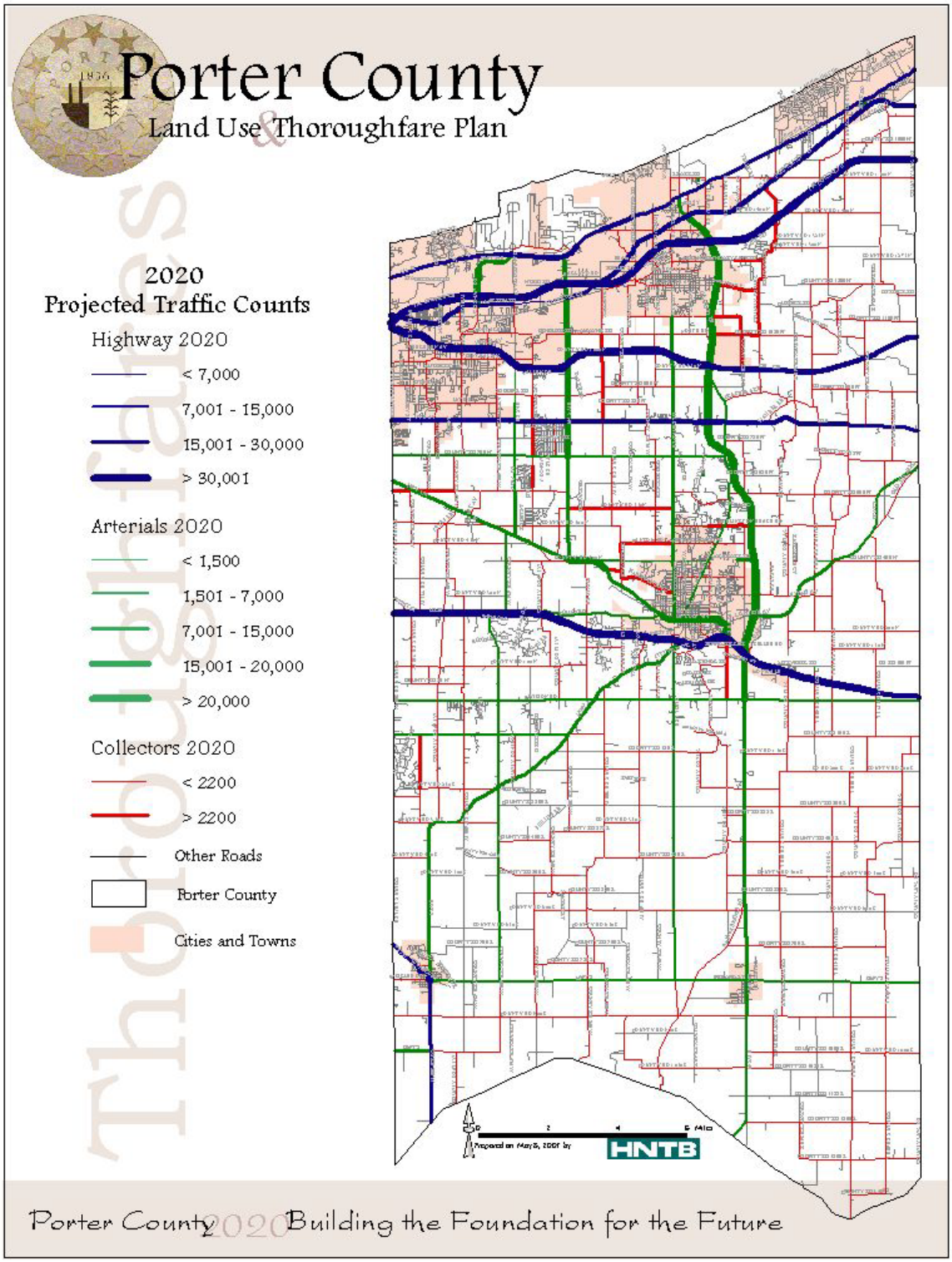
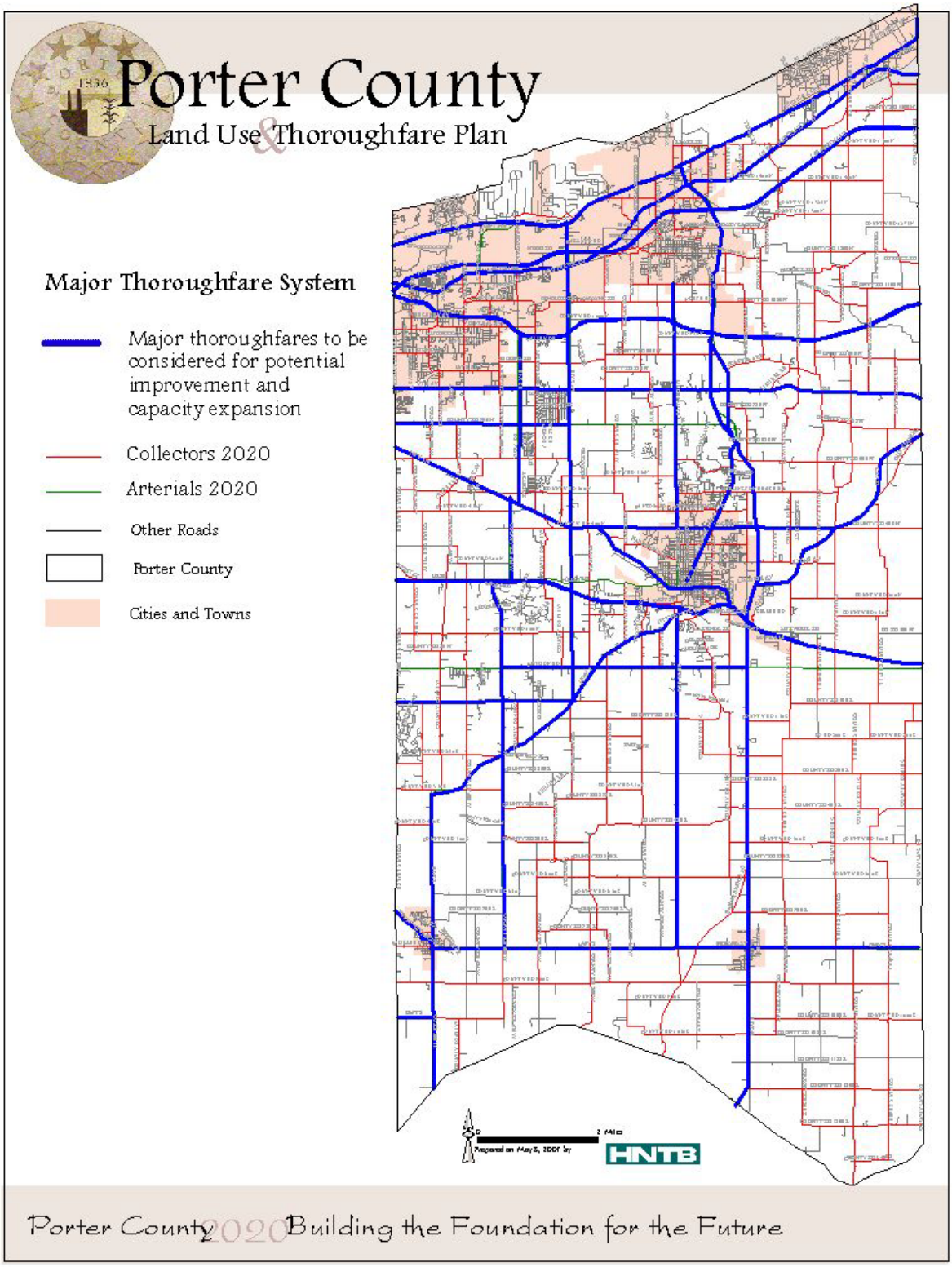


Figure 34: Major Thoroughfare System



SR 130 is identified as needing a capacity expansion but is not programmed for in the 2020 plan. However in the TIP there are intersection improvements and traffic signal modernization programmed for SR 130.

SR 2 (from Division Road to SR 130) is identified as needing a capacity expansion but is not programmed for in the 2020 plan. However auxiliary lanes and an intersection improvement are included in the TIP.

US 30 is identified as only needing transportation system management. The TIP plans for a bridge replacement and traffic signal modernization.

Vale Park Road (between Calumet and SR 49) is identified as needing expansion but is not included in the 2020 projects.

Calumet is identified as needing an expansion. The City of Valparaiso has a project to add travel lanes to Calumet Avenue between Glendale Boulevard and Evans Avenue.

b. North-South Connectors

One of the objectives identified in the Plan is to study the feasibility of north-south connectors. The 2020 Vision Plan concentrates most of its efforts on improving east-west traffic flows. The capacity extension of SR 2 (between Division Road and US 6) and the congestion management of the northern section of SR 49 constitute the only north-south connection improvements on state routes. The extension of CR 300 W (SR 149), included in the 2020 Vision Plan, will provide a crucial north-south link crossing US 30 and SR130. When the second phase of the CR 300 W extension is approved the link will extend to SR 2.

c. Growth Areas

Major thoroughfares are needed to access the areas identified as future growth areas. The activity areas designated for growth in Porter's land use map generally correspond to the "hot-spots" identified by the 2020 Vision Plan. These areas at the northern section of the County and around Valparaiso will be served by improved roads and by a new commuter rail.

However, other smaller growth areas like Hebron and Kouts designated in the land use plan are not identified in the Regional Plan. Road improvements will be necessary to adjust to new developments, however their timing cannot be projected. Given the relatively small size of these growth areas it is difficult to make accurate yearly statistical projections, the reason being at this smaller scale, small random changes will significantly affect the areas. A twenty-year projection would give realistic conclusions, but that is too far down the line for projecting road improvements. Some roads might have had limited use and yet

they will already need improvements. Consequently, road improvements will have to be planned once new developments are approved.

