Muncie-Delaware County Comprehensive Plan

Prepared by:

HNTB

Communities in Concert:
CREATING TOMORROW'S HOMETOWN

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EXECUTIVE SUMMARY

Communities plan so that they can better manage their future and provide a high quality of life to their residents. By carefully planning land uses and public investments, public services can be more efficiently provided, scarce land resources can be put to their highest uses, and public resources can be effectively targeted to pervasive problems.

This Comprehensive Plan Update focuses on seven key plan elements. These plan elements are equal in importance to one another, and include:

- ***Alleviating and preventing problems created by urban sprawl***, through several means. These means may include focusing new developing around the existing "service area villages" of Eaton, Gaston, Albany, Selma, Yorktown and Daleville, as well as encouraging infill development and defining an effective growth boundary for the City of Muncie.

Appeal to the Great Spirit, Muncie

- ***Preserving agricultural land and farming operations***, by focusing new development around existing development. An investigation of the feasibility of changing lot size and/or development requirements for residential uses in agricultural areas should be conducted. The agricultural land committee that was formed during the Comprehensive Planning process should be retained, and continue to discuss and implement initiatives for preservation of both farmland and farming.

- ***Redevelopment and revitalization*** of existing urban areas and neighborhoods within the City of Muncie, including the Central Business District.

- ***Implementing key thoroughfare improvements***, including the earliest completion of the western growth and arterial circulation study and, by extension, completion of the infrastructure improvements endorsed by the study. The study should follow the guidelines applicable to any Major Investment Study (MIS) where all alternatives are considered, including the western loop concept as well as, but not limited to, existing roadway alignments.

- ***Encouraging economic development*** through the provision of new Class A industrial and office space, and taking advantage of the proximity of the community to the Indianapolis metropolitan area via I-69.

- ***Preserving and protecting the natural environment***, and maximizing the recreational value of natural areas for all citizens, through constraining development to non-environmentally sensitive areas, expanding the greenway system, and encouraging, where feasible, clustered

development that preserves open space. Such techniques to preserve and protect the natural environment shall also be cognizant of the importance of private property rights.

- ***Enhancing the attractiveness of the community*** through enhanced design standards for major gateway corridors, and implementing improvements to major gateways, such as SR 332 and SR 67. Such activities will reinforce a positive city/county image, promote better quality design, and serve as a guide for the enhancement of existing properties.

In addition to these seven key elements, two recurring themes play an integral part in the development of this Comprehensive Plan: regionalism and implementation. A regional perspective is apparent throughout the Plan, most notably in transportation and economic development. Implementation is very specifically addressed in the final chapter, thereby emphasizing its importance. Adoption of this Comprehensive Plan goes beyond the legislative process of approval – it is merely the beginning. True adoption is to use and to implement the Plan in future decisions, actions and ordinances affecting the physical development of the entire Muncie and Delaware County community.

CHAPTER 1
INTRODUCTION

1.1 THE COMPREHENSIVE PLAN

This Comprehensive Plan is a guide for the future of Muncie and Delaware County. As such, it outlines the vision of the community as articulated by its citizens, the goals, objectives, and policies that steer the community to that vision, and the individual plans that serve as blueprints for achieving these ends.

Communities plan so that they can better control their future and provide a high quality of life to their residents. By carefully planning land uses and public investments, public services can be more efficiently provided, scarce land resources can be put to their highest uses, and public resources can be effectively targeted to pervasive problems.

It is important to understand that while the Plan is a document with a long-term vision (generally 20 to 30 years), it is not a zoning ordinance or other regulatory document. However, the Plan is adopted by the legislative bodies of the City and County, thereby becoming an official policy statement. The fact that the Plan encompasses both City and County interests and issues allows for a seamless Plan, absent of the contradictory City-County policies that continue to plague many Hoosier communities.

Ball Pillars at Minnetrista Center

The Comprehensive Plan is the policy document for the physical, social, and economic growth and redevelopment of the City and County. As such, the plan influences policy decisions in a broad variety of areas, including, but not limited to, the following: land use, transportation, infrastructure and utilities, drainage, environmental conservation, urban reinvestment, economic development, recreation and open space, and housing.

Indiana law provides guidelines for the development of the Plan. According to these guidelines, the general purpose of the Plan is to "…guid[e] and accomplish[] a coordinated, adjusted and harmonious development of the area which will, in accordance with present and future needs and resources, best promote the health, safety, morals, order, convenience, prosperity or general welfare of the inhabitants, as well as efficiency and economy in the process of development…."

The last comprehensive plan for Delaware County was completed in 1977. Many of the underlying planning assumptions and analytical conditions related to that plan had dramatically changed therefore a complete revision-versus-update to the plan was desired. In its diligence of discussing the purpose and use of the proposed comprehensive plan, the Steering Committee has identified the need for this plan to be used as a policy guide by the City of Muncie and Delaware

County. Equally however, the Steering Committee has recognized that the plan as a guide will need to be flexible to changing conditions which may arise over the period of the plans life. It is desired that the plan be updated every five years, and that on an annual basis, the plan be monitored for its performance.

Currently, Muncie and Delaware County are at a critical phase in their growth and development as shown in Map 1-1 Base Map. The community's economy has been hit hard during the last several years by the departure of several key industries, including the namesake for many important community institutions, the Ball Corporation. Urban sprawl has diluted the capacity of the community to efficiently provide important public services. Much of this sprawling growth has consumed agricultural land, making farming an increasingly difficult activity. Muncie's inner-city neighborhoods suffer from deterioration and blight.

In contrast, there are easily identified assets such as, and definitely not limited to, Ball State University, the White River, a growing medical community and small business diversification. Factoring all of these elements together is the function of a comprehensive plan which will then provide the guidance for future development of the Muncie-Delaware County community.

1.2 PROCESS FOR DEVELOPING THE COMPREHENSIVE PLAN

The process for developing the Plan began in 1997, when the City and the County appointed a steering committee to oversee the Plan's development. Proposals for consulting services were solicited shortly thereafter, and in December of 1997, HNTB Corporation was selected for assisting in the development of the new Comprehensive Plan.

The process for developing the new Comprehensive Plan is reflected in the organization of this document. The first major phase of the new Comprehensive Plan was garnering public input through various means, which included public meetings, an issues symposium, and electronic participation. Local and regional demographic and economic changes were investigated, as were the existing land uses of the City and County. These findings informed the development of the Policy Plan. Several land use alternatives were then generated and critiqued. Attributes of the land use alternatives were used to develop the Land Use plan. The impacts of the Plan were examined and used to form the functional elements of transportation, parks and open space, and community development. Once the elements were in place, methods for implementing the Plan were researched.

Coincident with the new Comprehensive Plan was a Targeted Industry Study (TIS), which was intended to identify industrial clusters for which the City and County were considered competitive. The TIS also identified activities that the City and County could pursue to strengthen their competitive advantages for attracting industries. The results of the TIS form many of the policy statements and actions contained within this new Comprehensive Plan.

1.3 HISTORY OF MUNCIE/DELAWARE COUNTY

The City of Muncie has built a steady foundation from its long rich history. It has felt growth and decline throughout its existence, but its strength in character has allowed it to overcome most difficulties in its path. Before Muncie became a city, the area along the White River, which can be described as the present day downtown, was home to Munsee/ Wolf Clan of the Delaware Indians. The establishment of this area lead the way to a tribal town called Munseetown, which later became Muncie.

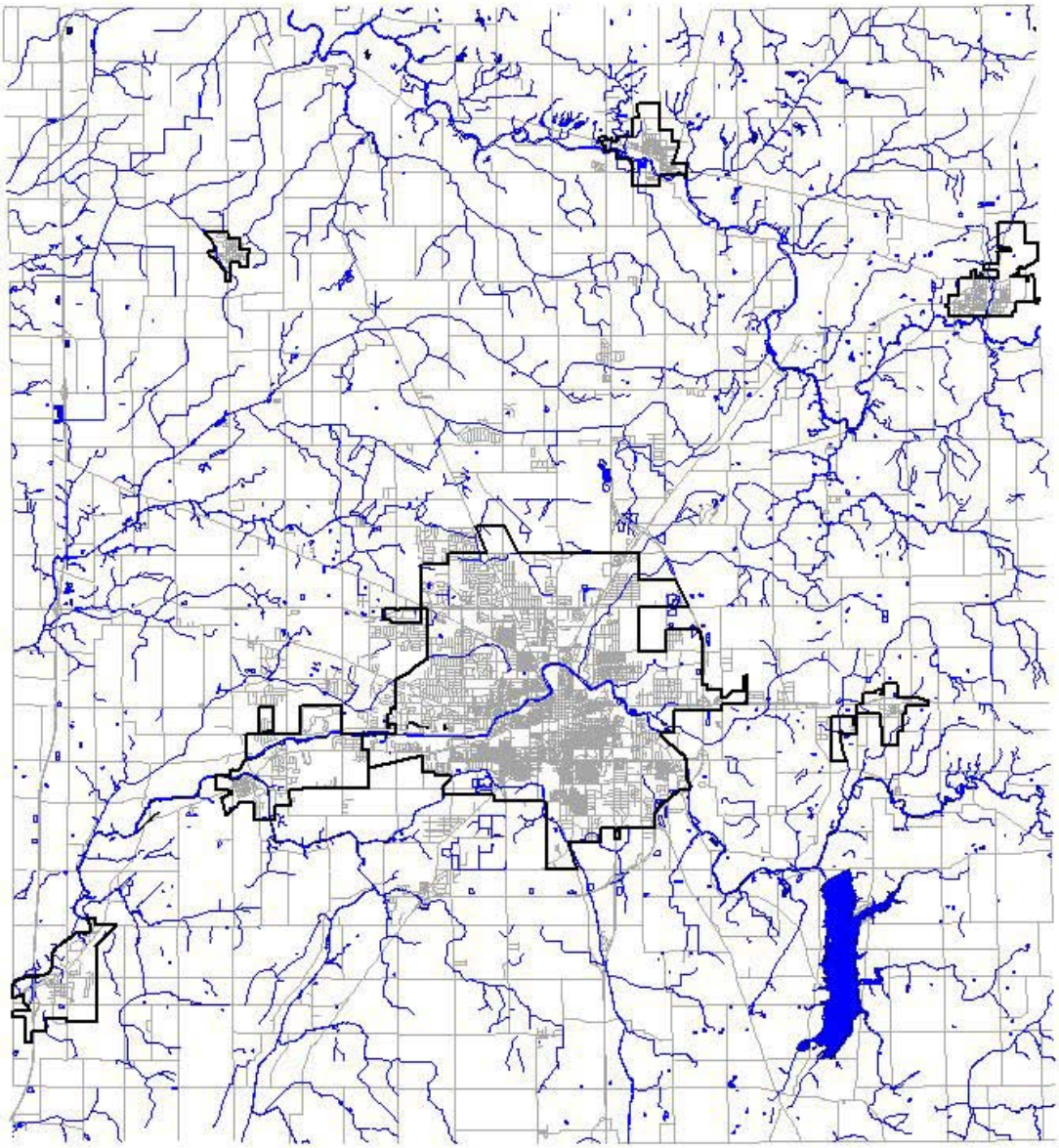
In 1886 a gas boom occurred drawing industries around the country to central Indiana. Muncie became the center for glass and steel manufacturing in the state. The most notable of these manufacturers was the Ball brothers and their glass manufacturing company. The Ball family moved to Muncie in 1888 and remained there until 1998. Not only did the Ball Brothers and then later Ball Corporation bring jobs and a steady economy to the City of Muncie, but also a level of philanthropic support that supercedes anything their company ever accomplished. The Ball family donated funds and support for a variety of community projects, such as like the acquisition of the Indiana State Normal School, and later Ball State University, and the donation of over $2 million for the construction of Ball Memorial Hospital.

After 1910, the second emergence of industrial development occurred due to the need for tool and die manufacturers for the new wave of automobile use. One of the leading manufacturers in the early part of the century was Warner Gear; this company later merged with the Illinois parts maker Borg and Beck to create a "multi-national firm that was a major Muncie employer throughout the 20th century."

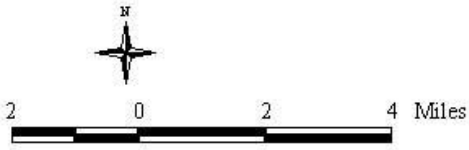
In 1929 Muncie became known as "Middletown" or the typical American City when the husband and wife team of Robert and Helen Lynd conducted the Middletown studies. The studies looked at a variety of issues and characteristics that cities and towns dealt with on a day to day basis. Even today, many classrooms and sociological analyses are still finding these studies relevant. In 1935, the Lynds followed up with a second study, Middletown in Transition and in 1977, the University of Virginia conducted a further study of Muncie, called Middletown III, to determine what changes may have occurred since the Lynds' second study.[1] Although Muncie became known as "Middletown" the recognition did little for the town in regards to benefits or fame.

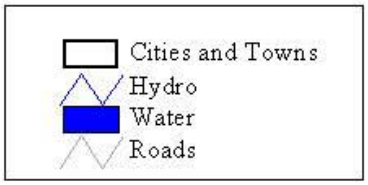
Muncie was home to several attempted Normal schools throughout the end of the 19th century and the beginning of the 20th century. Because of a donation by the Ball Brothers in 1918, the Indiana State Normal School opened and flourished throughout the century. The Normal School later became the present day Ball State and received University status in 1965. Ball State University has played a major role in the growth and development of the Muncie community.

During the 1960's, Muncie grew geographically with the expansion of the Muncie Sanitary District. Rural residences could now have the same benefits and service protection that the residents of the city utilized. With this increase in services came the annexation of rural Delaware County into Muncie's city limits. Efforts to continue to annex rural Delaware County over the last three decades have remained constant, in attempts to allow Muncie to grow and expand with the times.



Map 1-1: Base Map





Muncie is taking an aggressive move towards the next century by improving the quality of living and it's surrounding environment. Major projects have taken place, such as the renovation of the Muncie Mall, the expansion of Walnut Street to accommodate two-way traffic and new economic development strategies to aid in the loss of Ball Corp. headquarters and the ABB and GM plants. The next century will be an exciting one, building on the past and moving head on to the future.

CHAPTER 2
INPUT TO THE PLAN

2.1 INTRODUCTION

The Comprehensive Plan is not merely a technical document; it is a testimony of a vision shared by its citizens. The delineation of that vision is therefore very important to the Plan.

In addition to garnering input from citizens, the process of developing the new comprehensive plan was overseen by a Steering Committee with broad representation from the City and County. The Committee provided input and feedback at all stages of the new comprehensive plan.

2.2 PUBLIC INPUT

In addition to merely gaining information, public participation accomplishes several goals in the process of developing the Comprehensive Plan, labeled the four "D's"[1]:

- *Deprofessionalization* – citizens, and not just professionals, take charge in planning the community;
- *Decentralization* – decision-making is not dependent upon a few specific groups;
- *Demystification* – people better understand planning and its impact on their lives, and ensure the development of "user-friendly" plans; and
- *Democratization* – people are directly involved in decision making.

Several opportunities were available for citizens to participate in the process of developing the new comprehensive plan. First, several public meetings were held to garner public input. Second, a more focused issues symposium explored three of the more pressing issues in greater detail. Finally, a web site was set up for electronic participation in the development of the Plan.

2.2.1 Public Meetings. Four public meetings were held in various locations of the City and County during June of 1998. Two of the meetings were in the County, at Yorktown High School and Delta High School. The other two meetings, at Central High School and Southside High School, were in the City of Muncie.

Attendance varied by location, with 12 persons attending the Delta High School meeting, 27 persons attending the Yorktown High School meeting, 41 participants attending the Southside High School meeting, and 58 participants attending the Central High School meeting.

The results from the meeting were as follows:

[1] After Jones (1990:11).

2.2.1.1 Yorktown High School. Participants at this County location generally saw quality-of-life issues as being local strengths, including the following items:

- Nice people;
- Good volunteerism;
- Ball State University;
- The County's central location;
- Low taxes; and
- Ball Memorial Hospital.

Opportunities for the County focused around the growth of BSU, development along the White River, and providing tax incentives to new businesses. Weaknesses generally revolved around government, infrastructure, and economic development, including the following items:

- Non-professional government;
- Poor infrastructure;
- Poor maintenance of public facilities;
- Poor political perception;
- High taxes (contradicting what was listed as a strength); and
- A lack of community pride.

Threats focused around the continued loss of jobs, high taxes, media negativity, and the deterioration of the Downtown.

2.2.1.2 Delta High School. Participants at this meeting listing the following items as strengths:

- Ball State University;
- Cultural offerings;
- Workers and facilities;
- A good geographic location;
- A low cost of living;
- Good medical services; and
- Agriculture.

Opportunities included BSU, historical places, and the community's youth. A long list of weaknesses was generated at this location, including the following:

- Uncontrolled growth;
- Poor appearance of development;
- Deteriorated neighborhoods;
- A lack of planning;
- High property taxes;

- Apathy;
- Low wages;
- Low level of public services;
- Lack of leadership;
- Low voter turnout;
- Poor quality of government;
- Constant controversy;
- Fragmented communities;
- Muncie's unattractive Downtown; and
- Xenophobia.

Threats that were listed included the loss of productive farmland from non-agricultural uses, the loss of youth to the community, the attraction of low-skill, low-wage jobs to the community, and the lack of implementing good plans.

2.2.1.3 Central High School. A surprising degree of consensus emerged from this group, the large number of participants (58) notwithstanding. Strengths were found in the following items:

- Ball State University;
- Ball Memorial Hospital;
- The Minnetrista Cultural Center and the arts programs it supports;
- The Horizon Center; and
- The White River.

Opportunities focused around Muncie's Downtown, parks and recreational facilities development, a sports center, empty manufacturing space (for industrial recruitment), and inter-governmental cooperation.

Participants generally saw taxes and local government as weaknesses. The newspaper was seen as negative, as were existing alternate transportation modes. People generally listed drugs and crime as threats, along with urban sprawl and a lack of commitment to planning. The continued loss of jobs, and high property taxes were also seen as threats.

2.2.1.4 Southside High School. Participants at this meeting generally saw the following items as strengths:

- Ball State University;
- Ball Memorial Hospital;
- The Convention Center;
- The White River;
- Prairie Creek and the Cardinal Greenway; and
- Good people and volunteerism.

The following list of opportunities was also generated:

- BSU;
- IVY Tech;
- Vacant structures (for redevelopment/reuse);
- City parks programming;
- Adult and community education;
- Improved local government cooperation; and
- Downtown revitalization and redevelopment.

Weaknesses focused on the perceived political division and corruption in local politics. Poor infrastructure and the loss of manufacturing jobs were also listed. The following items were listed as threats:

- A lack of jobs;
- Apathy;
- A lack of regulation enforcement;
- A loss of business;
- Local government; and
- Insufficient planning.

2.2.1.5 Conclusions. People generally saw the existing institutions in the community, such as BSU and Ball Memorial, as strengths. Other types of public-oriented facilities, such as the Horizon Center, Prairie Creek, Minnetrista, and the Cardinal Greenway, were also generally viewed as strengths. Overall, natural resources and recreational opportunities were seen as strengths.

Patterns in items listed as opportunities are less apparent. Recreational opportunities and governmental cooperation were apparent, as well as Downtown revitalization and BSU.

Ball Memorial, Muncie, Indiana

Government-related issues were cited as weaknesses more than any other category, including taxes, intergovernmental cooperation, and poor public facilities and services. The economic difficulties of the community and a sprawling pattern of land use were also listed as weaknesses.

The list of threats included many economic development and neighborhood atrophy items, including crime, Downtown deterioration, and drugs. People are concerned about the youth leaving the community.

2.2.2 Agricultural Survey. An agricultural survey (see appendix to this chapter) was developed in order to gain input from the farming community on agricultural issues.

2.2.3 Electronic Participation. A world wide web site (www.mdccompplan.com) was established to inform viewers of the Comprehensive Plan process and status. Email addresses to project staff were listed on the site, allowing viewers to email comments.

Email participants saw many positive attributes about Muncie and Delaware County. In particular, the geographic proximity to Indianapolis was seen as a strength, as were several community institutions, such as Ball State University and Ball Memorial Hospital. Participants generally saw opportunities in public facilities projects, such as extending SR 67 to the south, creating an expressway from I-69 to the Central Business District, and utilizing the Cardinal Greenway. Urban design and redevelopment issues, such as revitalizing the Downtown, making better connections to BSU and Ball Memorial Hospital, and requiring landscaping on new businesses, were also seen as opportunities.

Participants also felt that communication across neighborhoods and organizations presented a weakness, as did general apathy. The loss of young people and the community's school system were seen as weaknesses. The continued deterioration of the Downtown was seen as a threat.

2.3 ISSUES SYMPOSIUM

During the public meetings, several issues arose that were deemed worthy of further exploration. These three issues were economic development, parks and open space, and agricultural preservation. In order to explore these issues, an "Issues Symposium" was developed. This symposium invited members of the community to explore these issues. The group was broken down into workshops surrounding the three issues. Following a short presentation by individuals with professional knowledge of the subject area, participants in each workshop discussed problems and potential solutions. The larger group reconvened following the workshops, in order to share their findings with all the participants.

This section discusses the findings of the Symposium.

2.3.1 Agricultural Preservation. The State of Indiana has closely felt the impacts of unrestrained urban development and its impacts on agricultural production. Despite its relatively small size (ranked 38th in the Country in land area), Indiana is rated 8th in the value of its agricultural exports (p.21), and has the second highest proportion of prime farmland in the United States (p.6). According to the Task Force, rural areas are experiencing population growth at a rate exceeding that of the State (9.6% v. 5.3%; p. 9).

Urban areas in the State grew by 17% between 1982 and 1992, increasing the total urbanized area by about 233,000 acres (365 square miles; p.9).

Delaware County-Muncie provides an excellent case study of these forces at work. Map 3-4, in Chapter 3, compares the developed area of the City of Muncie in 1962 and 1998. During that time period, the City's developed area approximately doubled; however, the population in 1998 was about the same as it was in 1962. In order to accommodate the same number of people, the City doubled its size, thereby increasing the costs of the provision of public services and losing productive farmland.

According to the Census of Agriculture, during the period of 1982 to 1992, Delaware County lost approximately 22,000 acres or 11% of its farmland. The number of farms experienced a similar drop, from 965 farms in 1982 to 688 farms in 1992 (a 29% drop). The degree of loss varies by the type of farm, as is indicated in the following table:

Table 2-1 Loss of Farmland

	1982	*1992*	*% change*
1-9 acre farms	86	68	-11%
10-49 acre farms	303	195	-36%
50-179 acre farms	282	198	-30%
180-499 acre farms	202	133	-34%
500-999 acre farms	65	56	-14%
1,000-over acre farms	27	38	41%
TOTAL	965	688	-29%

Particularly hard-hit are smaller farmers, with the exception of the smallest farms, which are presumably not the sole source of income for the inhabitants. Note that the category of the largest farms has experienced growth over the time period.

The following issues were identified by focus group participants as being pertinent to agricultural preservation and urban sprawl in the community:

- **Encourage urban development:** Several participants voiced their belief that much of the development taking place in unincorporated areas could easily be accommodated in existing urban areas if those areas were redeveloped and had adequate public facilities. Public policies that increased the desirability of urban infill sites would help stem the tide of sprawling development patterns. Development standard incentives were mentioned as one possible set of tools to achieve this goal.

  Several participants noted that under existing ordinances and procedures, it is difficult to receive permission to construct higher density housing, particularly in the urban fringe areas. What results then, is the demand of low density housing being built on "country" lots that are not subdivided. This creates a classic

sprawling pattern which is more costly to provide services to and in some cases interferes with the ability to efficiently farm.

It was also noted that many people moving to rural areas did so because of a perception of negative influences in urban areas. Issues such as high crime and poor schools were seen as driving people out of the municipalities.

- **Difficulties arising from lax requirements:** Most participants agreed that existing ordinances were quite permissive in allowing development in unincorporated areas. Developer obligations and dedications in unincorporated areas were seen as relatively minor given the scope and location of developments, and did not properly address all of the costs of providing public services to those developments. The existing minimum lot size of 5 acres currently allowed in agricultural areas was viewed as lax. Participants also expressed their belief that obtaining variances to existing regulations was too easy.

- **Development nodes:** Participants expressed an interest in a regulatory policy that restricted new development to areas outside of existing incorporated areas. This variant of the "growth boundary" concept would designate several population nodes, outside of which growth boundaries would be drawn.

- **Workforce Training:** The perceived poor quality of public school education as compared to other districts in the State, and its effects upon major employers choosing Muncie-Delaware County was discussed. Participants viewed the increasing number of computers relative to student enrollment as a positive trend.

- **Demand for rural residences:** Participants condemned the current practice of farm auctioneers splitting farmland for auctioning. Still, they recognized the legitimacy of the demand for rural residences, and stated their ideal of a balance between the demand for rural residences and farm production. Regulations that permitted development on non-productive farmland while restricting development elsewhere were cited as one possible tool. Conservation easements that restricted land use to agricultural production were also discussed.

- **Agriculture focus group:** An outgrowth of this session was the creation of an agricultural focus and workshops where lot size and preservation of farmland and farming operations were discussed in more detail. It is anticipated that this group would be used for input on future ordinance revisions.

2.3.2 Economic Development. Participants in the focus group were asked to define the term "economic development". The purpose of this discussion was not to arrive at a synthesis definition, but rather to see the different perspectives and concerns that people have regarding economic development and to better understand that economic development means more than just creating jobs. The following ideas, issues, and definitions were stated by the participants:

- Promotion of economic well-being, as defined in job creation, population increase, and maximizing opportunities for advancement.
- The creation of wealth.
- Quality-of-life issues, including an attractive and sustainable community.
- A positive force that builds for the future and results in a better way of life.
- Acting strategically and building upon the strengths of the community.
- An atmosphere of cooperation.
- The heartbeat of the community.
- Increasing community resources, including the community's tax base.

Many of the economic and demographic analyses discussed in Chapter 3 (following) were presented to the participants. Also, staff from Hammer Siler George Associates (HSGA) discussed the Targeted Industry Analysis (TIA) they were conducting for the metropolitan region. This material was presented to the focus group to give participants a sense of the assets and liabilities inherent in the region for implementing economic development activities. Several issues were identified in the TIA, as shown in the following list:

- There is a lack of supply of competitive business park sites.
- Conflicts exist among local governments' political parties.
- There is a lack of professional government management.
- There is a lack of tax resources for capital projects, operations, and management of public facilities and services.
- Ball State University has not been spinning off well-paying local jobs, as one would normally expect.
- The time and distance to travel to air carrier and cargo services is prohibitive.
- A mismatch seems to exist between local job skills and the needs of potential employers.
- Ball State University's level of research is relatively low, leading for little potential in spinning off technology-based companies from the University into the community.
- Absorption of industrial ground is effectively 15 acres per year, but there are no high-quality industrial parks currently in the inventory.

The Delaware County-Muncie Chamber of Commerce recently completed its Economic Adjustment Plan, which utilized funding from the U.S. Economic Development Administration. The Plan provides a framework for the regional economy's recovery from several key industry relocations. The Plan begins with an analysis of the impacts of several industry shutdowns and/or relocations within recent months. Interviews with downsizing or relocating companies and a citizen participation process are then utilized to arrive at economic development goals and strategies.

The strategy component of the Plan emphasizes activities that promote the diversification of the regional economy, and pays particular attention to small business development (including the development of a business incubator), the development of a new business park, a shell building program for improving site marketing, and a program to market dislocated workers. Workforce education and improving the quality of life were also identified as key issues.

The following issues were identified by focus group participants as being pertinent to economic development in the community:

- **Development Framework Issues:** Concerns over the physical pattern of land use and development and the lack of a clear vision or future development guide was a paramount concern. The historic sprawling pattern of development was especially a concern, as participants voiced the need for "core-fringe balance" and the increased service costs that a lack of balance could induce. Also, the need for specific, targeted development strategies and corridor master plans for State Roads 67 and 332 were discussed. Questions were asked about what was planned for those corridors, and how a positive character could be assured .

- **Opportunities for Industrial Development:** Industrial development within existing urban areas was seen as an issue. Should there be different policies to encourage adaptive re-use of older industrial facilities in parks as well as on free-standing sites that are scattered about the existing urbanized area? Should there be a push for new master planned business parks? Questions were also voiced regarding the needs of inner city areas. Downtown Muncie was a special area of concern, with current employment clusters of government and financial services, and an emerging convention and entertainment center being the current economic activity generators in the area. Would it be feasible to promote Downtown for new business park development? Participants discussed the need for strategies to bring industry and employment to these areas.

- **Ball State "Products":** Questions were raised about the typical destination of Ball State graduates and what could be done to keep more of these "exported products" in Muncie and Delaware County. The lack of amenities and activities to attract and/or retain young persons was a concern. One suggestion was to increase active recreation amenities and community quality of life. Participants wanted to know where the Ball State graduates ending up going and why.

- **Workforce Training:** The perceived poor quality of public school education as compared to other districts in the State, and its effects upon major employers choosing Muncie-Delaware County was discussed. Participants viewed the increasing number of computers relative to student enrollment as a positive trend.

- **Exporting of Workers:** The substantial out-commuting patterns of residents of the County to jobs outside the County raised questions about the long-term

prospect of those families remaining in the County without prospects for meaningful employment in the County.

