

CALHOUN COUNTY MASTER PLAN

A Comprehensive Land Use Plan

June 2005



*Balancing the Preservation of Natural Resources
with the Opportunity for Development*

CALHOUN COUNTY MASTER PLAN
A Comprehensive Land Use Plan

Calhoun County Metropolitan Planning Commission

Rebecca Rocho, Chair

Dan Kesselring, Vice Chair

Larry Rizor, Secretary

Robert Bolton

Terance Lunger

Kelli Scott

Blaine VanSickle

Calhoun County Master Plan

Adopted June 13, 2005

Amended _____, 2012



**Calhoun County
Planning Department**

Table of Contents

Section I Introduction.....	1
Location.....	2
Planning Process	2
Section II Natural Resources	4
Wetland Areas	5
Floodplain Areas	5
Woodland Areas.....	5
Soil Conditions.....	5
Prime Farmland.....	5
Parks and Recreation.....	5
Wellhead Protection Areas.....	5
Section III Existing Land Use.....	4
Zoning	5
Agricultural/Residential	5
Commercial/Industrial.....	5
Transportation Systems	5
Section IV Demographic Analysis.....	4
Urban Neighborhood.....	5
Southwest Rural Neighborhood	5
Marshall Area Neighborhood.....	5
Southern Neighborhood	5
East/Northeast Neighborhood	5
Calhoun County	5
Education, Employment and Retirement	5
Population Projection	5
Section V Goals & Objectives	4
Agricultural Enterprise and Farmland Preservation.....	5
Parks and Recreation.....	5
Land Use Planning	5
Economic Development	5
Transportation and Infrastructure.....	5
Section VI Future Land Use Plan.....	4
Open Space.....	5
Agricultural	5
Residential.....	5
Transitional	5
Commercial	5

Industrial	5
Master Land Use Plan Map.....	5
Section VII Implementation.....	4
Development Corridors	5
Coordinated Site Development	5
Concept Plans.....	5
Review of Local Plans	5
East/Northeast Neighborhood	5
Calhoun County	5
Education, Employment and Retirement	5
Population Projection.....	5

List of Tables

Table 1A Urban Neighborhood Population and Housing Data.....	1
Table 1B Urban Neighborhood Population and Housing Change.....	4
Table 2A Southwest Rural Neighborhood Population and Housing Data	4
Table 2B Southwest Rural Neighborhood Population and Housing Change	4
Table 3A Marshall Area Neighborhood Population and Housing Data.....	4
Table 3B Marshall Area Neighborhood Population and Housing Change	4
Table 4A Southern Neighborhood Population and Housing Data.....	4
Table 4B Southern Neighborhood Population and Housing Change	1
Table 5A East/Northeast Neighborhood Population and Housing Data	4
Table 5B East/Northeast Neighborhood Population and Housing Change	4
Table 6A Neighborhood Density Data	4
Table 7A Calhoun County Population and Housing Data.....	4
Table 7B Calhoun County Population and Housing Change	4
Table 7C Calhoun County Household Data.....	4
Table 7D Calhoun County Age Distribution.....	4
Table 7E Calhoun County Population Projection Data.....	4

List of Maps

Map 1 Calhoun County and Surrounding Region.....	1
Map 2 County Base Map.....	4
Map 3 Planning Neighborhoods.....	4
Map 4 Wetland Areas.....	4
Map 5 FEMA Floodplain Areas	4
Map 6 Woodland Areas.....	4
Map 7 Prime Farmland.....	4
Map 8 Non-Motorized Trails.....	1
Map 9 Designated Wellhead Protection Areas	4
Map 10 Local Zoning.....	4
Map 11 Local Land Use	4
Map 12 Development Corridors.....	4

Map 13 Utility Service Areas (Existing and Proposed).....4
Map 14 Calhoun County Master Land Use Map4
Map 15 Concept Plans.....4
a. Interstate Development Build-out.....4
b. Interstate Development Alternative.....4
c. Lake/Village Build-out.....4
d. Lake/Village Alternative4

SECTION I: INTRODUCTION

The ~~2004-2005~~ Calhoun County Master Plan was undertaken in order to provide guidance and coordination for programs conducted by Calhoun County and as a resource document for local units of government and business interests within the County. It was developed based upon a premise of the County serving as the link between these local units of government (and the citizens they represent) and the influence of regional, state and federal resources and impacts on local decisions. In addition, the County's connection to a much larger regional market area provides the potential for business development and the opportunity for ease in commuting.

Location

Calhoun County is located in southern Michigan, centered within the State and overall Great Lakes Region (See Map 1). Two interstate highways intersect just northwest of the county seat in Marshall. I-94 serves as the east/west linkage between the metropolitan areas of Detroit and Chicago as well as providing convenience of access to the Jackson and Kalamazoo areas. I-69, a central focus of the movement of goods from Mexico and Canada under NAFTA (North American Free Trade Agreement), provides for north/south linkage to the Lansing and Indianapolis markets. Many residents of the county undertake less than 45-minute commutes to Lansing (north), Coldwater (south), Jackson (east) and Kalamazoo (west) for employment purposes. Residents of those areas also commute into the county, with the three largest cities of Battle Creek, Albion and Marshall providing unique downtowns and industrial park facilities. The southern tier of the County, served by the M-60 corridor, provides for connection of the Villages of Athens, Burlington, Tekonsha and Homer, with each surrounded by Townships of the same name. These smaller communities present their own unique qualities and support additional commercial and industrial development potential.

Planning Process

This Plan is based upon a format and planning process associated with the County Planning Act and amendments that took effect in January of 2002 (PA 264 of 2001). These amendments were directed at improved coordination between local units of government in terms of input and review, as well as the foundation for other planning and ordinance efforts at the county level. As part of this overall coordination effort, Calhoun County administers a number of programs that are linked within this Master Plan. These were identified as the following five program areas:

- Agricultural Enterprise and Farmland Preservation
- Parks & Recreation
- Land Use Planning
- Economic Development
- Transportation & Infrastructure

Agricultural Enterprise refers to the range of activities and disciplines encompassed by modern food production, and can include everything from planting and growing of farm

commodities (including the supply and support services) to the marketing, production, and sale of goods produced. Given the County's strong foundation in farm-to-table food production, it is important to demonstrate the link between rural land use and the nearby urban industries that benefit from these commodities. Prime farmland provides the unique resource rich for niche markets relating to food science/safety and biosciences where such expertise can be transferable to other industries. Food production, food science/safety, and the more recent community supported agricultural initiatives that are becoming prevalent in the County's urban centers provide a foundation for economic stability in the greater Battle Creek area and the overall Calhoun County community.

Farmland Preservation efforts in Calhoun County ~~is~~are based, primarily, upon the County ordinance creating the Calhoun County Farmland Preservation Program adopted by the County Board of Commissioners in 2003. This ordinance established the seven-member Agricultural Preservation Board and the framework for a countywide Purchase of Development Rights (PDR) program. The PDR program is authorized under the County Zoning Act and funding is coordinated between federal, state and local resources. The potential for grants from the State of Michigan is ~~based~~dependent upon the establishment of ~~the~~a program (under P.A. 262 of 2000) supported by ~~based on~~ a comprehensive land use plan (adopted within the last 10 years) and the ability to raise matching funds toward the purchase of these development rights or through conservation easements. Farmland preservation should be viewed as a community-wide economic development strategy and recognized through appropriate zoning techniques that support preservation efforts.