Although the land use plan tries to encourage development around already developed areas, some growth will occur in the rural agricultural district. To minimize the negative impact of such growth the county should encourage subdivision and cluster development instead of single-lot development along roadways. Since many roads do not have the capacity to support increased traffic volumes, new developments in the rural agricultural district will require road improvements such as widening and new pavement. To minimize the need for such improvements developments should be situated in close proximity to arterial and collector roads and existing developments. The county could offer density incentives to developers that follow these guidelines.

H. THOROUGHFARE INITIATIVES AND IMPROVEMENTS

1. Reduce the Number of Curb Cuts

The number of entrances and exits along US 30, SR 130, SR 49, SR 2, SR 8, US 6, SR 249, US 20 and SR 149 directly affects the operation of these streets. These arterials have two primary purposes of moving traffic through the planning area and providing access to business and residential areas. Often these purposes can be conflicting because of the number of entrances requested and granted on each street versus the stop and go movement of cars waiting to turn. Turn lanes and stop lights are necessary to aid in the flow of this traffic. A desirable alternative to many different curb cuts on these arterials is to group these entrances into one entrance that serves many buildings. In some cases, this may include combining existing entrances and/or encouraging new business to use existing entrances. This may include relying on entrance regulations that are largely controlled by the issuance of permits by INDOT. The benefit of this initiative is to enhance the character of the community by providing a means to call out an entrance through special signage and landscaping while increasing flow of traffic and ease of entrance and exit. Zoning and subdivision regulations will be a key in the limitation of the number and distance between access points as well as the requirement of ingress and egress lanes.

2. Encourage Cross Easements Between Parking Lots

The establishment of grouped entrances versus existing parking lots presents the issue of access from one business to another without exiting onto an arterial. Along US 30, US 6, SR 130, SR 2 and SR 49 there are a tremendous number of curb cuts for the large retail centers, as well as the numerous chain restaurants and stores. As such, parking lots have been created for each of these businesses and are generally linked to that one particular building. The connection of parking lots and the creation of frontage roads parallel to an arterial would limit the access points onto the primary arterial and enhance the flow and safety of traffic movements.

3. Capital Improvements Plan

Public expenditures are an important component in the implementation of a comprehensive plan. Yet, allocating the funding needed to implement infrastructure projects, etc. is difficult given the number of competing uses for those monies. This is further complicated by the fact that a number of public and semi-public entities have the authority and ability to construct public improvements, including, but not limited to, parks boards, highway departments, school corporations, utilities, etc.

Like other communities, Porter County needs to give attention to funds for infrastructure maintenance. A Capital Improvements Program (CIP) is a useful tool for coordinating and prioritizing infrastructure investments. A CIP should consists of a multi-year funding/strategic plan, and an annual capital budget which details what specific improvements should be made, where those improvements will be, the cost estimate of those improvements and the funding mechanism for those improvements and finally the time frame in which the improvements will occur. The Plan Commission should develop a CIP with assistance from the highway department, engineering department and surveyor office for road and drainage infrastructure within Porter County. The CIP shall then be presented to the Porter County Commissioners for final approval. The following bullet points are elements that should be included in the CIP:

- Identify and Improve Key Intersections

  To aid in the movement and flow of traffic, intersection improvements are needed. These are generally recommended for areas that have increased turns and traffic volumes. Intersection improvements may include new traffic signals, addition of turn lanes, the widening of intersections and lanes, and other street modifications. These should especially be considered for very large subdivisions with over 250 units. Additional improvements that would signify intersections as key intersections include special signage treatments, lighting treatments and landscaping. The County should identify key existing areas that should be targeted for improvement while applying to new development on a case-by-case basis. With the concentration of land uses and the future demand on traffic, new lanes and traffic signals will greatly enhance areas. The intersection improvements would provide for better functioning traffic flows at these locations.

- Improve Drainage

  Drainage improvements could include the rehabilitation of crossings/culverts, addition of curb and gutter where necessary, and addition of storm water drains and inlets. These changes would improve the local drainage patterns, increase the service life of the roads and improve their aesthetics. The benefit to the roadways is that water will drain more efficiently, keeping the roadways clear, decreasing the potential for accidents and increasing the flow of traffic. Future

improvement areas should be analyzed on a situation- by-situation basis and as new development occurs in undeveloped areas.

- Institute Traffic-Calming Measures

  Traffic-calming measures should be analyzed and applied to neighborhood or subdivision streets as warranted. Measures could include speed bumps, four-way stop signs, medians, textured pavements, rumble strips, traffic circles, raised crosswalks, and others. Traffic calming measures could help retain the residential nature of neighborhood subdivision streets by discouraging high operating speeds and non-local traffic.

- Repair Pavement/Shoulders

  Improvements to pavement lanes and shoulders should include pavement patching and re-paving. These improvements would be included in the County's general maintenance program of roadway infrastructure.

4. Improve Connections/Access

The design of residential subdivisions has changed over the past years. The size of lots, styles of houses, right-of-way configurations have been a function of subdivision regulations and the zoning ordinance. With an increasing number of subdivisions that have only single access points, meandering internal roads and stubbed cul-de-sac streets, more problems are arising. This can cause increased delays in response times of fire and police. Also curb cuts for newer subdivisions often do not align with those of older, adjacent developments. Subdivision streets could be extended to intersect with other subdivision streets to improve subdivision connections and access, and those streets should align with one another. From a public services viewpoint, multiple access points to subdivisions are important. Future subdivisions should have multiple access points, and their roadways should align with those of existing, adjacent developments.

5. Limited Use of Cul-de-Sacs

Subdivision designs which utilize cul-de-sacs limit the connections of local streets and provide problems for school buses, fire equipment and County and Highway Department vehicles. Cul-de-sacs function as dead-end streets and should be avoided. Street extensions should be placed through unimproved lots whenever possible. Where this is not possible, and the problem is severe, swapping lots from cul-de-sac locations to a nearby site in the new development may need to be considered. This should be determined on a case-by-case basis as it is reviewed by the Plan Commission. The discouragement of cul-de-sacs could be accomplished with the subdivision ordinance.

I. COUNTY-WIDE ROAD AESTHETICS DESIGN GUIDELINES

Porter County's Comprehensive Master Plan places great emphasis on maintaining the current character of the County, while providing land for over 24,000 additional residents as well as additional commercial, office and industrial areas. In addition to changes in land use and development patterns, it will be necessary to examine the overall design and aesthetics of many of the U.S., State and County roadways to help minimize access points, calm traffic, screen views, buffer noise and maintain the rural/open character of the County.

These aesthetic improvements could range from signage and access limitations, to improved landscaping, design guidelines and visual barriers to high-density development (See Figures 35 to 38). Improvements will have to be made to the landscaping along major corridors and key gateways. They will enhance the visual aesthetics of a corridor and provide identity to an area. Landscaping of a corridor, especially a primary arterial, provides many different functions, including a softening of the area and its land use activities, creation of a buffer between uses and the arterial, relief from large areas of asphalt pavement, and identification of key entrances and exits. Landscaping improvements can take the form of the addition of sidewalks, planting of trees in parking lots and plantings along the right-of-ways.

Primary areas that the County should focus on include key activity centers where traffic is the heaviest along US 30, SR 2, SR 130, SR 149, SR 49 and US 20. Other key areas to target are the proposed entrance gateways on the Land Use Plan. Specific studies and guidelines should be considered along County Roads (Figure 34), State Routes, and U.S. Highways (Figure 36). A planting design can be created in the right-of-ways that defines the corridors and provides aesthetic beauty to the area(see Figures 36 and 37) . This can be accomplished by the creation of new landscaping standards and implemented through corridor overlay zones that target specific corridors. Funding for these improvements could be accessed through TEA-21 and INDOT as well as through local funds and specific development requirements.