- **New Employment Needs:** A need was expressed to attract both "new generation" businesses as well as more businesses to the area to support an expanding employment base and opportunities that match the skill-sets of the Muncie-Delaware County workforce. The Targeted Industries Study effort currently underway will be critical to this repositioning effort and to properly plan for appropriate space and land development needs to support this attraction

2.3.3 Parks and Open Space. Physical development and demographic changes are altering the demands of residents on open space, greenways, and recreation facilities. Today's residents also value the diverse benefits of open spaces and the variety of functions open spaces serve. Mantell et. al. (1990, 114) identifies these functions:

- They provide economic resources. Open spaces are economically useful for agriculture, livestock grazing, and forestry. Undisturbed wetlands are vital to fisheries and water quality. The scenic beauty of open space attracts tourists.
- They provide direct health and safety benefits. Open spaces help recharge groundwater aquifers. Undeveloped watersheds protect the quality of public drinking water supplies. Conservation of floodplains prevents the loss of life and property damage. Forested areas cleanse the air and moderate temperatures.
- They provide recreational opportunities. Open spaces serve as national, state, local, and private parks, preserves and recreation areas; archaeological preserves; and historic and cultural sites. They serve as urban greenbelts, greenways, and trails and provide public access to shores and rivers.
- They preserve ecological resources. Open spaces protect animal and plant habitat, wilderness areas, scientific reserves, and unique and threatened species and ecosystems.
- They promote aesthetic values and create community identity. Pastoral and open landscapes create scenic vistas and parkways. They separate and maintain the distinct identity of communities and create cultural landscapes.

At the symposium, a brief presentation was made regarding a parks classification system that addresses the natural and urban diversity of open spaces throughout Delaware County. This system (see Figure 1) addresses a wide range of open spaces from urban wilderness where natural values predominate to manicured gardens and urban squares where social values have priority and large crowds can gather.

With a common vocabulary in place, participants were divided into small groups to discuss pertinent issues and arrive at alternate schemes for implementing green corridors in the community.

Participants noted the increased demand for open-space recreational opportunities. Residents of Muncie and Delaware County are becoming increasingly aware of the benefits of a walkable, livable, and sustainable community, and how open space and greenways contribute to those goals.

There are difficulties to meeting this increase in demand. The financial capabilities of the Muncie Department of Parks and Recreation are tested with the maintenance of existing facilities, let alone any proposed increase in capacity. In fact, the Parks Department has rejected several proposed private dedications for park land due to the Department's difficulties in maintaining property.

While these difficulties do not necessarily rule out any new facilities, a strict evaluation may be expected. Under this evaluation, the Parks Department makes sure that proposed facilities provide benefits that directly relate to the values and goals of the community.

Participants discussed many different options for providing additional greenways and open spaces within the community. These options included the following:

- Greenway planning along urban waterways and other corridors. These greenways would be especially suitable for the development of off-street bikeways and pathways. This planning supports a number of other planning goals, including flood plain management, fish and wildlife habitat protection, and water quality planning. Other benefits include aesthetic enhancement and passive recreation such as simply large publicly accessible open or green spaces.

Example of off-street pathway

- Requiring new growth to the west of Muncie to be connected via open space corridors. Corollary activities would include the increasing of residential densities, requiring sidewalks, and requiring small, neighborhood-based parks.
- In order to increase the revenue flow of the Muncie Department of Parks and Recreation, cash generation activities could be implemented. Examples of these enterprise operations could be snack shops at major trailheads, and bike and skate rental shops as have occurred along the Monon Trail in Indianapolis.

With these ideas on how to increase recreational opportunities in place, the participants arrived at the following list of recommendations:

- Partnerships with schools, particularly elementary schools, for the provision of recreational space should be explored.

- Linear parks and other greenway concepts should be used to connect schools and recreation facilities, as is feasible.
- The Downtown is the heart of the community. Options for increasing connections to the Downtown should be explored.
- New residential developments should be required to install sidewalks and/or roadside trails.
- Significant habitats along waterways should be protected.
- Outside funding sources for implementation should be investigated and utilized.
- The White River and the Mississinewa River should see the development of greenways and bicycle trails.

2.4 SUMMARY AND CONCLUSIONS

A myriad of public issues resulted from the various participation techniques utilized in the new comprehensive plan process. When all of the comments are considered, some general trends and patterns begin to emerge:

- *The growth, development, and redevelopment of the community is important to most people*. People sense that the pattern of development that has taken place in recent years has introduced new problems into the community. Also, people want to see the inner-city neighborhoods and areas revitalized.

- *People desire to live and work in an attractive community*. Some elements of the community are well-designed and attractive, while others can utilize improvement. The addition of "gateways" along major entry corridors was suggested, as were downtown design projects and design/landscaping standards for new development.

- *Economic development is important*. People are keenly aware of the economic difficulties that the community has experienced. The ability to make the transition through this time period was expressed through references to economic growth, local schools and universities, job training, and other items.

- *Intergovernmental relations offer potential for improving the community*. Currently, people perceive competition between the City of Muncie and Delaware County.

Minnetrista & Oakhurst Gardens Grounds, Muncie, Indiana

CHAPTER 3
CONDITIONS AND TRENDS

3.1 INTRODUCTION

This chapter summarizes the findings of analyses undertaken to determine issues pertinent to the growth and development of Muncie and Delaware County. Some of these analyses, such as population and land use studies, are considered part of the standard land use planning repertoire, and fulfill important functions in anticipating future growth and development. Other analyses, such as agricultural land and property taxation comparisons, arise from specific issues that were raised during the public input process.

3.2 REGIONAL CONTEXT

Delaware County is located in the east central part of the State of Indiana. The County is a stand-alone Metropolitan Statistical Area (MSA) as defined by the U.S. Department of Commerce, Bureau of the Census, hence this comprehensive plan update encompasses an entire metropolitan area. The County is adjacent to a larger MSA, the nine-county Indianapolis region, with the two central cities of Indianapolis and Anderson.

I-69 is the County's most direct surface transportation connection to nearby metropolitan areas. About 60 minutes' drive north on I-69 will bring a traveler to Fort Wayne, the second-largest city in the State, while driving southwest will bring one to Anderson and Indianapolis. The I-69 corridor extending from Indianapolis is one of the fastest-growing areas of the State in terms of population and economy, and is located about 30 miles from Delaware County.

The County contains one second-class city (as defined by state law), the City of Muncie, which is the largest municipality in the County and serves as the County seat. Muncie is situated slightly south of the geographic center of the County. Six incorporated towns also exist; the towns of Eaton, Gaston, and Albany are located in the northern third of the County. Selma lies east of Muncie, while Yorktown abuts Muncie's west side. Daleville is located in the southwest part of the County. In addition to these municipalities, a Madison County community, Chesterfield, has annexed territory in Delaware County adjacent to Daleville. Several small, unincorporated communities dot the landscape.

3.3 TRANSPORTATION

3.3.1 Airport. The Delaware County Airport contains two runways of 6,500 and 5,000 feet in length. These runways are insufficient for larger passenger and cargo jets (which generally require 12,000-foot runways), and mainly accommodate general aircraft. A smaller facility, Reese Airport, with a 2,800-foot runway is located southeast of Muncie. Passenger and cargo traffic generally must choose from three airports that are each about an hour's drive from the County: the Indianapolis Airport, the Fort Wayne Airport, and the Dayton (Ohio) Airport.

3.3.2 Rail Access. Three rail lines traverse the County, primarily converging on the City of Muncie. Norfolk Southern operates a line that runs north-south, through the Town of Eaton and the City of Muncie. Another Norfolk Southern line enters the County to the west, travels through Muncie, and then heads northeast through the Town of Albany. CSX operates the last line, which enters the County near the Town of Daleville in the southwest, travels through Muncie, and then extends east through the Town of Selma.

According to the Targeted Industry Study, in 1999 a rail connection of Norfolk Southern lines in Alexandria (in Madison County, to the west of Delaware County) will be constructed. The goal of this connection is to , create a new route between Chicago and Cincinnati, and is expected to have the unfortunate effect of increasing railroad crossing conflicts in western Muncie. Delaware County is a very active rail center with some 30 trains per day traversing the CSX line which runs just to the south of downtown Muncie southwest to Daleville.

3.3.3 Surface Transportation. As previously mentioned, I-69 is the major interstate link for Delaware County to other Hoosier metropolitan areas. Essentially, I-69 runs north-south on the western edge of the County, turning west-southwest at the southwestern corner. Interchanges occur (moving south-north) at State Road 67/32, State Road 332 (McGalliard Road), and State Road 28.

Several other important highway links exist. Beginning with its intersection at I-69, SR 67 extends east-north to the City of Muncie, then forms part of the Muncie Bypass (see following discussion) before breaking off to travel northeast to Albany and points beyond. SR 332 begins at I-69, and provides a major entrance into the City of Muncie as McGalliard Road. SR 28 begins at I-69, then heads due east until it joins up with SR 67 and heads to Albany, where it breaks off and continues eastward. US 35 follows I-69 and SR 28 to the SR 3 intersection, then heads south to form part of the Muncie Bypass before breaking off to head southeast. SR 3 enters the County from the south, joins up with the Muncie Bypass, then heads north to Eaton and points beyond. SR 32 enters the County at Daleville (near the I-69/SR67 interchange), heads northeast to Muncie whilst travelling through Yorktown, then heads east from Muncie to Selma and points beyond. SR 167 begins at SR 67 in Albany, and heads north.

A major highway link is the Muncie Bypass, an unclosed loop that skirts the southern and eastern edges of Muncie, and which is comprised in various locations of State Roads 67 and 3, and US 35.

Local street systems in the towns are typically grid patterns oriented to state highways and natural features (primarily waterways). Yorktown and Selma are slight exceptions to the rule; while there are areas in these towns that are grid-patterned, these towns are primarily linear (both are oriented to SR 32).

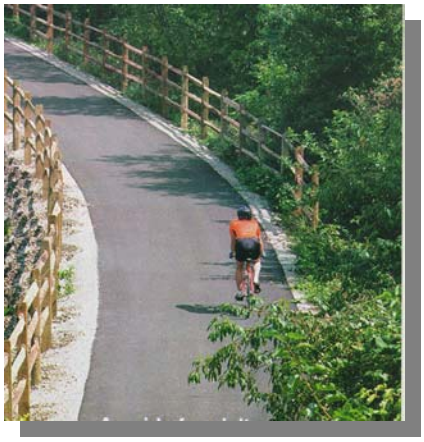
The street system in the City of Muncie is a grid pattern, with some subdivision curvilinear and cul-de-sac streets being introduced, primarily in the northwest area of the

City. SR 32 bisects the City from east to west, becoming a one-way pair in the Central Business District. State Roads 3 (business) and 67 (business) combine with US 35 (business) to form Madison Street/Broadway Street, and bisect the City from north to south. SR 332 become McGalliard Road, and ceases to be a state highway at about Tillotson Avenue. Several radial streets facilitate outside access to the City, and include Westview Boulevard/Jackson Street, Bethel Avenue, Wheeling Avenue, Granville Avenue, Burlington Drive, and Hoyt Avenue.

3.3.4 Bicycle and Pedestrian System Muncie and Delaware County have made significant strides in initiating a separated bicycle and pedestrian system. Fundamental to this system is the Cardinal Greenway which traverses the county in a diagonal direction along portions of the old Chesapeake and Ohio Railroad. Portions of this Greenway have been constructed with other segments planned for construction in the shortterm. Other elements of the Delaware Bicycle and Pedestrian System Plan include separated trails along White River and other environmental corridors. Sidewalks exist primarily within the City of Muncie with significant gaps in connectivity.

3.4 LAND SUPPLY AND USE

3.4.1 Existing Land Use. Map 3-1, Existing Land Use, shows the pattern of current land uses within Muncie and Delaware County. The existing land use inventory was prepared from aerial photographs and windshields surveys. Several observations may be made from visual analysis:

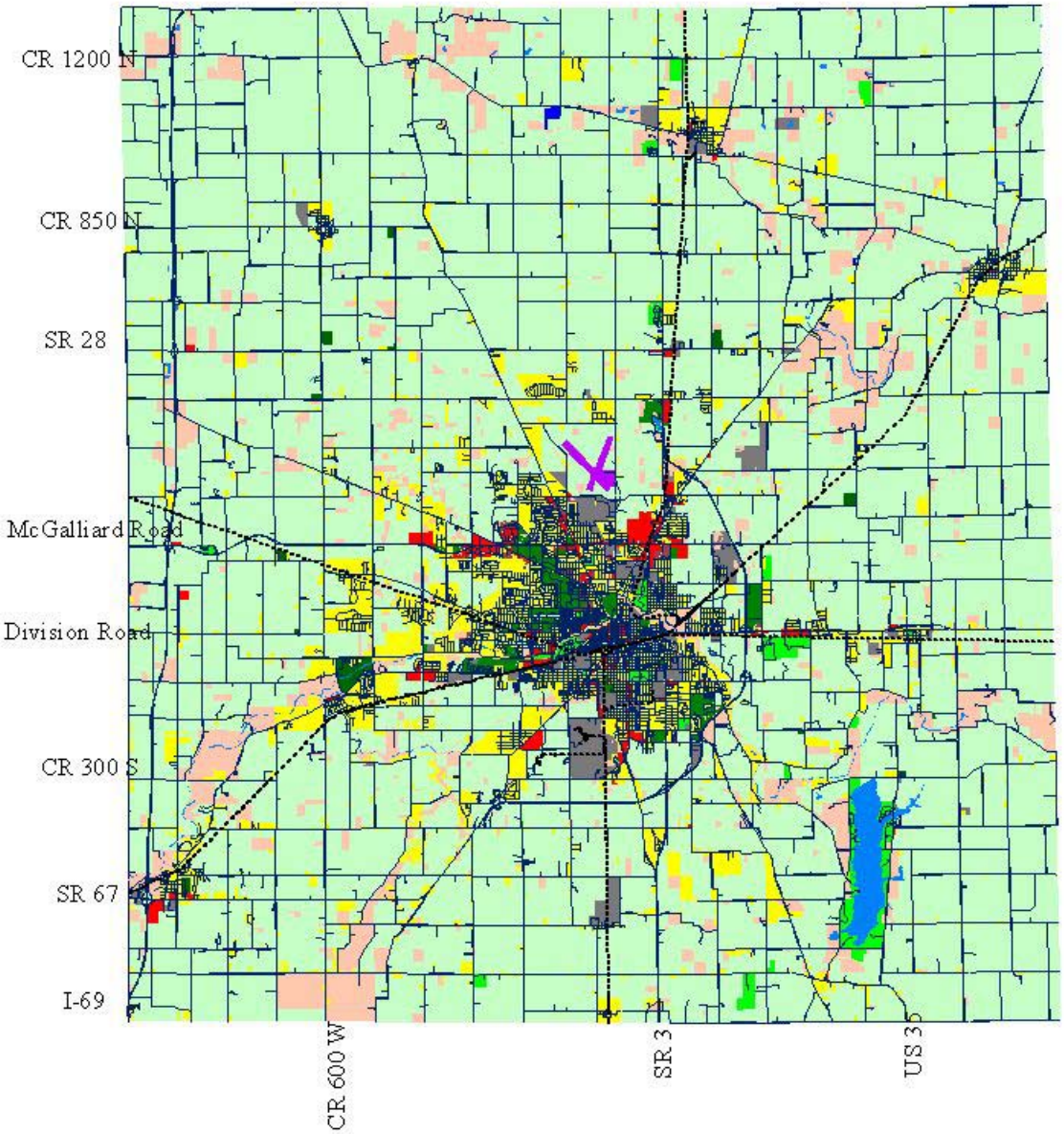


Cardinal Greenway, Muncie, Indiana

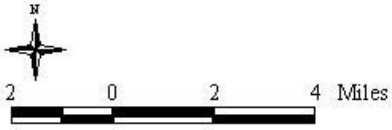
- A sprawling (i.e., lacking cohesion) residential development pattern exists. This pattern represents an approximate doubling of urbanized land area since the early 1960's, despite the fact that no sizable net increase in population occurred during that time period. Since the cost of providing public services increases with the amount of developed land (due to more infrastructure required, longer response times, etc.), this sprawling growth pattern has raised the average per capita cost of public services.

- New development is spreading west to I-69 from Muncie.

- Pockets of isolated residential subdivision have occurred. These disconnected neighborhoods lack cohesion and integration into the community as a whole.



Map 3-1: Existing Land Use



- Many county roads and highways are becoming "stripped out" by residential development. This development introduces several negative effects, including multiple traffic access points along these roadways (thereby raising the potential for accidents), and removing agricultural land from production.

Table 3-1: Existing Land Use Inventory

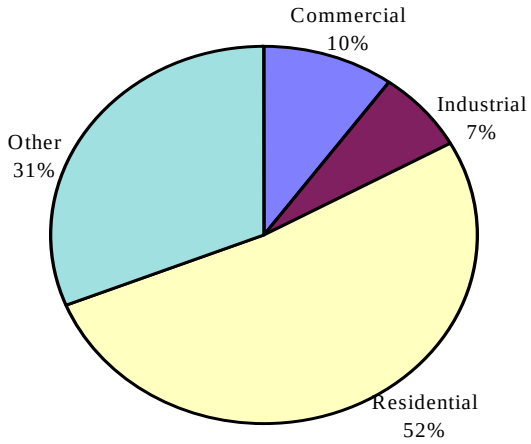
	Delaware County (total area)		*Delaware County (excludes Muncie)*		*Muncie City (total area)*	
	Acres	Percent	Acres	Percent	Acres	Percent
Total Area	249,615	100%	228,957	100%	13,371	100%
Total Residential	23,665	9.48%	17,174	7.50%	6,491	48.55%
Single Family	23,218	9.30%	17,151	7.50%	6,067	45.37%
Multi-Family	447	0.18%	23	0.00%	424	3.17%
Commercial	2,104	0.84%	886	0.39%	1,254	9.38%
Industrial	3,590	1.44%	2,051	0.90%	1,539	11.51%
Other Land Uses	220,256	88.24%	216,169	94.41%	4,087	30.57%
Public/Institutional	2,589	1.04%	1,255	0.55%	1,334	9.98%
Parks and Recreation	3,055	1.22%	2,696	1.18%	359	2.68%
Agricultural	196,134	78.57%	194,398	84.91%	1,736	12.98%
Vacant (undeveloped)	18,478	7.40%	17,820	7.78%	658	4.92%

Source: HNTB Corporation

The American Planning Association publishes land use averages for communities with populations under 100,000. Figure 3-1 shows these national averages.

Figure 3-1

Average Land Use Percentages
population under 100,000
(Source: APA)



For Muncie, we can make the following observations:

- Industrial land somewhat exceeds that of the national average.
- Agricultural uses still play a vital role in the City, with about 13% of the total area.
- Commercial and residential land use amounts are consistent with the national average.
- A small amount of land (658 acres or about 5% of the City) remains undeveloped.

For Delaware County as a whole, the following items may be observed:

- The predominant land use is agriculture, comprising over 75% of the land. Agriculture will be the subject of discussion in the next section.
- Less than 10% of the land is categorized as residential uses. Of these uses, almost all of them are single family in nature.
- About 7.5% of the land in the county is classified as vacant or absent of an active use.

3.4.2 Land Use Densities. The determination of various land use densities is important for estimating and comparing future land use requirements. In this section, we will assume that industrial land is primarily occupied by manufacturing and warehousing uses, that commercial land is primarily occupied by retail and office (service and finance, insurance, and real estate [FIRE]) uses, residential land is primarily occupied by residential uses, and that institutional land is primarily occupied by government uses.

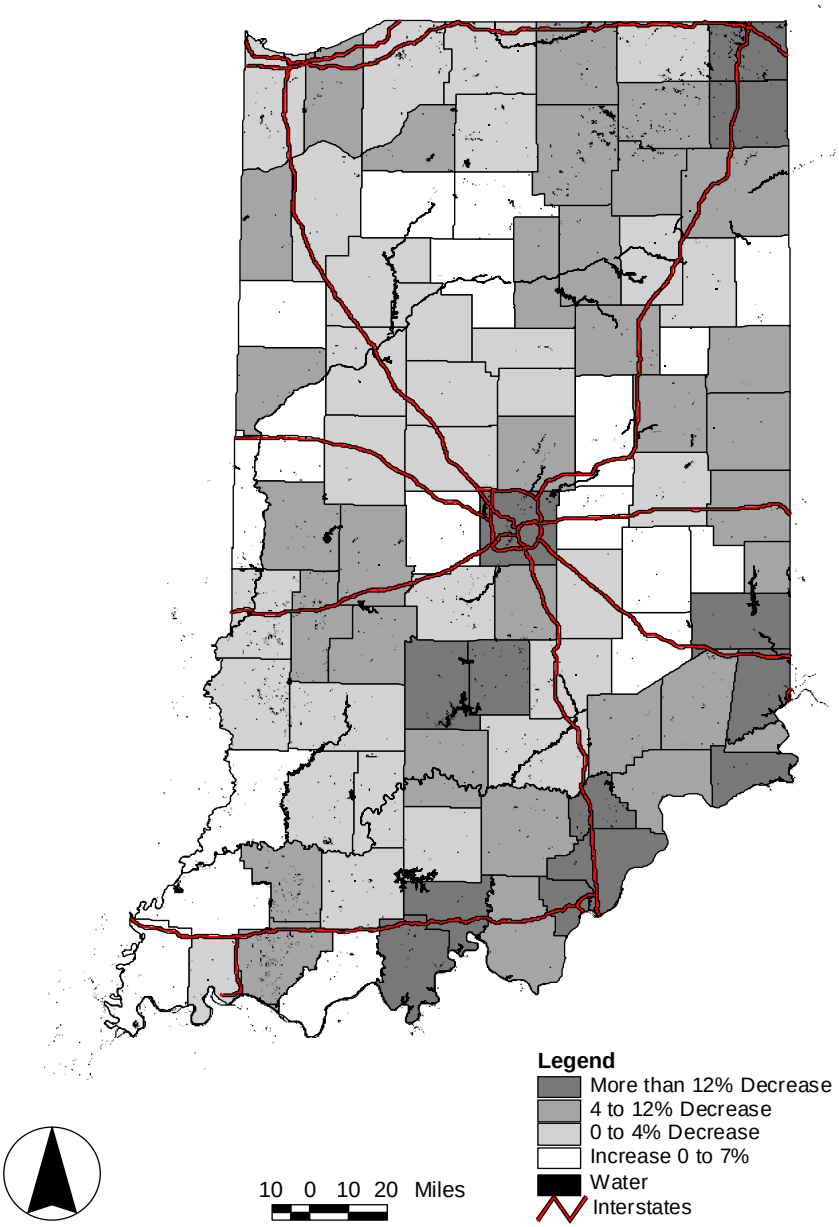
Taking the population statistics from Section 3.5 (below) and the land uses from Table 3-1 (above), the residential density (population / residential acreage) for the County as a whole is 5.0 persons per acre (1996 population). For the City of Muncie, the statistic is considerably higher, at 10.6 persons per acre. This higher density may be attributed to a smaller average lot size for single-family units and a higher concentration of multi-family housing. See the chart of land use acreages for further explanation of land use type and density patterns

Utilizing the employment data from Section 3.5, industrial land uses have a density of 4.9 employees per acre, commercial land uses have a density of 17.3 employees per acre, and institutional land uses have a density of 4.0 persons per acre. Since differences in employment between the Muncie and Delaware County are unknown (employment data are collected only at the county level), comparisons of employment density are impossible.

3.4.3 Agricultural Land Use. Figure 3-2 shows how Delaware County compares to other Indiana counties with regard to agricultural land use change from 1982 to 1992. Delaware County is one of only 7 counties in the State to have lost more than 15,000 acres of productive farmland. As a percentage of available farmland, this loss put Delaware County in the 4-12% decrease category, owing to the large amount of farmland already available. Delaware County has also lost over 13,000 acres of farmland.

Many of the counties in northeastern Indiana (as well as southern Indiana) appear to be experiencing similar problems. Grant, Jay, Randolph, Wayne, and Henry Counties (all adjacent to Delaware County) have experienced loss of farmland. Madison and Blackford Counties (also adjacent to Delaware County) have reported increases in farmland.

Figure 3-2 LAND IN FARMS 1982-1992 (Percent Change)



Source: U.S. Bureau of the Census, 1982 and 1992 Census of Agriculture

3.5 SOCIOECONOMIC PROFILE

The following charts and tables were developed based on data from the U.S. Department of Commerce, Bureau of the Census.

3.5.1 Population. Figure 3-3 shows how the population in Muncie and Delaware County (exclusive of Muncie) has changed over time. Several trends can be discerned from these figures, as follows:

- In the interval between 1950 and 1960, both Muncie and Delaware County (outside the City) experienced population growth, with Muncie having the stronger gains. Between 1960 and 1970, both Muncie and Delaware County grew, but this time Delaware County had the stronger gains with a phenomenal growth rate of about 4% per year.
- In the decade between 1970 and 1980, the City of Muncie grew by 11.8% to its highest population level of 77,216. During the same period, Delaware County (outside the City) experienced a severe population decrease. The comparison between Muncie's and Delaware County's population changes leads to the conclusions that a significant annexation policy was implemented in this interval.
- Since 1980 the City of Muncie and Delaware County have experienced population decline (with a slight rebound being evident in the County after 1990).

Figure 3-3: Population Change

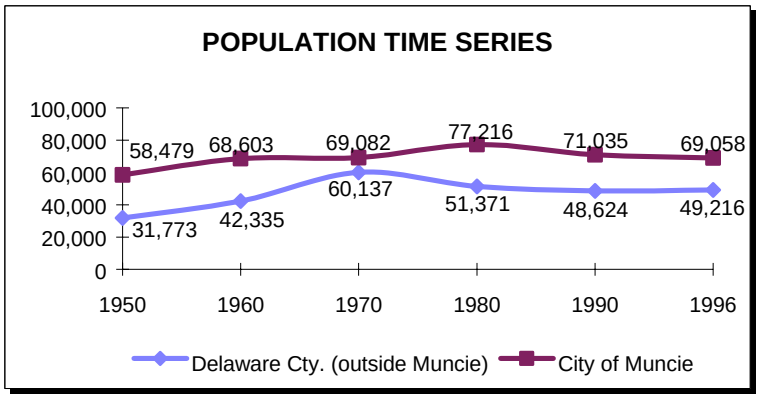
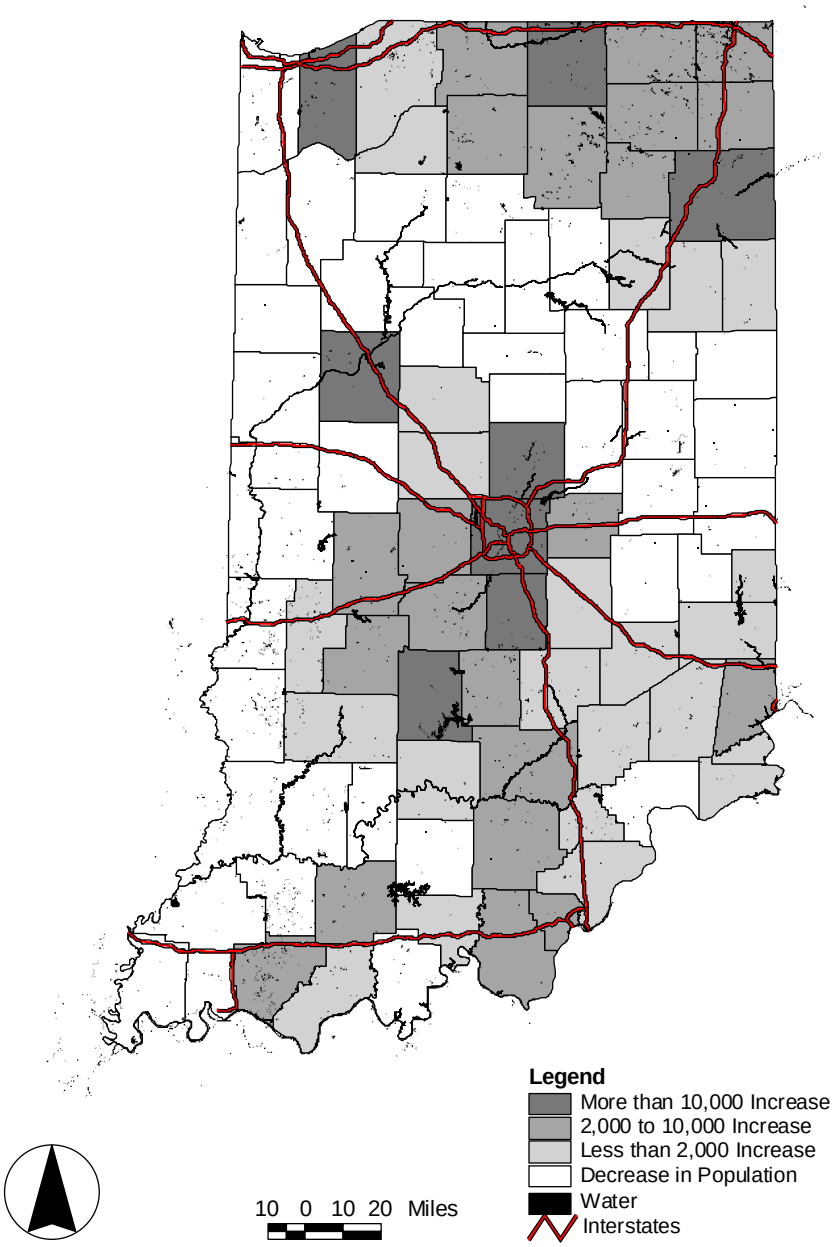


Figure 3-4 shows how Delaware County's population change from 1980 to 1990 compares to other Indiana counties. Delaware County is one of a large swath of counties roughly between Indianapolis and Fort Wayne that have lost population over the time period. Every county adjacent to Delaware County lost population during that period. Most population growth in the State in that interval was concentrated in counties in Central, Northeastern, and Southeastern Indiana.