It should be noted that specific properties are not identified for preservation, but rather, generalized areas that are free from the pressure of more intensive land use beyond the natural division of property for large lot single family residential development. In most instances, these areas are supported by the criteria related to preservation priority outlined within the County's ordinance.

Parks & Recreation is based, primarily, on the County's 5-Year Recreation Plan, which is required by the State of Michigan in order to obtain grants for specific parks and recreation projects through state agencies that focus on natural resources, environment, and transportation. ~~the Michigan Department of Natural Resources and Environment as well as Michigan Department of Transportation.~~ In addition to these funding sources, other grants are available for the development of non-motorized facilities, including bike paths, through transportation enhancement grants or similar programs. The overall intent is directed at establishing a network of community recreational facilities, including schools, linked by linear parks that may connect to regional and statewide facilities. Such facilities offer an alternative to motorized travel and provide access to natural resources while protecting them from development.

Land Use Planning is the coordination of planning efforts that include responsibilities under the County, Township and City/Village Planning Acts and associated zoning statutes. Due to the large number of local units of government in Michigan, coordination at the County level is critical in order to build strong relationships directed toward both development and preservation programs. The focus on creating "neighborhoods" within the planning process

was intended to build on the unique characteristics within Calhoun County and solicit input and guidance from local officials on the resources they need to enhance community development.

Economic Development is a broad-based coordinating effort associated with all aspects of development planning in order to retain and attract business and industry within Calhoun County and the region. This includes opportunities for employment through the support of industrial development, the provision of accessible commercial facilities and services, as well as suitable areas for housing development. Supporting agriculture as a viable business, based upon its historic influence on the County's development, is critical to the balance needed between both development and preservation alternatives. It is important that this broad "package" of resources be in place or within the County's plans in order to meet the needs of business and industry while serving as a preferred location in which people seek both short-term and long-term residence.

Transportation & Infrastructure is also intended to support economic development efforts through capital improvement programming (CIP). This element of the plan creates a "comprehensive" outlook on community development. Due to the unique characteristics of the County, the location of two major interstate highways and the Kalamazoo River system (See Map 2), the natural pattern of development is often interrupted by natural or man-made features. These features create expensive obstacles when associated with the extension of public utilities or road improvements. The identification of "development corridors" is based upon the need to focus capital improvement efforts into specific areas of the County based upon the preservation of natural resources and farmland as well as limitations on financial resources to undertake such projects.

The five program areas outlined above establish a building block approach, with protection and preservation of farmland and open space areas followed by more intensive land use and the identification of development corridors. In Calhoun County, such a Plan must also be based upon the natural differences in terms of population concentration and the historic pattern of development. Five "neighborhoods" were established for planning purposes, in order to gain local input and identify differences in opinion and outlook for specific areas.

Focus Initial meetings were held with elected township officials and planning commission members where ~~and~~ a mapping program was presented to provide a resource base for discussion. Maps identified areas of prime farmland and where protection of wetlands and floodplains was deemed critical to the long term health of our environment. This was followed by a second round of meetings with the focus on the five program areas. It was clear from the input received at these meetings that overall quality of life for residents of Calhoun County cannot be achieved without first defining areas for protection and preservation. This second round of public input was incorporated into the *Goals & Objectives* element of the plan.

This document is intended to be a 20-Year Comprehensive Land Use Plan through the year 2025. The Plan includes 2010 Census data, which has been coordinated with 1990 and 2000 Census data and analysis to project future population within the *Demographic Analysis*. This projection will be compared with data released for the 2020 Census in order to evaluate how

accurate the projections were and whether an update is required. The document is designed so that individual elements of the Plan can be reviewed and updated on a five year basis, consistent with County Planning Act requirements. It is also presented in a manner in which it can be modified and amended on an as needed basis, such as a change in condition that may warrant such amendment.

The theme of the Plan is directed at **balancing the preservation of natural resources with the opportunity to support new development within the County**. While a thorough *Natural Resources* inventory was not undertaken, based upon the size of the County and the scope of such an endeavor, available resources were utilized in the determination of preservation areas. These resources included the Calhoun County Soil Survey and a graphic presentation of conditions that identified compatibility or constraint, such as prime farmland or locations that were not suitable for building site development. *Existing Land Use* and zoning was reviewed in order to build on the current pattern of development and to coordinate such land use with the plans and ordinances of the local units of government within the County.

The Plan concludes with a *Future Land Use* element, a generalized narrative and map designating areas of the County intended for future development. This is then carried forward into the *Implementation* element, outlining how the pattern of development follows transportation and natural resource corridors. The ability to coordinate site development leads to the potential for both large scale and small scale projects to effectively achieve this desired outcome. Two concept development plans are included to assist in presenting these recommendations in both narrative and graphic form.

SECTION II: NATURAL RESOURCES

The initial step within a land use planning process is to evaluate the natural features and assess the natural resources that must be protected or preserved. The balancing of development with the protection of the natural environment, including surface water and groundwater and those areas highlighted below, cannot be understated. Failure to consider the long-term impact of development will lead to increased difficulty in supporting the needs of future generations to enjoy and rely on the benefits of our limited natural resources.

As part of this planning process, a series of maps were developed that characterize the landscape of Calhoun County. These maps were developed from a range of data resources related to our natural environment, including a survey of soils, water and drainage features, and topography. Many such features have shaped decisions related to man-made improvements, specifically the provision of public facilities such as roads and bridges across these natural barriers in support of the local and regional economy. This transportation system has often served as the most crucial determinant in balancing new development with the protection of our natural resources.

Wetland Areas

Our natural resource base includes a wide range of features and conditions. Initially, surface water features have long attracted development, leading to over population and increased pollution of these resources. In addition to these recognized water features are other areas, known as wetlands, which provide immense benefit to the natural environment. Wetland areas within Calhoun County (Map 4) include areas that adjoin surface waters as well as other areas, which may or may not be regulated ~~by through~~ state/federal laws governing natural resources and environmental quality. Such wetlands are critical for protection of the environment due to their water filtration benefits. They also serve as habitat for plants and animals that enhance overall quality of life. These areas should be preserved and most have been designated under *Open Space* within this land use planning process.

Floodplain Areas

In addition to surface water bodies, storm water flows can tremendously alter the landscape and efforts should be made to prohibit or limit development where such conditions exist. Floodplain areas (Map 5) in most instances follow these surface waters, primarily along rivers and streams and their tributary areas. Because these areas naturally discharge into surface waters or infiltrate into groundwater supplies, preservation in their natural state is critical for a healthy environment. Buildings, parking areas and other impervious surfaces inhibit natural flow patterns, disrupt temporary storage, and introduce chemicals that may spread pollution into surface water and groundwater supplies. Again, most of these areas have been designated under *Open Space* within this Plan.