Figure 35: Urban Fringe/Village Roadway

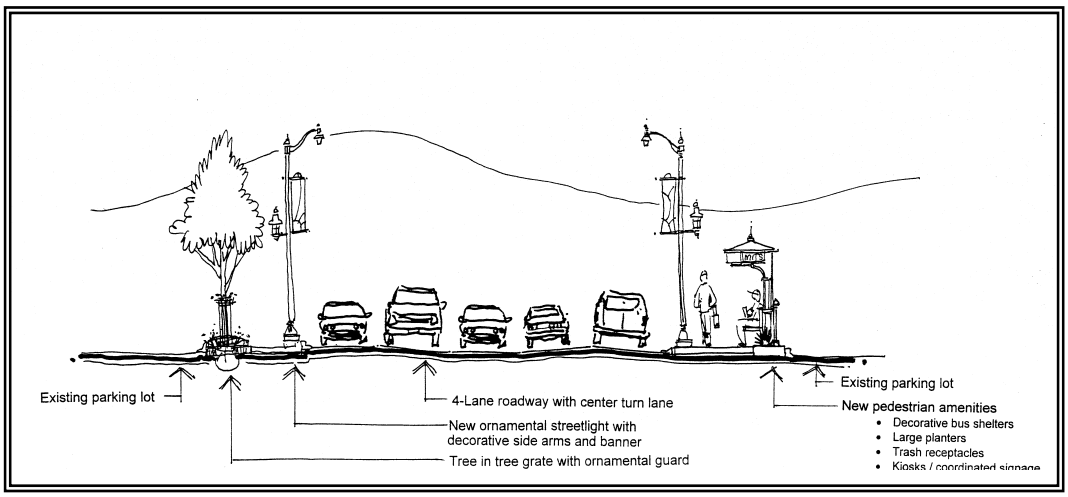


Figure 36: Suburban Parkway

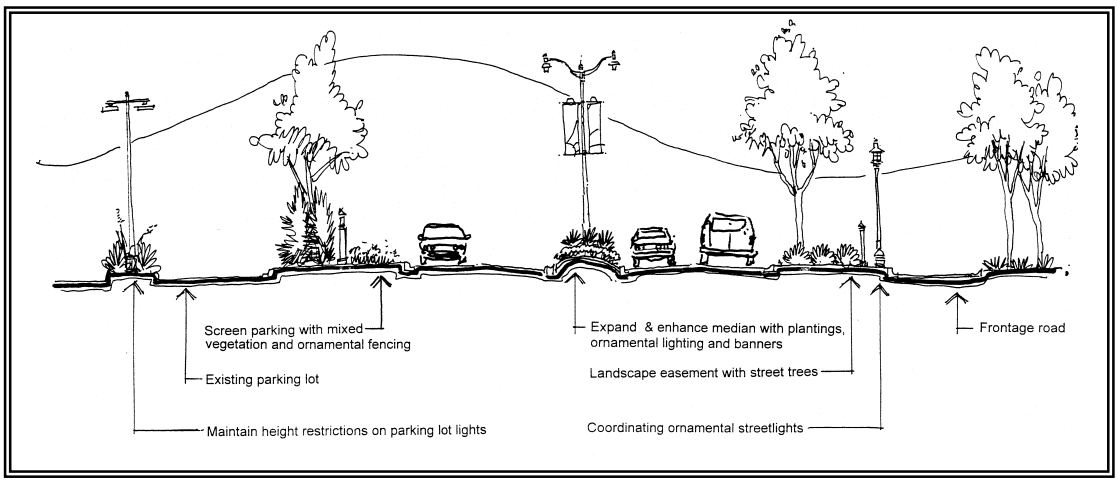


Figure 37: Rural Roadway

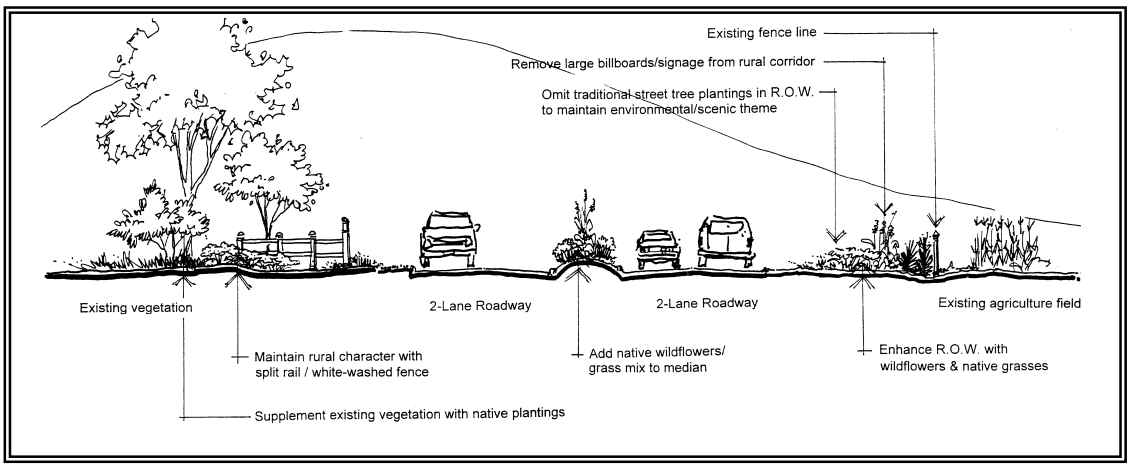
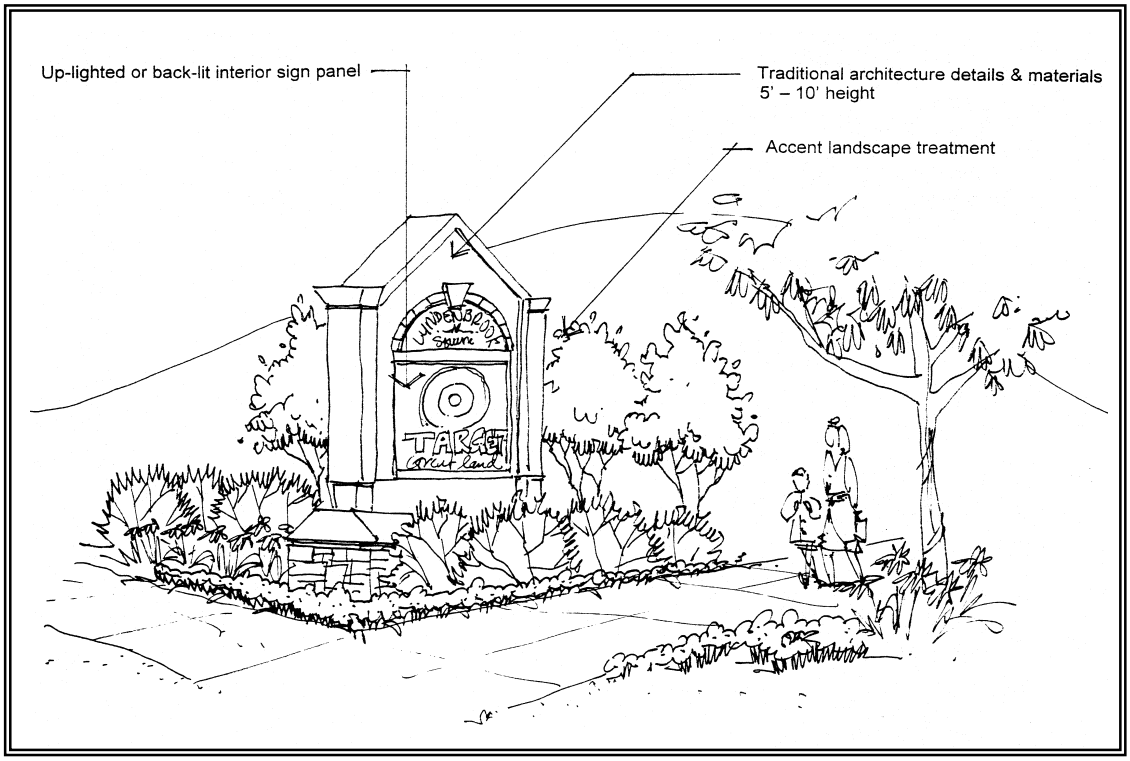


Figure 38: Signage



J. BICYCLE AND PEDESTRIAN PATHWAYS

The Porter County Bikeway System has been developed within the County to provide recreational and alternative transportation opportunities. The Porter County Bikeway System Plan provides the framework for a bikeway network covering 140 miles (phase I includes nine loops shown in Figure 38).

Five rails-to-trails pathways are available for public use in Porter County. The trails are mostly paved and include: Chesterton Trail (3 miles), Prairie Duneland Trail (9 miles), Iron Horse Heritage Trail (5 miles), Calumet Trail (9.2 miles), and Marquette Trail (3 miles). Additional trails are available at Imagination Glen Park in Portage, Rogers, Lakewood Park in Valparaiso, and the Outback BMX Trail in Porter County.

1. NIRPC's Projected Bike Network

NIRPC has identified regional priority trails corridors and study areas. The corridors crossing through Porter County are the Calumet Trail, the Little Calumet River Trail and the Prairie Duneland Trail. These corridors are situated in the northern area of the County. There are areas that have been designated to be studied in order to connect Hobart, Chesterton and Valparaiso and Valparaiso to LaPorte. Some of these projects are being funded by INDOT's Transportation Enhancement Activities program.

The regional bikeways plan for Northwest Indiana identifies 389 miles of separated regional bikeways, including 204 miles along abandoned railroad right-of-ways, 101 miles along levees and waterway corridors and 84 miles along utility easements. Porter County's loops and the projected regional bikeway trails will complete each other and make virtually all areas in the County easily accessible by pedestrians and cyclists (see Figure 39), thus, attaining the goal of establishing a county-wide interconnected trail system. See tables 14 and 17 for the projects that have been programmed for the years 2001-2003.

2. Provisions for On-Or-Off-Street Bicycle / Pedestrian Pathways

The expanded use of non-vehicular access (bike and walking paths, etc.) will not only help in maintaining the overall character of the County, but could also slow some of the traffic growth on these roads and provide additional recreational opportunities.