Figure 3-4 POPULATION CHANGE 1980-1990



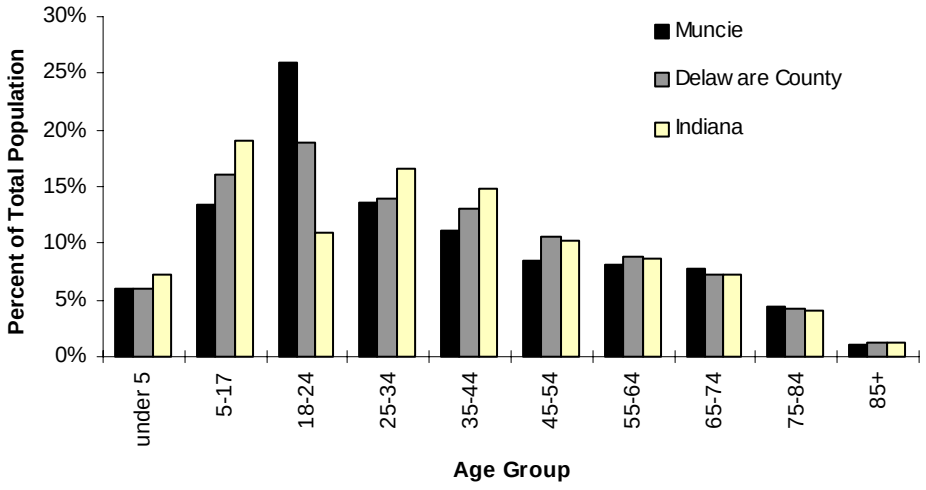
Source: U.S. Bureau of the Census, 1980 and 1990

Total State population increased by about 1% during the 1980-1990 period. The 1996 Census population estimate for the State indicates that population growth is accelerating, with a 5.3% increase from 1990 to 1996.

3.5.2 Age distribution. Figure 3-5 shows the age distribution if Muncie and Delaware County at the time of the 1990 Census. Comparisons to the State's age distribution are also made by the figure. Several trends are made clear by the figure, as follows:

- The population in the 18-24 range for Muncie is extremely high due to the students of Ball State University. The other groups reveal a slightly higher percentage of the elderly, age 65-84; and lower percentages in the young and middle ages.
- Likewise, the presence of Ball State University translates into a high percentage of younger people for Delaware County. Beyond age 44, the county is home to a slightly higher percentage of people than the state.

Figure 3-5: 1990 Age Distribution



Source: U.S. Department of Commerce, Bureau of the Census

3.5.3 Households and Dwelling Units. Households are a useful statistical construct due to their ability to link population to housing consumption. Table 3-2 lists historical change of households and dwelling units over time, as follows:

Table 3-2 Historical Change: Population, Dwelling Units, and Households

	Muncie			*Delaware County*			*Indiana*		
	1970	1980	1990	1970	1980	1990	1970	1980	1990
Population	69,082	77,216	71,035	129,219	128,587	119,700	5,193,669	5,490,224	5,544,159
Dwelling Units	22,829	29,455	29,828	43,950	51,248	52,341	1,730,099	2,065,115	2,246,046
Households	21,505	27,465	27,188	41,954	48,160	48,462	1,609,494	1,927,050	2,065,355
Persons per hh	3.21	2.81	2.61	3.08	2.67	2.47	3.23	2.85	2.68

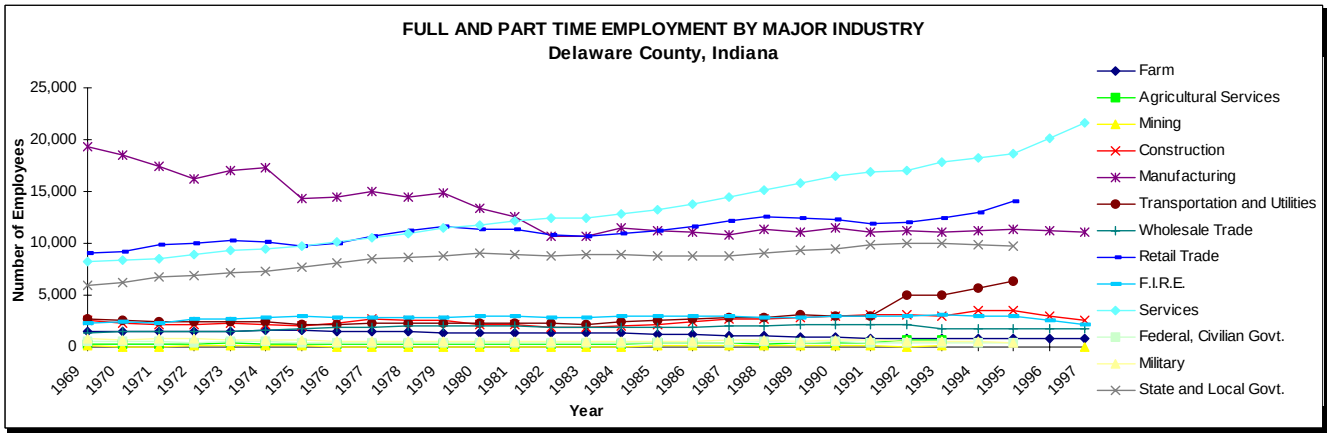
Source: U.S. Bureau of the Census

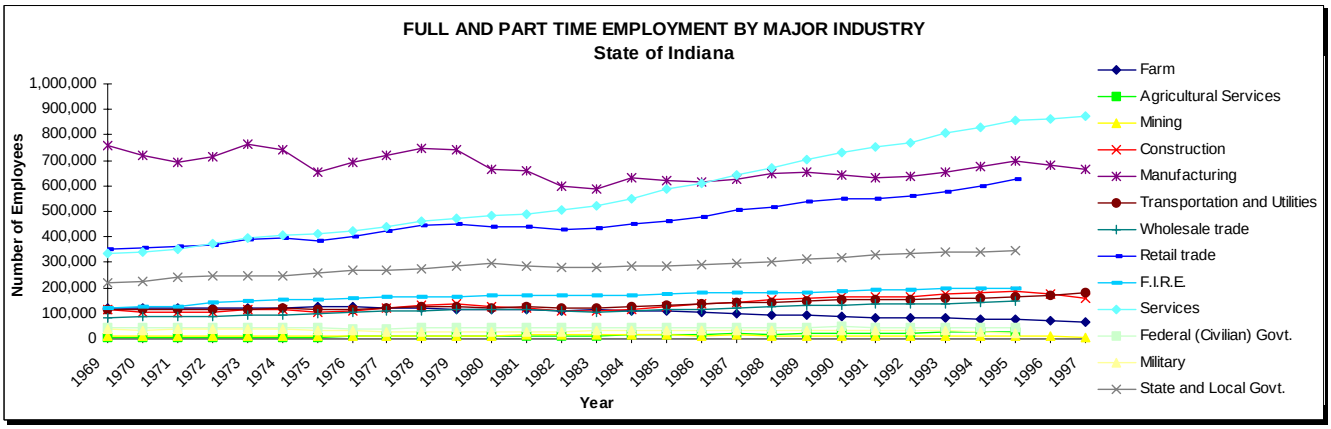
Key findings include the following items:

- Since 1970, all three units of analysis (Muncie, Delaware County, and Indiana) have shown a continuing decrease in the number of persons per household. This follows a national trend toward smaller families, as well as the decline of the farming industry. Households in rural farming communities tend to be larger than their urban and suburban counterparts.

- As seen in the table, the steady reduction in household size in Muncie and Delaware County has resulted in an increase in dwelling units in all jurisdictions, despite a decrease in population during this same time period.

3.5.4 Economy. The U.S. Census Bureau does not annually track historical employment for cities; however, such do exist for Delaware County. The following two charts show the changes in employment since 1969:





Source: U.S. Bureau of the Census

Changes in employment in Delaware County are very similar to those in the State of Indiana. Manufacturing employment, which has traditionally been the mainstay of most regional and state economies, have been declining for both areas. The decline in Delaware County seems to have been more severe than that for the State, and manufacturing has ended up in a lower relative position. Services employment dominates total employment growth in both the County and the State, with services emerging as the primary sector in 1982 in Delaware County and 1987 for the State.

The *Outlook '99* edition of *Indiana Business Review* (December, 1998) noted several pertinent items about the regional economy and its prospects for the near future:

- The departure/downsizing of five major manufacturing companies in recent months has injected a high degree of uncertainty into the local economy. Manufacturing employment and electricity sales, two major indicators of manufacturing activity, have declined sharply.
- Increases in service-sector employment have partially compensated for these losses, keeping total employment relatively steady. However, these service-sector jobs do not earn as well as their manufacturing counterparts.
- Forecasts for Delaware County's immediate prospects are pessimistic. It is becoming increasingly difficult for communities of Muncie's size to attract companies the size of those that vacated.
- While significant employment growth has been experienced in the sector of Transportation, Communications, and Public Utilities, most of this growth can be attributed to changes in a single employer.
- The overall forecast for the immediate future is a continued net addition of jobs, but a very minor one at that, translating into about 0.5% annual growth (about 200-300 jobs). This growth rate is about one-fourth that of the national economy.

3.6 NATURAL RESOURCES AND CONSTRAINTS

Natural constraints have a profound influence upon land development. This section discusses some of these constraints and how they need to be accommodated in the Comprehensive Plan.

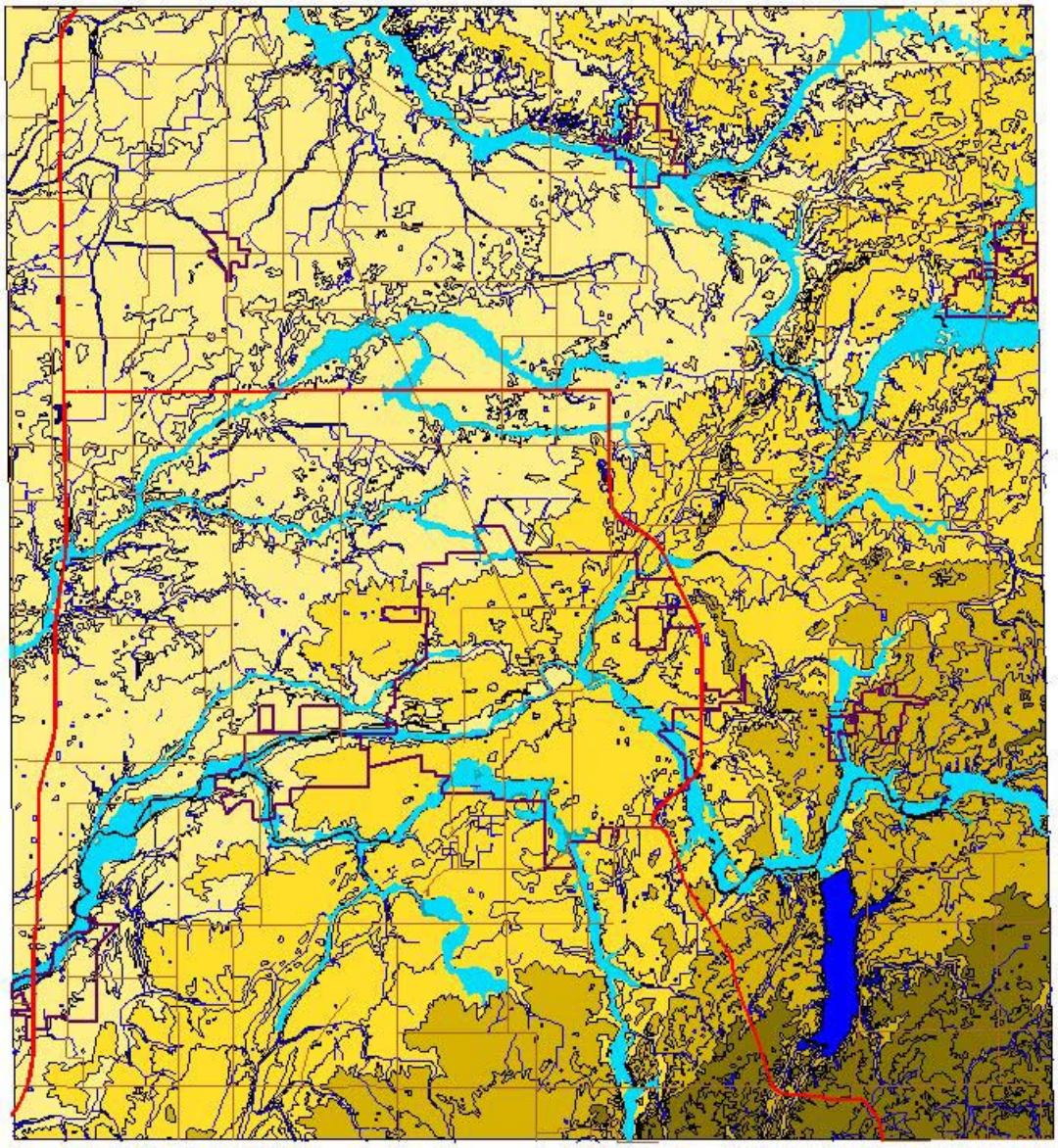
Map 3-2, Natural Features, shows the location of two prominent natural features: waterways/floodplains and slope. Map 3-3, Soil Types, shows the location of soil types. Map 3-4, Environmental Resources, shows potentially significant ecological regions.

3.6.1 Waterways and Floodplains. These natural features pose the largest single constraint upon land use in the County. Development in waterways is generally impossible. Floodplain development should be carefully limited and controlled, due to the risk of property damage to the development itself, as well as the potential changes to the floodplain that may result in injury to properties downstream. Upon visual observation, much of the undeveloped acreage in the County is located in floodplain areas.

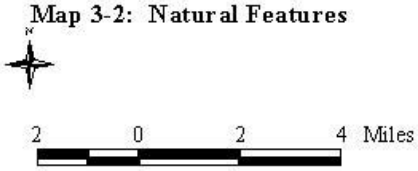
Waterways should also be viewed as assets. They perform an important function by draining areas of stormwater and runoff. Additionally, these waterway and floodplains serve as habitats for wildlife and need to be maintained as such, which also maintains the aesthetic appeal of natural areas.

Most of the natural waterways are a part of the regulated drain system for Delaware County, providing the primary outlets for the remainder of the regulated system which consists of closed tile drains as well as for an extensive network of private tiles installed for individual farm drainage. Obviously, the natural waterways were formed as they provided drainage for natural conditions, including significant impervious soil types. Settlements and farming as the first "development" necessitated installation of the extensive network of drain tiles, both public and private, due to some runoff increases as well as the extent of poorly drained soil types. Much of this historic drainage system is still the primary system used today – where capacities have not increased at the same rate as impervious development (rooftops, parking lots, etc.). This lack of drainage capability will require careful stormwater planning and facilities implementation for future development.

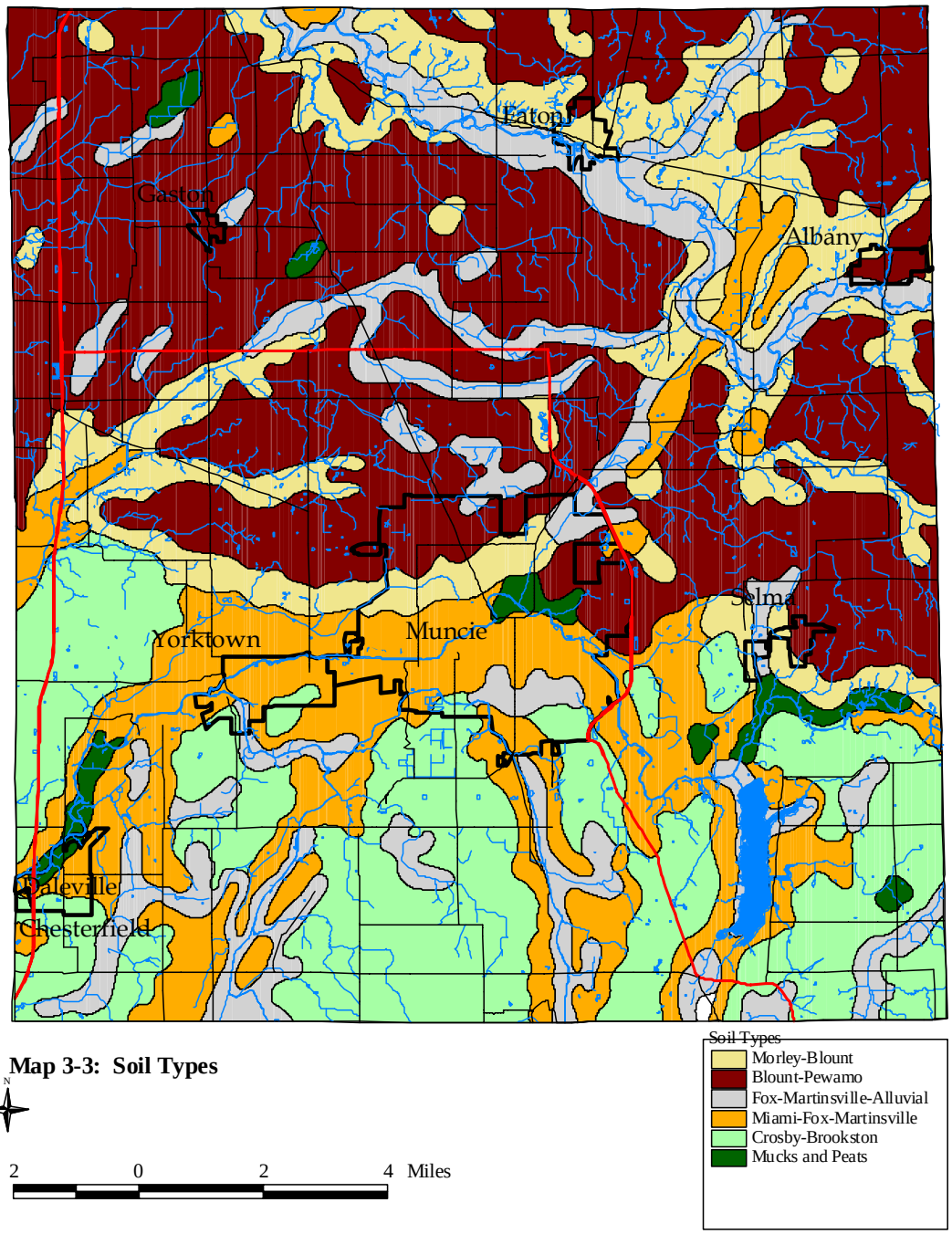
One prominent water feature is the Prairie Creek Reservoir, a man-made lake located in the southeast corner of the County. In addition to serving as a drinking water resource, the Reservoir also has recreational value. Although floodplain is evident in the White River, which runs near the Reservoir, little floodplain is evident at the Reservoir itself.



Map 3-2: Natural Features



Corporation limits
Floodplain
100 Year Floodplain (w/ BFE)
500 Year Floodplain
Elevation (5-m contours)
Base Elevation
1 - 280 m above base
281 - 295
296 - 310
311 - 335



Map 3-3: Soil Types

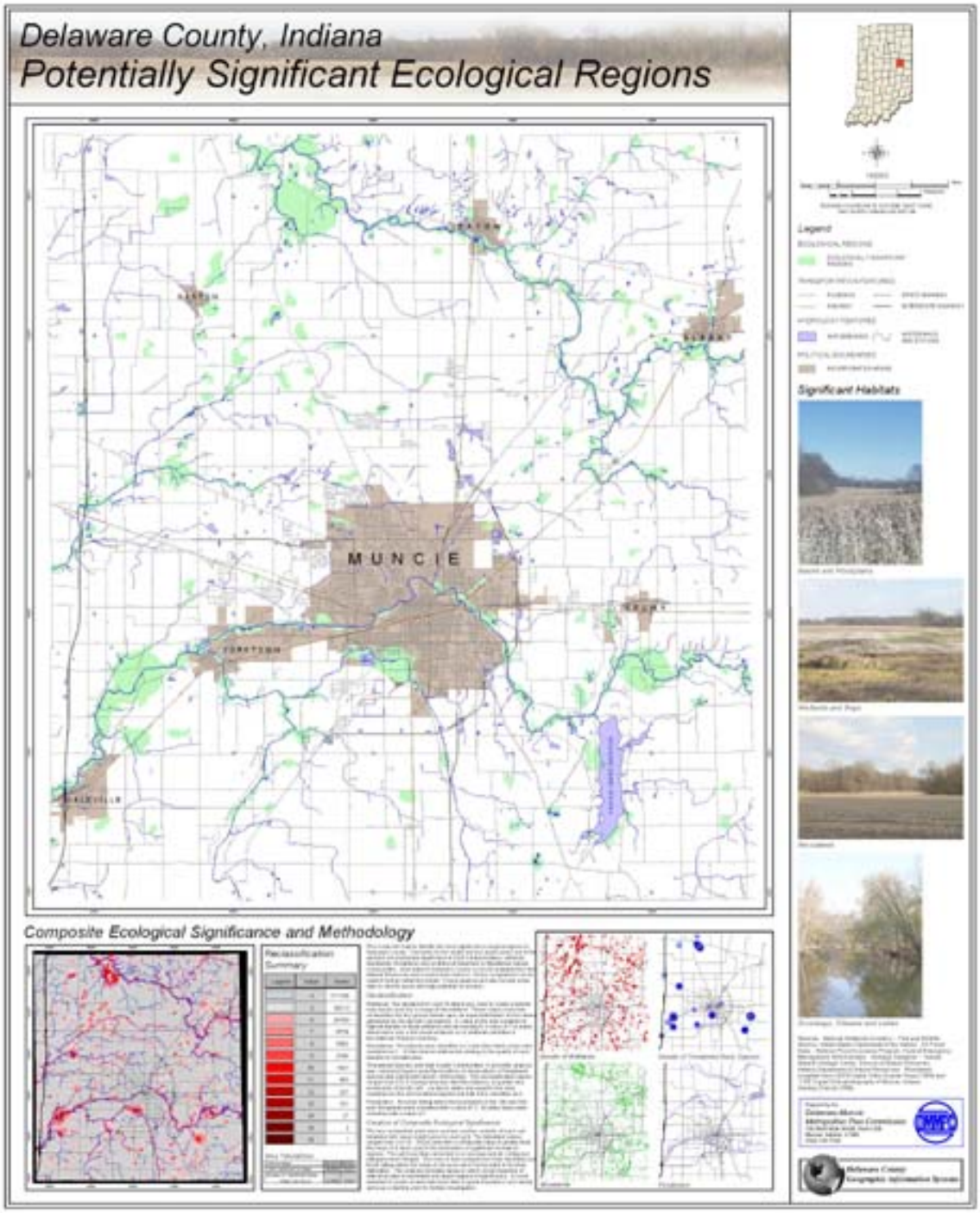


Figure 3-4: Ecological Regions

White River, Muncie, Indiana

Another prominent water feature is the White River, which flows from east to west across the southern third of the County, thereby draining most of the County. The River bisects the City of Muncie, then continues along the north side of Yorktown, then curves south to form the north boundary of Daleville before exiting the County. Several creek tributaries flow into the White River; one tributary drains the south-central part of the County (including south Muncie), and flows north, then west before entering the River. Other tributaries drain the Selma, the are north of Yorktown, and northeast Muncie. The amount of floodplain surrounding the river is fairly limited within the City of Muncie, with the exception of the River's eastern entrance. Floodplain also occurs in significant amounts near Selma and between Yorktown and Daleville.

A creek with two minor tributaries drains the north-central and western parts of the County. This creek has its genesis in Hamilton Township (north of Muncie), and flows westward. No large amounts of floodplain are in the vicinity of the creek.

The Mississinewa River drains the far north and northeastern parts of the County, including the towns of Eaton and Albany. The River has a tributary that extends to the northeast. Floodplain exists in rather significant amounts in the vicinity of Albany.

Most of the municipalities in the County appear to be well-drained by existing waterways. The sole exception to this observation is the Town of Gaston, has only minor creek as the watercourse in its immediate vicinity. This lack of in drainage capability may require careful stormwater planning and facilities implementation for future development in this area.

3.6.2 Topography. The slope of land can have a constraining effect upon land use development. The slope influences the placement of certain utilities, particularly sanitary sewers, that rely primarily upon gravity flow in order to properly function.

The general slope of land in Delaware County runs from the southeast to the northwest. Curiously enough, one of the more prominent water features, the White River, flows at a slight tangent to this general slope, from east to west/southwest.

More localized topography tends to depress in the vicinity of water features. This is logical, since water collects at lower elevations.

3.6.3 Soils[1]. The different soil types in the County are listed in Table 3-3, as follows:

[1] Data in this section come from the U.S. Department of Agriculture (Soil Conservation Service) and the Agricultural Experiment Station and Cooperation Extension Service, Purdue University.

Table 3-3: Soil Associations

Association	*% in County*	*Avg. Productivity Index*[2]	*% Suited for Septic Use*
Fox-Martinsville-Alluvial	6.56%	56	39%
Blount-Pewamo	42.42%	54	0%
Crosby-Brookston	20.75%	65	5%
Miami-Fox-Martinsville	16.72%	58	40%
Morley-Blount	13.08%	43	6%
Mucks and Peats	0.48%	68	11%

About 42% of the soil in the County belongs to the Blount-Pewamo association. Primarily concentrated in the northern half of the County (particularly north-central and northwestern areas), this association is characterized by poor drainage and clayey properties. Cropland yield on this type of soil is relatively low when the soil type is not drained. Conversely, crop yield is actually very productive however when underdrains are installed, as is the case for many of these areas in Delaware County

The next most-represented association is the Crosby-Brookston association, which is nearly level, somewhat poorly drained, and loamy. Agricultural productivity, as measured by the index, is relatively high. This association is primarily located in the southern third of the County, south of the White River.

The Miami-Fox-Martinsville association primarily follows the White River. It is characterized by average agricultural productivity. Another Martinsville/Fox association, the Fox-Martinsville-Alluvial, follows the Mississinewa River, and is similarly characterized by average agricultural productivity.

The remaining soil association, Morley-Blount and Mucks and Peats, together comprise less than 14% of the County's soils. The Mucks and Peats association, characterized by the highest agricultural productivity of all the observed associations, is primarily present in the vicinity of the White River, although an outlier observation is noted in the northwest area of the County. The Morley-Blount association, with its average agricultural productivity, is present near the Mississinewa River and in the central-western area of the County.

Overall, septic systems should be discouraged in most areas of the County, due to the low carrying capacity of the soils. The two associations that are the most suited for septic

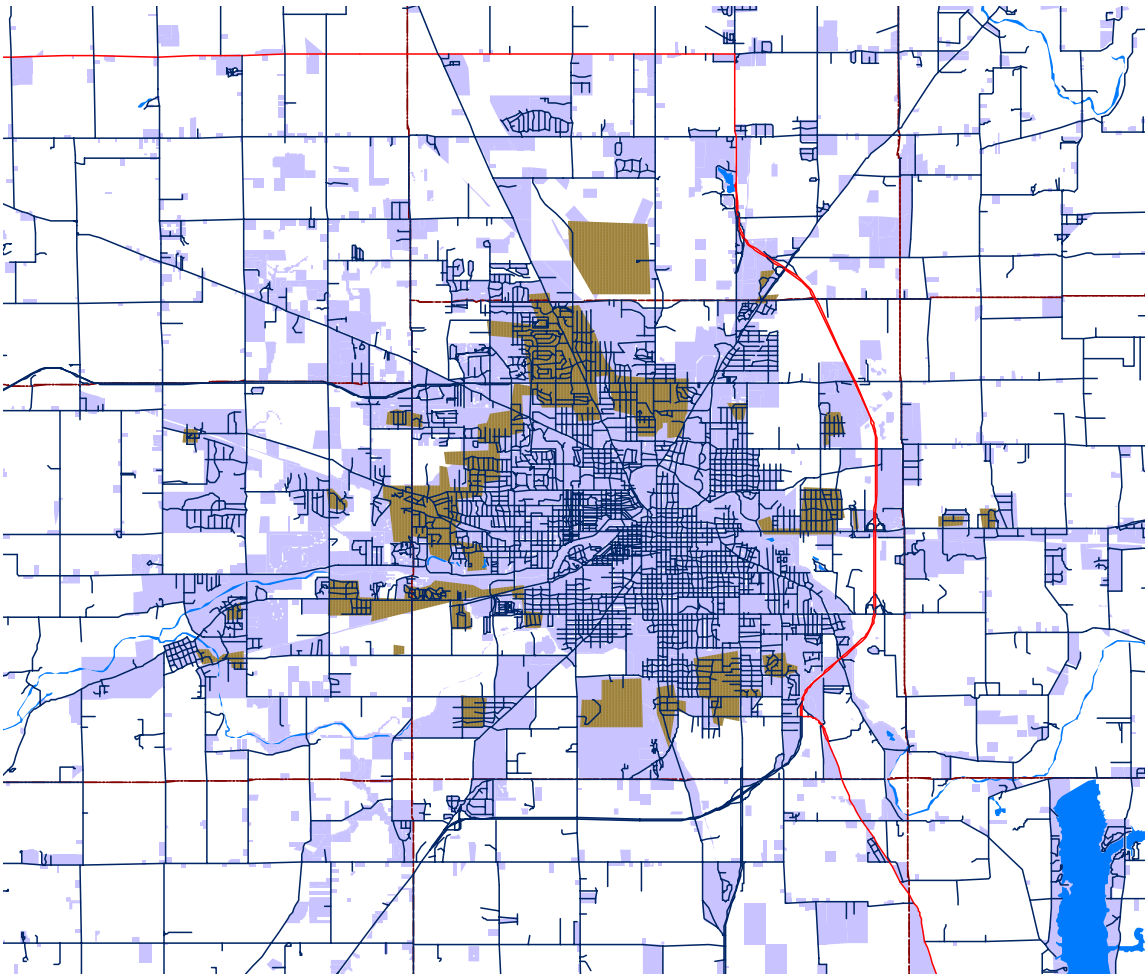
[2] The productivity index is estimated by taking the average gross agricultural return minus production and conservation costs; the highest possible value of the index is 100. This is a soil index only, created using data that do not necessarily originate from Delaware County, and therefore does not take into consideration local agricultural productivity factors such as drainage, accessibility, etc.

use, the Fox-Martinsville and the Miami-Fox associations, are still not extremely suitable for septic systems, and together only comprise about 23% of the County's soils.