Woodland Areas

Other natural features and important areas for infiltration are woodland areas presented on Map 6. These areas may or may not have characteristics associated with wetlands, but are again critical areas for plant and wildlife habitat. Where these areas are connected to wetland and floodplain areas depicted on Maps 4 and 5, additional protection should be considered

due to the natural development of wildlife habitat corridors along with higher potential for infiltration of precipitation. However, as with the attraction for development along inland lakes, woodlots are often the preferred choice for new housing sites. Planned development utilizing woodlots as open space set asides, or with minimal and appropriate harvesting that can protect these woodland areas is strongly encouraged. While these areas may not be as critical as preservation of wetland and floodplain areas, the aesthetic and environmental benefit of a diverse landscape cannot be understated.

Soil Conditions

The Calhoun County Soil Survey provides a valuable tool in defining areas of the County that have soil characteristics in support of preservation as natural open space areas. These include hydric soils that typically show consistency with these wetland and floodplain areas, as well as woodland areas that may include low-lying hardwoods. In addition, the survey also depicts areas where soil conditions may support increased development based upon suitability for on-site septic systems and building foundations. These same soils may also be most supportive of agricultural production of crops, leading to conflict between preservation of farmland and demand for residential development. In some instances, such as in Pennfield, Emmett and Marshall Townships, large tracts of prime farmland are located in areas planned for commercial and industrial development, reducing the influence of agricultural production in favor of expanded employment and service businesses. Despite plans for more intensive development, these areas have remained in active agricultural use pending this future development.

Prime Farmland

Farmland is a valuable resource in Calhoun County. Seventy-one percent of the county is comprised of prime farmland soils, and that which remains undeveloped is being compromised due to haphazard fragmentation of land in the active agricultural areas. The Calhoun County Agricultural Preservation Board, and the committee that worked toward its formation, established the areas presented on Map 7 that show soils with the highest capability for agricultural use. In addition to analysis of soil conditions, other factors such as parcel size, proximity to utilities, and local planning and zoning policies, have been considered when determining the areas to be most likely eligible for preservation efforts (the hatched areas defined on Map 7). Preservation of farmland in Calhoun County may be accomplished through the County Purchase of Development Rights (PDR) program, as well as other planning and zoning techniques. The discouragement of land fragmentation in the productive and active farmland areas through techniques such as quarter-quarter zoning, sliding scale zoning, and open space/conservation design elements, to mention just a few, can be successful when implemented consistently and in conjunction with the County PDR program. Calhoun County is heavily grounded in the food science/safety industry and it is critical that consideration be given to the impact of the agricultural industry on the local economy and that preservation of these areas be encouraged.

Cost of community services studies conducted in Calhoun County indicate that farmland provides a net return on the services provided and therefore, is a fiscal asset to the community. Other economic benefits of farmland preservation include strengthening the local agricultural economy and increasing the long-term sustainability of farming and, in

turn, limiting the dependency on other nations for food. In addition, farmland provides habitat for wildlife, protects water quality, and provides the potential for renewable energy.

Parks and Recreation

The Calhoun County Parks and Recreation Department strives to provide recreational facilities and programs that preserve and enhance the county's natural resources and provide residents with various opportunities to experience them thus enhancing the quality of life for the community. Map 8 displays the various non-motorized trails within the county, both existing and proposed. The network of trails throughout the county provides a linkage between the various natural resources discussed above.

Wellhead Protection Areas

Wellhead protection areas are defined as the surface and subsurface area surrounding a public water well or public well field, through which contaminants are reasonably likely to move toward and reach such well or well field. Map 9 depicts the designated wellhead protection areas (WHPA) in Calhoun County. A proactive approach to wellhead protection area planning can help minimize and potentially prevent contamination of community drinking water supplies. Public officials should take extra care when making land use decisions within these sensitive areas in order to protect the valuable water resources beneath the ground surface.

Private water wells are also areas of concern for potential contamination of drinking water supplies. Proper caution should be taken on an individual basis in order to eliminate the potential for contamination.

SECTION III: EXISTING LAND USE

The historic pattern of development within the County, as well as established zoning within individual units of government, creates much of the foundation for future planning efforts. This is primarily due to the investment in capital improvements associated with providing support to those development areas. In addition, regional and statewide influences impact upon the location or provision of services within a given area. These linkages with adjoining counties may be based upon larger market areas for business or travel patterns based upon employment or connections to regional facilities, including schools or for health care services.

Within Calhoun County, interstate highways establish direct connections east and west (I-94) and north and south (I-69) from a central interchange just northwest of the City of Marshall, the county seat. The two largest cities of Albion and Battle Creek, located on the eastern and western boundaries of the County, create a unique pattern of development, with close market connections of those communities to Jackson and Kalamazoo. The southern tier villages of Athens, Burlington, Tekonsha and Homer (along the M-60 corridor) provide further uniqueness based upon an historic pattern of development. The Battle Creek metro area, including the City of Springfield and surrounding townships, supports the largest concentration of commercial and industrial development, although the smaller communities are competitive in their own right in supporting more intensive land use.

Zoning

While this planning process did not include a windshield survey of existing land use, a compilation of local zoning ordinance maps (Map 10) provides an indication of the pattern of development that has occurred and may be supported for build-out in the future. All 27 units of government (19 Townships, 4 cities and 4 villages) have some form of zoning ordinance in place, regulating the use of land within varying districts. Because the County is not an advisory body for review of local zoning under the City/Village Zoning Act, and for purposes of plan mapping, these cities and villages have been shaded gray on this compiled map.

Agricultural/Residential

Changes in existing land use since the last survey in 1978 would likely reflect the growth in population in most Townships, with much of this growth occurring in larger lot, scattered site residential development within agricultural zoning districts. This pattern of development, while of concern related to issues of sprawl and farmland preservation, typically relies on private well and septic systems with frontage and access from existing county roads. With such use permitted by local zoning, usually on lots of 2 acres (3-5 acres with livestock), this land use is consistent with what has occurred since 1970, when many of these ordinances were first enacted.

Other residential development has occurred within subdivisions and/or on smaller lots within close proximity of existing urban areas. Yet, many of these areas are not served by

public utilities and the supply of building sites may be limited in these areas due to extension of such services beyond jurisdictional boundaries.

Commercial/Industrial

Public utilities play a large role in support for more intensive commercial and industrial development. Central business districts and development along highway interchanges provide for the majority of commercial services. The cities and most villages have also made attraction of new industry a priority, with many promoting their industrial parks as the preferred location. Several industrial parks located in Calhoun County are *certified industrial parks* through the Michigan Economic Development Corporation. Various Townships also promote large tracts of land, presently utilized for agricultural purposes, for commercial and industrial development. In most instances, the lack of public utilities has limited such development to uses (such as small office and warehouse facilities) that do not require substantial demand for water or the treatment of wastewater in order to operate effectively.

Transportation System

With interchanges along I-94 and I-69 providing the primary location for expanded commercial development within the Townships, it is anticipated that this pattern will continue into the future. Traffic counts along both of these interstate highways have continued to increase, with 2003 counts (24-hour traffic volume) at over 50,000 along I-94 just west of the I-69/I-94 interchange. Use of I-69 has expanded related to trade between Canada, the United States and Mexico under NAFTA (North American Free Trade Agreement). While development along I-69 interchanges has occurred, the natural beauty of this roadway has led to designation by the Michigan Department of Transportation as a *Recreation Heritage Route*. The State of Michigan has also expanded the number of state trunkline miles, providing connections between these interchanges in support of such development [such as the M-294 (Beadle Lake Road) and M-96 (Michigan/Columbia Avenue) designations].