Currently, the County's development ordinances do not contain provisions pertaining to on- or off-street bicycle/pedestrian pathways. These pathways may be in many forms, and can be added to roads, either existing or planned, or may be off-road in nature. With the Plan's emphasis on maintaining the open character of the County and enhancing the opportunities for residents to enjoy the beauty of the County, increased non-vehicular accessibility should be made a priority and incorporated into new developments. Examples of such pathways include the following (see Figures 40 to 43):

Figure 39: Bike Routes

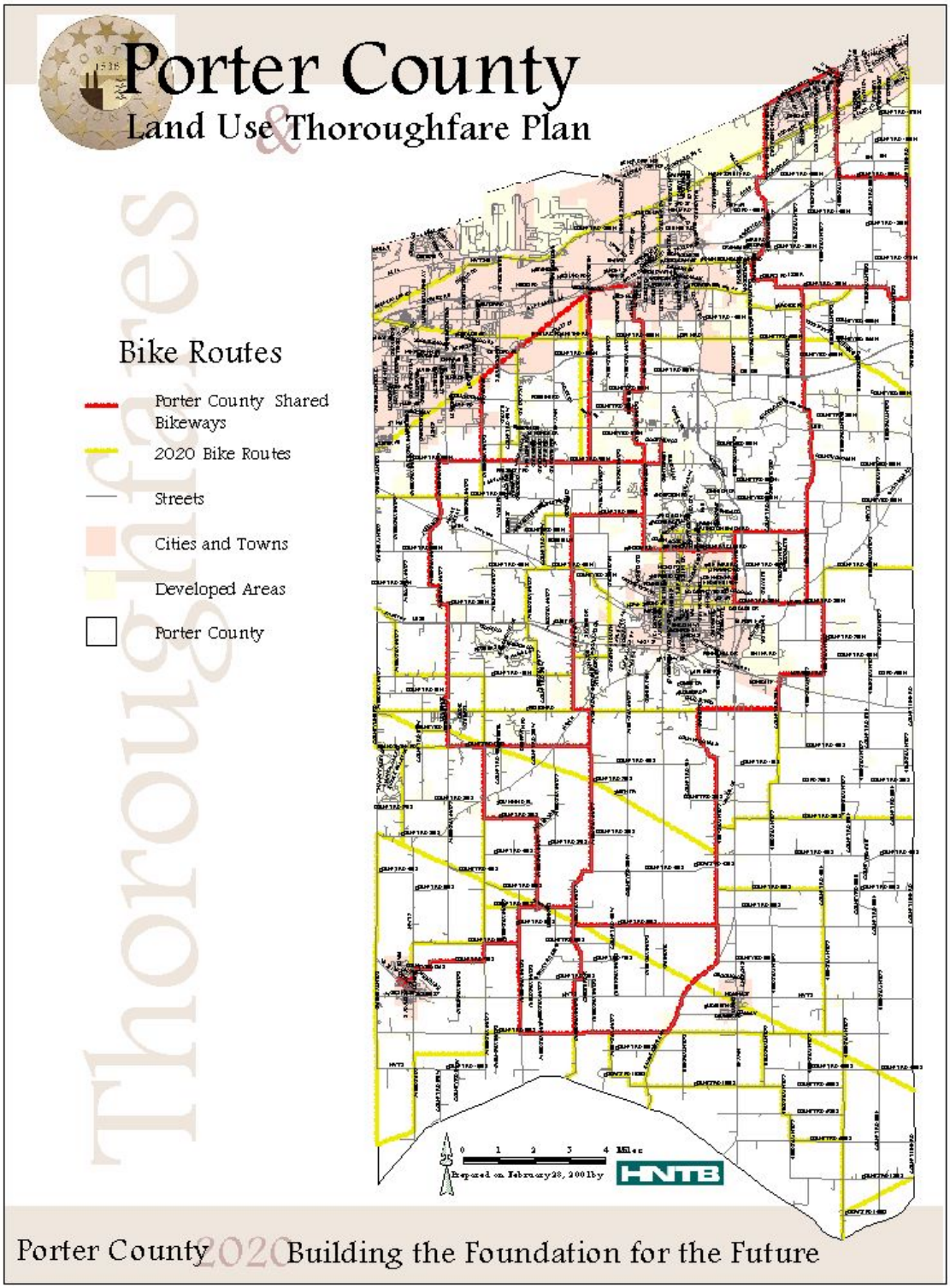
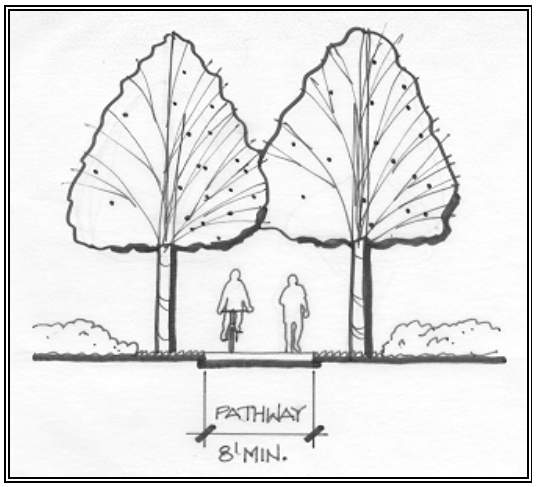
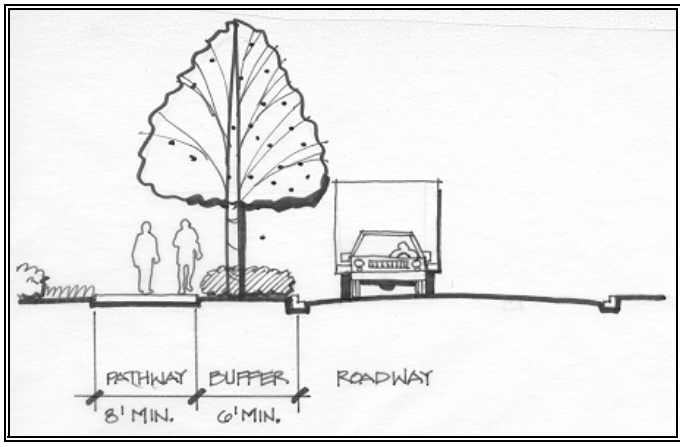


Figure 40: Class I Corridor



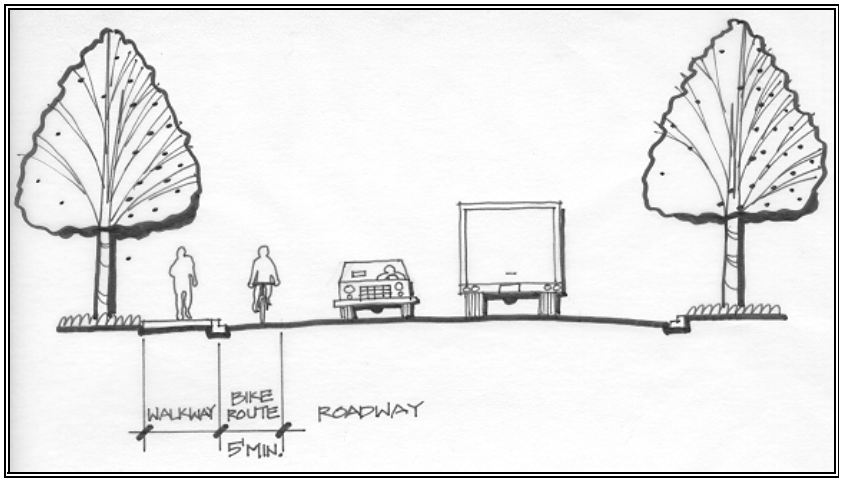
The class I corridor is completely separated from the roadway and is designed to serve a variety of users, including bicycle, equestrian, and pedestrian users.

Figure 41: Class IIA Corridor



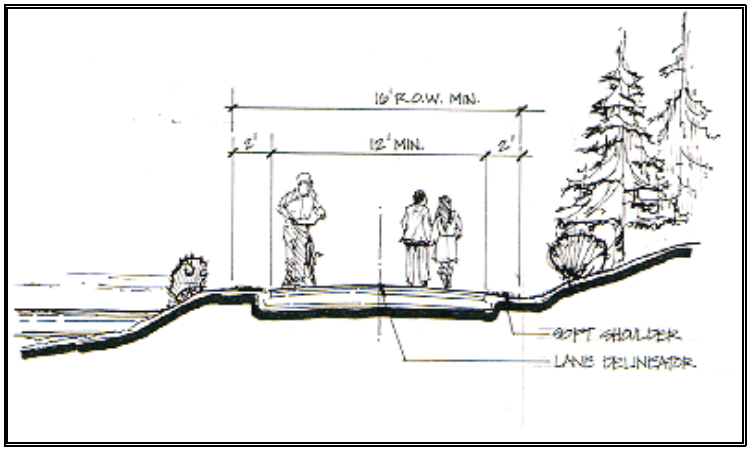
The class IIA corridor separates the path from the roadway with a landscaped buffer not less than six feet in width. This category is preferred when new roadways are constructed in the future.

Figure 42: Class IIB Corridor



The class IIB corridor is a striped portion of the roadway reserved for bicycles to separate motorists from bicycles.

Figure 43: Off-street



The standard design for all off-street facilities is a multi-use pathway. Off-street zones are all areas where a bicycle facility is located in its own right-of-way, not on a roadway.

Note: The dimensions noted on the figures above are requirements designated by the American Association of State Highway and Transportation Officials (AASHTO) Guide for Development of New Bicycle Facilities.

Design standards for pathways should consider items such as pavement width and material, right-of-way, separation/barriers, vegetation/buffering, signage, striping, bridge and underpass treatment, bicycle storage, emergency phones, intersection treatment, and traffic calming.

RECREATION PLAN

A. HISTORY OF THE PORTER COUNTY PARK SYSTEM AND ITS DEPARTMENT OF PARKS & RECREATION

The Porter County Parks Board was created in 1983, and it established the first county park in 1993. Sunset Hill Farm County Park was a dairy farm from the 1930's to the 1970's until it was no longer used for agricultural purposes. The Porter County Parks Foundation, Inc. took over ownership in 1985. The park was developed after the Parks Foundation donated land, and a Land and Water Conservation Fund Grant was received in the 1980's. The park is in the "geological setting of the Valparaiso Moraine which has characteristics of 'roller coaster hills.'" It has 235 acres and is located in Liberty Township. Public meetings in 1996 helped determine residents' preferences for the park. People said that Sunset Hill Farm County Park was a "unique element of the community" and considered it a "destination point." (Grant Application for the Sunset Hill Farm County Park Multi-Use Trail Project).

B. PORTER COUNTY PARK INVENTORY

Three park properties are under the jurisdiction of the Porter County Parks Department: Sunset Hill Farm County Park, Dunn's Bridge Park, and Calumet Trail. A full list of parks within Porter County is provided in Appendix B.