In addition, the poor drainage afforded by the major soil categories (Blount-Pewamo and Crosby-Brookston, which together constitute about 65% of the soil in the County) point to the need for greater stormwater control. Drainage and runoff should be elements that are carefully considered when reviewing new development.

3.7 PUBLIC SERVICES AND COSTS

Of acute interest in the development of the Comprehensive Plan are the related issues of providing public services, and the revenue that can be raised to cover the costs of those public services. During the public input sessions, consensus emerged that the level of public services was low, while property taxes were too high. Also, public officials have been surprised when presented with an "urban sprawl" map (Map 3-5, Historic Growth and Urban Sprawl), which compares urbanized areas in 1963 to 1998. During this time period, the urbanized area approximately doubled (thereby raising the costs of public services) while the population (from whence comes the revenue to cover public costs) stayed approximately the same.



Map 3-5: Historic Growth and Urban Sprawl

An example of the inefficiency of this sprawl pattern relates to the fact that to serve the same population, the City of Muncie and Delaware County now have a street system which is double in size from 1963 to today, even though the residential population is the same. This double in size street network increases the size of area that has to be maintained, increases emergency services travel times and doubles traffic control devices that need to be installed and maintained.

It is appropriate for the Comprehensive Plan to consider these items. Through the provision of infrastructure and the implementation of regulatory mechanisms such as zoning, the City and County have a great deal of control over the degree to which public services are provided. The potential revenue generation of new development is a critical item to consider in determining how, when, and where the City and County should grow.

This section reviews the degree to which public and quasi-public services are provided in the County. The revenue-generation potential of the County's tax base will also be considered.

3.7.1 Public Costs. The LOS will also prove valuable in targeting certain areas for improvements in public services, in two ways. First, differences in levels of service (LOS) in various parts of the County, particularly areas that are underserved, may be targeted for improvement in the Comprehensive Plan. Second, utilization of standard LOS measures allows for comparison to national standards, which again will clarify local comparisons and more accurately focus on potentially underserved areas.

This document focuses on public services whose levels of service may be measured, a group which includes schools, health services, and public safety (police, fire, and EMS). The plans and service areas of public utilities, particularly water and sewer, will also be discussed. Notably absent from this analysis are public services that are not easily measurable, including solid waste disposal, and administrative and regulatory services (e.g., zoning and subdivision enforcement).

3.7.1.1 Schools. Education typically represents the single-largest local public expenditure. Muncie and Delaware County have eight high schools in seven districts. The performance of these schools is listed in the following Table 3-4:

Table 3-4. School Districts (1997-1998 school year)

			Add.	Stu/Staff	Student Population			Avg. Class Size				
School District	Students	Teachers	Staff	Ratio	K-6	J.H.	H.S.	K-6	J.H.	H.S.	SAT	% grad
Muncie	9,576	624	14	15.0	4,944	1,907	2,443	28	28	24	999	100
(Central)	*5,069*	*329*	*7*	*15.1*	*2,400*	*1,017*	*1,373*	*28*	*28*	*24*	*998*	*100*
(Southside)	*4,507*	*295*	*7*	*14.9*	*2,544*	*890*	*1,070*	*28*	*28*	*25*	*1,000*	*100*
Cowan	668	39	8	14.2	370	N/A	298	21	22	17	890	100
Daleville	668	42	9	13.1	346	N/A	322	15	18	18	890	100
Delaware	2,897	158	26	15.7	1,288	714	894	20	25	28	1,017	90
Harrison	966	59	10	14.0	444	222	300	18	18	24	N/A	100
Washington Liberty-Perry	1,114	70	13	13.4	488	282	343	20	27	25	977	98
Mt. Pleasant	2,114	117	18	15.7	930	491	692	18	26	24	970	98

Source: The School Report (www.theschoolreport.com)

The largest district is definitely the Muncie School System, with two high schools and approaching 10,000 students. The student-to-staff ratio is moderately high relative to other County school systems.

Most of the high schools are at or near 100% graduation. The exception is Delaware/Hamilton High School, with a 90% graduation rate. Ironically, this high school also has the highest average combined SAT scores.

3.7.2.2 Health Services.

Medical Facilities. In 1999 there was one hospital in the community, with 350 beds. This is a regional referral and teaching hospital with more than 30% of its patients coming from outside of Delaware County. There are also two freestanding ambulatory surgery centers, as well as, several free standing primary care clinics providing a wide range of diagnostic, ancillary, treatment and pharmacy services. Psychiatric and chemical dependency services are provided at the hospital as well as through an independent regional mental health agency network. The hospital has 72 physicians in training in several residency programs and also provides two years of medical school education in association with Ball State University and the Indiana University Medical School.

Physicians. In 1990, there were 217 physicians in the County, or about 1.81 per 1,000 population[3]. This represents an increase from the 1985 figure of 1.69 physicians per 1,000 population, and is well above the national LOS standard of 1.5[4]. In 1999 there were 241 physicians in the county in active practice. Of these, 74 were primary care physicians and 167 specialists, representing more than 60 medical and surgical specialties and subspecialties. The specialists provide certain services to all the surrounding counties.

[3] U.S. Bureau of the Census (1988 and 1994). *City and County Data Book.*
[4] Urban Land Institute, p. 93.

Elderly Care. Approximately 12.7% of the County's population was age 65 or over in 1990, as compared to 12.3% in the U.S. in 1990 and 11.2% in the County in 1984. This moderate level of elderly population results in an average demand for elderly care within the County.

One measure for the level of service (LOS) for elderly care is the number of nursing home beds per 1,000 elderly persons; nationally, the recommended LOS is 45[5]. Although the number of beds in nursing homes was not counted in the 1990 Census, the number of persons in nursing homes was included. Assuming that each person represents one bed, and that there was negligible vacancy, then the 1,012 persons in 1990 who were in Delaware County nursing homes represent an LOS of about 67.4, well above the LOS standard.

3.7.2.3 Public Safety[6].

Police. The Muncie Police Department maintains 126 full-time police personnel at three stations in the City. This represents an LOS of 1.6 officers per 1,000 population. The recommended LOS is 2.0 officers per 1,000 population. The Department also maintains 50 vehicles, or 0.63 vehicles per 1,000 population, which is consistent with the recommended LOS of 0.6 vehicles per 1,000 population. Based on this information, we can conclude that the coverage of the Department is consistent with recommended LOS (based on the number of vehicles), but that the number of officers that are able to respond to a particular emergency is relatively limited. Average response times are not available for Muncie or for any of the following law enforcement departments.

The Delaware County Sheriff's Department is the main law enforcement arm in the County. The Sheriff maintains 109 full-time personnel and 50 vehicles. The Towns of Selma, Yorktown, Daleville, Eaton, Albany, and Gaston all maintain their own police departments, although some of them utilize part-time personnel. The total number of full-time personnel in the County (exclusive of Muncie) is 127 officers, with 66 vehicles. Assuming that the service areas of these Departments are exclusive of one another and Muncie, then the LOS for personnel is 2.6 officers and 1.35 vehicles per 1,000 population, well above the recommended LOS listed in the previous paragraph. Police service in the County therefore meets recommended standards. In addition to these public Police Departments, Ball State University additionally employs a policing staff for its campus.

[5] Urban Land Institute, p. 92.
[6] Personnel and vehicle estimates obtained from phone interviews with departmental administrative staff in December of 1998. The population estimates are those of the 1996 Census updates. The difference in dates between the personnel/vehicle estimates and the Census should be remembered, but are believed to have negligible consequences for this analysis. Recommended LOS statistics are from the *Development Impact Assessment Handbook* (Urban Land Institute, 1994).

Fire. The Muncie Fire Department has 118 firefighters. This translates into 1.49 firefighters per 1,000 population, which is slightly below the recommended LOS of 1.65 firefighters per 1,000 population. Average response times are not available for Muncie or for any of the following fire departments.

The Yorktown Fire Department has 40 firefighters, which translates into a LOS of 0.97 firefighters per 1,000 population. This LOS is quite low relative to the recommended LOS of 1.65 firefighters per 1,000 population.

Fire service in the County and the other towns is handled through numerous organizations, and much of the service is provided by volunteers. These organizations include the Hamilton Township Fire Department, the Cowan Volunteer Fire Department, the Selma Fire Department, the Albany Fire Department, the Daleville-Salem Fire Department, the Eaton Fire Department, and the Gaston Fire Department.

3.7.2.4 Parks and Recreation. Much of the level of service (LOS) information used in this discussion comes from the National Recreation and Park Association (NRPA), which uses several types of parks (mini-parks, neighborhood-parks, community parks, and regional parks) to discuss desired mixes of recreational opportunities. LOS is typically described in acres per 1,000 population. Recreation within the planning area is provided by the Muncie Department of Parks and Recreation; no comparable department exists for the County. In 1993 the Department prepared a five-year Master Plan, which is a requirement of the Indiana Department of Natural Resources (DNR) in order to seek state funding for parks and recreational opportunities.

One recreational facility, the 750-acre Prairie Creek Reservoir, meets the NRPA's definition of a regional park. The LOS for this park The NRPA LOS standard for this type of park is 5.0 to 10.0 acres per 1,000 persons. Accounting for Delaware County's population, the LOS for regional parks comes out to 6.3 acres per 1,000 population, which is within the LOS range set by NRPA.

Adequate park and recreation facilities are critical quality of life features in any community

Three parks (Heekin, McCulloch, and White River Parks) meet the NRPA's definition of community parks. Another two parks (Tuhey and Westside) are on the margin between neighborhood-level and community-level parks. These five parks have a combined area of about 245 acres. If we define "community" as

Delaware County, then the LOS is about 2.1 acres per 1,000 population[7]. This LOS does not measure up to NRPA's recommended LOS of 5.0 to 8.0 acres per 1,000 population. It is also noteworthy that the existing community park space is concentrated in the City of Muncie, with no community parks space immediately available to County residents.

The remaining 18 parks qualify as either mini- or neighborhood-level parks, with a total area of 59.2 acres. Since all of these parks are located within the City of Muncie, and are oriented to Muncie neighborhoods, we can assume that the serviced population is constituted entirely of Muncie residents. The combined LOS for these parks is 1.33 acres per 1,000 residents, which is within the NRPA recommended LOS of 1.25 to 2.5 acres per 1,000 residents. No formal recreation space is tallied within the County, although this analysis does not include informal passive recreation space that may be available in such places as schoolyards.

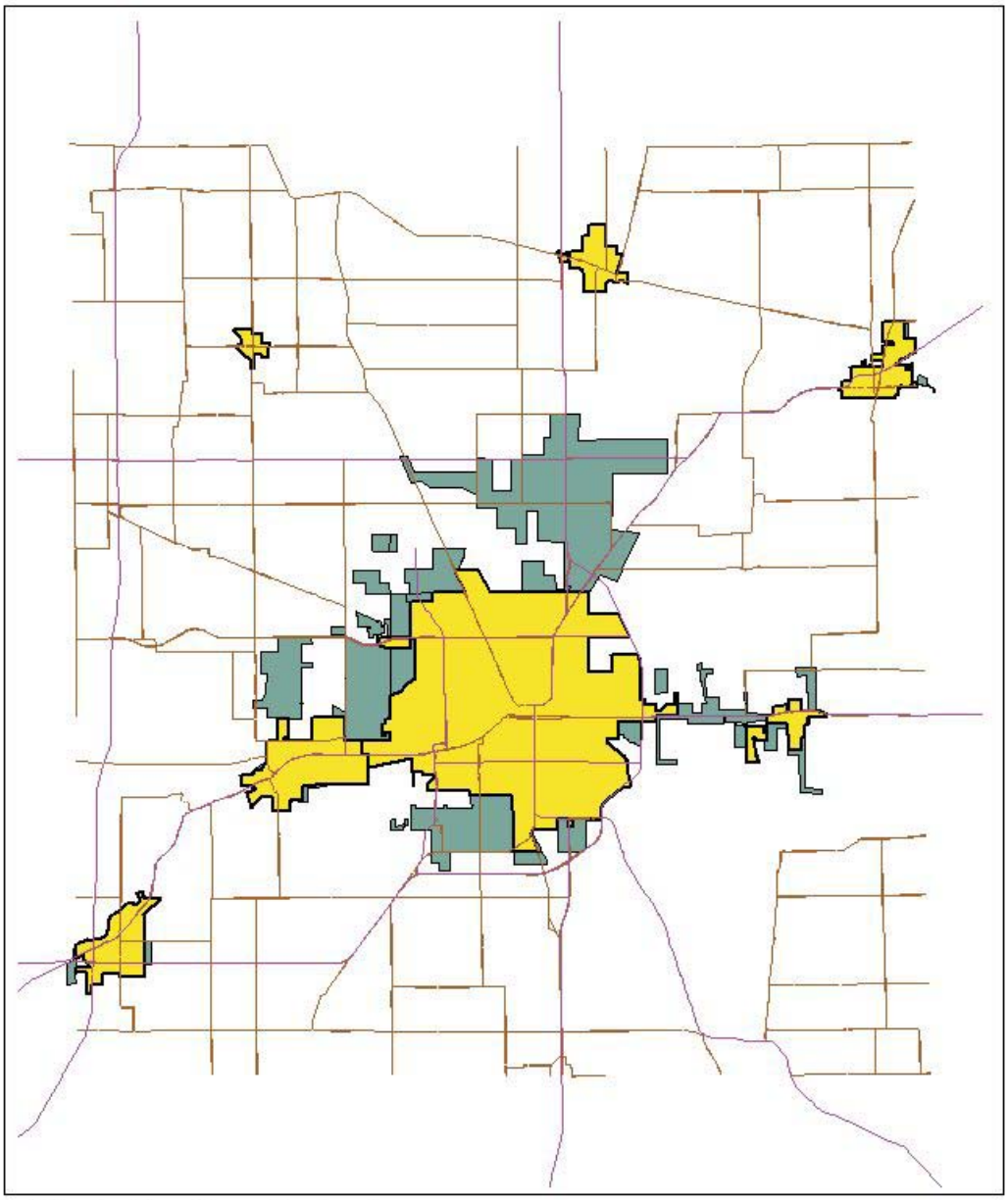
Overall, the total amount of "close-to-home" recreational space (consisting of community-, neighborhood-, and mini-park facilities) available to Muncie citizens is about 3.4 acres per 1,000 persons, which is well below the NRPA's recommended LOS of 6.25 to 10.5 acres per 1,000 persons. This is primarily due to a lack of community park space.

In the County, which does not have the benefit of neighborhood- or mini-parks, the total "close-to-home" recreational space consists entirely of community parks, at a LOS of 2.1 acres per 1,000 population. Again, this is well below the NRPA's total recommended LOS of 6.25 to 10.5 acres per 1,000 persons. More community park space and substantial implementation of neighborhood- or mini-park space may be required to rectify these deficiencies.

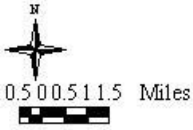
3.7.2.5 Capital Facilities.

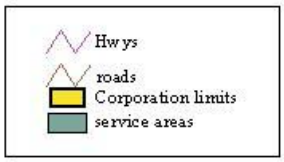
Public Utilities. Water service is provided by Indiana-American Water Company. American Electric power provides electric service in the County. Ameritech is the local telephone service provider. Several fiber-optic cables are available in the community. Natural gas service is provided by Indiana Gas Company. No problems with pressure, quantity and/or levels of these services have been reported.

[7] If the City of Muncie is defined as the "community", then the LOS is about 3.1 acres per 1,000 population. This amount is still deficient. Since we can assume that County residents use the community parks (since they have none of their own), for purposes of community-level parks we will utilize Delaware County as the community.



Map 3-6: Sanitary Sewer Service Areas



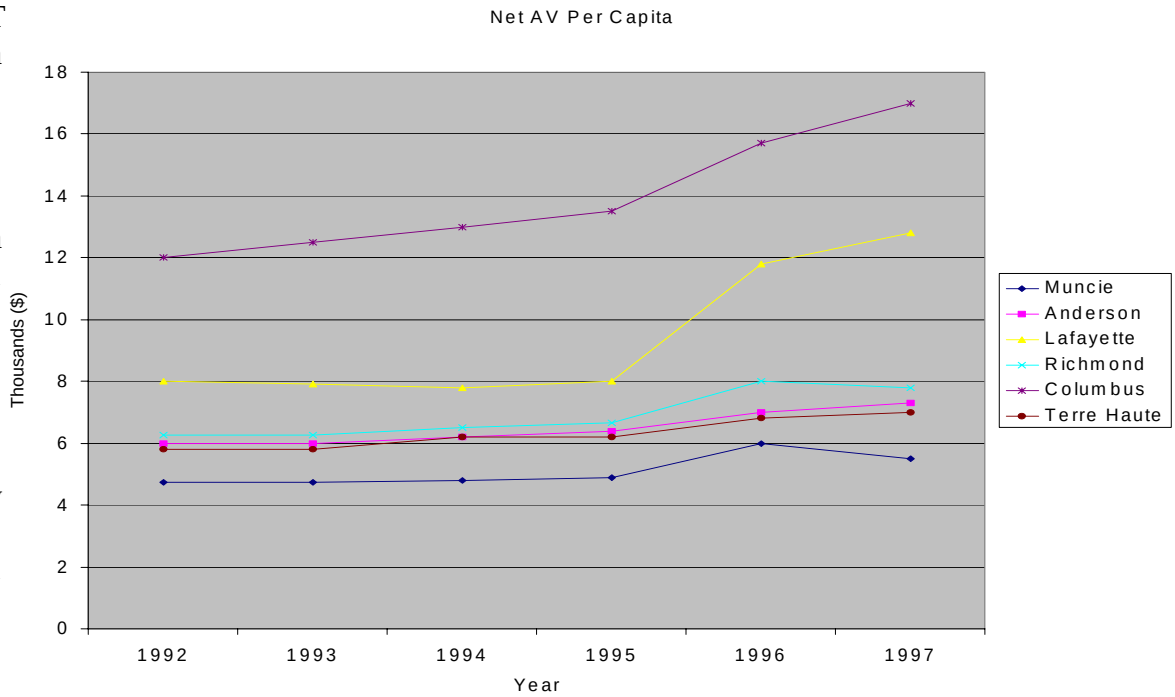


Wastewater. Map 3-6 shows the location and service areas of wastewater systems in and around the City of Muncie. The City of Muncie operates a wastewater treatment plant; the sewer system services all of the City, as well as several peripheral locations. The treatment plant has approximately 11 million gallons per day (MGD) of unused capacity. All of the towns in the County, with the exception of Selma, operate their own wastewater treatment systems.

3.7.2 Public Revenues. In 1997, Delaware County operated two local incomes taxes, the Economic Development Income Tax (EDIT) and the County Option Income Tax (COIT). The EDIT rate was 0.2%; under state law, this rate may vary from .05% to 0.5%. The COIT rate was 0.6%, and state law allows the rate to vary from 0.2% to 1.0%. The combined COIT/EDIT rate is 0.8%; state law places a cap on the combined rate at 1.0%.

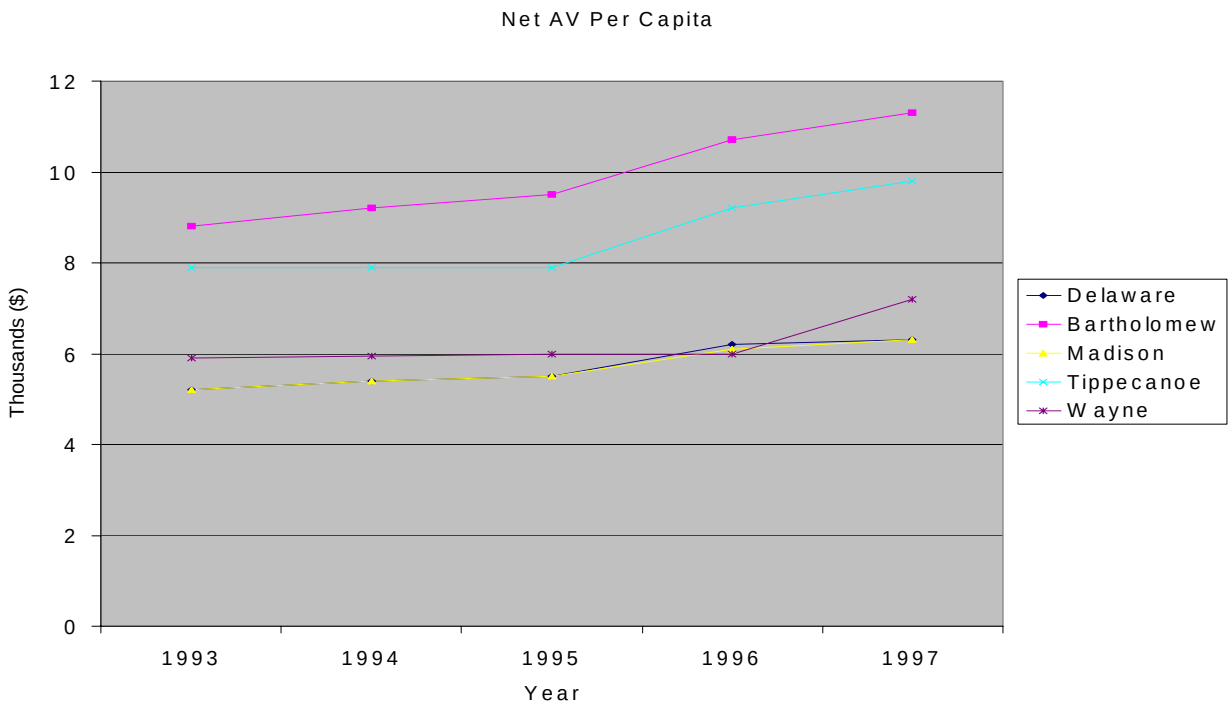
The primary local source of revenue for most units of government in the County is the property tax. In order to determine the revenue-generation potential of this source, the Net Assessed Value per Capita was estimated for the City and for several comparison municipalities, including Anderson, Lafayette, Richmond, Columbus, and Terre Haute. Comparison communities were selected based upon age of size, age of housing stock, and other characteristics. A similar exercise was conducted for the County, with Bartholomew, Madison, Tippecanoe, and Wayne Counties being included for comparison. The first chart shows the comparisons for the City of Muncie:

This chart reveals t



Source: IU Center for Urban Policy

This chart reveals that Muncie is at the bottom among all communities examined with regards to net assessed value per capita. The next chart shows the results for the County:



Source: IU Center for Urban Policy

Delaware County, too, is in a poor revenue-generation position relative to comparable municipalities.

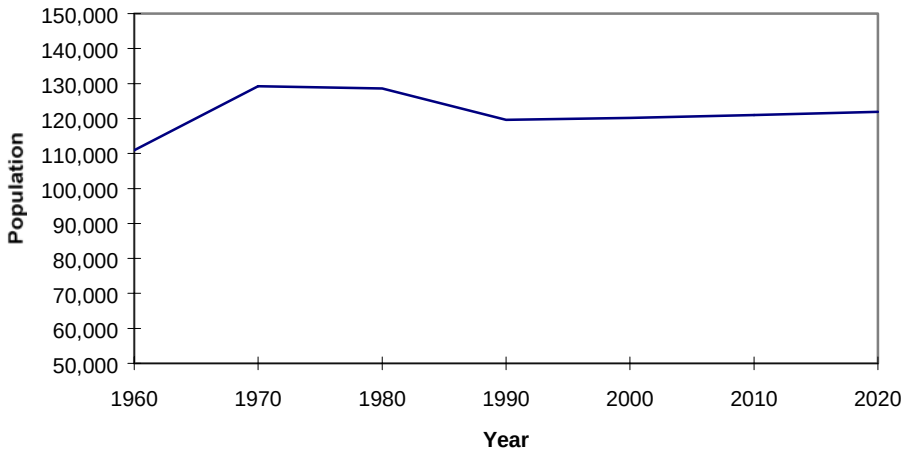
3.8 POPULATION AND ECONOMIC FORECASTS

3.8.1 Population. Traditionally, forecasts of population are used to establish a growth rate that in turn is used to allocate housing units. In general, population forecasts are more accurate for shorter time periods than longer ones and for larger areas than smaller ones. Population forecasts reflect underlying assumptions and the accuracy of forecasts relies heavily upon the reasonableness of the underlying assumptions. Population forecasts at the County level were available from the Indiana Business Research Center and Woods & Poole Economics. Both of these sets of projections utilize "age-cohort" methodology, which looks at the ages, fertility, and migratory patterns of the existing population. The difference between the two sets of projections differs by only 5%. The Woods & Poole projections, however, are integrated into household projections, and will therefore be utilized for the remainder of this analysis.

Figure 3-6 shows the historical population and the Bureau of Economic Analysis forecast to the Year 2020. Two decades of moderate population decline are projected to end by

the late 1990's. A period of moderate increase is expected to ensue, with a Year 2020 population of approximately 134,000.

Figure 3-6 Delaware County Population Change/Forecast 1960-2020



Source: US Department of Commerce, Bureau of the Census; Woods & Poole

The methodology utilized for forecasting township population a "step-down" process which allocated a percentage of the population to different townships based on historic trends. A "best-fit" Ordinary Least Squares (OLS, a.k.a. Linear Regression) process was conducted on the resulting figures. Those populations were then corrected based on the Woods & Poole projections. Muncie's population projections were developed by projecting the trend in the City's share of County population, and applying the resulting share to the projected County population.

One important item to note is that these more in-depth forecasts show the distribution of the population changes expected to occur. As such, these changes are heavily affected by local policy.

Table 3-5 shows the projected population for Muncie, relative to Delaware County. There are several items to note in this table, as follows:

- County household growth, and therefore housing demand, will continue to increase slightly even though population change is expected to be relatively stable. This increase is explained by the decline in average households size.

Table 3-5 Population/Household Growth 1960-1990; Proportion Share Increase 2000-2020

	Muncie	Delaware County
Population		
1960	68,603	110,938
1970	69,082	129,219
1980	77,216	128,587
1990	71,035	119,659
Population Forecast[1]		
2000	71,450	122,200
2010	74,092	126,900
2020	78,067	133,900
Households		
1970	24,239 (2.85)	41,954 (3.08)
1980	30,281 (2.55)	48,160 (2.67)
1990	30,357 (2.34)	48,462 (2.47)
Households Forecast[2]		
2000	30,797 (2.32)	50,705 (2.41)
2010	32,496 (2.28)	53,544 (2.37)
2020	34,239 (2.28)	56,498 (2.37)

1 Population forecast based upon projections from US Department of Commerce, Bureau of the Census; Woods & Poole; HNTB.

2 Households forecast based upon population forecast divided by the persons per household rate (shown in parenthesis.) Persons per household rate follows the rate of decrease in the national persons per household trend.

3.9.2 Employment. The U.S. Bureau of Economic Analysis lists population projections for metropolitan areas by employment sector. For purposes of using these data to estimate future land requirements, it is not important to make projections for individual municipalities. For Delaware County, these projections are listed in the following table:

Table 3-6: Projected Employment

Sector	*1996 (comp)*	*2000*	*2010*	*2020*
Farming	748	900	900	750
Ag Services	850*	800	1,000	1,050
Mining	100*	100	100	200
Construction	3,540	3,300	3,500	3,600
Manufacturing	11,355	11,100	11,000	10,750
Trans, Comm.	4,274	5,600	6,300	6,600
Wholesale Trade	1,751	1,900	2,000	2,000
Retail Trade	13,795	13,300	14,100	14,300
Finance, Ins.	2,890	3,100	3,300	3,350
Services	19,654	20,500	23,800	25,500
Government	10,347	12,000	12,800	13,100
TOTAL	69,039	72,500	78,600	81,500

Source: U.S. Bureau of Economic Analysis (government information sharing project: http://govinfo.library.orst.edu)
* = estimated by writer; actual data withheld because of confidentiality requirements

3.9 FUTURE REQUIREMENTS

Forecasting population and employment change, as was done in the previous section, is an interesting exercise, but its real utility for land use planning lies in utilizing the forecasts to anticipate the acreage requirement for future land uses. For example, applying existing employment densities of commercial areas to projected commercial employment provides a good estimate of future commercial requirements.

3.9.1 Residential Requirements. Section 3.8 outlined the process of forecasting households, which constitute the primary unit of housing demand. The number of households can be used to estimate future residential land use requirements. To recap the household projections, the number of households in Delaware County is expected to increase by 7,000, of which about 3,500 (or half) will be in the City of Muncie.

Unfortunately, the process for calculating anticipated residential requirements is more complicated than that for commercial and industrial requirements. A wide variety of residential densities are considered "normal" for most communities, including Muncie and Delaware County. In order to accommodate this potential future variety, we will investigate several different alternatives for residential development, as outlined in the following Table 3-7:

Table 3-7: Residential Requirements

Delaware County (including Muncie) – High Multi-family Mix			
Assume: 7,000 new housing units from 1998 to 2020 with a mix of 75 percent single family units and 25 percent multi-family units.			
Single Family Land Requirement			
Total units: 5,250			
	5 units per acre	2 units per acre	1 unit per acre
Raw Land	1,050	2,625	5,250
Transportation and Other: (1)	210	525	1,050
Total (2)	1,260	3,150	6,300
Multi-Family Land Requirement			
Total units: 1,750			
	14 units per acre	10 units per acre	8 units per acre
Raw Land	125	175	219
Transportation and Other: (1)	25	35	44
Total	150	210	263
Delaware County (including Muncie): High Single-Family Mix			
Assume: 7,000 new housing units from 1998 to 2020 with a mix of 90 percent single family units and 10 percent multi-family units.			
Single Family Land Requirement			
Total units: 6,300			
	5 units per acre	2 units per acre	1 unit per acre
Raw Land	1,260	3,150	6,300
Transportation and Other: (1)	252	630	1,260
Total	1,512	3,780	7,560
Multi-Family Land Requirement			
Total units: 700			
	14 units per acre	10 units per acre	8 units per acre
Raw Land	50	70	88
Transportation and Other: (1)	10	14	18
Total	60	84	106

1 Assumes that Transportation and other improvements occupy 20 percent of land area.
2 Includes Transportation and other improvements.