SECTION IV: DEMOGRAPHIC ANALYSIS

The demographic analysis is utilized to organize population and related data into a format in which to define historic trends that may be extended from the past into a projection of the future. Calhoun County has been characterized by a stable overall population over the last 30 years (1980 to 2010 Census data), yet within this land mass are unique pockets of growth and significant areas of decline. In order to better assess this situation, the County was divided into five, somewhat distinct, neighborhoods (See Map 3). Each neighborhood was analyzed by its population change and growth rate (in terms of additional housing units) in order to assess where specific goals and objectives may be directed to meet a specific area need.

A series of neighborhood meetings was held to present this data and gain input as to the direction of future development in each area. While these meetings reinforced common goals and objectives, an analysis of differences by neighborhood begins with this statistical analysis.

This element of the Plan begins with population and housing statistics for each of the five neighborhoods, followed by an overall compilation of this data for the entire County. In many instances, such as with employment, the statistics must be blended due to influences of commuting or other patterns of development that naturally cross jurisdictional boundaries. Based upon the location of population within the County, influences from adjoining cities and counties are also referenced throughout this planning process.

A substantial body of historic data is presented within the 1984 Comprehensive Plan and, to a large extent, has not been duplicated within this Plan. Rather, this Plan seeks to build on that analysis by better defining the unique characteristics of given areas and then directing appropriate development into those areas consistent with the objectives of those communities (as defined by planning and zoning practices). This Plan seeks to provide those linkages through specific program areas for the County that naturally cross those boundaries.

The analysis of the five neighborhoods begins with the *Urban Neighborhood*, where almost 2/3 (65%) of the County's population resides. This is followed by the *Southwest Rural Neighborhood*, which has been influenced by the urbanized area to its north yet has remained rural and represents only 6% of the County's population. The *Marshall Area Neighborhood* represents the County's central core, and supports 12% of the population on 25% of the land area. As with the Southwest Rural Neighborhood, the *Southern Neighborhood* has remained rural as compared with development to the north and also represents only 6% of the total population of the County. Despite this, the unique small-town atmosphere of these villages and townships support the potential for growth based upon quality of life issues that will be presented under the Implementation element of this Plan. The *East/Northeast Neighborhood* is based upon development in and around the Albion area and is generally where population decline has been occurring (with the exception of the Clarence Township/Duck Lake area). To some extent, this historic decline has been influenced by economic conditions that have affected many areas of the country dependent upon manufacturing for employment. Diversification and reliance on unique educational institutions may reverse this trend in the years ahead.

Urban Neighborhood

The *Urban Neighborhood* is based upon an area within Calhoun County characterized with the highest density of residential development and where the largest and most diverse mix of business and industry is located. The total population of the area (~~88,962~~ 87,735) represents almost ~~65%~~ 64% of the total population of the county (~~137,985~~ 136,146) situated on only 20% of the land area. Growth has generally been occurring to the southeast and southwest along the I-94 corridor, influenced by the Ft. Custer Industrial Park, commercial development along Beckley Road/B Drive North and residential development within close proximity to employment and these commercial services. ~~The following is a breakdown in population (U.S. Census data) over the last 30 years and the percentage rate of change that has occurred during this period.~~

Community	1980		1990		2000		2010	
	population	housing	population	housing	population	housing	population	housing
City of Battle Creek*	56,339	22,975	53,540	23,252	53,364	23,525	52,347	24,277
City of Springfield	5,917	2,409	5,582	2,367	5,189	2,367	5,260	2,467
Bedford Township	10,157	3,564	9,810	3,564	9,517	3,841	9,357	3,967
Emmett Township	11,155	4,296	10,764	4,296	11,979	5,232	11,770	5,323
Pennfield Township	8,743	3,550	8,386	3,550	8,913	3,764	9,001	3,962

*The City of Battle Creek and Battle Creek Township were merged on January 1, 1983. 1980 figures include those for Battle Creek Township.

Table 1A displays population and housing data for the Urban Neighborhood. Despite the stable to declining population in a number of the communities, the number of housing units in the Urban Neighborhood has increased based upon demand created by a decline in the number of persons per household. The information presented in Table 1B identifies a total of ~~38,729~~ 39,996 housing units within this neighborhood in ~~2000~~ 2010, reflecting 2/3 or 66% of the overall total for the County (~~58,691~~ 61,042). This reflects a national trend of more people living alone or smaller family size. Social issues of divorce, longer life expectancy and people postponing marriage and childbirth all play a role within this demand for more housing units. Table 1A presents population and housing data for the Urban Neighborhood over the past 30 years. Table 1B summarizes the changes observed over that time period.

Community	30 year Population		30 year Housing	
	% change	# change	% change	# change
City of Battle Creek*	-7%	-3,992	7%	+1,302
City of Springfield	-11%	-657	2%	+57
Bedford Township	-8%	-800	18%	+613
Emmett Township	6%	+615	25%	+1,051
Pennfield Township	3%	+258	20%	+670

Southwest Rural Neighborhood

The *Southwest Rural Neighborhood* is defined by its relationship to the Battle Creek area (*Urban Neighborhood*), with M-66 serving as the common access and development corridor. This neighborhood represents only 15% of the total land area of the County and only 6% (~~8,304,817~~) of the County's total population. Growth has been quite modest over the last thirty years, with ~~only~~ Newton and Leroy Townships experiencing the greatest a substantial increase in population, due to their proximity to the Battle Creek area. It is anticipated as growth continues in the southwest and southeast portions of the Battle Creek area, both Leroy and Newton Townships will share in this growth, primarily through residential development.

Community	1980		1990		2000		2010	
	population	housing	population	housing	population	housing	population	housing
Athens Village	960	362	990	383	1111	424	1024	424
Athens Township*	1312	464	1525	571	1460	579	1530	654
Leroy Township	2929	993	3026	1114	3240	1250	3712	1575
Newton Township	1979	757	2025	823	2493	1077	2551	1170

* Village totals subtracted from Census data for these Townships

It should be noted that the ~~2000-2010~~ Census statistics include Township totals for the incorporated villages. The analysis of data for those Townships, such as Athens, would require that the same statistics for the Villages, such as Athens, be subtracted in order to accurately reflect the impact or influence of such change.