Sunset Hill Farm County Park offers a total of 235 acres of camping, picnic shelters and areas, playgrounds, and open space. Restroom facilities accessible to disabled persons are available to visitors, as is handicapped parking. Festivals are held yearly at Sunset Hill. The schedule for 2000 included a Kite Festival, Gaelic Fest, Music Fest, Harvest Festival, and Antique Equipment Show. The park also has a trail ranging in difficulty from easy to moderate.

Porter County Parks also owns a small, two-acre access site to the Kankakee River at Dunn's Bridge Park. The park includes the historic Dunn's bridge, access drive, parking, and a small boat ramp.

The Calumet trail is a 9.2-mile long trail within the corridor of a previously abandoned railroad corridor. Access to the trail is off of Indiana 49. The trail passes through the Indiana Dunes National Lakeshore and is adjacent to the 2,182 acre Indiana Dunes State Park. It has unusual topography, varying from the dry exposed foredunes to the interior dune blowouts.

C. OPERATION AND MAINTENANCE

In order to maintain a recreation facility, it is necessary to care, clean, replenish, and groom the different aspects of the area so that it is an attractive, clean, safe and fun place for people to visit. Operating a park project includes phases other than maintenance. The four phases of a park project are:

1. Design

2...Installation

3...Inspection

4. Maintenance, including natural resource management.

To be successful, a park project must incorporate all four phases.

D. RECREATION NEEDS ANALYSIS

Several methods were used to analyze various aspects of the recreational needs. The needs analysis included public meetings, Park Board meetings, acreage analysis, facilities analysis, and demographic studies. Public input is one such method that proves to be a valuable component of understanding the recreational needs of a community. A community's desired recreational interests may not always be consistent with regional recreational standards. Therefore, public input helps to define the recreational needs at a more site-specific scale. For this project, public meetings were used as the primary mechanisms of public input.

1. Meeting Summaries

A public meeting was conducted on Thursday, January 20, 2000. Attendees included the Porter County Park Board and HNTB consultants. The public meeting was located in the Commissioners Chambers in Valparaiso.

General comments from the meeting were as follows:

- Discussed processes for 5-year plans
- Create a mission statement and goals
- Look into multi-use, non-motorized trail system for the county
- Recommendations will be made for a new Sunset Co. Park master plan
- Renovate existing structures to accommodate new uses
- Physical and service improvements to better serve the public
- Improve service and public access to park sites
- Begin promoting active parks
- Explore funding and land options for a new park
- Two-mile fringe maintenance for Valparaiso
- Possible park sites
  - ....Union Township

- ....Morgan Township
- ....Arboretum in Union Township

- Create a method to determine suitable park sites and required facilities
- Promote sources of tax monies directly collected for parks.
- Currently funded out of the general fund
- Growing communities
- Fishing and boating access to area lakes and streams is needed.

A public meeting was conducted on Wednesday, March 22, 2000. Attendees included the Porter County Park Board and HNTB consultants. The public meeting was located in the Commissioners Chambers in Valparaiso.

General comments from the meeting were as follows:

- The Master plan should discuss the responsibility of trails
- Park system need to be more general and not just filling in the gaps
- Allow for opportunities to serve densely populated unincorporated areas in the county
- Don't compete with Valparaiso services and facilities
- Need goals regarding preservation of natural resources
- Eliminate conflicts between preservation and increasing use
- Keep natural features as part of new development
- Encourage a range of public park land natural resource preservation areas
- Combine natural resources, parks, and recreation goals
- Funding is an issue
- Tax rate for parks is not separate from the frozen levee
- Quality of Life – look to the Chicago area study of threats to conversion of O.S.
- Involvement of public/private partnerships
- Large private properties as future green space
- New plants in public and private lands

A public meeting was conducted on Wednesday, April 26, 2000. Attendees included the Porter County Park Board and HNTB consultants. The public meeting was located in the Commissioners Chambers in Valparaiso.

General comments from the meeting were as follows:

- County parks should not be put in areas within the service area of city parks.
- Potential areas for county parks:
  - ....South Haven Area
  - ....Salt Creek Area
  - ....Wauhob Lake
  - ....Between Kouts and Hebron
  - ....North or South of Route 8 in between the 2 towns
    - An abandoned railroad exists just south of Route 8
  - ....Access to the river – important because there is currently not any access, other than Dunn's Bridge
    - An unofficial canoe site exists under State Road 49
    - "River's Edge Farm"
  - ....South of Valparaiso in Morgan Township
    - An abandoned railroad comes through that area
  - ....A wooded area near Route 6

A public meeting was conducted on Wednesday, June 28, 2000. Attendees included the Porter County Park Board and HNTB consultants. The public meeting was located in the Commissioners Chambers in Valparaiso.

General comments from the meeting were as follows:

- There will be similarities between the Comprehensive Plan and the Parks and Recreation Plan, as well as unique text for each document.
- Those present agreed upon a schedule of completion for the Parks and Recreation Plan.
- Existing parklands were discussed.
- State and Federal park properties will not be included in the needs assessment for the Parks and Recreation Plan because they are managed and targeted toward a larger regional recreational user group and the acreage would severely skew the local recreation acreage needs assessment figures.

- Limitation of soils for potential recreational uses is an issue in Porter County.
- The Park Board should identify publicly owned land for possible future parks as an ongoing goal.

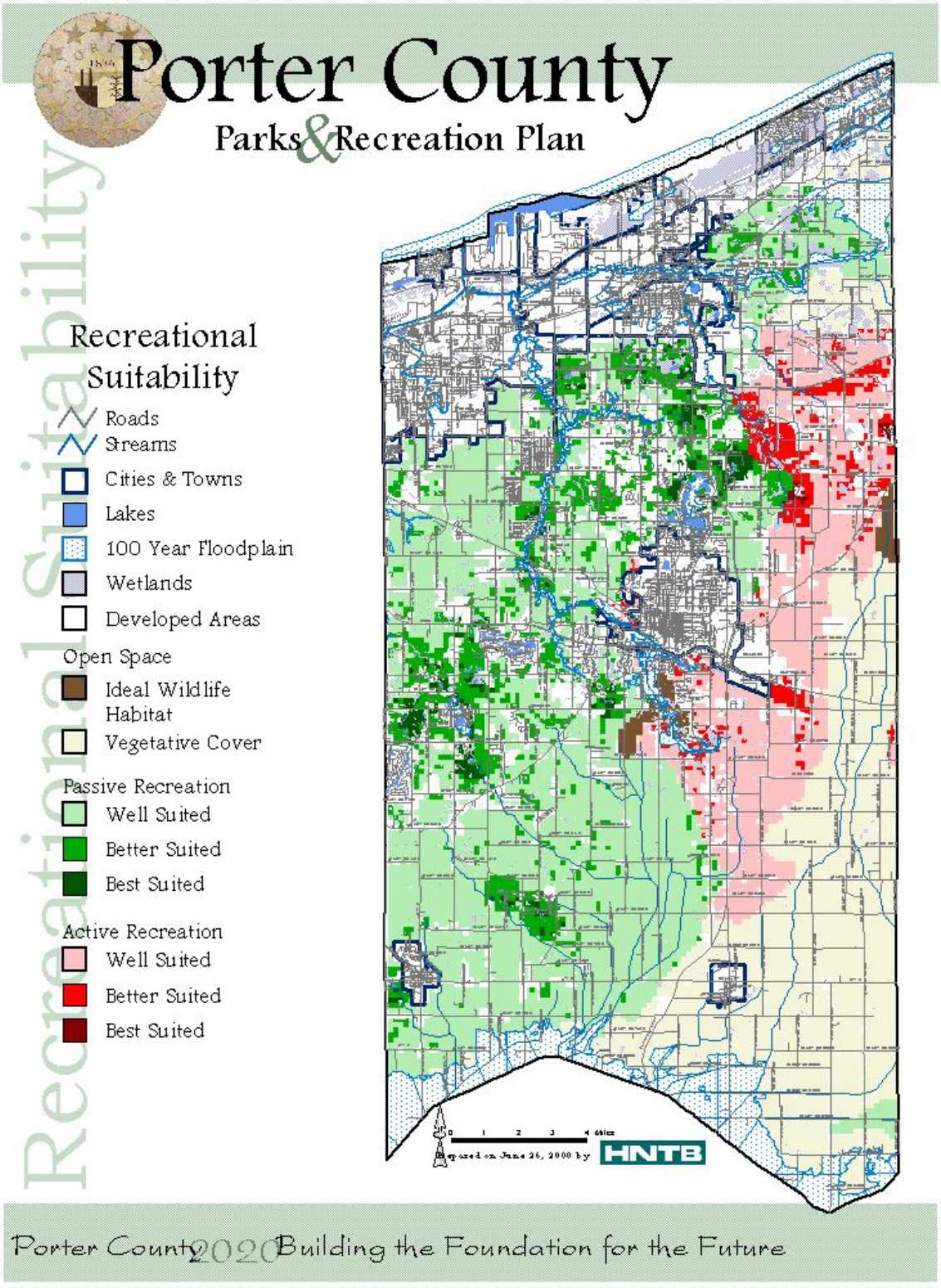
2. Park Suitability Analysis

The Recreational Suitability Map (Figure 44) was prepared to illustrate the areas within the unincorporated and undeveloped portions of Porter County that are best suited for passive and active recreation. Passive recreation is defined as primarily those types of recreational activities that have a low impact on the surrounding environment, such as picnicking, nature study, trails, open play areas, etc. Active recreation is defined as those activities that have a high impact on surrounding areas, such as athletic fields, basketball courts, etc.