Muncie – High Multi-family Mix

Assume: 3,500 new housing units from 1998 to 2020 with a mix of 60 percent single family units and 40 percent multi-family units.

Single Family Land Requirement

Total units: 2,100

	5 units per acre	2 units per acre	1 unit per acre
Raw Land	420	1,050	2,100
Transportation and Other: (1)	84	210	420
Total (2)	504	1,260	2,520

Multi-Family Land Requirement

Total units: 1,400

	14 units per acre	10 units per acre	8 units per acre
Raw Land	100	140	175
Transportation and Other: (1)	20	28	35
Total	120	168	210

Muncie: High Single-Family Mix

Assume: 3,500 new housing units from 1998 to 2020 with a mix of 85 percent single family units and 15 percent multi-family units.

Single Family Land Requirement

Total units: 2,975

	5 units per acre	2 units per acre	1 unit per acre
Raw Land	595	1,488	2,975
Transportation and Other: (1)	119	298	596
Total	714	1,786	2,571

Multi-Family Land Requirement

Total units: 525

	14 units per acre	10 units per acre	8 units per acre
Raw Land	38	53	66
Transportation and Other: (1)	8	11	13
Total	46	64	79

1 Assumes that Transportation and other improvements occupy 20 percent of land area.
2 Includes Transportation and other improvements.

3.9.2 Employment Requirements. If we assume that manufacturing, TCU (transportation, communications, and utilities) and wholesale trade primarily occupy industrial space, then existing industrial employment density is approximately 4.9 employees per acre. In addition, assuming that retail trade, FIRE (finance, insurance, and real estate), and services employment primarily occupy commercial centers, then existing commercial employment density is 17.3 employees per acre. When we add the existing employment density of government employment to the mix (4.0 employees per acre), we can now estimate future employment requirements.

	Existing Emp.	*Future Emp.**	*Increase*	*Space Multiplier*	*Additional space required*
Manufacturing[8]	11,355	10,750	-605	4.9 emp./acre	-123.5 acres
Trans/Utilities	4,274	6,600	2,326	4.9 emp./acre	474.7 acres
Wholesale Trade	1,751	2,000	249	4.9 emp./acre	50.8 acres
Retail Trade	13,795	14,300	505	17.3 emp./acre	29,2 acres
F.I.R.E.	2,890	3,350	460	17.3 emp/acre	26.6 acres
Services	19,654	25,500	5,846	17.3 emp./acre	337.9 acres
Government	10,347	13,100	2,753	4.0 emp./acre	688.3 acres
				TOTAL:	**1,484.0 acres**

3.10 SUMMARY AND CONCLUSIONS

The variety of analyses performed in the course of the Comprehensive Plan may bewilder the reader. However, given the many different subject areas that the Plan intersects, the importance of defining issues to the greatest extent possible cannot be underestimated.

There are some general patterns that arise in these analyses that heavily influence the direction that the Comprehensive Plan Update must take. These general observations are listed as follows (in no particular order):

- *The urbanized areas of the County, particularly in the vicinity of Muncie, exhibit a "sprawling" land use pattern*. As indicated in Map 3-6, Historic Growth and Urban Sprawl, above, the urbanized area of Muncie has approximately doubled from 1962 to 1998, during which time period the City's and County's populations were relatively stable. Land use patterns of this type usually result in difficulties in public services provision.

  This sprawling land use pattern seems influenced by a trend of inner-city flight, particularly from the City of Muncie. This flight has exacerbated the deterioration of the older urbanized areas, resulting in a low-income inner city suffering from disinvestment.

  Closely related to the "urban sprawl" issue is the loss of agricultural land that results from an unfocused development pattern.

[8] Some caution must be exercised here. Nationally, manufacturing is in a trend of moving from labor to capital for inputs. Hence, the continuity of the employment-per-acre ratio must be carefully considered.

The Comprehensive Plan can do little for the sprawl that has already occurred, other than locate public services for these sprawling areas to the maximum feasible extent. However, the Plan can help in minimizing further sprawl, primarily through focusing future residential growth to particular areas, and abandoning a "laissez-faire" land use policy.

- *The community has been hard-hit by recent industry losses*. These impacts have reverberated throughout the local economy, but were especially felt in the professional specialty, service, administrative support, and executive and managerial occupations.

- *Regional access is good*. Several transportation modes, particularly surface transportation and rail, are very accessible. The region is well-positioned relative to several large metropolitan areas. Air transportation is the major modal weakness.

Rural Delaware County

- *The City of Muncie and Delaware County have difficulties with local revenue generation*. These difficulties are particularly evident in the low per-capita assessed value evident in both municipalities, and may eventually result in problems with project and program implementation and public services provision.

CHAPTER 4
LAND USE PLAN

4.1 INTRODUCTION.

The process of developing the Land Use Plan began with the development of four separate land use alternatives that represented different strategies for achieving the ends of the Policy. The merits and demerits of each alternative were debated, and different elements were selected for inclusion in the final Plan.

The selected Land Use Plan is shown in the attached Map 4-1, Land Use Plan[1]. This Plan has several emphases, which are listed as follows:

- The Plan encourages focused residential development around the Towns of Gaston, Eaton, Albany, Selma, Yorktown and Daleville. This development is meant to satisfy the demand for rural residential housing without greatly compromising pubic services provision or agricultural production, and is complemented through the implementation of roadway improvements connecting these satellites to Muncie.

- Infill development is encouraged in and around the City of Muncie in a concentric pattern fashioned by the Muncie By-Pass on the east.

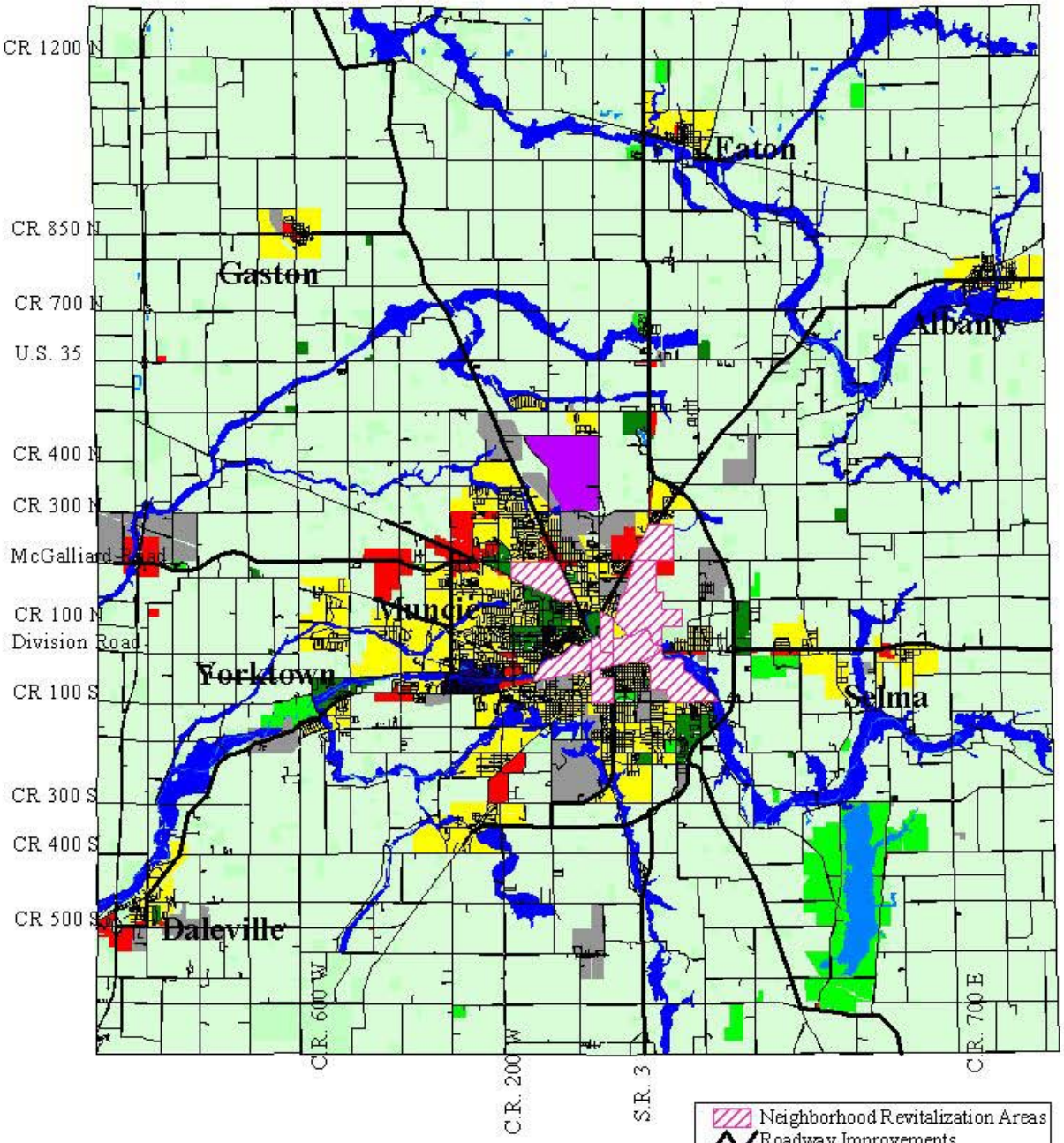
- The development opportunities provided by interstate interchanges are capitalized through industrial and interstate-related commercial development, particularly around the Daleville (SR 67) and McGalliard Road (SR 332) interchanges.

- The revitalization and redevelopment of key inner-city neighborhoods is encouraged.

- The Downtown's future as the commercial and office center of the County is secured.

- Environmentally-sensitive areas, particularly areas of floodplain, woodlots and habitats, are preserved from future development.

[1] As per the existing land use patterns discussion from Chapter 3 (Map 3-1), a great deal of scattered residential land uses are present in non-urbanized portions of the County. For purposes of clarity, Map 4-1 does not show the majority of this residential development; however, the development is assumed to continue to exist (i.e., there is no proposal here to remove it), and the following discussion will incorporate the acreage from these residential uses.



Map 4-1: Land Use Plan

N

2 0 2 4 Miles

Neighborhood Revitalization Areas
Roadway Improvements
Land Use Classifications
Agricultural
Airport
Cemetery
Commercial
Industrial
Institutional
Recreation
Residential
Floodplain

4.2 DESCRIPTION OF LAND USE PLAN.

4.2.1 Overview of Final Land Use Alternate. The final alternate contains the following proposed uses (refer to Chapter 3, Table 3-1 for existing land use acreages):

Table 4-1: Planned Land Uses

	Delaware County		*Delaware Cty (w/o Muncie)*		*Muncie*[2]	
Land Use	**Acreage**	**% Total**	**Acreage**	**% Total**	**Acreage**	**% Total**
Agricultural	187,430	75.7%	186,541	78.9%	1,328	9.8%
Commercial	3,146	1.3%	2,095	0.9%	1,051	7.8%
Industrial	5,535	2.2%	4,112	1.7%	1,423	10.6%
Residential	29,167	11.7%	22,548	9.5%	6,619	49.3%
Public/Institutional	3,318	1.3%	1,930	0.8%	1,388	10.3%
Parks/Recreation	4,132	1.7%	3,873	1.6%	259	1.9%
Water/Floodplain	16,910	6.6%	15,118	6.4%	1,353	10.1%
Total	249,638	100.0%	236,217	100.0%	13,421	100.0%

4.2.2 Analysis of Land Use Plan. This section examines some of the impacts expected under this Land Use Plan. Transportation impacts and the improvements required to meet the needs of the Land Use Plan will be the subject of the next chapter, and hence are not discussed here.

4.2.2.1 Residential Density. At existing densities, the build-out population under the Plan is 145,835 persons for the County as a whole, and 70,161 for the City of Muncie. Existing densities can therefore accommodate the projected 2020 County population (listed in Chapter 3, Table 3-5) of 133,900 persons, but they cannot accommodate the City's projected population of 78,067 persons. Increasing residential densities within the City would help somewhat in rectifying this imbalance between buildout and projected populations; however, even the highest-density scenario considered in Chapter 3 required about 625 acres, and only 150 acres is provided here. It becomes apparent, then, that the City will need to annex in order to accommodate the demand for its services. The 1,438 acres of planned residential uses west of the City and the 606 acres to the northwest of the City are the most logical targets for this annexation. This acreage can accommodate a high single-family mix provided that densities are no more than two units per acre.

Residential land uses in the County increase by about 5,500 acres, or 23%. Referring to the discussion of different residential mixes and densities in Chapter 3, this increase can accommodate a high single-family mix, in keeping with the existing character of the County. Provided that the single-family densities within

[2] The figures for Muncie listed here assume no annexation. It may be expected that annexation will take place (see Chapter 8: Implementation), and planned land uses will change according to the area annexed.

the City of Muncie are maintained at a minimum of two units per acre, then single-family densities in the County (outside of Muncie) can be at densities of one unit per acre.

The Plan emphasizes residential reinvestment and redevelopment within Muncie's inner city. Neighborhood plans that more explicitly discuss reinvestment and redevelopment strategies are under the purview of the City of Muncie's Department of Community Development.

4.2.2.2 Economy. Industrial land uses within the County increase by 1,945 acres (over 50%). About half of this increase, 930 acres, is located in the vicinity of the I-69/McGalliard Road interchange. This site was chosen because of its easy access to both surface and rail modes of transportation, and because of the minimal presence of competing land uses (particularly residential). The planned commercial uses in this vicinity may offer an opportunity for a mixed-use business park at this interchange. Other areas of industrial land use include Daleville and areas of the McGalliard Road corridor as illustrated on Map 4-1.

As with residential uses, the amount of land allocated to industrial uses exceeds that required in the projections (Chapter 3). This allows for some flexibility in siting industrial land uses, particularly the heavy industrial users indicated in the Targeted Industry Study (TIS). The TIS lists several types of industrial users that may be classified as heavy industry, including metalworking, plastics, transportation equipment, and production machinery.

At existing densities, build-out industrial employment for the County under the Plan is approximately 27,120 employees.

Commercial land in the County increases by 1,040 acres, or about 50%. About 260 acres is focused around the I-69/McGalliard Road interchange for highway-serving retail and office uses. The I-69/SR 67 interchange is similarly targeted for increased commercial activity, including retail and offices. Muncie's Downtown is targeted for commercial redevelopment, particularly for office and regional/specialty retail uses. McGalliard Road within Muncie is a focus for retail development.

At existing densities, build-out of commercial areas is expected to be approximately 54,400 employees, about 18,200 of which will be in the City of Muncie.

4.2.2.3 Parks and Open Space. Some decrease in parks and recreation acreage within the City is evident. This results from the inclusion of the new category of floodplain, since much of land previously classified as parks and recreation took place in floodplain. It should be noted that passive recreation, when properly conducted, is an appropriate use of floodplain, and maximizes the utilization of an

otherwise unusable site. Parks and recreation within the County increases, primarily through the expansion of recreational space around the Reservoir. In addition, although their acreages are not listed in the Land Use Plan, linear parks (greenways) are proposed for several portions of the planning area.

4.2.2.4 Environment. The inclusion of floodplain as a designated land use is meant to clarify the location of other land uses. However, it also emphasizes an environmental conservation theme that is present in the Land Use Plan. As would be expected, most of the floodplain was previously undeveloped. Some acreage was previously used for agricultural and recreational uses, and provided that certain conditions are met (in particular, no construction or cut/fill), can continue to be used for those purposes without adverse effect.

4.2.2.5 Agriculture. Agricultural land declines for both the City and the County. The City experiences a loss of 25% of its agricultural land, while the County as a whole loses a little over 4%. It is noteworthy that with regards to the County, this loss is over a 20-year period, and represents a much lower rate of loss than the 0.75-1.0% loss per year that had been previously experienced. Also, the agricultural acreage does not include potentially tillable areas currently listed as being in the floodplain.

4.2.2.6 Public Utilities and Services. New growth is generally encouraged in areas that can be supported by existing water and wastewater systems with minimal capital investment, generally around existing towns, and within the vicinity of the City of Muncie. One significant exception is the industrial and commercial growth planned for the I-69/McGalliard Road interchange.

In order to maintain the level-of-service standards discussed in Chapter 3, the County's population growth (outside of the City of Muncie) is expected to necessitate the hiring of an additional 13 police officers and 5 fire-fighting personnel. Some of the towns where focused residential growth is planned may have to increase the proportion of full-time to volunteer fire-fighting personnel. Since growth is focused around existing areas, new police and fire stations may not need to be constructed, with the exception of the I-69/McGalliard Road interchange.

The increase in population in the City and County will necessitate another 30 hospital beds and 6.5 physicians in order to maintain adequate levels of service. The aging of the population nationwide is expected to affect Muncie; assuming that the percentage of the population over the age of 65 increases from 12.7% to 15%, then the number of nursing home beds will need to rise by about 300.

The BEA population projections do not provide estimates by age. Assuming that the proportion of school-age children to the total population moderately declines to about 15%, then by the Year 2020, there will be approximately 20,000

students, an increase of about 2,000 students. A state-issued transportation cost standard for students[3] is $460 per pupil per year, which translates into about $920,000 annually. State-issued capital expenditures standards[4] are 150 square feet per pupil times $100 per square foot, for a total capital cost of $30,000,000; amortizing this cost over 20 years with 6% interest yields an annual capital cost of about $2,600,000. Overall, the school districts in the County maintain a student-faculty ratio of about 14.9 students per faculty member (including teachers and supportive staff); applying this ratio to the increase in students yields an additional 134 faculty. Assuming a salary range of $35,000 to $45,000 (including benefits) yields an estimated annual operating impact of $4,690,000 to $6,030,000.

4.2.2.7 Neighborhood Impacts. The Land Use Plan heavily relies upon the utilization and/or redevelopment of existing land uses in inner-city areas. While actual revitalization/redevelopment activities will be the subject of Chapter 8: Implementation, this section will outline the neighborhoods that need to be targeted for reinvestment. Map 4-2 shows the location of these neighborhoods. Primary targets for redevelopment and/or revitalization under the Plan include the following areas[5]:

Central Business District (CBD). This area currently contains a mix of office, retail, single-family residential, industrial, and institutional activities. It should be noted that mixed uses are generally desirable in a Downtown, provided that the particular mix of uses maximizes the CBD's activity. Redevelopment in this area should emphasize aesthetics and common themes; historical themes generally work well in downtowns throughout the country. A Downtown market study and strategy should be developed and implemented.

Example of a neighborhood, Muncie, Indiana

Whitely Neighborhood. This largely-minority, poor, and elderly neighborhood resides to the northeast of the CBD. Problems with the housing stock are visible, with indications of low maintenance and even dilapidation.

[3] DeBoer, Larry and Lei Zhou (1997). *The Fiscal Impact of Residential Development in Unincorporated Wabash Township*.
[4] *Ibid*.
[5] This section is heavily informed by the neighborhood planning work of the Muncie Department of Community Development. There are more defined neighborhoods than what are listed here; those neighborhoods not listed are not perceived as having a need for reinvestment ("need" being defined by the amount of substandard housing, low property values, high proportion of population being low-income or in poverty, and being targeted by the Community Development Block Grant [CDBG] Program).

Anthony/Northside Neighborhood. While housing quality in this neighborhood has been stable, there has been a drop in owner-occupied housing value, coinciding with a transition of owner- to renter-occupation. The nearby presence of Ball State University has been cited as the primary cause of this shift, and students make up a significant portion of the neighborhood's population.

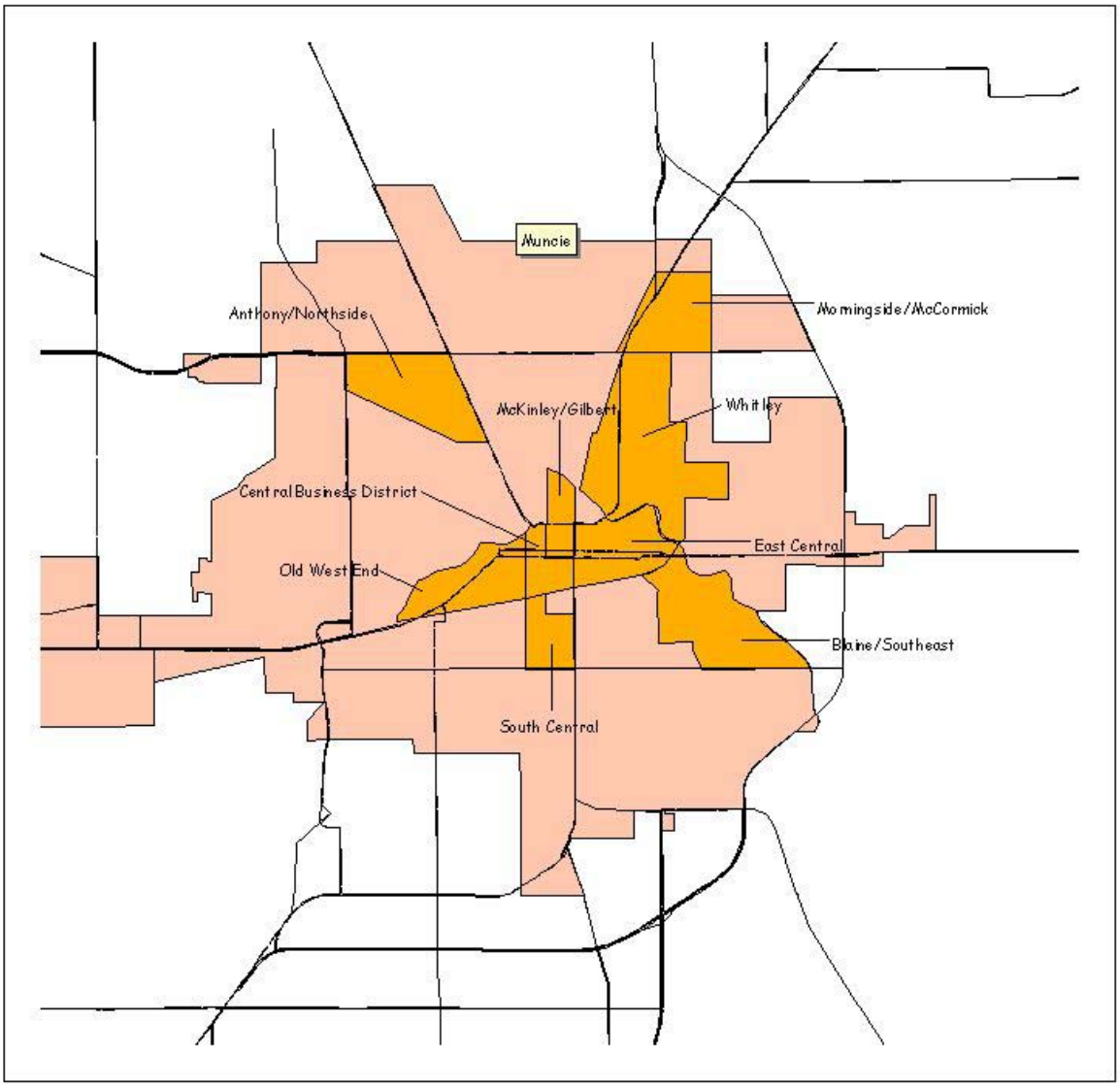
East Central Neighborhood. While known as an historical neighborhood, it is noteworthy that the number of historic homes in this area have drastically dropped. The median age of the neighborhood has also dropped, perhaps indicating a potential for the implementation of homeownership programs. Traffic, particularly along SR 32, is an issue. Population and housing quality have been on the decline.

Blaine Neighborhood. The housing stock in this neighborhood has been aging, and home maintenance has become an issue. A transition from owner- to renter-occupation is evident. Population and median income have declined in recent years.

McKinley Neighborhood. About 12% of the properties in this neighborhood are vacant, and home values and median rents have been on the decline, all of which are characteristic of disinvestment. Infrastructure, including sidewalks, streets, and alleys, are generally in poor condition as rated by residents.

Morningside Neighborhood. Housing units in this neighborhood are of declining quality. Housing values and median rents are also falling, and a shift from owner- to renter-occupation is occurring. The neighborhood has gained a reputation as a starting area for young couples, which has encouraged hopes of homeownership as an effective tool for neighborhood revitalization.

The Old West End. This area, primarily residential in character, contains a number of historic homes, many of which have been placed on the National Historic Register. Because of its access to the CBD, many downtown workers have located here. Low housing quality and crime are seen to impede the revitalization of this neighborhood.



Map 4-2: Neighborhood Target Areas

South Central Neighborhood. This neighborhood has relatively good ratings for housing quality and infrastructure. However, the neighborhood is low-income, and is experiencing an increase in the proportion of renter-occupied housing.

While these neighborhoods have been highlighted, investment/reinvestment in all City neighborhoods is essential to maintaining and encouraging urban residential land use.

4.2.2.8 Other. Public and institutional acreage is relatively stable under the Plan and areas are to continue to be promoted and enhanced. No major change to the pattern of these uses is projected.

4.2.2.9

Because of the increase in employment, total personal income is expected to increase, thereby driving up revenue from the County's Economic Development Income Tax (EDIT) and County Option Income Tax (COIT). The Bureau of Economic Analysis provides personal income projections for the County. Total revenue is expected to rise (in 1999 constant dollars) by about 38%, from $2,890,000,000 to about $3,990,000,000. Using the existing income tax rates, COIT revenue is projected to rise by about $2,200,000 per year, while annual EDIT revenue is project to rise by about $6,600,000. Actual COIT and EDIT revenue collected will fluctuate in accordance with a variety of circumstances, including, but not limited to national economic upturns/downturns, the economic development of the County, etc. If fully developed, the planned and developed area of the County will increase by about 11,000 acres (30%) as a result from the implementation of the Plan, thereby raising property tax revenues.

CHAPTER 5
TRANSPORTATION ELEMENT

5.1 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.

The Delaware-Muncie Metropolitan Plan Commission coordinates transportation planning and policy for the metropolitan area. The Commission 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.

Map 5-1, Transportation System, shows the transportation system for the County, including the thoroughfare system, rail system, airport, and bicycle/pedestrian system.

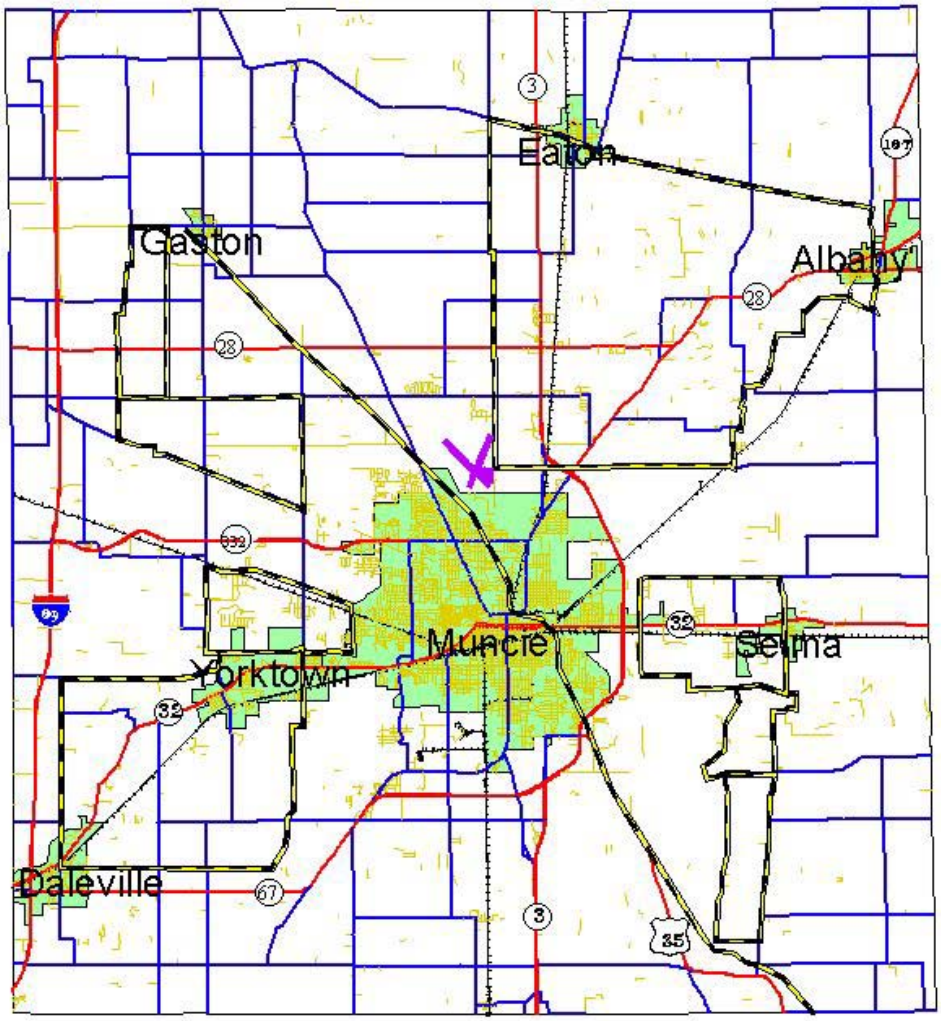
5.2 DESCRIPTION OF TRANSPORTATION SYSTEM.

5.2.1 Thoroughfare System. Of all the modes of transportation in Delaware County, the thoroughfare system (surface transportation) is the most important and visible. Map 5-1 shows the thoroughfare system, broken down by major roadway classification.

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

- *Highways* are devoted to high-speed, long-distance traffic movement with (ideally) little or not access to adjacent land. Federal highways (i.e., I-69) are multi-lane, and have controlled access. State highways may be multi-lane or single-lane, and may, according to the policy of the Indiana Department of Transportation, 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.