As with most stable to growing communities, the number of new housing units has outdistanced the percentage of population growth. The percentage increase in housing units in Leroy Newton Township (59% or 582 units) easily led the County over the last thirty years, ~~although total increase in the number of housing units averaged only 22 per year or roughly 2 per month.~~

Community	30 year Population		30 year Housing	
	% change	# change	% change	# change
Athens Village	7%	+64	17%	+62
Athens Township*	17%	+218	41%	+190
Leroy Township	27%	+783	59%	+582
Newton Township	29%	+572	55%	+413

* Village totals subtracted from Census data for these Townships

Marshall Area Neighborhood

The *Marshall Area Neighborhood* is clearly defined by the role it plays as the center of the County and the intersection of I-69 and I-94. Convis Township has been included within this

neighborhood based upon the influence of I-69 and a development pattern most closely linked to Marshall. This neighborhood represents 12% (~~17,183~~16,981) of the total population of the County and 25% of the land area. The most consistent growth over the last 30 years has been in Marshall Township, with this community influenced by I-94 and growth in the Battle Creek area as well. Marengo Township has also experienced growth over the last ten-year period based upon similar ease of access to I-94 and proximity to the City of Marshall.

Table 3A Marshall Area Neighborhood Population and Housing Data

Community	1980		1990		2000		2010	
	population	housing	population	housing	population	housing	population	housing
City of Marshall	7,201	2,870	6,891	2,894	7,459	3,353	7,088	3,394
Convis Township	1,734	572	1,739	626	1,666	651	1,636	685
Eckford Township	1,273	484	1,217	477	1,282	513	1,303	564
Fredonia Township	1,755	645	1,741	687	1,723	727	1,626	733
Marengo Township	1,811	595	1,801	660	2,131	822	2,213	899
Marshall Township	2,564	887	2,655	1,014	2,922	1,117	3,115	1,261

The City of Marshall experienced minimal increase in the ~~greatest~~ number of new housing units (~~4594~~) over the last ten year period as presented in Table 3BA below. ~~As with most communities the percentage increase in housing units far exceed the percentage increase in population. The net greater increase in housing units in the townships adjacent to the City of Marshall validates the trend toward more residents seeking a rural residential living experience. This minimal net increase in new housing units for the City of Marshall can also indicate the possibility of a build-out, or the lack of potential for new residential developments. of 162 units in Marengo Township and 103 in Marshall Township indicate a fairly strong housing market in the Marshall Area Neighborhood.~~ It

Table 3B Marshall Area Neighborhood Population and Housing Change

Community	30 year Population		30 year Housing	
	% change	# change	% change	# change
City of Marshall	-2%	-113	18%	+524
Convis Township	-6%	-98	21%	+113
Eckford Township	2%	+30	17%	+80
Fredonia Township	-7%	-129	14%	+88
Marengo Township	22%	+402	51%	+304
Marshall Township	21%	-551	42%	+374

It should ~~also~~ be stressed that the strength of housing in adjoining communities is critical to overall growth within any of the areas as issues impacting on housing (such as school district boundaries) cross these specific jurisdictional lines.

Southern Neighborhood

The *Southern Neighborhood* is primarily characterized by the influence of M-60 connecting the three Townships and three Villages. This neighborhood is made up of 20% of the land area of the county and less than 6% (~~7,787~~7,740) of the total population of the county. While the townships are some of the most rural in the County, the three villages add a sense of community and connection not found in other areas of the County. The regional M-60

corridor is bisected by I-69 and serves as an east/west truck route. The historic growth rate in the Southern Neighborhood has been quite slow. 2010 Census data confirms the trend in outward migration from higher density population centers (villages) to a more rural residential setting (townships). The decline in the housing market can also be a contributing factor for decreases in population and housing within the Village limits. with Burlington Township and Burlington Village experiencing the greatest increase. As urban development continues in other areas of the county, these villages and townships become more attractive for growth based upon their slower paced lifestyle and potential for start-up business.

~~Whereas in most communities, the central cities have declined in population and the surrounding townships have absorbed the growth, villages have traditionally held to a very slow growth process. Often, while this growth is restricted based upon limitations of land in the cities, many villages have some undeveloped areas that can support new housing or larger lots for infill development. This may be the case in Homer Village, with its attractive downtown improvements and residential development around Homer Lake.~~

Table 4A Southern Neighborhood Population and Housing Data

Community	1980		1990		2000		2010	
	population	housing	population	housing	population	housing	population	housing
Burlington Village	367	133	294	105	405	157	261	118
Homer Village	1,791	673	1,758	685	1,851	745	1,668	722
Tekonsha Village	755	283	722	280	712	298	717	312
Burlington Township*	1,521	547	1,479	582	1,524	618	1,680	719
Clarendon Township	1,176	405	1,100	401	1,114	425	1,139	487
Homer Township*	1,250	421	1,117	418	1,159	437	1,347	502
Tekonsha Township*	1,016	365	1,027	396	1,022	404	928	418

* Village totals subtracted from Census data for these Townships

Table 4B Southern Neighborhood Population and Housing Change

Community	30 year Population		30 year Housing	
	% change	# change	% change	# change
Burlington Village	-29%	-106	-11%	-15
Homer Village	-7%	-123	7%	49
Tekonsha Village	-5%	-38	10%	29
Burlington Township	10%	159	31%	172
Clarendon Township	-3%	-37	20%	82
Homer Township	8%	97	19%	81
Tekonsha Township	-9%	-88	15%	53

Village totals subtracted from Census data for these Townships

East/Northeast Neighborhood

The *East/Northeast Neighborhood* is generally characterized as the Albion area, with Lee Township included based upon linkage with Clarence Township. This neighborhood includes 20% of the land area of the County and less than ~~12%~~ 11% (15,749-14,873) of the total population. 2010 Census data indicates a continued loss in population for the City of Albion, losing 528 people from 2000 to 2010. The same trend observed in other neighborhoods is not present in this neighborhood, as the surrounding townships have not absorbed this loss. With the City of Albion losing approximately 1,000 people for each of the last 3 census periods (almost 3,000 people over the last 30 years), the surrounding Townships have not absorbed this loss as is traditional with most cities in decline. The percentage rate of decline over the past thirty years was approximately ~~25.22%~~ 25.22% for both the City and Township of Albion and 14% for Sheridan Township to the north. Growth occurred in Clarence Township, primarily influenced by the presence of Duck Lake, and to a lesser extent in Lee Township. The potential for population loss to Jackson County, due to the close proximity to the City of Jackson, exists as a possible scenario for population loss in this neighborhood.

Table 5A East/Northeast Neighborhood Population and Housing Data

Community	1980		1990		2000		2010	
	population	housing	population	housing	population	housing	population	housing
City of Albion	11,059	3,789	10,066	3,656	9,144	3,591	8,616	3,514
Albion Township	1,413	514	1,256	495	1,200	493	1,123	512
Clarence Township	1,916	908	2,051	985	2,032	996	1,985	1,045
Lee Township	1,186	419	1,281	487	1,257	462	1,213	495
Sheridan Township	2,257	845	2,139	809	2,116	823	1,936	843

With population decline, the housing market typically experiences little, if any, demand, despite the trend for reduction in the number of persons per household. It is likely that any new construction may also be offset by demolition activity and a decline in the number of occupied units (or households). Despite the population decline for all units of government in this neighborhood from 2000 to 2010, in Sheridan Township, there was a general increase in the number of housing units was observed. , although the 1980 housing increases for the Sheridan and Albion Townships and the City are inconsistent with this reduction in population and likely were in error.