The map clearly illustrates a pattern of suitability that reflects soil types, access to water and other parameters that influence recreational development. The areas better suited for passive recreation include areas west of Valparaiso and south of US 30. A broad arch of suitable land is also found roughly paralleling I-80 from McCool Road to Calumet Road, then south within the moraine landscape to the northern and northeastern edge of Valparaiso. Additional pockets of suitable land include areas south of U.S. 20 and north of the Calumet River in the northeast portion of the County. Better suited land also exists in isolated tracts in the southwest corner of the County, primarily focused along stream corridors and around lakes.

The areas better suited for active recreation occur immediately south, southeast, and northeast of Valparaiso. Suitable land also exists along the I-80 corridor, northeast of Valparaiso, and scattered south of this location as well.

Figure 44: Recreational Suitability Map



Access to water and the lack of any existing recreation in this area does make the Kankakee River suitable for some types of passive recreation such as fishing, boating, and nature study.

3. Recreational Standards

Social and behavioral professionals have proven that park and recreation facilities are helpful in maintaining a positive atmosphere for community growth and development. Minimum standards for open space have been intensely researched in past years and now serve as a guide for community recreation planners. These minimum recreation standards can be compared with existing recreation park acreage to help determine the recreational needs of a community.

Standards developed by the National Recreation and Parks Association have been adopted nationally and have proven effective in meeting the basic recreation needs of communities. The standards are only a guide in determining community deficiencies because they do not account for local factors that may influence recreation choices. For example, soccer has become an increasingly popular sport, throughout the State of Indiana and in Porter County. Although the national standards were used as a guide in determining the necessary number of soccer fields, the Parks Board may want to increase that number as they determine the need within the County.

a. Park acreage analysis

The Recreational Standards chart in Appendix C illustrates the deficiencies and surpluses of public recreational land in Porter County. Park types have been categorized according to acreage. For example, any parks of less than an acre were categorized as mini parks. If a park did not fit into one of the categories, the attributes of the park were examined to see into which logical category the park would fit. The 1998 population for each municipality and for the county has been provided, along with the required park acreage according to national standards. A surplus or deficiency of acreage is provided for the municipalities, the total incorporated areas of the county, the unincorporated areas of the county, and the entire county according to each type of park.

An analysis of these standards points to an overall surplus of acreage countywide when the acreage of the parks with incorporated areas are included. It also shows that the unincorporated areas of Porter County are lacking in every type of park except regional parks when parks in incorporated areas are not included. The entire county is lacking in mini parks, but many parks and recreation departments choose not to increase the number of mini parks because they are difficult to maintain due to their small size. They are not big enough to require a full-time staff person, and it would be difficult to send a staff person around the county to maintain each one on an irregular basis. This could be an area that the new subdivisions take over. Homeowners' Associations could be responsible for developing and maintaining mini parks throughout the new neighborhoods that are developing, especially in the unincorporated areas of the county.
The existing acreage figures do not take into account recreational facilities that are often open to the public after hours, such as school parks. Other recreational opportunities, such

as the Federal and State park land in the northern section of Porter County near the Indiana Dunes, were left out as well because they are generally targeted toward a larger population than just the county. They are also out of the county jurisdiction. If the Federal and State acreage were allowed to be counted as part of the total, they would produce inaccurate results for the county needs analysis.

b. Recreation standards for facilities

The Recreation Standards for Facilities chart in Appendix C illustrates the inventory of recreational facilities throughout Porter County. The list includes all public, county, municipal, township, State, and Federal facilities. Private facilities and commercial facilities are only included in select categories because they may have required membership fees to use the area. School facilities are included in all but the ball fields, soccer fields and playgrounds categories. This is because some school facilities are generally not open to the general public throughout the year and therefore are not counted as public recreation sites.

Overall, Porter County is lacking in the number of picnic tables and tennis and volleyball courts, but if the residents' demand is not high for these facilities, they may not be a priority. The analysis indicates that the county does have enough basketball courts, football fields, golf courses, and running tracks, however all of these facilities are lacking in the unincorporated areas.

E. PREVIOUS PLANNED PROJECTS

Planned capital projects for the last Five-Year Parks and Recreation Master Plan included the following:

- Establishing a bicycle trail
- Establishing a county-wide interconnected trail system
- Developing a park in the southern portion of the county
- Establishing a municipal golf course
- Public access to natural lakes and rivers
- Joint venture with the Kankakee River Basin Commission
- Complete improvements at Sunset Hill Farm (outlined in the Sunset Hill Farm County Park Master Plan)
- An off-road bicycle park

Planned program elements for the last Five-Year Parks and Recreation Master Plan included:

- Expanding the festival/concert series

- Developing a cooperative agreement with area schools to provide environmental education
- Requiring developer parkland dedication
- Developing a presentation on park donations

F. ACHIEVED GOALS AND IMPLEMENTED PROJECTS

The Parks Department has implemented the following projects that relate to the goals identified above:

- Grading the band to install a split rail fence (1990)
- Signage at the main entrance to publicize events (1993)
- Maintenance shop remodeled (1993)
- Gate and gatehouse constructed (1993)
- Amphitheater built (1993)
- Restrooms built for the campground (1994)
- Hickory and Pine shelters built (1994)
- Playground equipment installed (1994)
- Replaced roof and siding on first restroom in upper area and made ADA compliant (1994)
- Toilet pit excavated in the campsite (1994)
- Underground power lines installed (1996)
- Split rail fence added to main entrance (1996-7)
- Evergreen trees planted at main entrance (1996-7)
- Parking lot graded and paved (1996-7)
- Electricity extended to the gatehouse (1996-7)
- Water lines extended to front and lower areas (1996-7)
- Sugar maple growth planted (1997)
- Establishment of Dunn's Bridge Park (1999)
- Calument Trail improvements (1998-9)
- Office space and storage area created for site supervisor and naturalist
- NIHPA buildings repainted and roofs repaired, repainted, or replaced
- Upgraded water and electricity in meeting area
- Chicken coop cleaned, remodeled, and painted
- Gravel added to parking lot
- Group shelter resided and re-roofed
- Exterior of storage and dairy farm buildings repainted
- Underground fuel tanks removed
- Replaced roof, siding, and windows on manager's house
- New septic area in lower portion of park
- Trails cut into wooded area

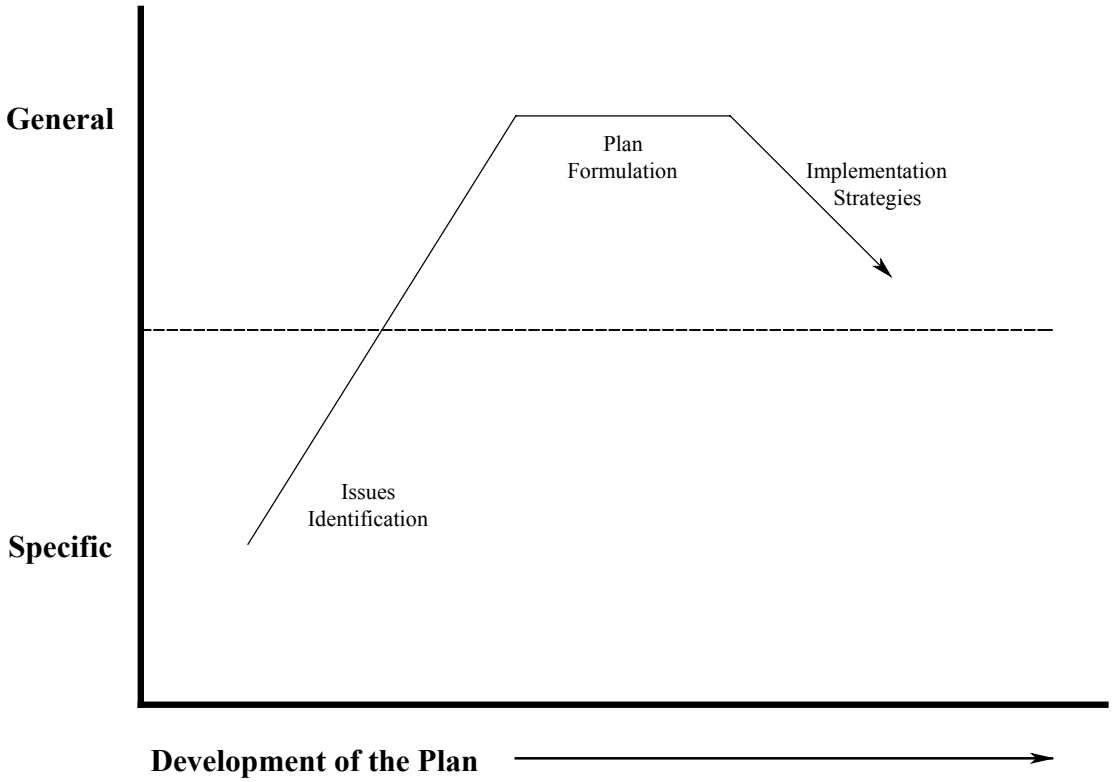
- 4 new campsites
- Well shelter built
- Shelter with fireplace constructed
- Sites for trails cleaned
- Gravel road added off of 700
- Gravel parking lot with wood bollards
- Split rail fence installed along side entrance road
- 2 wooden gates built

IMPLEMENTATION

A. INTRODUCTION

Any discussion of Comprehensive Plan implementation walks a fine line between the general and the specific. Implementation actions must be defined, and therefore specific; however, the Comprehensive Plan is by nature a general, conceptual policy document, and indeed must be general in order to retain its flexibility in the face of new, emerging conditions. The following figure illustrates the difficulties in identifying implementation actions within a Comprehensive Plan.