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



Map 5-1: Transportation System

0.8 0 0.8 1.6 Miles

Airport
Airport
Bicycle/Pedestrian System
Road Classifications
Interstate/Highway
Arterial
Collector/Local
Rails

5.2.1.1 Highways. Several federal and state highways service the County. I-69 crosses the western portion of the County, and is under the purview of the U.S. Department of Transportation, Federal Highway Administration. U.S. Highway 35 enters the County from the southeast, and becomes part of the Muncie Bypass. State Roads 3, 28, 32, 67, 167, and 332 provide access to Muncie and the surrounding towns, and are under the purview of the Indiana Department of Transportation (INDOT). With the exception of I-69, which traverses the County but does not intercept the City of Muncie, these highways radiate towards the City. State Roads 3 and 67, together with US 35, merge to form the Muncie Bypass.

Daily traffic levels for these routes (except I-69 and US 35) at several heavily-traveled points, and their projected traffic in the Year 2015, are listed in the following table[2]:

Table 5-1: State Highway Traffic Counts

Route	*Intersection/Vicinity*	*Average Daily Traffic (1995)*	*Projected (2015)*
S.R. 3	400 N (Bypass)	12,430	18,470
	Mississinewa River	7,460	9,110
	SR 28	9,420	11,500
	Riggin Road	6,285	9,339
S.R. 28	I-69	6,810	8,310
	SR 3	7,090	8,650
S.R. 32	Country Club Rd.	19,856	29,505
	Andrews Rd. (500 W)	15,850	23,560
	Stockport Dr.	15,556	23,131
	Tiger Drive	13,099	19,464
	CR 400 E	16,296	24,215
S.R. 67	CR 400 S	11,610	17,260
S.R. 167	N/A	N/A	N/A
S.R. 332	Bethel Avenue	25,469	37,145
	Morrison Road	17,206	25,568
	Tillotson Avenue	18,554	27,569
Bypass	Centennial Ave.	23,229	34,517
	Memorial Dr.	18,500	27,491

As can be seen, the state highways carry a great deal of traffic. Most of these points (although not all) are found either in the City of Muncie or in the western portion of the County, where most of the existing land uses are concentrated. SRs

[2] *1995-2015 Delaware-Muncie Transportation Plan: An Intermodal Foundation for the Future* (1994). Delaware-Muncie Metropolitan Plan Commission. The Year 2015 was the furthest year out for average daily traffic projections. Traffic projections were developed prior to the land use plan (Chapter 4), and hence do not take it into account. One-count volumes for two-directional flows were divided in half in order to compare to one-way counts.

32, 67, 332, and the Bypass are approaching capacity in some areas, including areas within the City of Muncie and the County.

5.2.1.2 Arterials. Several arterial streets serve the City of Muncie, including Wheeling Avenue, Tillotson Avenue/Martin L. King Jr. Boulevard, Port Avenue, McGalliard Road, Walnut Street, Broadway Avenue, and Meeker Avenue. Wheeling Avenue and Port Avenue, which also provide access outside of the City of Muncie. Traffic counts for these streets are shown in the following table:

Table 5-2: Muncie Arterial Traffic Counts

Route	*Intersection/Vicinity*	*Average Daily Traffic (1995)*	*Projected (2015)*
Wheeling Ave.	Moore Road	10,482	15,576
	Ashland Ave	24,101	35,813
	McGalliard Rd.	19,889	29,555
	Lindweth Place	19,590	29,110
Tillotson Ave.	Devon Rd.	24,698	36,699
	Bethel Ave. (SB)	8,703	12,933
	Ethel Ave.	20,590	30,595
Port Ave.	N/A	N/A	N/A
McGalliard Rd.	Tillotson	26,559	39,465
	Walnut St.	30,175	44,838
	Broadway	17,142	25,473
	Elgin Street	15,014	22,311
	Rosewood (WB)	11,240	16,703
Walnut St.	23rd St.	11,832	17,582
	Harvard Ave.	8,587	12,761
	Roosevelt St.	15,019	22,318
	Victor St.	10,803	16,053
Broadway Ave.	Siretta	11,259	16,731
	Manor	15,196	22,581
	Princeton	20,672	30,718
	Waid	14,366	21,348
Meeker Ave.	N/A	N/A	N/A

Certain arterials in the City are handling exceptional amounts of traffic, particularly Wheeling Avenue and McGalliard Road. Problems with capacity are developing in areas along McGalliard Road, Tillotson Avenue, Walnut Street, and Wheeling Avenue.

Arterial streets also service the County areas outside of Muncie. The number of arterials is too high to list them all here. Suffice it to say that these arterials generally form a grid pattern in the County, and allow for easy movement between different areas. These roadways have been relatively free from the congestion that troubles some areas of Muncie.

5.2.1.3 Collector/Local System. A grid street pattern is apparent within the older, more densely-developed areas of Muncie and the outlying towns. Newer subdivisions exhibit looping and cul-de-sac streets.

5.2.2 Rail and Air Transportation. As noted in Chapter 3, three main rail lines traverse the County, primarily converging on the City of Muncie. Norfolk Southern operates a line that runs north-south, through the Town of Eaton and the City of Muncie. Another Norfolk Southern line enters the County to the west, travels through Muncie, and then heads northeast through the Town of Albany. CSX operates the last line, which enters the County near the Town of Daleville in the southwest, travels through Muncie, and then extends to the east through the Town of Selma. In 1999, a rail connection between CSX and Norfolk Southern lines in Alexandria (in Madison County, to the west of Delaware County) was constructed, which will increase rail traffic on this route.

With the exception of Muncie's CBD, most rail crossings in the County are at-grade, including those with state highways. At-grade crossings require whistle-blowing safety measures and consideration of alternatives should occur to mitigate adverse noise impacts, particularly in urban neighborhoods such as in and around the CBD where all train traffic converges.

As noted in Chapter 3, the Delaware County Airport contains two runways of 6,500 and 5,000 feet in length. These runways are insufficient for larger passenger and cargo jets (which generally require 12,000-foot runways), and mainly accommodate general aircraft. The smaller Reese Airport with a 2,800-foot runway is located southeast of Muncie. The Delaware County Airport provides an economic amenity and opportunity as a multi-use hub for travel alternatives to the automobile and warrants continued support and enhancement.

5.2.3 Bicycle and Pedestrian Pathways. A bicycle-pedestrian system exists, and is comprised primarily of four on-street bicycle "loops" in each of the four quadrants of the County (northwest, northeast, southwest, and southeast). Typically, the system consists of a shared shoulder, with appropriate signage being introduced along the routes.

The Cardinal Greenway, an off-road trail developed (and currently being developed) out of an abandoned rail corridor, extends from the northwest corner of the County, connects to Gaston before heading southeast, then bisects the City of Muncie before paralleling US 35 to the southeast.

Sidewalks are evident in most older portions of the City of Muncie and outlying towns. These sidewalks are in varying condition; an inventory of conditions should be conducted. Newer subdivisions vary as to whether they include sidewalks at all.

5.2.4 Mass Transit. Bus service exists for the City of Muncie, but not for any of the other municipalities. No light or commuter rail system exists or is planned within the City or County.

5.3 EFFECTS OF LAND USE PLAN.

5.3.1 Thoroughfares. Much of the new residential development takes place in areas around the Towns of Gaston, Eaton, Albany, Selma, and Yorktown. Access to these areas takes place (respectively) along Wheeling Avenue, SR 3, SR 28, SR 32 (east), and SR 32 (west). Many of these corridors are already experiencing traffic congestion. Estimated additional traffic volumes (assuming full buildout, an assumption which, as discussed in Chapter 4, may not occur) are listed in the following table:

Table 5-3: Additional Residential Trip Generation

Corridor	*Additional Residential Acreage*[3]	*Additional Daily Trips Generated*
Wheeling Avenue	450	6,460
SR 3	150	2,150
SR 28	300	4,310
SR 32 (east)	450	6,460
SR 32 (west)	435	6,240
TOTAL	1,785	25,620

[3] Assumes 1.5 dwelling units per acre, and 9.57 daily vehicle trips per unit (as per *Trip Generation Manual* (1997), Institute of Traffic Engineers).

Areas of new office development include the I-69/McGalliard Road interchange, the Central Business District, and the I-69/SR67 interchange. Additional acreages, and the trips generated by these developments, are listed in the following table:

Table 5-4: Additional Office Trip Generation

Corridor	*Additional Office Acreage*[4]	*Additional Daily Trips Generated*
McGalliard (I-69)	250	14,360
CBD[5]	35	5,000
SR67 (I-69)[6]	80	5,560
TOTAL	365	24,920

Areas of new retail development (other than mixed office-retail, which were discussed above in Table 5-4) are located primarily along McGalliard Road. Assuming that this is primarily shopping-center retail[7], then the approximately 600 acres of planned commercial development will result in approximately 56,000 additional daily vehicle trips (assuming full build-out) in the western McGalliard Road corridor.

New industrial uses are focused at the McGalliard Road/I-69 interchange, the I-69 Daleville interchange, and eastern McGalliard Road. The following table lists the traffic impacts at these areas:

Table 5-5: Additional Industrial Trip Generation

Corridor	*Additional Office Acreage*[8]	*Additional Daily Trips Generated*
McGalliard (I-69)	950	14,060
McGalliard (east)	220	3,260
SR67 (I-69)	350	5,180
TOTAL	1,520	22,500

In conclusion, the Land Use Plan 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.

5.3.2 Other Impacts. Industrial uses are generally placed in close proximity to rail lines. The rail usage of these uses is unknown, and will be heavily affected by the types

[4] *Trip Generation Manual* (1997) Institute of Traffic Engineers. Assumes 3.32 trips generated per employee, and 17.3 employees per acre.
[5] Mixed office/specialty retail; assumptions include: 30% retail (22.36 trips per employee), 70% office. Some replacement of residential taken into account.
[6] Mixed office/fast-food retail; assumptions include: 30% fast-food retail (5 seats per acre, 19.52 trips per seat), 70% office.
[7] Assumptions include 42.92 trips per 1,000 s.f. of gross leasable area, and a floor-to-area ratio of 0.05.
[8] *Trip Generation Manual* (1997) Institute of Traffic Engineers. Assumes 3.02 trips generated per employee, and 4.9 employees per acre.

of industries that are marketed by the local economic development program. Rail lines are more often utilized by heavy industrial users, which points to more impacts being experienced at the I-69/McGalliard Road interchange, where most of the heavy industrial users are expected to located.

Existing usage of bicycle and pedestrian facilities is unknown. An increase in usage may be expected, proportional to population increase.

5.4 THOROUGHFARE IMPROVEMENTS.

Map 5-2, Transportation Plan, describes the proposed projects and activities for accommodating the increased population and employment expected through the implementation of the Land Use Plan and for maintaining and enhancing regional access. Components of the proposed projects and activities are described below:

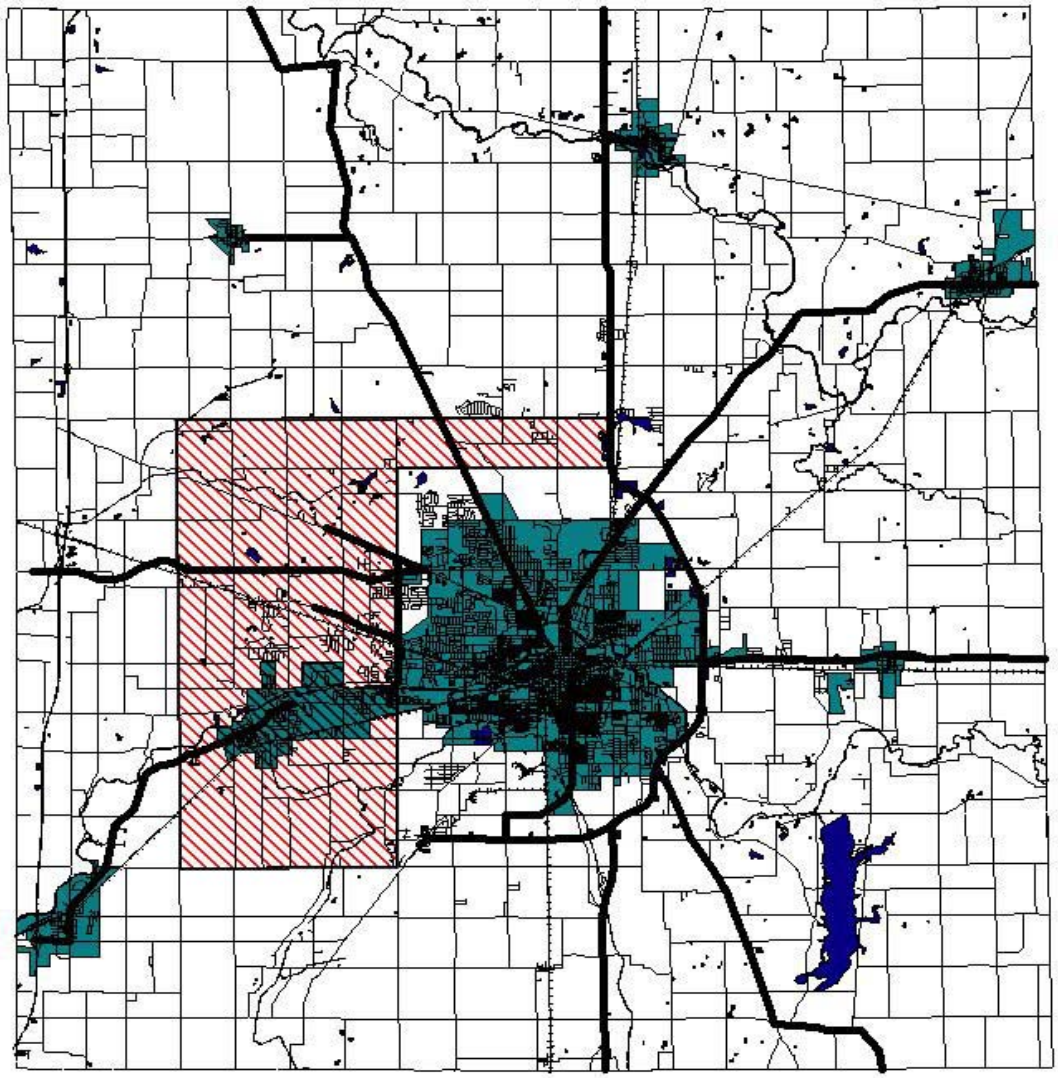
5.4.1 Accommodation of Western Growth & Arterial Circulation. This is an important transportation project for alleviating existing and projected congestion in the McGalliard Road corridor and for improving circulation and congestion of north/south arterials. The project would also provide access for the residential development west of Muncie, as proposed in the Land Use Plan, and enhance regional connections.

The concept of a western loop, connecting with the By-Pass, has been proposed and re-proposed at several points over the last two decades. A western loop alignment was listed in the 1977 Plan. The design of the western loop was to be equivalent to the design of the existing Bypass, i.e., four moving lanes, controlled access, etc.

With the high cost of a new route such as this and the need to address the congestion and circulation issues previously noted, the Transportation Plan calls for a traffic engineering study of the urban arterial system to determine how to best address these issues in the most cost-efficient manner. If new roadways are proposed, the study should determine the best alignment for the routes. Land use is also a key element of the study. If new roadways are endorsed, land use along the corridor must be addressed and the projections on the Land Use Plan in Chapter 4 should not be considered finalized until this arterial study is completed.

5.4.2 Access Roads to Focused Residential Development. As discussed in Chapter 4, residential development is primarily focused around the Towns and in the area west of Muncie. These residential areas will require adequate access in order to be viable. Residents of these areas will primarily work and shop in the City of Muncie, so transportation access should be aligned accordingly.

Many of the improvements listed here will not require roadway expansion. Instead, appropriate signage and striping to clarify routes and lanes and resurfacing/maintenance should be priorities. In addition, traffic flow will be generally improved through the



Map 5-2: Transportation Plan

1 0 1 2 Miles

Rails
Roadways Improvements
Western Study Area

implementation of right-turn lanes and signalized intersections. Affected corridors are discussed as follows:

Wheeling Avenue. The additional traffic generated from Gaston's residential areas will total about 6,500 daily vehicles, or about 650 vehicles during peak hour. Even adding this to the approximately 525 peak-hour vehicles in the vicinity of Moore Road, the two-lane configuration should suffice. Right-turn lanes should be a priority within the City of Muncie. The CR 850N stub that connects the Town of Gaston to Wheeling Avenue may require lane-width expansion.

SR 3. This state highway serves as access to the Town of Eaton and to areas outside of Delaware County, particularly Hartford City. The residential areas at Eaton will generate an additional 2,150 daily vehicle trips (215 peak-hour). Again, the two-lane configuration should suffice here.

SR 28. Albany is accessed by this corridor on the east, as is the City of Portland, IN (Jay County). Residential areas located at Albany will generate an additional 4,310 daily vehicle trips (430 peak-hour). This route also provides access to the west – Madison County, Elwood, Alexandria as well as I-69. The existing two-lane configuration will suffice here, although some grading would be a welcome improvement.

SR 32 (east). Selma's residential areas will generate an additional 6,460 vehicle trips (650 peak-hour). This additional traffic may push total vehicles to about 1,860 vehicles at peak hours beyond the Year 2015, which is less than the capacity of the existing roadway (estimated at 2,200 vehicles per lane per hour for a four-lane roadway). SR 32 also provides access east of the County to Winchester, IN (Randolph County).

SR 32 (west). Yorktown's residential areas are expected to generate an additional 6,240 daily vehicle trips (625 peak-hour). When added to existing traffic, total peak-hour vehicle trips could total 1,800 beyond the Year 2015, thereby reaching the (single-lane) capacity of a two-lane roadway. Projected congestion could be mitigated somewhat by the implementation of a western loop, making it premature to discuss roadway expansion projects here. Still, traffic in this area should be closely monitored.

5.4.3 McGalliard Road and Western Muncie. These areas deserve special attention because of the new industrial, commercial, and residential development that is planned here. Particular areas of concern are noted as follows:

McGalliard Road/I-69 Interchange. This major industrial/office node will primarily take advantage of the presence of I-69. Some reconfiguration of the existing interchange (currently a "spread diamond") will be required in order to accommodate increased truck and vehicle traffic. Office and industrial development in this vicinity should incorporate an internal street system that minimizes the utilization of McGalliard Road for intra-development movement.

McGalliard Road/Bethel Avenue Intersection and Vicinity. This area is the focus of concentrated retail development with a great deal of trip generation potential. In order to accommodate some of this traffic, there are thoroughfare plan amendments in effect and planned improvements on McGalliard from Tillotson Avenue to Morrison Road. Improvements to Morrison Road should also alleviate some of the congestion. McGalliard Road itself should be widened to six lanes in this vicinity, with breakdown (turning) lanes. Intersections should be minimized, meaning that commercial development should incorporate frontage roads with a minimum of access to McGalliard.

McGalliard-S.R. 332, Delaware County

Morrison Road. Most of the residential development in western Muncie-Yorktown has access to this north-south roadway, and to little else. Ideally, this roadway should be expanded to four lanes from McGalliard Road to SR 32. Access to the Bypass can be afforded through Jackson Street.

5.4.4 Other Improvements. Several roadway improvement projects are underway which enhance the efficiency of the thoroughfare system, and are not listed on Map 5-2, Transportation Plan. One project is the SR 67 expansion project, now completed, stretching from Daleville to the Bypass. Another is the Hoyt Avenue project, which will provide the CBD with better access from the Bypass/SR 67. Other proposed projects are listed as follows with additional provisions on SR 67:

Madison Street. The importance of Madison Street as an entrance to Downtown Muncie from the Bypass should be recognized and capitalized upon.

Daleville/I-69 Interchange. SR 67 should be able to accommodate the planned industrial and commercial development in this corridor, provided that internal movements are accommodated in a manner similar to that discussed for the McGalliard Road/I-69 interchange (above). As with that other interchange, the configuration of the interchange (currently a "spread diamond") will need to be reconsidered in order to accommodate increased truck and vehicle traffic.

SR 3 and US 35 (south). These two highways provide access to areas outside of the County, including (respectively) New Castle and Richmond. While roadway expansion is not required, signage, striping, and turning lanes are all appropriate improvements that should be incorporated into local and state maintenance programs.

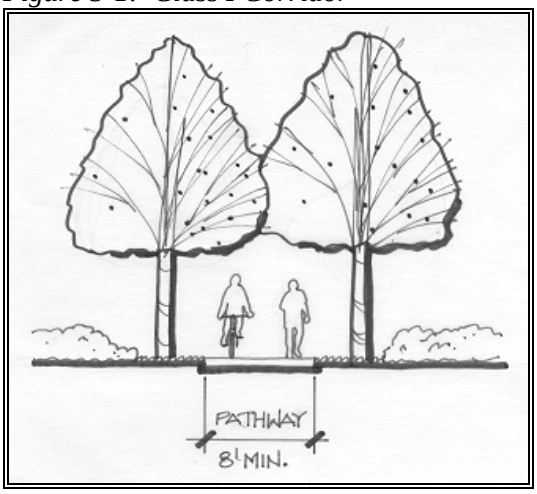
SR 67 (south). With the four-lane expansion project complete, the importance of maintaining SR 67 for the efficient movement of traffic from I-69 to the City of Muncie should be emphasized and it's transportation function protected. As indicated by the Land Use Plan, no major land use changes are proposed.

5.5 OTHER IMPROVEMENTS.

Not all transportation improvements relate to surface transportation. Additional modes are considered below:

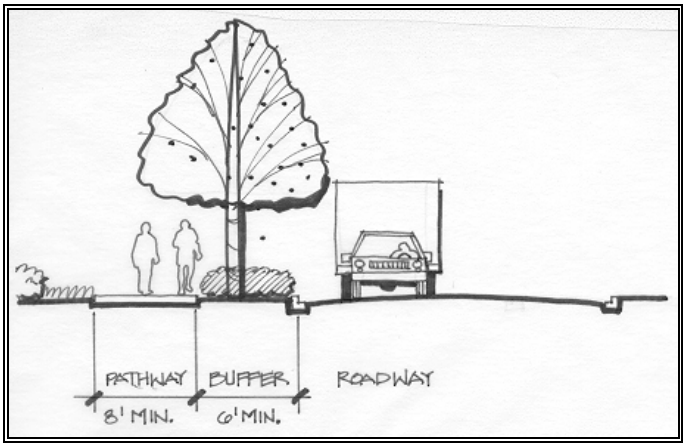
Bicycle and Pedestrian Pathways. Currently, the County's development ordinances do not contain provisions pertaining to on- or off-street bicycle/pedestrian pathways. These pathways may be in many forms, and can be added to roads, either existing or planned, or may be off-road in nature. Examples of such pathways include the following:

Figure 5-1: Class I Corridor



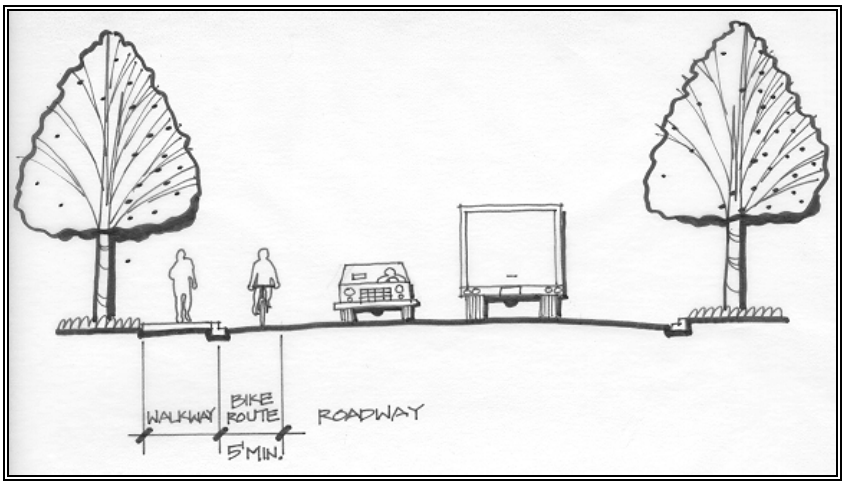
The class I corridor is completely separated from the roadway and is designed to serve a variety of users, including bicycle, equestrian, and pedestrian users.

Figure 5-2: Class IIA Corridor



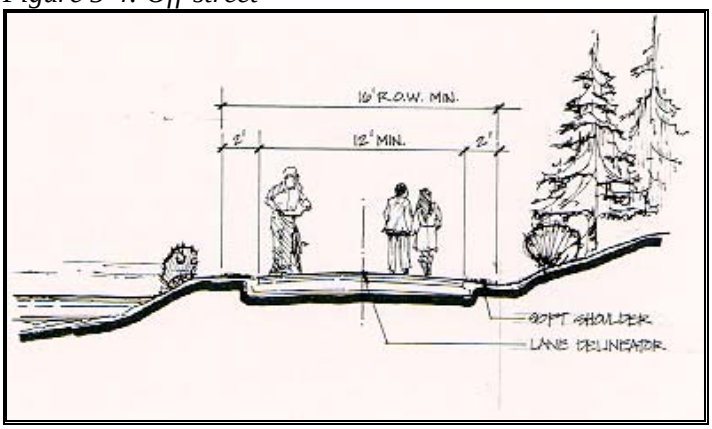
The class IIA corridor separates the path from the roadway with a landscaped buffer not less than six feet in width. This category is preferred when new roadways are constructed in the future.

Figure 5-3: Class IIB Corridor



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

Figure 5-4: 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.

- *Commuter Rail*. The growth of the northeast corridor of Indianapolis, and the connection to this region provided by the existing Conrail Railroad, provide an opportunity for the exploration of this transit mode. Currently, a study is underway in Indianapolis regarding transportation options for the northeast corridor; the alternatives under consideration in this study include light rail and commuter rail from Indianapolis north to Fishers and Noblesville. Depending upon the recommendations and outcomes of that study, the feasibility of connecting into that system via commuter rail may be worthy of further research.

CHAPTER 6
URBAN DESIGN PLAN

6.1 PROJECT DESCRIPTION

This chapter is intended to provide a framework for the physical and functional enhancement along the corridor, particularly along the SR332/McGalliard Road corridor. The prototypical design standards and treatment illustrated in this study can be applied to other established corridors identified in the plan. The study area for this case study extends from the Interstate 69 / 332 interchange at the west end to the Broadway / McGalliard intersection at the east end. The objective of this study is to illustrate unified corridor enhancement strategies and policies in order to guide new development, the improvement of existing businesses and the public right-of-way. Today the 332/McGalliard Road is a heavily traveled 4-lane thoroughfare that includes the main commercial and retail activity found in Muncie/Delaware County. The west-end of the corridor is initially surrounded by agricultural land. Further east, the character of the corridor becomes cluttered with a mix of big-box retail and outlot development. Between Tillotson and Broadway, the adjacent uses are a mix of older-retail strip mall development, small office complexes and several restaurant out-lot developments. The Muncie Mall, a major east-central Indiana shopping complex that includes four attached department stores and one stand-alone department store, anchors the east end of the corridor study area.

The character of the corridor will continue to evolve as the road is expanded to meet new traffic demands, or as new larger commercial buildings are constructed. These changes provide opportunities to promote high-quality innovative site and architectural design solutions. These solutions should reinforce a positive city/county image, promote better quality design, and serve as a guide for enhancement of existing properties. This will require a coordinated effort by the City of Muncie, Delaware County, State Highway Department and the individual developer or business owner to implement a unified improvement project.

6.2 CORRIDOR ENHANCEMENT RECOMMENDATIONS

The recommendations outlined for general overall corridor enhancement represent what is generally referred to as schematic design. It describes overall the concept and sets the location and design character and location of specific features. Additional detailed design will be needed on a project by project basis to deal with more technical aspects of the project, more coordination with utilities, city/county/state agencies and adjacent property owners.

A general overview of the corridor enhancement includes:

- Removal of overhead power lines
- Landscaping
- Make retention ponds attractive site amenities

- Construction of a pedestrian path along 332 – possibly along the frontage road on the south side
- Installation of unique signage and lights
- Introduction of cultural/recreation/community park center

Benefits of improving the 332/McGalliard Corridor include:

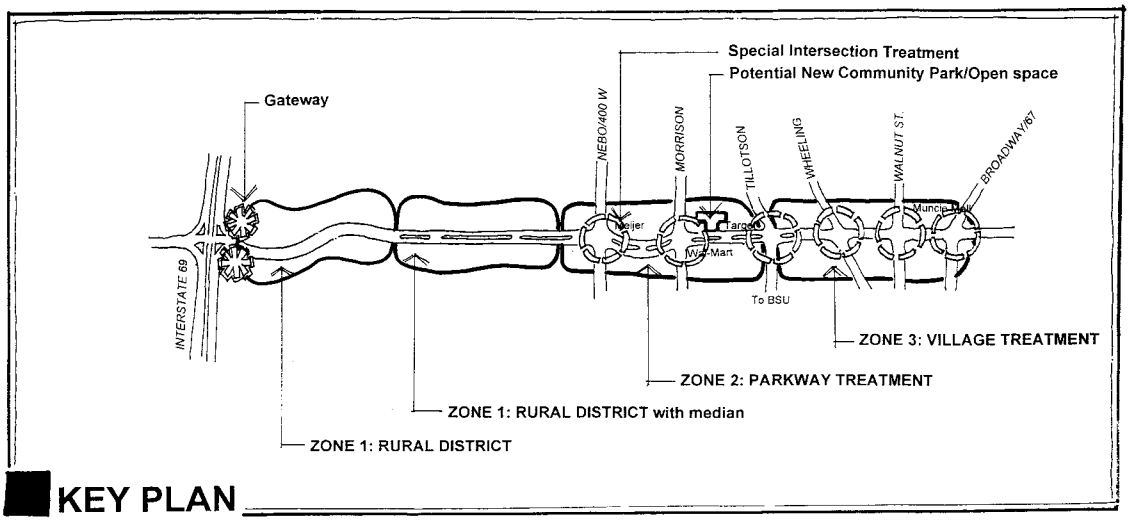
- Positive City/County image and identity
- Stronger sense of place
- Place for recreation, retail, entertainment
- Quality standards help attract business and generate tax revenues

6.3 CONCEPT PLAN

The proposed design for the 332/McGalliard Road Corridor creates three "character zones" that have unique existing conditions, visual perception and physical restrictions. However, the major component proposed for the corridor is the introduction of a consistent linear expression. This linear theme would include a basis for the landscape treatment along the corridor, and would provide a unifying element for the entire project.