Table 5B East/Northeast Neighborhood Population and Housing Change

Community	30 year Population		30 year Housing	
	% change	# change	% change	# change
City of Albion	-22%	-2,443	-7%	-275
Albion Township	-21%	-290	-.4%	-2
Clarence Township	4%	69	15%	137
Lee Township	2%	27	18%	76
Sheridan Township	-14%	-321	-.2%	-2

It is clearly the goal for this neighborhood to support growth and continued cooperation between these communities. Such

actions will be critical in achieving objectives associated with reversing this decline in population.

Calhoun County

The neighborhood census data provides the foundation for the review of totals for Calhoun County. Generally, this Plan is intended to characterize the population as it relates to land use and the need to support new development within given locations in the County. Based upon the neighborhood breakdown and the 2000-2010 Census, the population density, in this case the number of persons per acre, is presented ~~as follows: in Table 6A.~~ This tabulation provides a generalized look at the County, with an average of approximately 3 persons per every 10 acres of land, with the Urban Neighborhood at almost one person per acre and the Southern neighborhood at less than one person per every 10 acres.

Neighborhood	Population	Land Area	Persons Per Acre
Urban	87,735	92,160 acres	.952
East/Northeast	14,873	92,160 acres	.161
Marshall Area	16,981	115,200 acres	.147
Southwest Rural	8,817	69,120 acres	.128
Southern	7,740	92,160 acres	.084
Total	136,146	460,800 acres	.295

* Total acreage is based upon a standard 640 acres per section x 36 sections x 20 twps.

Calhoun County population data for the past ~~The County's population for the last~~ 30 years is presented in Table 6.7A. It is clear from the distinct fluctuations within the neighborhood data (Tables 1A to 5A) that change is occurring within the County despite a stable overall population.

~~It should be emphasized that while census data is the most wide reaching estimate of population, the numbers are only as accurate as the information that is presented on census forms. Many communities have disputed their population counts based upon local data sources, including tax roll and building permit information. Annual estimates of population are even more difficult to define (as to their accuracy), with many estimates in southern Michigan higher than the final 2000 Census totals by wide margins. Often, disputes can be resolved at the block level, where a survey of residents can be conducted to confirm the accuracy of the data. Yet, this is not an alternative in most communities, where no block data is available and the jurisdiction is made up of one census tract.~~

	1980		1990		2000		2010	
	population	housing	population	housing	population	housing	population	housing
Calhoun County	141,579	54,234	135,982	55,619	137,985	58,691	136,146	61,042

The comparison of a slight population decline (~~2.8~~ 3.8%) over the last 30 years, compared to the ~~25.3~~ 12.5% increase in the number of housing units over the same period, reveals two likely scenarios. First, the number of persons living within each household (occupied housing unit) has declined. Second, the supply of housing units has exceeded demand or older housing stock has become uninhabitable resulting in higher vacancy rates. Likely, a combination of factors has resulted in this situation.

	30 year Population		30 year Housing	
	% change	# change	% change	# change
Calhoun County	-3.8%	-5,433	12.5%	6,808

As presented within Table 6 7C, the average household size has declined, although the pace of that decline has slowed dramatically over the last ~~twenty~~ ten years. The most troubling statistic is the percentage increase in the vacancy rate, with the number of vacant units increasing 53% over the last ten years and over nearly 150% 125% in the last thirty years. In some instances this is based upon overbuilding in relation to market conditions, ~~this and~~ can also be attributed to the number of vacant housing units that may be in need of rehabilitation prior to sale or rental. The more recent spike definitely points to the high foreclosure rate for the County.

	1980	1990	2000	2010	30 year % change
Households	51,123	51,812	54,100	54,016	5.7%
Persons/household	2.69	2.54	2.47	2.44	-9.3%
Vacant housing Units	2,822 (5.2%)	3,807 (6.8%)	4,591 (7.8%)	7,026 (8.6%)	149%

While the intent of this Plan is not to present a housing market study, since most such studies are localized rather than countywide, it is important to recognize that while there appears to be a sufficient supply of housing, it may not be consistent with demand for the type of housing units. New construction is most often in the form of new single family detached units based upon demand in the owner-occupied market. However, t~~The~~ percentage of such occupancy has ~~increased~~decreased, ~~consistent with national trends~~, from ~~71% in 1990 to 73% in 2000~~ to 70% in 2010 most likely due to increased foreclosure of single family homes.

~~These detached units may be on scattered sites, larger lots in rural areas or within planned developments closer to commercial services and public utilities. Many of these newer developments (single family subdivisions/plats or site condominium projects) are oriented toward the higher end of the market (larger homes with more amenities) based upon profit margins in the construction trade and/or demand by “move-up” buyers. In addition, planned developments may include attached units, often in the form of condominium ownership, that are marketed to retirees. In most areas, this type of new housing supply is fairly continuous based upon this growing owner occupancy demand.~~

The renter-occupied market is often quite different, with greater cycles of high demand and low supply followed by the opposite condition of low demand and increasing vacancy rates. Based upon the increasing vacancy rates presented within Table 67C, demand for new rental units may not be sufficient, overall, to support new construction of these units. Yet, conditions may exist, such as housing affordability, that restrict this demand, meaning the expense of constructing or maintaining the units is beyond the income (return on investment) that can be achieved from rents within that segment of the market. In order to further analyze this demand, a review of the age breakdown of the population is appropriate.

~~Consistent with national trends, the population within the County is aging. The majority of the Baby Boom generation (persons born between 1946 and 1964) is now represented in the 55 and over age category, the only category to see an increase in numbers over the last ten year period.~~

~~Consistent with national trends, the population within the County is aging, with the Baby Boom generation (persons born between 1946 and 1964) now in the 40-58 age range. With the overall population of the County increasing by approximately 2,000 persons (or 1.5%) over the last ten years, it is clear that this minimal growth is concentrated within this 25-54~~

Category	1990	2000	2010	10-year Change (%)
24 & Under (%)	49,576 (36.4%)	48,165 (34.9%)	45,636 (33.5%)	-2,529 (-5.3%)
25-54 Years (%)	55,468 (40.38%)	58,320 (42.3%)	52,793 (38.8%)	-5,527 (-9.5%)
55 and Over (%)	30,938 (22.8%)	31,500 (22.8%)	37,717 (27.7%)	+6,217 (+19.7%)
Total Population	135,982	137,985	136,146	-1,839 (-1.3%)
Median Age	33.9	36.4	39.2	+7.7%

~~age group or within the early stages of the 55 and over category.~~ From an age perspective, the ability to retain and grow the population under 24 years will be critical to the long-term stability of the County. Quality education and training followed by productive employment opportunities are necessary within any community if they are to retain families and attract new residents over time. ~~Affordability in housing may also become an issue, especially for those first starting out, as well as for those looking to downsize in retirement.~~

Education, Employment and Retirement

Following the age breakdown categories, it is clear that quality of education, employment and retirement are traditional focus areas for overall quality of life within Calhoun County. Instability of employment can have a tremendous impact on family life, impacting both the 25-54 age group, as well as their offspring in the 24 and under category. Commuting patterns may also result in fewer residents if housing opportunity and commercial services are more attractive in adjoining counties. These issues also impact upon the attraction of the County for retirees, another strong influence on a stable population base. Due to the location of Battle Creek and the Ft. Custer Industrial Park at the far western end of the County, strong employment may not result in population increase in Calhoun County, but may support new development in adjoining Kalamazoo County. The same influence of such efforts in Albion may benefit Jackson County statistics. Thus, Calhoun County is often in a difficult position ~~to in-~~successfully marketing itself when its two largest cities are strongly influenced by their

locations and relationships to the east and to the west. Thus a coordinated plan for development, building on the strengths of an excellent educational system, strong and diversified employment base, and an attractive quality of life for retirees, is at the heart of this master planning process.