Figure 45: Planning Process



As stated in earlier chapters, the timeframe of the Plan is to the Year 2020. Highly specific action items tend to have shorter timeframes than more general ones. In order to integrate action items into the Comprehensive Plan, our discussion must remain somewhat general. It is not the plan's purview to exhaustively list every possible action item that should be used to implement the plan's vision. However, the plan does need to provide directions for implementation, even if it is not carried to great detail.

The purpose of this chapter is to identify the next steps that the participant communities should undertake to implement the Plan Update. The discussion is broken down into several sections, as follows:

- ***Follow-up studies and action programs*** identifies studies, ordinances, and other activities that need to be undertaken to implement the Comprehensive Plan.
- The ***Intergovernmental Coordination and Community Involvement Program*** outlines programs to maintain open lines of communication with outside agencies and members of the community.
- The ***Strategic Planning Program*** integrates the Comprehensive Plan with the ongoing operations and budget and capital improvements of the County and its municipalities. The Strategic Planning Program also includes provisions to ensure a regular review of the Comprehensive Plan and its implementation efforts.
- ***Other Policy Recommendations*** are more detailed and specific actions and directives that need more consideration and adjustments to existing activities. Some of these policy recommendations can be implemented immediately, while others need to be subjected to further scrutiny by public officials and residents.

B. FOLLOW-UP STUDIES AND ACTION PROGRAMS

1. Create a Plan Commission Work Plan

The Comprehensive Plan covers a broad variety of issues and subject matter. In order to implement the Plan, the Plan Commission should, on an annual basis, prioritize the activities for that year and develop a strategy for moving those items forward.

2. Zoning and Subdivision Control Ordinances

The Comprehensive Plan is a statement of policy; it is not a regulatory document. The most common regulatory means for implementing the plan include zoning and subdivision ordinances. Zoning is the most direct method for regulating land use. In addition to restricting uses, zoning ordinances also dictate the bulk of development (typically through height requirements, floor-area ratios, and the like) and its site placement (typically through the use of building lot setbacks). The subdivision ordinance relies on the right of municipalities to regulate the legal (ownership) subdivision of land, and places the burden of implementing public infrastructure directly on the developer.

The current zoning ordinance was adopted in 1983. While periodic updates have made to the ordinance responsive to land use and development issues that have arisen since its inception, these updates did not generally consider all aspects of the ordinance. The adoption of this Plan Update outdates the ordinance; therefore, it is recommended that both the zoning and the subdivision ordinances be rewritten.

Significant land use changes made in this Comprehensive Plan, along with the County's focus on the overall character of development and the County's image, will require these changes in the County's ordinances in order to be implemented. Without changes in both the County's zoning and subdivision ordinances, (incentives for subdivisions over single-lot, strip type residential development in the Rural Land category, etc.) some of the future land use changes made in this Comprehensive Plan could actually be counter-productive to

the goals of the Comprehensive Plan. These incentives and regulations might include items such as density incentives for open space and environmental preservation, spacing standards for roadway access which apply to both single lot residential as well as subdivisions, strict standards for roadway access and stormwater control for all residential development regardless of size, and density incentives for recreational amenities. The adoption of these changes as part of updating the zoning and subdivision ordinances will help assure that the intent of the County's Comprehensive Master Plan are realized in the future development of the County.

Some of the specific recommended changes include:

- Use overlay zoning to provide additional regulations for individual commercial areas that have unique surroundings.
- Create overlay zoning districts for specific corridors and gateways to visually enhance these areas.
- Revise signage regulations so that signage does not overwhelm commercial districts.
- Incorporate landscaping requirements into development plan review for commercial and industrial developments.
- On the zoning map, re-zone areas not designated for future growth on the land use map for agricultural uses, making residential uses a special exception.
- Increase zoning densities around cities and towns to encourage development in those areas.
- Require Planned Unit Developments (PUDs) to reserve at least 30% of their land for non-residential uses such as neighborhood commercial, institutional, recreation, or a combination of all of the above.
- Incorporate into the zoning code screening and buffer yard requirements for non-compatible uses. Language should include which uses should be screened, height and depth of screen, and a list of permitted plant or building materials.
- In residential zoning districts, especially in rural areas, the zoning code should incorporate incentives for clustering. Consider increasing density as much as 50% for clustering development and retaining 50% of the property as common open space.
- Require subdivisions of more than 3 lots (two new lots plus the parent lot) to build off of a private street rather than in a row along county roads.

- Require development plans for minor subdivisions of three lots (two new lots plus the parent lot) to require approval by the Plan Commission through the subdivision process.

- Require a minimum of at least 500 feet between residential driveways on major thoroughfares.

- Require residential subdivisions in conservation areas to use clustering to retain at least 30 percent of the natural features.

- Through appropriate zoning classifications, confine large-scale commercial development to designated commercial growth areas (see future land use map).

- Provisions should be placed within the zoning code requiring the protection of existing tree stands.

- Limit the incompatibility of large-scale residential development and agriculture by requiring residential development in agricultural areas to obtain additional review process.

- Rezone rural areas with more than one agricultural zone, reserving prime farmland for agricultural purposes and prohibiting residential development in such areas without a rezoning.

- For scenic corridors, enact overlay zones that require development to be behind the driver's viewshed.

- Reduce signage allowances to keep visual clutter off roadways.

- Enact an ordinance requiring new development to preserve significant natural resources.

- Incorporate performance standards into the zoning code to limit pollution by industries.

- Investigate the creation of an architectural review board and associate standards for non-residential development.

C. INTERGOVERNMENTAL COORDINATION AND COMMUNITY INVOLVEMENT PROGRAM

1. Annexation Strategy

The issue of annexation is one of the most emotional ones facing Indiana communities. From the perspective of cities and towns, the annexation process, when conducted in accordance with State law, helps the municipalities to provide services, manage growth, and ensure their communities' well-being. Citizens and landowners in unincorporated areas facing annexation are generally opposed to the increase in property taxes that annexation invariably brings, and are frustrated that annexation proceedings are under the purview of officials that they did not help to elect. County officials are generally ambivalent about annexation, recognizing that annexation is a legitimate means for providing urban services, yet worried about potential changes to rural lifestyles.

When is annexation in Porter County justifiable? Some of the possible situations are listed as follows:

- *When landowners in unincorporated areas receive urban services, but do not pay their fair share for those services.* This is most often the case with moderate- to high-density development that is adjacent to incorporated areas. It is difficult for municipalities to withhold fire protection to these areas, for example. Also, public water and sewer service areas typically extend outside of the municipalities, to provide for anticipated growth.

- *When the lack of urban services in unincorporated areas imposes external costs on adjacent areas.* This situation typically describes areas where groundwater contamination from high-density septic tank usage potentially threatens the water supply of incorporated areas. However, it could also describe areas within a fire district that do not have access to a public water supply and therefore, could be responsible for increasing insurance costs for adjacent properties that do have public water access and should be receiving lower insurance rates.

- *Where land is needed for future urban growth.* Increasing populations of communities in Porter County may well cause them to require additional land to sustain the population growth and facilities to support the growth.

The Plan Commission should lead a dialogue with municipalities and county officials to formulate a strategy based upon these principles.

2. Subdivision Regulation Coordination

Closely related to both annexations as well as updates to the County's Subdivision Ordinance and Regulations, is the coordination between the County and municipalities within the County regarding specific subdivision standards. County subdivisions are typically designed, built and reviewed under different standards than those within

municipalities. This is due to differences in available public infrastructure, zoning requirements and road standards. This can cause difficulties or significantly higher costs when municipalities annex or extend services to subdivisions developed under County standards since infrastructure and layout must either be revised or rebuilt to municipal specifications.

However, municipal subdivision design standards within the County vary, making an adoption by the County of a uniform subdivision standard that would also meet municipal standards virtually impossible. One possible solution would be for agreements to be negotiated between the County and municipalities within the County to allow the municipality's subdivision standards to be applied in areas specifically targeted by the municipality as likely candidates for future municipal growth and annexation or extension of public infrastructure. This would require the municipalities to specify which standards should apply and which areas would fall within this category. The burden would be placed on the municipalities to identify those areas where annexations are anticipated over the short-term, or where public services will be extended, and not to simply draw large "urban growth" boundaries and ask for their design standards to be utilized within the area.

This could also have the additional benefit of allowing developers and property owners to better plan for the benefits and impacts of future municipal annexations, and potentially work out agreements with the municipality to jointly arrange public infrastructure extensions.

An additional idea would be to invite local cities and towns to sit on the County's Technical Advisory Committee when developments are within 2 miles of their jurisdictions. This provides them the opportunity to provide input and feedback to the County and developers regarding new development.

D. STRATEGIC PLANNING PROGRAM

1. ONGOING, PERIODIC REVIEW OF THE PLAN

Planning is not a process with a definitive beginning and end. Rather, it is an on-going process that reacts to new information and developments, and tries to incorporate changing conditions into municipal activities. Conditions that may change include population and migration, employment, income, physical conditions of buildings and/or infrastructure, the natural environment, social and community goals, and the like.

A disciplined schedule of Plan review is helpful in Plan implementation. Noting areas of the Plan's success helps to build support for future planning activities, while less successful components of the Plan may suggest a need for refinement and/or amendment. County planning staff should therefore annually conduct a thorough review of the Plan, asking whether the conditions on which the Plan was predicated still hold. The staff should provide an annual "report card" which reviews Plan Commission, Board of Zoning Appeals and County Commission cases for compliance with the Comprehensive Plan.

Also, prior to preparing annual municipal operating budgets, the County planning staff should conduct an assessment of the impacts of the activities that implement the Plan. This assessment should consist of the following activities:

- Identifying the programs and projects done to implement the Plan.
- For each implementing program/project, develop criteria that can be used to measure the effectiveness of the program, apply those criteria, and write a report summarizing the strengths and weaknesses of the program.
- Consider alterations of existing programs to improve their efficiency and effectiveness and, where necessary and appropriate, their removal.
- Identify new programs, if any, that could be implemented.