In each of the sub-districts, the linear theme would be altered to appropriately match the physical constraints and visual character of the district. The character zones are described below and identified in the Key Plan.

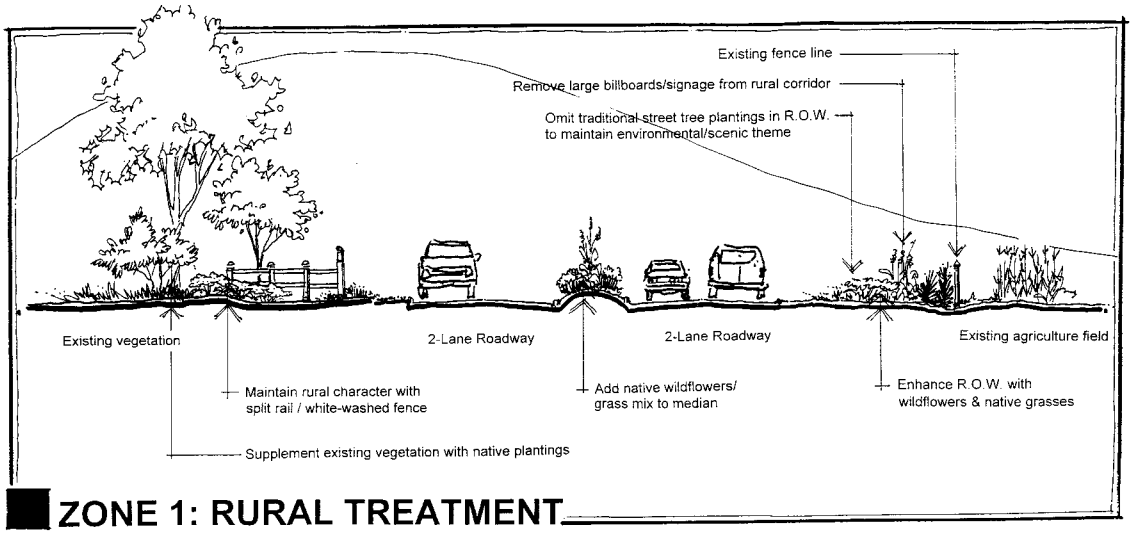
ZONE 1: Rural District
ZONE 2: Parkway District
ZONE 3: Village District



6.3.1 ZONE 1: Rural District (Interstate 69 to Nebo Road/400 W.)

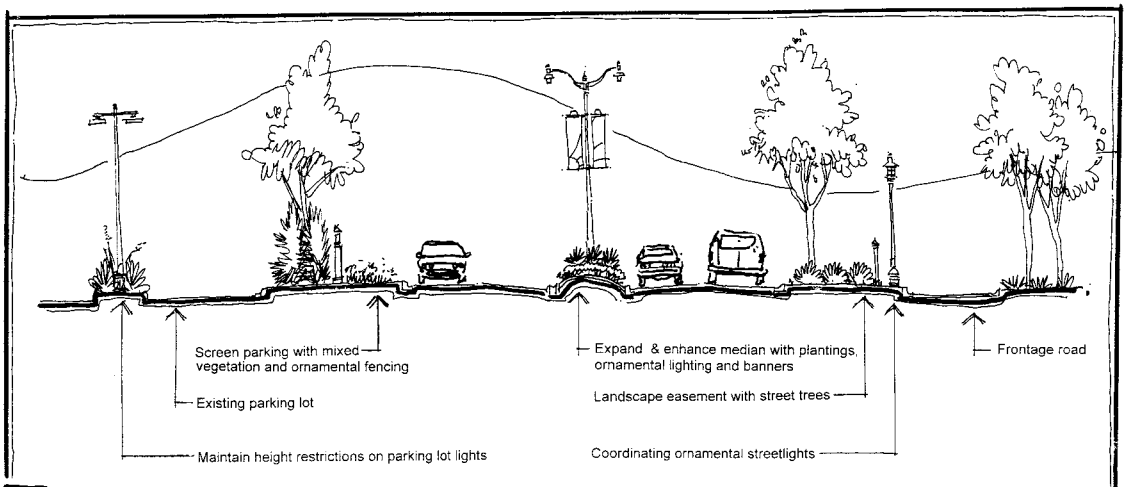
A simple gateway, using natural stone/wood fence with supplemental native wildflower plantings and native trees should be designed to reinforce the entry statement from the interstate. This should be thought of as a "front-door" to the county/city and as such, it should reflect the positive visual image that Muncie is a healthy, vibrant and attractive place to live, work and recreate.

A linear landscape treatment is proposed for all areas between the curb and the right-of-way throughout Zone 1. In keeping with the rural character established as the context for the district, the planting material should be natural in design, with the use of native plants, wildflowers and ornamental grasses as appropriate. Intersections should be highlighted with decorative street lighting. A decorative whitewashed picket fence could be used in combination with perennial plantings and up-lighting to further highlight key intersections. The center median should be planted with a native wildflower mix that coordinates with the right-of-way treatment. Native plantings are not only attractive, but are also hardy and low in maintenance. In addition, they provide a direct link to the existing vegetation found in the surrounding agricultural land adjacent to the corridor.



6.3.2 ZONE 2: Parkway District (Nebo Road to Tillotson Avenue)

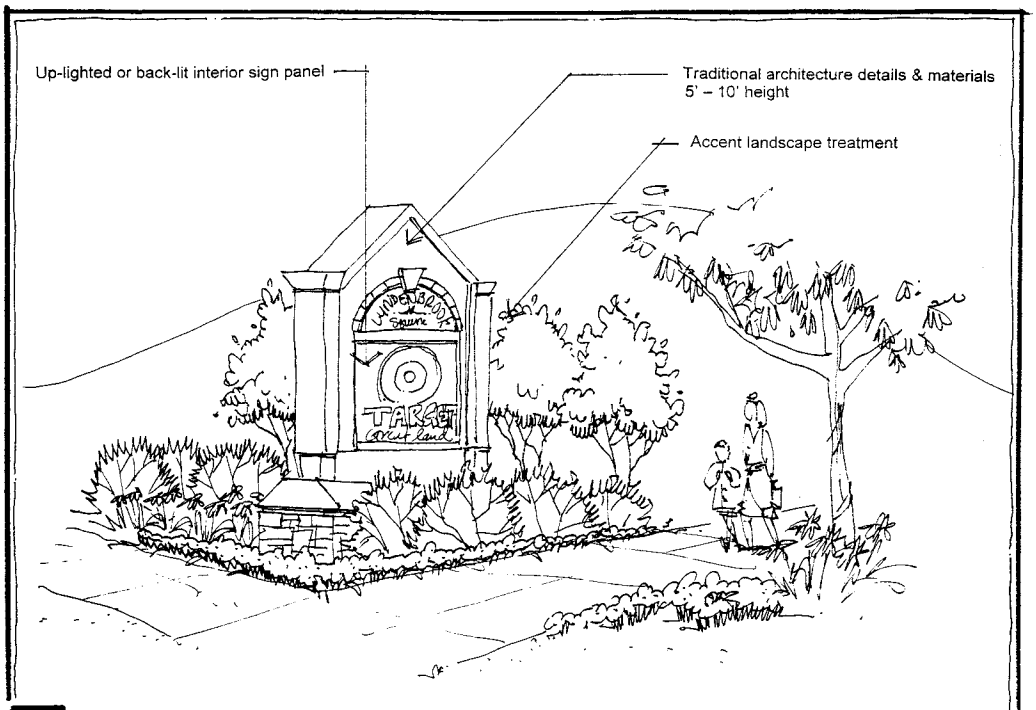
Throughout Zone 2, the linear theme evolves into a combination of soft and hardscape improvements. Large, stand-alone retail users surrounded by expansive parking lots dominate the character of this area. Therefore, the introduction of additional hardscape elements, such as stone walls, different paving materials, and a higher intensity of lighting is appropriate. Major enhancements proposed for this district include entrance plazas, intersection treatments and road improvements.



ZONE 2: PARKWAY TREATMENT

Entrance Plaza and Signage

At the Nebo Road Intersection, a stone/brick wall with appropriate gateway signage and lighting should be erected. Additional landscaping, water feature etc. could also be provided.

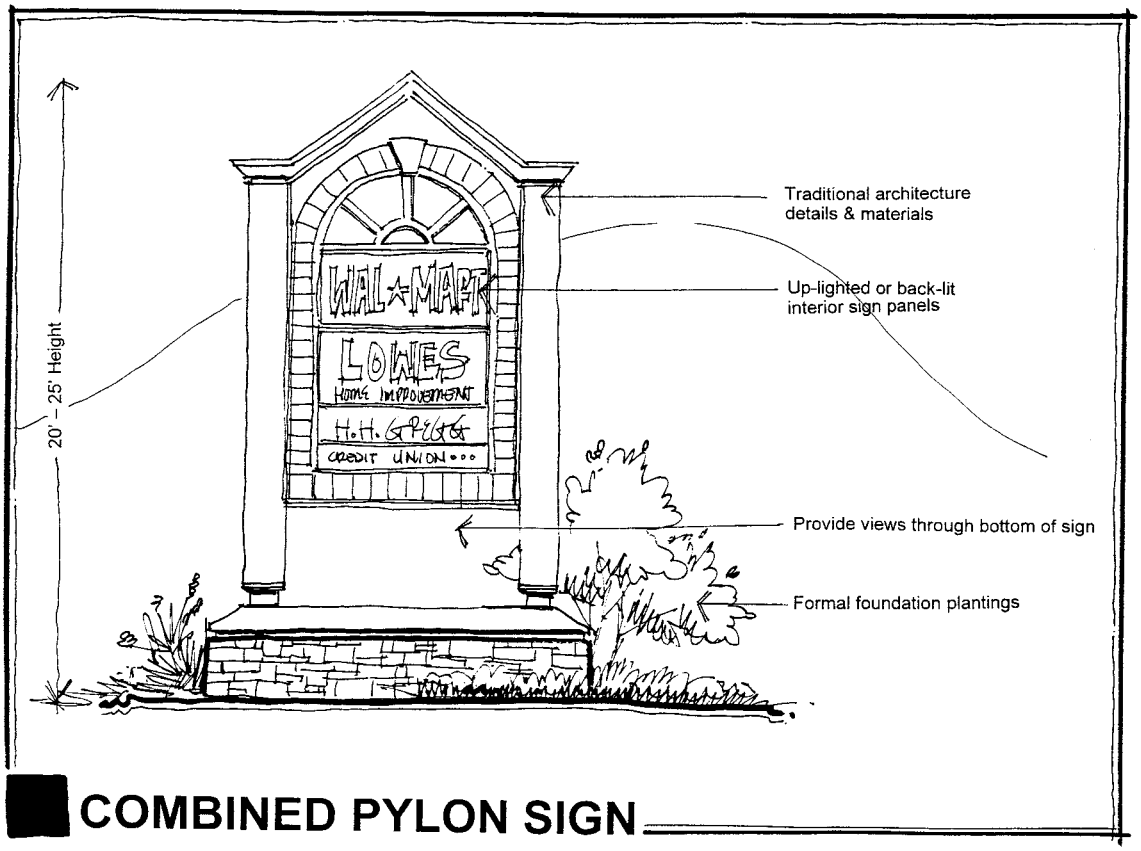


DECORATIVE MONUMENT SIGN

Signage for the individual retail establishments should be either combined into a grouped pylon sign or decorative monument sign. Existing developments should be encouraged to

comply with these requirements. Potential modifications to any existing sign regulations that encourage uniform sign design are listed below.

- Consider removal of all free-standing pole signs and roof signs along corridor;
- Designate specific sign types by district and location within corridor;
- Designate multiple-use signs in for major shopping centers as shared, decorative pylon signs;
- Restrict height limits on pylon signs;
- Require appropriate lighting and landscape enhancement coordinating with free-standing pylon and monument signage; and
- Restrict billboards on adjacent land uses.



COMBINED PYLON SIGN

Intersection Treatments

Improvements to the key intersections of Morrison Road, Bethel and Tillotson should include:

- Stone/brick walls to delineate intersection and contain signage;
- Graphically coordinated signage – directional and informational;
- A more formal landscape treatment, including shrub massings, groundcover, ornamental trees should be introduced;

- Special paving at intersection crossings (to announce entry into district and provide a traffic calming device);
- Decorative light standards along right-of-way and in the median; and
- Banner poles.

Right-of-Way Improvements

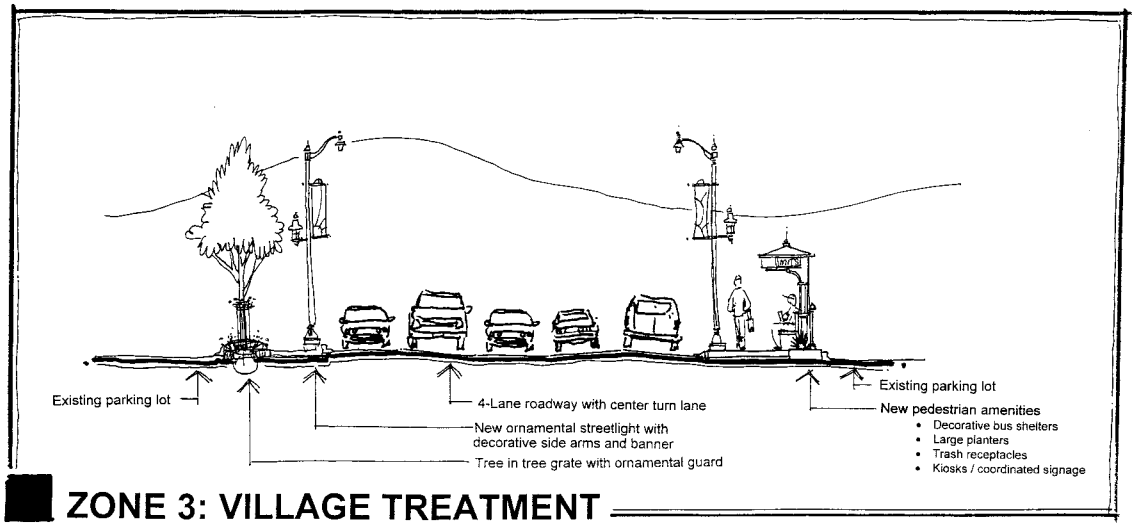
- Install sidewalk;
- Install landscape screen hedge or appropriate wall combination;
- Bury/reduce visibility of utility lines;
- Install new decorative lighting;
- Install banner poles;
- Upgrade bus-stops with additional lighting and signage; and
- Install sidewalk / safe bike path.

6.3.3 ZONE 3: Village District (Tillotson Ave. to Broadway Ave.)

Some of the greatest enhancement challenges along the 332/McGalliard Corridor are found within the areas of the existing mixed-use, auto-oriented commercial strip sub-district. The existing stock of buildings vary significantly in age, building height/scale, material and styles. Multiple drive cuts and parking areas that extend to the street from the building face have eliminated space for landscape and streetscape improvements. Recommendations for this district must balance the need for parking with the need for corridor enhancement.

In general, the following recommendations for enhancement of this district include the introduction of additional pedestrian friendly elements such as street furniture and planters. A recommended list of improvements that continue to expand upon the linear theme concept follows:

- Establish parking lot landscape requirements that provide adequate green space within parking lots;
- Install new decorative street light standards that coordinate with those used throughout the corridor;
- Enhance key intersections (Wheeling, Walnut and Broadway) with a change of paving pattern, appropriate signage, lighting and new ornamental signals;
- Modify parking lot entrance and exit requirements to limit number of drives for each individual business;
- Review existing signs for compatibility with recommended combined pylon/monument sign program;
- Introduce large planters with appropriate planting material where space limitations prohibit traditional ground plantings;
- Install new site furniture – benches, trash receptacles, signage;
- Repair / replace broken and damaged sidewalk; and
- Extend sidewalk to connect with new walks as recommended throughout Zone 1 and 2.



6.4 SPECIAL TREATMENT AREAS

6.4.1 Gateways

- Develop entry/gateway features – especially at the Interstate 69 interchange

6.4.2 Special Identity Intersections

- Develop special design emphasis at the intersections:
  1. Broadway/McGalliard
  2. Walnut/McGalliard
  3. Wheeling/McGalliard
  4. Tillotson/332
  5. Bethel/332
  6. Morrison/332

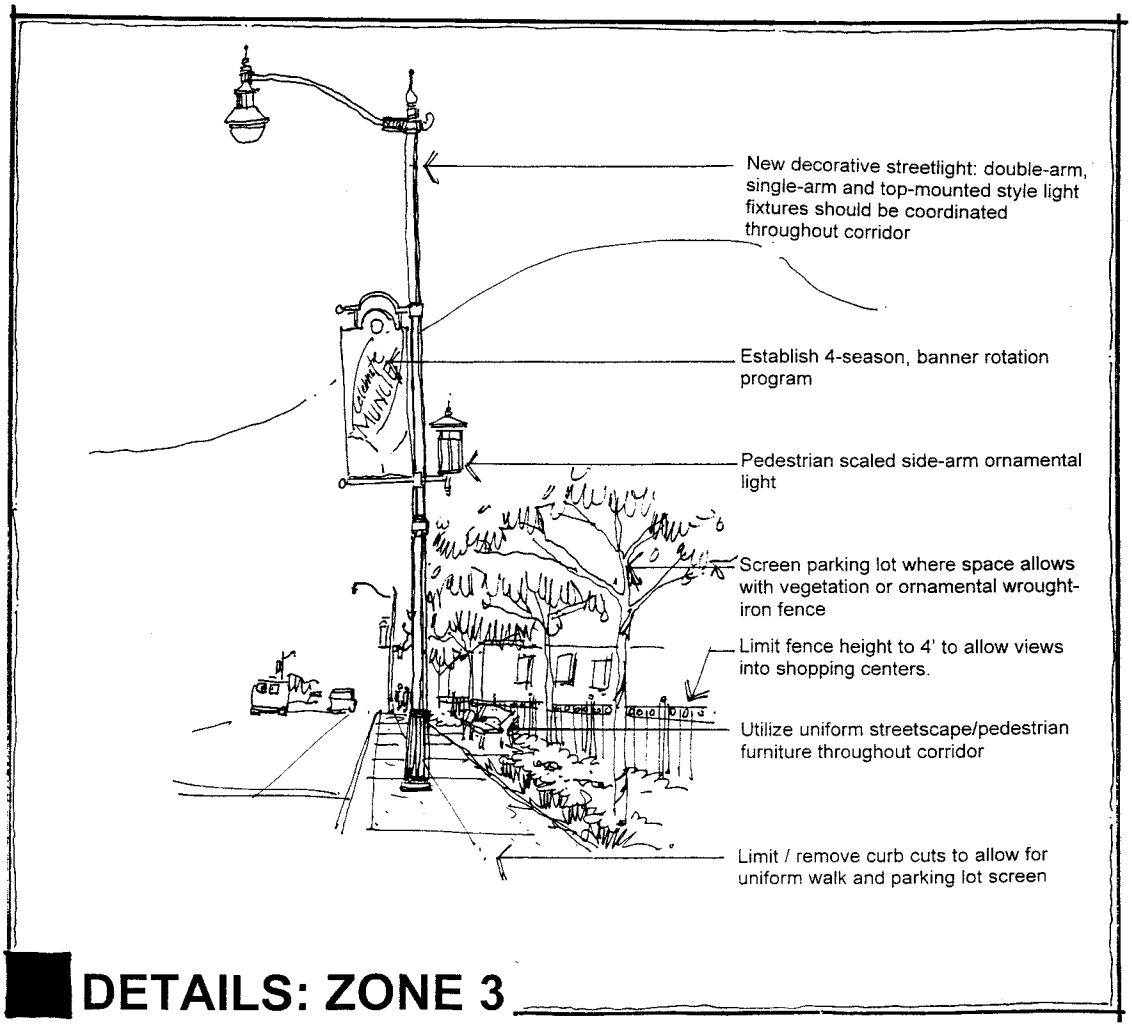
6.4.3 Treatment of Right-of-Way

- Extensive and coordinated landscaping;
- Screening of parking lots through mixed-use of soft and hardscape;
- Screening of service areas;
- Removal of overhead power lines where possible;
- Enhancement of retention ponds;
- Creation of pedestrian path;
- Introduction of decorative street lighting;
- Use of special accent lighting;
- Use of accent paving (at special identity intersections/gateway points);
- Enhance existing boulevards with masses of perennial plantings, vegetation and ornamental lighting;

- Where possible, expand boulevard system to unify and connect corridor;
- Combine drive cuts along the corridor to minimize intersection confusion; and
- Extend frontage road along 332 west – create frontage road for any new development.

6.4.4 Creation of Design Guidelines (Overlay Zone).

- Control future development or redevelopment along the 332/McGalliard Road Corridor through a special zoning overlay district. This special district should address such issues as landscape screening, retention ponds, architecture (height, building set-back etc.), sign standards & graphics and lighting



6.5 SUMMARY

The purpose of the 332 / McGalliard Road Corridor Enhancement study is to:

- Create a unified, harmonious and high-quality visual environment, thereby identifying it as a special place with a unique identity;
- Promote high-quality design through improved development standards along the corridor;
- Foster a distinctive and positive image for the City/County and for 332/McGalliard Road; and
- Protect and enhance existing wetlands, naturally vegetated areas and other natural resources through use of careful site design, protective easements and sensitive alignment of roadways and utilities.

In general, implementation of the plan recommendations is accomplished by careful review of proposed new development, establishment of a program to enhance existing development, and modification of current city/county ordinances. Priorities of development, ranked in a broad order of preference, should be established. A general reference for establishing this order is listed below.

1. Treatment of 332 ROW within Zone 2 – includes landscaping, creation of pedestrian paths, screening of parking lots, addition of ornamental lighting, signage and paving.
2. Development of primary focal feature at the Interstate 65/332 Gateway.
3. Development of special intersection treatments.
4. Treatment of 332 ROW within Zone 1.
5. Treatment of McGalliard Road ROW within District 3.
6. Creation of a community park / open space along the corridor.

CHAPTER 7
POLICY PLAN

One of the primary purposes of a Comprehensive Plan is to make statements and policies of community needs and desires. These statements are crafted in terms of goals, objectives, and policies as defined below:

- Goals – These statements describe, in general terms, desired future conditions.
- Objectives – Objectives describe specific future conditions that are to be attained within a specific time period.
- Policies – These statements outline courses of action or rules that will achieve the specified goals and objectives.

GOAL 1: ALLEVIATE AND PREVENT PROBLEMS (INCLUDING LOSS OF AGRICULTURAL LAND) CAUSED BY SPRAWL.

OBJECTIVE A – Encourage focused development in and around the small towns (County Villages) of Yorktown, Daleville, Chesterfield, Gaston, Eaton, Albany and Selma.

Policy i. Develop residential densities that are within compatible transition of adjacent residential densities.

Policy ii. Provide incentives and rezonings to steer residential development to small town fringe areas, away from agricultural land.

OBJECTIVE B – Promote the preservation of higher-yield agricultural land.

Policy i. Finalize and implement through development code revisions recommendations from the Study Committee for Agriculture Preservation.

Policy ii. Investigate the potential use of large residential lot sizes in areas that are deemed predominantly agricultural in use.

Policy iii. Identify, by soil type, areas suitable for residential development and create appropriate performance standards such as lot sizes, sanitary facilities and access.

OBJECTIVE C – Encourage a compactness in urban land development in order to reduce new infrastructure costs.

Policy i. Annex new territory into the City of Muncie when such annexation is necessary to provide space for City growth, where territory is a logical extension of the urban area.

Policy ii. Regulate the expansion and design of public utilities and facilities in order to promote desired growth timing and minimize negative fiscal impacts.

Policy iii. Focus strip commercial development at major nodes and avoid creating small parcels, through platting requirements, along major arterials which promote excessive curb cuts.

Policy iv. Only low-intensity, open-space and agricultural land uses will be designated outside of urban service areas.

Policy v. Public utilities and services shall not be extended to development outside of the urban areas without logical annexation (note: this is not intended to prevent the extension of utilities into existing urban "places" such as Cowan and Royerton for public safety and general welfare purposes).

Policy vi. Encourage a variety and mix of housing types and densities so as to provide choices for all consumers and provide incentives to steer residential development to inner-city areas, away from agricultural land.

Policy vii. Residential development should be planned and developed with the following principles of the Neighborhood Unit concept:

- Residential uses should be buffered from commercial and industrial uses.
- Medium or high density housing, mobile home parks/subdivisions, churches, secondary schools, commercial sites, and other facilities with intense activity should be located along arterials with access to either the arterial street or a collector street; however, preference should be given to arterials. Low density uses should be buffered from these higher intensity uses through the use of fencing, streets, landscaping and/or topographic features.
- Residential areas should be developed with careful attention given to the natural features of the land.
- Low density residential lots should not have direct access to arterial streets.
- Arterial streets, collector streets, and pedestrian walkways should provide convenient access to schools, parks, and other public facilities.

Policy viii. Revise development code standards to encourage more compact development and more easily allow for infill development.

OBJECTIVE D - Provide adequate public services to support both existing and future residents and businesses.

Policy i. Steer development to areas where major infrastructure investments have been made (e.g. I-69, SR 332, the By-Pass, McGalliard Road, Downtown, etc.).

Policy ii. Encourage infill development and redevelopment in inner-city areas.

Policy iii. Provide for the orderly and efficient delivery of public services, facilities and utilities through coordination and communication of inter-agency plans (e.g. sanitary districts, emergency management, drainage board, utility companies, parks department).

Policy iv. Provide urban services such as recreation, emergency services and other facilities in accordance with nationally accepted levels of service (LOS) standards.

- City and County departments, where appropriate, should utilize LOS data for measuring existing service and adopt nationally accepted LOS standards for evaluation of service.
- The capabilities of non-capital public services (such as police and fire) should be enhanced accordingly through the provision of appropriate staffing, equipment, station facilities, training and education.

OBJECTIVE E – Promote a community that efficiently utilizes land, transportation and energy.

Policy i. Develop and annually update a 5-Year Capital Improvement Program (CIP) for effective use of limited public financial resources.

Policy ii. Limit public facilities expansion to areas of planned growth.

Policy iii. Areas that are, or are projected to be, inadequately serviced by capital facilities should be identified and evaluated for possible inclusion in future CIP's.

GOAL 2: ENCOURAGE ECONOMIC DEVELOPMENT, PARTICULARLY OF TARGETED INDUSTRIES, TO BROADEN AND STRENGTHEN THE ECONOMIC BASE OF THE COMMUNITY AND INCREASE OPPORTUNITIES FOR QUALITY EMPLOYMENT.

OBJECTIVE A – Locate industrial and office uses in areas that minimize conflicts with other land uses and that are supported by adequate infrastructure.

Policy i. Encourage new industries to locate in business or industrial park developments.

Policy ii. Locate industrial and office uses in areas which are accessible by arterial streets and which are supported by adequate infrastructure.

Policy iii. Phase out all nonconforming uses from potential industrial and office areas.

Policy iv. Alter existing zoning districts to minimize land use conflicts (e.g. BV Variety Business Level 1, Level 2, Level 3; II Intense Industrial Level 1, Level 2) and develop appropriate standards and regulations (e.g. no outside storage, outside display or adult businesses in BV Level 1, and outside displays such as auto sales only in BV Level 3; II Level 1 exclusive office/industrial uses with low emissions, noise, etc., and mixed industry for Level 3).

OBJECTIVE B – Strategically develop and/or redevelop industrial and office areas that maximize the potential for future economic development.

Policy i. Provide enough industrial and office sites to accommodate a self-sufficient economic base.

Policy ii. Promote the use of Downtown Muncie as a regional office employment and entertainment center through the provision, where appropriate, of such public improvements as street and intersection improvements, parking improvements and enhancing regional access.

Policy iii. Take maximum advantage of the economic development potential of I-69 by supporting the development of industrial and/or office parks that have ready access to I-69 (e.g. capitalize on interstate and rail access on north side of McGalliard for metal-working, plastics, transportation equipment; capitalize on interstate access on south side of McGalliard for Class 1 industrial park for distribution uses).

Policy iv. Separate and/or buffer heavy industry from light industry, commercial and other land uses.

Policy v. Provide, where feasible and appropriate, shell buildings for speculative industrial development.

Policy vi. Support the development of a business incubator in order to emphasize small business development.

Policy vii. As per the Targeted Industries Study, site industries in accordance with their specific needs, particularly for industrial types identified by targeted industry analysis (e.g. such capitalize on metropolitan proximity and highway access at McGalliard and future West ByPass for Class 1 business park for health services, medical instruments and general offices).

OBJECTIVE C – Diversify the regional economy.

Policy i. As per the Targeted Industry Study, position the economy for emerging national and international economic trends by emphasizing high-tech manufacturing, health care, and information based businesses.

Policy ii. Assist local businesses in increasing international potential through exporting goods and services.

Policy iii. Continue to offer economic development incentives to businesses that satisfy public benefit objectives, such as tax abatement, tax increment financing and public lending.

OBJECTIVE D – Promote a business/industrial community that efficiently and safely uses land, transportation and energy.

Policy i. Develop and annually update a 5-Year Capital Improvement Plan (CIP) for effective use of limited public financial resources and encourage alternate funding sources such as state/federal grants and public/private partnerships.

Policy ii. Focus infrastructure investment on targeted industrial/business park development.