Population Projection

The statistics presented within Table 67A (County Population) and Table 67D (Age Breakdown) present a challenge for projecting population over the next twenty years. Traditional methods of ~~cohort/survival (natural increase of births over deaths) or~~ growth rate (past growth extended into the future) ~~may~~ result in a scenario of population decline, while data compiled by the Office of the State Demographer indicate an increase in growth for the County. This data is presented in Table 7A and Figure 7A. ~~that is not intended by this Master Plan. Rather, this Plan seeks to build on the strengths of the County (quality education and pro-active economic development), with a focus on quality of life through the preservation of natural resources and recreational opportunities for its residents.~~

~~Utilizing the percentage increase growth rate over the last ten years (1.5%), with this applied in five-year increments, results in the population projection presented within Table 6E: The projection presented achieves a 2020 population that is approximately a 200 resident increase over the 1970 population of 141,963. While a substantial change in condition may influence this number in either direction, this projection reflects a continued decline in population will require collaborative efforts in land use planning in order to maintain a high quality of life for all residents. the stable population that the County has experienced over the last 30 years continuing for the next 20 years. Placing emphasis on the three life cycle stages of education, employment and retirement will only enhance this stability and possibly lead to growth beyond these projections.~~

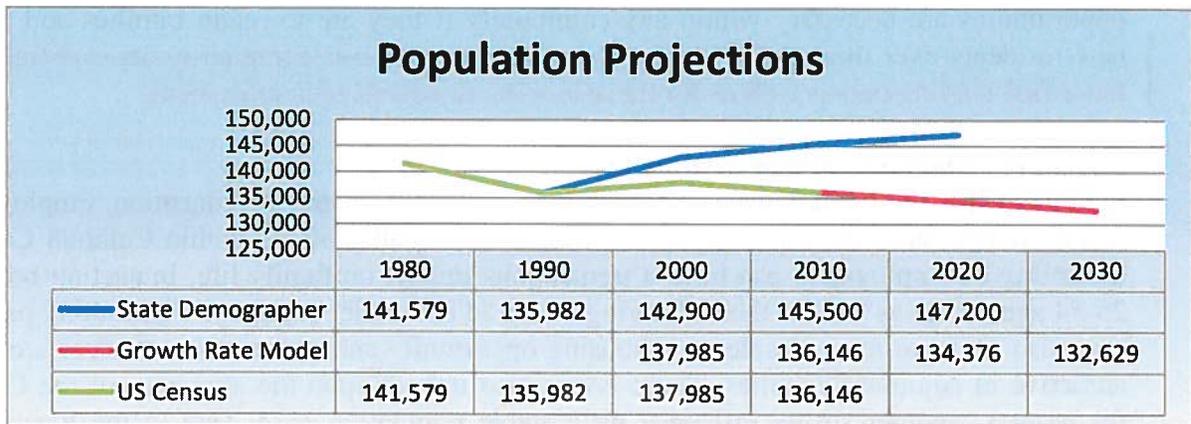


Figure 7A

Source: Michigan Department of Management and Budget, Office of the State Demographer, January 1996
US Census Bureau, 2010 Census

SECTION V: GOALS & OBJECTIVES

Undertaking a new Master Plan typically includes the development of generalized goals and more specific objectives that are intended to serve as the guide for implementation. As part of the development of these goals and objectives, and the desire to coordinate this effort with local units of government, a series of “Neighborhood” meetings were scheduled in order to gain input regarding the Plan.

The following goals were presented and modified by this input and then organized consistent with elements within the planning process. As a county-wide plan, these elements are intended to link state, regional and county issues with local concerns and initiatives. Presentation of these program areas and input received from these “neighborhood” meetings lead to the development of these specific objectives, which can then lead to project development at the County level.

AGRICULTURAL ENTERPRISE AND FARMLAND PRESERVATION

Goal: The County shall **promote and** provide for coordination of an overall farmland preservation program.

Objective: The County shall promote the agricultural industry as an important economic contributor in the County, and shall promote the preservation of the natural resource base that Agriculture depends on.

Objective: The County shall encourage local units of government to identify those areas proposed for preservation through criteria outlined within the County Ordinance creating the Calhoun County Farmland Preservation Program.

Objective: The County shall support the purchase of development rights based upon available funding ~~at the state, county and local level~~ available from federal, state, county and local government resources including private investment and donation sources.

Objective: The County’s Agricultural Preservation Board shall serve in a leadership role regarding education of the public and the local units of government to the benefits or alternative approaches to farmland preservation.

PARKS & RECREATION

Goal: The County shall provide for coordination of an overall parks and recreation program.

Objective: The County shall promote the development of recreation facilities consistent with the ~~2002—2007-current~~ Calhoun County Parks and Recreation Plan.

Objective: The County shall support linear connections to existing facilities, including emphasis on the Kalamazoo River and the North Country Trail system.

Objective: The County shall encourage the local units of government to endorse the development of public and private recreation areas and the preservation of open space within new planned residential development.

LAND USE PLANNING

Goal: The County shall provide coordination directed toward improved planning and zoning practices for local units of government.

Objective: The County shall support and promote the preservation of areas where protection of natural resources should be the primary concern.

Objective: The County shall continue to educate local units of government on the need for coordinated planning and serve as an advisory resource when undertaking such efforts.

Objective: The County shall utilize this Master Plan as the foundation for decisions on zoning and conduct a review ~~an annual~~ of any decisions in conflict with the Plan.

ECONOMIC DEVELOPMENT

Goal: The County shall provide coordination with local economic development efforts in order to achieve stability and growth for business and industry.

Objective: The County shall support the location of more intensive commercial and industrial development in areas where public utilities presently exist and are underutilized, or where services can most economically be extended and provided.

Objective: The County shall assist in efforts directed at cooperation between units of government in attracting new business as well as retention of existing industry, and the associated work force to sustain it.

Objective: The County shall promote efforts directed at overall quality of life through public education, employment, affordable housing, recreational resources and services to seniors.

TRANSPORTATION & INFRASTRUCTURE

Goal: The County shall provide coordination of overall infrastructure improvements through the appropriate governing body ~~Calhoun County Road Commission and Calhoun County Board of Public Works.~~

Objective: The County shall educate units of government on the need for Capital Improvement Programming (CIP) in order to finance transportation and infrastructure improvements serving those communities.

Objective: The County shall promote the need for access management along county roads in order to enhance those roadways for both motorized and non-motorized use.

Objective: The County shall support investment in off-site public improvements that enhance private investment in on-site development of land consistent with this Master Plan.

Objective: The County shall promote, support, and/or facilitate initiatives regarding regional mass transportation.