2. Capital Improvements Program (CIP)

A CIP is a multi-year capital programming and budgeting process. Certain agencies already engage in multi-year capital budgeting. With the adoption of the Comprehensive Plan, all County and municipal agencies with capital requirements should coordinate and consolidate their capital budgeting processes using the CIP model.

The County should coordinate their capital improvements programming with the Comprehensive Plan Future Land Use Map and those areas designated for residential, commercial and industrial growth over the next 20 years. Items that should be considered in the CIP include land acquisition, stormwater facilities, water and wastewater collection and treatment facilities, roads, alternative transportation facilities (e.g., sidewalks, greenways), parks, police and fire stations/substations, and large equipment items (i.e., fire trucks, computer equipment, etc.)

E. OTHER POLICY RECOMMENDATIONS

The recommendations in this section are a further iteration of the guiding principles and objectives. Some of these policy recommendations can be implemented immediately, while others need to be subjected to further scrutiny by public officials and residents. Some of these recommendations are focused around a one-time action, while others represent on-going efforts. These recommendations should be evaluated annually as the County prepares its budget, and the recommendations listed below can be implemented as staff and budget resources permit.

- Discourage expansion of public services into areas not slated for development by the year 2020 (see land use plan).

- Encourage large-scale development on existing rural roadways that have sufficient capacity to support such use.
- Assure compatibility of commercial and industrial uses by requiring buffers and screening where these uses abut residential uses.
- Encourage architecturally compatible and quality development through the site plan review process.
- Encourage good design and integration of commercial uses by offering incentives (density bonuses, increased signage allowances, etc.) for meeting aesthetic and design criteria.
- Encourage developments to enhance the roadways immediately adjacent to their developments.
- Encourage developments to set aside recreation areas when developing residential subdivisions.
- Undertake an impact fee feasibility study to determine whether Porter County should implement impact fees to assist in the cost of providing public services to new development.
- Enact an adequate public facilities ordinance requiring that new development be located in areas where there is service by a public (or approved private) water and sewer provider.
- Encourage compact, mixed-use developments that incorporate everyday commercial and institutional activities within easy walking distance (1/2 mile) of local residences.
- Provide incentives in all districts for good design and aesthetics rather than using regulatory controls.
- Encourage Purchase of Development Rights (PDRs) by private organizations and the placement of conservation easements to allow rural landowners to profit from the development potential of their land without developing areas not serviced by public utilities.
- Adopt a Traditional Neighborhood Development (TND) district that is specifically written to encourage and to guide developments with a mix of residential uses (condos, apartments, and single-family homes) as well as commercial and institutional uses.
- Areas designated for conservation development on the land use plan should be transitioned into the natural landscape through the retention of at least 30 percent of the natural features within new developments.

- Use a development plan review process to ensure that clustering preserves natural and historic features.

- Limit the number of residential driveway cuts permitted on County roads through provisions in the subdivision ordinance for shared driveways and easements for ingress and egress.

- Locate small- scale, neighborhood commercial development at intersections where future road improvements and signalization can be targeted.

- Discourage large-scale commercial development anywhere other than within the designated commercial nodes on the future land use map.

- Within commercial nodes, require that new development have interconnecting parking lots, only one access point per use, per street; and where possible, provide frontage roads accessible by signalized intersections.

- Using the recreational suitability map as a guide, the recreation department should focus on new park development areas fit for passive and active recreation to meet the different needs of various age groups.

- Raise support for a local "rails to trails" network.

- Focus attention on the Kankakee River by opening up public access areas for picnicking, hiking, and boating.

- Determine response times for fire, police, and EMS services in each of the County's unincorporated townships to determine where services are inadequate.

- Develop a funding program to increase service in areas where slow emergency response times are affecting the safety of the community. This may involve more staff, more stations, and/or agreements with other stations nearby.

- Locate neighborhood service level commercial development at major intersections within or in close proximity to residential areas.

- Take advantage of interstate access by marketing the county for business park development and distribution centers.

- Acknowledge the shift in Porter County's economy by focusing less attention on attracting manufacturing jobs and more attention on attracting office park development and high tech industries.

- Promote conservation development areas to cluster style residential uses.
- Encourage developers to seek information about protecting existing vegetation and wildlife habitats during the development process.
- For cluster or large lot development in rural areas, encourage and educate about the possibility of leasing open space to local farmers to continue agricultural production.
- Prohibit development in the flood plain to protect rivers and streams.
- Protect prime wildlife habitats with conservation easements and/or a private land trust (see recreation suitability map).
- Enforce current pollution laws.
- Limit the number of vehicular trips through mixed-use development and neighborhood centers which provide everyday necessities within walking distance of residences.
- Devote park and recreation money and/or locate private funding (i.e. rails to trails) for trail systems that link destinations (home to parks, home to schools, etc.)
- Include bike paths and sidewalks in all future roadway enhancements.
- Require that new developments incorporate sidewalks both within the development and outside as a link to a future county-wide sidewalk network.
- Incorporate park and ride lots into neighborhood commercial centers.
- Require that entrances to subdivisions on county roads be aligned so as to connect to one another.
- Adjacent subdivisions should connect with each other.
- Subdivisions located on more than one street should have entrances on all streets which they abut.
- Subdivisions developed prior to any other development in the area should retain a means for future connection to other subdivisions through stub streets.
- Expand the existing trail system by acquiring and developing properties.
    - Explore and pursue options for future trail development in existing park properties, on county roads, and with property owners.

- Add trails at Sunset Hill Park around pond and wetland after dam and bridge are completed.
- Develop a multi-purpose trail for the disabled.

♦ ..Create policies and plans for development and expansion of the park system.

- Develop a land acquisition policy.
- Develop a Greenway policy.
- Develop a "Legacy" program.

♦ Expand revenue sources and funding options for departmental programs and projects.

- Explore local, state, and federal grants.
- Expand program sponsorship through local businesses, service clubs, and other agencies.
- Solicit contributions from local sources.
- Review annually the department fees and charges.
- Explore revenue producing facilities and programs.
- Establish separate funding mechanisms for Parks.

♦ Promote linear parks/greenways along streams and rivers

- Explore opportunities along the Salt Creek Corridor.
- Explore opportunities along the Kankakee River.
- Explore opportunities along the Little Calumet.
- Explore opportunities along Coffee Creek.

♦ Continue to carry on a program of major repair, maintenance, and development of existing park properties and facilities.

- Improve the safety surface around the existing play equipment.
- Consider additional play systems and picnic shelters.
- Make improvements to park maintenance buildings.
- Make improvements to Sunset Hill Park as per Sunset Hill Park master plan.

♦ Establish departmental compliance with Americans with Disabilities Act (ADA) guidelines.

- Adopt a resolution of intent for ADA compliance and publish a statement of intent.

- Remove all physical barriers as stated in the ADA transition plan.
- Integrate ADA in program planning.
- Provide staff training in ADA.

♦ Continue to develop a major countywide park complex at Sunset Hill Park.

- Develop a master plan for Sunset Hill Park.
- Develop a program plan to increase the park usage incorporating existing and future facilities.
- Continue to surface roads.
- Develop a new children's playground.
- Expand the trail system in the park, including interpretive areas, signage, and maps.
- Work with local clubs/agencies.
- Install a new heater in the maintenance shop and the resident's house.
- Renovate the existing main barn and construct a new barn.
- Complete the remodeling of washroom/storage building.
- Install electricity for lights and appliance use at shelters and campgrounds.

♦ Consider additional interpretive sites.

- Explore the creation of a geological history interpretive site.
- Explore the creation of an interpretive historic site.

♦ Expand recreation options to ensure program diversification and a wider range of participation from various segments of the community.

- Develop and utilize a programming matrix that covers all ages, all program areas, and all seasons.
- Develop cultural interest programs.
- Develop programs for special populations.
- Expand Outdoor Education programs at Sunset Hill Park.
- Develop programs that promote fitness and wellness and/or incorporate those elements in existing programs.
- Encourage arts and crafts, photography, and historic societies or clubs to use the parks.
- Develop and utilize NIHPA for educational and agricultural programs.

- ..Develop a County park and recreation services marketing plan.
  - Develop a new department logo.
  - Develop alternative methods for promoting programs and services.
  - Develop a speaker's bureau to make presentations to community groups.
  - Utilize Government Access Cable channel to inform the public of programs and services.
  - Continue park internet information pages on web site.
- Continue to enhance the relationships with various community groups, agencies, and organizations.
  - Strengthen ties with schools and other municipal groups by exploring shared programs and cooperate on improvement projects.
  - Build relationships with service clubs and volunteer groups through involvement with programs and projects.
  - Establish Adopt-a-Park program within the parks.
  - Develop fair and equitable policies for public use of all park facilities.
  - Review and update park ordinances and park usage policies.
  - Review the user fee policy.
  - Review the park administrative policy manual.
- Expand Department personnel and resources.
  - Review and revise full time position descriptions and salaries.
  - Develop a process for identifying and prioritizing staff training.
  - Maintain weekly staff meetings and planning meetings of budgets.
  - Institute a risk management program in cooperation with the County Parks insurance provider IOSHA, the County Health Department, and other Health and Safety Agencies.
  - Add full time naturalist, program coordinator, park laborers, and office staff.
  - Implement a program for purchasing and continually upgrading computer equipment and software to meet department needs.
  - Purchase three new computers before 2005.
  - Purchase three new printers before 2005.

- Purchase new software including facility registration, desktop publishing, and any necessary upgrades.
- Purchase necessary hardware and software for a departmental/local area network and possible linkage to the County network.