Policy iii. Develop a long-term infrastructure strategy to support and strengthen existing industrial and commercial sites.

GOAL 3: REDEVELOP AND REVITALIZE EXISTING URBAN AREAS.

OBJECTIVE A - Encourage varying densities of residential development with neighborhood and community interconnections with protecting neighborhood integrity.

Policy i. Locate residential and non-residential uses so as to minimize potential land use conflicts.

Policy ii. Provide buffering, screening, separation or other techniques to help minimize nuisances generated from non-residential developments.

Policy iii. Conduct reviews of building, zoning, and subdivision codes and administrative procedures and enforcement at least every five years by an appropriate committee to eliminate disincentives for infill development.

Policy iv. Locate hazardous or offensive industry away from residential uses and impose restrictions to minimize nuisances to nearby land uses.

Policy v. Promote bicycle/pedestrian accessways and easements between neighborhoods, differing land uses, neighborhood amenities and public facilities.

Policy vi. Develop and promote overlay/PUD district applications for redevelopment of existing special areas such as the university village, unique neighborhoods with historic significance, etc.

Policy vii. Residential development should be planned and developed with the following principles of the Neighborhood Unit concept:

- Residential uses should be buffered from commercial and industrial uses.
- Medium or high density housing, mobile home parks/subdivisions, churches, secondary schools, commercial sites, and other facilities with intense activity should be located along arterials with access to either the arterial street or a collector street; however, preference should be given to arterials. Low density uses should be buffered from these higher intensity uses through the use of fencing, streets, landscaping and/or topographic features.
- Residential areas should be developed with careful attention given to the natural features of the land.
- Low density residential lots should not have direct access to arterial streets.
- Arterial streets, collector streets, and pedestrian walkways should provide convenient access to schools, parks, and other public facilities.

OBJECTIVE B – Promote the revitalization of Downtown Muncie as the economic, social and cultural center of the County.

Policy i. Provide resources for implementing public improvements to the Downtown.

Policy ii. Develop streetscapes that improve pedestrian linkages from the Downtown to surrounding neighborhoods, the University, Minnetrista and Oakhurst Gardens, the Community Civic Center, etc.

Policy iii. Encourage the development of regionally significant recreational and social space in the Downtown which will accommodate community-based activities such as art fairs, cultural and musical events.

Policy iv. Continue to provide programs to retain the appearance, cultural heritage and historic character of the Downtown.

Policy v. Promote mixed use development and appropriate Downtown design standards through ordinance revisions.

OBJECTIVE C – Encourage reinvestment in established urban neighborhoods in Muncie.

Policy i. Revitalize and/or conserve established residential neighborhoods through continuing the active community development programs encouraging homeownership and housing rehabilitation.

Policy ii. Encourage the development of neighborhoods that are attractive both from within and without through a continuing program of civic beautification, tree planting, and enforcement of ordinances that promote orderly development.

Policy iii. Develop neighborhood cohesiveness through the recognition of neighborhood organizations and assist such organizations in the planning and implementation of neighborhood revitalization activities.

Policy iv. Institute provisions allowing for block level PUD redevelopment in existing neighborhoods.

Policy v. Provide incentives for sustainable redevelopment of existing neighborhoods by allowing greater densities or other variable standards in exchange for bicycle/pedestrian, open space and other neighborhood amenities.

Policy vi. Develop targeted neighborhood reinvestment/redevelopment plans for the following neighborhood areas: Anthony/Northside, the Central Business District, Old West End, McKinley/Gilbert, Morningside/McCormick, Whitely, Blain/Southeast, South Central, and East Central.

Policy vii. Further study disparities of property assessment in order to eliminate disincentives for reinvestment/redevelopment.

OBJECTIVE D – Promote a livable sustainable urban community that efficiently uses land, transportation and energy.

Policy i. Develop and annually update a 5-Year Capital Improvement Plan (CIP) to effectively use limited public financial resources and assure that an equitable share of public resources are directed toward the needs and problems of areas targeted for reinvestment/redevelopment.

Policy ii. Provide all neighborhoods with adequate public facilities and services.

Policy iii. Supplement Community Development Block Grant (CDBG) and other federal entitlement community development programs going to low-to-moderate-income areas with local resources such as the Economic Development Income Tax (EDIT).

GOAL 4: PRESERVE, PROTECT AND MAXIMIZE BENEFITS FROM THE NATURAL ENVIRONMENT.

OBJECTIVE A – Discourage development in environmentally sensitive areas.

Policy i. Continue to identify all ecologically significant/environmentally sensitive areas and promote preservation/conservation designations based on the identified and accepted areas.

Policy ii. Limit the expansion of public facilities (such as sanitary sewers and roads) into environmentally sensitive areas so as to minimize future development in those areas.

Policy iii. Develop criteria for varying standards based on an environmental sensitivity measure such as larger lots in forested areas or larger open space requirements to accommodate significant areas.

OBJECTIVE B – Promote environmentally sensitive development practices.

Policy i. Promote protective construction practices and encourage preservation, through incentives, rather than mitigation in development design.

Policy ii. Revise landscape ordinances to emphasize, through credits, preservation of existing environmental features.

Policy iii. Incorporate County Storm Water and Erosion Control regulations into the City codes and incorporate, into both, water quality provisions for storm water runoff, such as requiring traps and filtering mechanisms for detention outlets, to mitigate pollution from such runoff.

Policy iv. Develop provisions for appropriate ratios of pervious cover, such as open green space, for individual properties to cause no net increase in surface water runoff from the property and for encouraging regional stormwater detention facilities rather than compensatory storage on individual properties.

Policy v. Develop and/or assure that industries meet appropriate and applicable standards regarding air and water pollution and the handling of hazardous wastes as well as quantifiable performance standards for heat, glare, and noise.

Policy vi. Preserve the integrity of the groundwater supplies through the implementation of a wellhead protection ordinance.

OBJECTIVE C – Capitalize on recreational opportunities provided by Prairie Creek Reservoir as a unique community resource.

Policy i. Encourage passive recreational sites and activities at Prairie Creek such as scenic overlooks and habitats.

Policy ii. Develop a strategic master plan for development and preservation in and around the Prairie Creek Reservoir.

OBJECTIVE D - Continue and expand upon the success of the Cardinal Greenway and the White River Corridor Development and utilize this success to launch other greenway and open space development efforts.

Policy i. Revise the subdivision platting requirements to establish levels of service for greenways and open space and to enable the dedication of rights-of-way and easements.

Policy ii. Provide active (e.g. trails, parks with playgrounds) and passive (e.g. overlooks, scenic and historic sites) recreational opportunities in creative ways such as through subdivision covenants utilizing homeowners associations for maintenance/ownership, development credits allowing off-site tree planting/landscaping in strategic locations, and partnerships utilizing elementary schools to provide school-parks particularly in under-served areas.

Policy iii. Provide regional and community connections to the Cardinal Greenway and promote and encourage partnerships for development of a regional White River Corridor.

Policy iv. Establish a trail thoroughfare plan for greenways/bikeways.

OBJECTIVE E – Promote an environmentally attractive community that effectively uses land, transportation and energy.

Policy i. Develop and annually update a 5-Year Capital Improvement Program (CIP) for acquisition and construction of strategic greenway links in the trail thoroughfare plan.

Policy ii. Promote partnerships for acquisition/preservation of environmentally sensitive and ecologically significant areas and consider establishing an on-going funding source in the CIP as the public contribution.

Policy iii. Encourage recreational opportunities that are financially self-supporting and consider user fees and appropriate concession opportunities as alternative and/or supplemental funding sources.

GOAL 5: IMPLEMENT KEY THOROUGHFARE IMPROVEMENTS

OBJECTIVE A – Create a sustainable intermodal transportation system that encourages opportunities for modal choice.

Policy i. Improve the surface transportation network through the completion of key projects including construction of the western portion of the Muncie ByPass, upgrade, and protect, the arterial links to the Towns of Eaton, Gaston, Albany, Selma, Yorktown and Daleville and the surrounding counties, and upgrade/widen western Muncie arterials such as McGalliard, Bethel and Morrison.

Policy ii. Provide for safe, efficient internal movement within developments and external connection between developments by providing a sufficient quantity of local streets and related facilities supporting bicycle, pedestrian and vehicular movement.

Policy iii. Institute ordinance revisions to require sidewalks and/or roadside trails in new developments and, where feasible, in the redevelopment of existing developed areas and update design standards for streets, sidewalks and trails (e.g. pavement/walkway widths, traffic calming improvements, etc.).

Policy iv. Continue the development of linear parks and greenways within the community.

OBJECTIVE B – Promote an intermodal community that efficiently uses land, transportation and energy.

Policy i. Develop and annually update a 5-Year Capital Improvement Program (CIP) to maximize the use of local transportation dollars for roadway and alternative transportation improvements.

Policy ii. Promote the development of all modes of travel (vehicular, bicycle, pedestrian, transit, rail and air) through programming and coordination of capital improvement projects.

Policy iii. Promote project efficiency and effectiveness through establishment of a coordination committee with partners from all modes of travel, utilities, and developers.

GOAL 6: ENHANCE THE ATTRACTIVENESS OF THE COMMUNITY

OBJECTIVE A – Enhance design requirements for new development promoting continuity.

Policy i. Develop provisions that set out specific standards and recommendations for new development pertaining to landscaping, open space, lighting and, where appropriate, architectural compatibility.

Policy ii. Institute appropriate review procedures for adherence to design standards.

Policy iii. Promote new signage provisions and encourage pilot signage projects and/or funding for amortization of nonconforming signage.

Policy iv. Encourage programs and provisions that promote retrofitting existing development to meet the new standards.

OBJECTIVE B – Provide urban design connections to major activity centers such as Ball State University, Ball Memorial Hospital, the Downtown and recreational/cultural centers.

Policy i. With continuity of streetscape design, provide for distinct connection of Ball State University and the Downtown.

Policy ii. With continuity of design, provide monuments and/or public spaces at major activity centers to provide a sense of mutual identity and focus.

Policy iii. With continuity of streetscape design, provide for connections between major activity centers and neighborhoods.

OBJECTIVE C – Enhance landscaping and design standards along major gateways of the County and entryways of the City.

Policy i. Implement corridor overlay districts to address specific issues along major gateways.

- McGalliard Road/SR 332 – signage and landscaping
- Bethel Avenue – signage and landscaping
- SR 32 – emphasize rural and historic themes
- Muncie ByPass – signage, landscaping and visual interest
- SR 67 – signage, landscaping and visual interest
- Hoyt Avenue – unified setbacks and streetscape
- Madison Street – unified setbacks and streetscape

Policy ii. Develop monumental spaces at major entryways into the City such as McGalliard Road, SR 32, SR 3, SR 67, US 35, and Wheeling Avenue.

OBJECTIVE D – Promote a well-maintained aesthetically pleasing community that efficiently uses land, transportation and energy.

Policy i. Develop and annually update a 5-Year Capital Improvement Program (CIP) for effective use of limited public resources that includes maintenance of public infrastructure.

Policy ii. Dedicate an annual apportionment for the maintenance of sidewalks and curbs and investigate programs and policies for public/private cost sharing of such maintenance.

Policy iii. Encourage and, where feasible, institute an "immediate response" approach to repair of streetscape features such as curbs and sidewalks,

Policy iv. Promote public streetscape features such as lighting, signals and signs that are aesthetically enhanced with continuity of design and encourage dedicated and alternative sources of funds for such improvements, including improvements associated with new developments.

CHAPTER 8
PLAN IMPLEMENTATION

8.1 INTRODUCTION

Good planning proceeds from the general to the specific. Previous chapters of this Comprehensive plan typify this progression, with the issues (the "why") being outlined in Chapters 2 and 3, the land use and transportation plans (the "what" and "where") being discussed in Chapters 4-6 and the policies (the "what" and "who") being discussed in Chapter 7. This Chapter completes the progression by discussing "how" these items should be implemented.

The implementation programs of the comprehensive plan describe the specific actions that the jurisdictions will take and will require of new developments to implement the vision of the future as expressed in comprehensive plan goals, objectives, approaches, and policies. Comprehensive plan implementation is organized into three general programs:

- ***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 whose activities affect, and are affected by, the various towns in the County, Muncie and Delaware County.

- The ***Strategic Planning Program*** integrates the comprehensive plan with the ongoing operations and budget and capital improvements programs of each jurisdiction. The Strategic Planning Program also includes provisions to ensure a regular review of the comprehensive plan and implementation efforts.

Follow-up Studies and Action Programs

Create a Plan Commission Work Plan

The plan commission should create a work plan to organize their activities on an annual basis. This will help the commission focus on the steps necessary for the implementation of the comprehensive plan. A work plan will be beneficial in setting priorities and making decisions on how to most effectively use the precious time of the commissioners.

Zoning and Subdivision Control Ordinances

Comprehensive plans are not regulatory documents. This fact often results in some confusion, since most people associated the "planning" in comprehensive planning with "zoning", which is indeed regulatory. Two of the most common regulatory activities for implementing a comprehensive plan include the municipality's zoning and subdivision ordinances, in accordance with state laws and requirements.

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). In most states, approval of the subdivision of land requires the approval of the pertinent local governing body, leading municipalities to adopt subdivision ordinances regulating aspects of the development of the land, and placing the burden of providing public infrastructure directly upon the landowner.

Muncie and Delaware County adopted their most recent development ordinance, the Comprehensive Zoning Ordinance, in 1973 (as amended). The Ordinance is an interesting example of a unified development ordinance, combining zoning and subdivision regulations with other types regulations, including (but not limited to) landscaping, signage, and adult entertainment. The Ordinance specifies uses and requirements by zoning district, with several types of residential types of residential, commercial, and industrial districts varying by intensity. Standards for use and bulk variances are relatively well-defined. Subdivision aspects of the Ordinance include development standards and requirements, as include an interesting "greenbelt" provision intended for buffering properties and preserving open space.

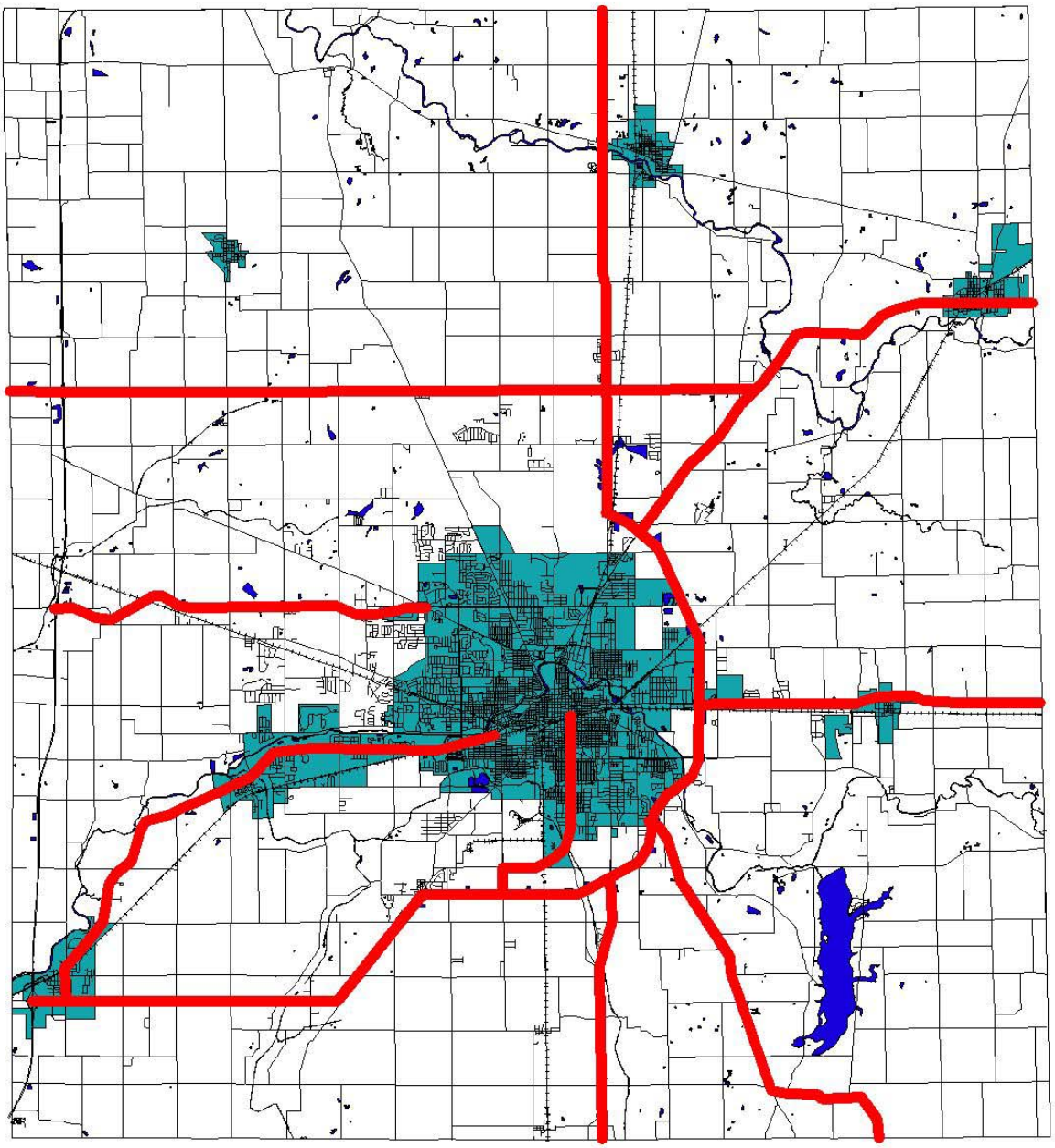
After the adoption of the comprehensive plan, the metropolitan plan commission will undertake preparation and adoption of amendments to the zoning and subdivision control ordinances to implement the comprehensive plan. Included in the zoning ordinance revision will be preparation of a zoning map to reflect the Proposed Land Use Map. The following issues are to be addressed, and applicable comprehensive plan policies and performance standards are to be implemented in the ordinances:

- Procedures are not specified in great detail (although submittal requirements are well-defined). This can be particularly harmful in the Planned Unit Development (PUD) process, the state authorization law for which has recently been amended.
- Clarity of the Ordinance and continuity with the Comprehensive Plan would be heightened through the inclusion of residential, industrial, and commercial development policies.
- No quantifiable industrial performance standards (which typically include glare, noise, heat, vibration, and emissions) are included.
- The minimum residential lot size in agricultural zones needs to be reconsidered. Large minimum lot sizes can be controversial; generally, they are intended to slow the pace of development in agricultural areas, but if the minimum size is not truly restrictive (i.e., 20 acres or larger), then a possible negative side effect is larger "chunks" of farmland being taken out of production. A subcommittee of the Comprehensive Plan Steering Committee has been set up to study the issue, and has not reached a consensus as of this writing.
- Design standards for development generally lack specificity, which may introduce problems in their consistent implementation. For example, there are no standards regarding pavement or right-of-way width for new development, minimum block length for residential subdivisions, or turnabout diameter for cul-de-sacs.

- Impact fees should be examined as an alternative means to develop funding for equitable park, road and other improvements
- Sidewalks and bicycle facilities should, where appropriate, be required in new development, and appropriate standards developed.
- Connection of new subdivisions to the sanitary sewer system should be required. Public facilities should be a prerequisite for development.
- The emphasis on setback requirements may create difficulties for infill residential development. These setbacks and their application to the average inner-city residential lot should be examined.
- Alternative affordable housing formats (elderly homes, assisted living facilities, and "Granny Flats") should be incorporated as permitted uses.

One proposal that results from the comprehensive planning process deserves special consideration here – overlay zones. These zones "lie over" other zoning districts, and provide additional regulatory guidance on design review, landscaping, development standards, and land use. Where the standards of the overlay zone conflict with the underlying zoning, the more restrictive requirement applies. Chapter 6, Section 6.4.4 discusses the proposed elements for one such zone. Map 8-1, Overlay Zones, shows the location of proposed overlay zones in the County. The following specific overlay zones are proposed, with the same concepts to be carried over to the other thoroughfares shown on Map 8-1:

- *McGalliard Road*. This corridor is slated for relatively intense commercial and industrial development, ensuring its role as a major entryway into the City of Muncie. McGalliard also serves as a primary access road to Ball State University and Ball Memorial Hospital, and hence is heavily utilized by visitors to the community.
- *SR 32*. More rural in character than McGalliard, this two-lane state highway provides access to Yorktown and Muncie. Controls along this corridor should emphasize rural and historical themes and should include being in place to the Delaware County line.
- *Muncie By-Pass.* Landscaping and other visual items of interest should be the focal point for this overlay zone.
- *Hoyt Avenue, Muncie Street, and US 35 (business).* These entryways into the City should focus on consistent setbacks for a unified image.
- *SR 67*. Becoming one of the newest major Gateways from I-69 into the county and the City of Muncie, this corridor warrants attention related to urban design, signage, landscaping and access/egress controls



Map 8-1: Overlay Zones

Overlay Locations

Railroads

City Limits

1 0 1 2 Miles

Create a Public Improvements Design Standards and Specifications Manual

- To foster intergovernmental coordination and clarify development requirements, the plan commission should create a Design Standards and Specifications Manual that will address plat requirements, design principles, specifications and standard construction details for public improvements. The manual will provide guidelines for designing streets, blocks, lots, easements, open spaces, bicycle and pedestrian facilities, and other site amenities. The specifications section would address the construction and installation of these features. Having all of these standards in one document provides clear, one-stop-shopping for information on improvements throughout the county. With the entire county covered by these requirements, it will be important to address the different design conditions between urban and rural areas.

Downtown Special Study

The downtown area of Muncie is still in need of a specific market oriented revitalization strategy. While plans for its physical improvement are progressing, development strategies based upon market sensitivities must be completed in parallel to the physical plans.

Western Growth & Arterial Circulation Study

A special transportation study needs to be completed, as soon as possible, to examine capacity, circulation and roadway needs and, if new roadways are endorsed, to identify alignments these segments could take and transportation /land use merits of each examined.

The Village/University Special Study

The Village area of Ball State University, including Ball Memorial Hospital, has the potential to be a very special characteristic area for the campus of Ball State University and the City of Muncie as a whole. A special study of the Village should be conducted in order to develop a land use and urban design strategy which accents and capitalizes on the character of this area in order to provide Ball State and Muncie with a design development strategy which highlights this area and provides for future marketing of the campus.

Prairie Creek Special Study

The Prairie Creek area of Delaware County represents a very special amenity to the county, both as a recreational venue, but also as an area with strong development potential for upscale housing. A subarea study of the long term of Prairie Creek should be conducted. Included in that special study the following issues should be examined;

- Environmental amenity preservation areas
- Utility extension alternatives
- Other infrastructure requirements
- Alternative development patterns including the provision of upscale housing sites

Intergovernmental Coordination and Community Involvement Program

Opportunities exist for greater intergovernmental cooperation in order to preserve the quality of life in Muncie and Delaware County. The implementation of the vision for Delaware County's future involves complex issues that cross geographic boundaries. Therefore, concerted efforts by several governmental entities are required to resolve certain issues. Each of the jurisdictions within Delaware County is committed to working with its neighbors to achieve this vision. Suggested intergovernmental cooperation areas of opportunity include the following:

Coordinate Land Use Planning Activities

Actively coordinate land use planning efforts with adjacent jurisdictions. Pursue formation of ad hoc coalitions with other local agencies and community groups as a means of increasing the effectiveness of each jurisdiction's voice in regional planning efforts and the planning efforts of adjacent jurisdictions.

On an annual basis, initiate discussions of issues of mutual interest with local, regional, State, and Federal agencies whose efforts could benefit or impact the comprehensive plan.

I-69 Coordinating Committee

The I-69 Corridor is proposed to be the only major north/south corridor connecting Canada to Mexico, through the U.S. This corridor has been identified in the comprehensive plan as being integral to the long-term economic vitality of Delaware County and the City of Muncie. To that end, the City and County must become more involved in the efforts in the State of Indiana and nationally to encourage the development of this corridor.

Annexation Strategy

Using this comprehensive Plan as a guide, an annexation strategy should be developed to highlight the timing of strategic annexations and geographic priority of utility extensions.

Neighborhood Plans

Fundamental to this comprehensive plan is the concept of improving many of Muncie's neighborhoods in order to provide for more efficient infill and capitalize upon infrastructure investments which have been made in the corporate limits, as a means of discouraging the need for some suburban residential development. Inherent in this concept is the need to have a comprehensive neighborhood planning improvements strategy which would include code enforcement, redevelopment strategies, infrastructure improvements and overall cleanup actions.

Circulation Facilities Coordination

To the degree feasible and to the extent permitted by interagency cooperation, pursue establishment of reciprocal traffic improvement programs with jurisdictions within and surrounding Delaware County to ensure that traffic resulting from development in these communities does not adversely impact the street system in Delaware County and other jurisdictions.

Expand Park Facilities and Programs Coordination

To ensure adequate availability of park and recreation programs and facilities, coordinate recreational programming, park planning, and park acquisition activities with the Indiana Department of Natural Resources, the Muncie Consolidated School Corporation, and the City of Muncie. Efforts shall include, but not be limited to:

- coordinating planned locations of schools and parks with the school district, and pursue joint use agreements for the development and maintenance of park facilities within joint use park/school facilities;
- pursuing alternative sources of funding for the acquisition and development of active park land;
- working with bicycle enthusiasts to identify and designate bicycle paths, lanes, and routes throughout the county;
- updating recreation programming to meet the changing needs of residents; and
- pursuing the creation of revenue generating recreational activities.

Enhance the Marketability/Coordination of Economic Development

The Muncie/Delaware County Chamber will work with major land owners and utility service providers to ensure that the transportation and infrastructure provided at critical economic development sites throughout the county is sufficient in capacity and quality to attract desired industrial targets. While coordination between the City, County and Chamber certainly already exists, it is paramount that coordination and communication be maximized between these three entities. One of the concepts to be implemented for this strategy includes the formalization of a public/private "Business Opportunities" response team. Such team would be able to provide quick response related to lending, zoning, permitting and other quick due-diligence issues, in order to provide potential businesses efficient responses.

Coordinate Non-automotive Paths with Road Improvements

After the identification and designation of bicycle paths, lanes, and routes throughout the county, the parks department or agency with responsibility for the implementation of the bicycle plan will coordinate with state and local transportation departments to coordinate the creation of bicycle facilities and sidewalks with scheduled roadway improvements where possible.

Strategic Planning Program

Capital Improvements Planning

The City and County should engage in long-range capital improvements programming, which is tied to this Comprehensive Plan. Capital improvements programming is a disciplined process that considers budgetary, environmental, and debt service constraints. A capital improvements program (CIP) typically consists of a five-year program and an annual capital budget. Both the City of Muncie and Delaware County should utilize the Comprehensive plan as the joint blueprint for elements to be implemented by capital improvements.

Items that should be considered in the development of the CIP include acquisition of land (e.g., greenways), as well as construction. Some specific items for potential inclusion in the CIP are listed as follows:

1. Stormwater facilities;
2. Transportation, not only roads and highways, but also sidewalks, bicycle facilities, and other modes;
3. Parks facilities, including linear parks and greenways;
4. Water improvements;
5. Sanitary sewers;
6. Fire and police stations; and
7. Large equipment items, e.g., pumper trucks, police vehicles.

The Board of Public Works is the lead entity in the implementation of capital improvement items, and therefore should be very active in the development of the capital improvements program. The City/County Planning staff should also be active, in order to maintain the link between the Comprehensive Plan and planned infrastructure improvements. Fundamental to this CIP effort a thorough analysis of financing tools should be completed. This funding analysis should include examination of the range of annual local, state, federal, private and endowment funding which may be available for the five year CIP.

Periodic Monitoring/Comprehensive plans to Comprehensive Plan

The Comprehensive Plan should reflect changes in the community. The City and the County should review the plan once a year in order to determine whether or not its recommendations are still relevant. Changing conditions can have significant impacts on how effective the Plan is. Therefore, annual reviews should monitor such things as:

- Major differences between projected economic and demographic growth rates and actual growth;
- Requests for amendments to the comprehensive plan, in order to determine if there is a pattern of requested changes emerging; and
- Changes in the local/regional organizational structure that may affect the implementation of the Plan.

Information regarding the state of the community should be continuously maintained and comprehensive planned. The County Plan Commission's implementation of a community-wide geographic information system (GIS) is a significant component of information maintenance. Such a system enables the planning staff to quickly and accurately ascertain patterns of development, changes in population, and other new developments pertinent to the implementation of the Plan.

The population and employment projections in this Comprehensive Plan are intended to depict the community's composition and growth to the Year 2020, but the Plan should not be expected to remain valid for the next twenty years without further comprehensive plans.

Recommendations Summary

All of the above measures would enhance the implementation of the comprehensive plan. However, limited funding prevents all of these measures from being established at once. Therefore, the measures need to be prioritized and ranked in order that the measures should be pursued. Prioritization is based upon the benefits, relationship to other measures, and feasibility of implementation. Measures are prioritized by five year increments.

Year 1 - IMPLEMENTATION MEASURES
Begin comprehensive plan to the zoning and subdivision control ordinances.
Establish capital improvement plans for Muncie and Delaware County.
Join I-69 Coordinating Committees at State and National levels
Complete BSU Village "Special Study"
Initiate Western Growth & Arterial Circulation "Special Study"
Promote Downtown "Special Study"

Year 2 - IMPLEMENTATION MEASURES
Create a public improvements design standards and specifications manual.
Coordinate circulation facilities.
Expand park facilities and programs.
Complete Overlay District Studies

Year 3 - IMPLEMENTATION MEASURES
Coordinate non-automotive paths with roadway improvements.
Complete Prairie Creek "Special Study".

Ongoing Measures
Create plan commission work plan.
Coordinate land use planning activities.
Complete annual comprehensive plan review.
Participate in regional project review.
Enhance the marketability of industrial sites.