SECTION VI: FUTURE LAND USE PLAN

This Plan is the culmination of study from the demographic analysis, the review of natural resources and the influence of existing land use and past zoning decisions within the County. Public input and the development of goals and objectives led to the determination and support for defining the future pattern of development. The density (number of residential units per acre) and intensity (impact on natural resources through an increase in impervious surface) of development are balanced by the desire to preserve natural open space and farmland through these designations of land use.

The first step within this future land use planning element was to review and coordinate all local plans (outside of the cities and villages) in order to balance this density and intensity of use and review any conflict along jurisdictional boundaries. These compiled land use plans are presented within Map 11 and served as the foundation for development of the land use designations within this Calhoun County Master Plan. It is this element of the Plan that merges the following narrative and the Master Plan map into one coordinated direction for future development. These are presented in the following generalized designations of future land use:

Open Space

The initial work on defining natural resources that should be protected and preserved establishes the outline for *Open Space*. These areas include those described as wetlands and floodplains, areas with hydric soil conditions, recognized wellhead protection areas, or other areas where development potential should be restricted based upon the presence of similar conditions. In addition, open space areas may include lands set aside for recreational purposes, including parks or linear trails supporting long-term public benefit. Often, such facilities incorporate waterways such as river frontage, which may include both floodplain and passive recreational use. Historical facilities, including cemeteries, may also be incorporated into these open space areas. Private facilities that promote or encourage outdoor recreation, including golf courses or open space areas within a planned unit development, may also be designated as open space areas. Such facilities are important in preserving a sense of natural landscape within a development area, often balancing the density or intensity of development by preserving woodlots or steep slopes. These open space areas also provide for wildlife habitat to coexist with the human or built environment, providing relief from the pressure of a continuous pattern of development. Some of this open space area may be suitable (or presently utilized) for agricultural purposes, likely where drainage improvements have been made or where periodic inundation is acceptable. The characteristics of this designation are summarized as follows:

- *Wetlands and Floodplains*
- *Other Areas with Hydric Soil Conditions*
- *Designated wellhead protection areas, where applicable*
- *Public and Private Recreational Facilities*
- *Historical Facilities*
- *Woodlots and Wildlife Habitat*

- *Permanent Set Asides or Buffer Areas (such as under PUD)*

Agricultural

An analysis of soils that define where prime farmland exists and areas where large tracts of land have historically been utilized as farmland provide the foundation for the ***Agricultural*** designation. This designation may serve as the basis for farmland preservation efforts or may define limitations on development through growth boundaries. Such areas support economic-based agricultural activities oriented toward food production for human consumption or animal feed, including the raising of livestock. Some of this area may also include vacant acreage once farmed or used as pasture or may be enrolled in programs limiting development options. Residential development should be directed toward simple divisions of land that seek to preserve the character of such areas while limiting conflict with agricultural activities. The determination of the density of such residential development shall be left to the character of the community, but generally no more than one unit per acre. Ideally, residential development in such areas should be scattered site with limited agricultural conflict or within planned development areas with open space or agricultural buffers in place. These areas should not be supported by public infrastructure investment that will hasten this transition to more intensive residential development. The characteristics of this designation are summarized as follows:

- *Prime farmland*
- *Contiguous large tracts*
- *Limited residential development*
- *Outside growth boundary*
- *Lowest infrastructure investment*

Residential (Low, Medium and High Density)

Residential development is supported through a determination of density and presented within a series or range of designations, from ***Low Density (1-3 units per acre)*** to ***Medium Density (3-5 units per acre)*** and ***High Density (5 or more units per acre)*** categories. These are intended to be broad in scope and general in nature and are not intended to create conflict with local plans that are more specific in their application. Full build-out of these areas is also not intended unless or until public facilities and infrastructure (roads and utilities) are in place or within a scheduled capital improvement program.

It is the intent of this plan to support residential development that is most compatible with surrounding land use, often through a natural transition from very low density in rural areas to the highest density within the County's largest cities and urban areas. When compatibility is more difficult to achieve, the use of clustering and open space buffers is the preferred development option. The impact of residential zoning on school performance must be considered when communities are planning for future development. The link between low income housing and low performance schools can be addressed through intentional residential housing plans that provide for a variety of housing types and sizes. When a mixture of uses is anticipated, planned unit development (PUD) is

strongly encouraged. Investment in infrastructure improvements shall also follow this transition, with the highest density supported by the greatest public investment, including proximity to (public) transportation, recreational facilities or commercial services. Characteristics of these residential designations are as follows:

- *Areas within growth boundary*
- *Current or planned extension of public utilities*
- *Clustering to preserve open space*
- *Planned unit development for mixed use potential*
- *Proximity to public or commercial services*
- *Access to recreational facilities*

Transitional

Some communities utilize a ***Transitional*** designation that is intended to blend the potential for either residential or commercial development or provide support for mixed use development options. Most often, this approach provides for high density residential or office use adjoining a commercial area. For purposes of this plan, such designation may be based upon areas where either residential or commercial development has been indicated within local plans. Characteristics of this designation are as follows:

- *Higher density of residential development*
- *Use of office development as buffer between residential and commercial*
- *Less intensive commercial development*
- *Potential for connection to public utilities*

Commercial

Areas designated ***Commercial*** are intended to support either a regional market or in support of local services adjoining residential areas. Many of these local areas may include one or two existing businesses and are not intended to expand beyond the rate of growth for a given neighborhood. Regional markets are served through locations along major thoroughfares, such as interstate highways (I-94, I-69), state trunk lines, or primary roads such as Michigan Avenue or Capital Avenue. These commercial areas should be adequately served by public utilities and be a focus area for infrastructure investment.

Industrial

Areas designated ***Industrial*** are based upon support for growth of our local economy through the provision of service or employment opportunities. It is critical that these areas be given highest priority for public investment based upon the broad implication and competition associated with attracting high quality private investment within the community. Ideally, related infrastructure improvements and coordinated development projects bring the greatest return on both public and private investment within the County and the surrounding region. Financial support through grants, low-interest loans and State and Federal resources and programs are often based upon this coordination and public/private partnership efforts.

Many of these commercial and industrial areas are managed through authorities or coordinated economic development efforts. Tax increment financing may be utilized for improvements or to attract investment through Downtown Development Authorities (DDA's) or Local Development Finance Authorities (LDFA's). The reuse of former commercial or industrial sites, through Brownfield Redevelopment, may build on past investment within a given area. Capital Improvement Programming (CIP) is a critical component associated with this more intensive land use investment. The identification of development corridors, with road, utility and integrated communication facilities, link communities within the county to regional and statewide investment, whether current or planned. Characteristics of these designations are as follows:

- *Highest investment in public infrastructure*
- *Coordinated Capital Improvement Programming (CIP)*
- *Development corridors and integrated communications*
- *Job retention and expansion*
- *Tax Increment Financing through DDA's, LDFA's and Brownfield Redevelopment*

It is clear from the compilation of local land use plans (Map 11) that overall development has occurred along transportation corridors and around the historic cities and villages within the County. Map 12 presents these development corridors, with emphasis placed on their importance within the implementation element of this Plan. In order to provide for this more intensive residential, commercial and industrial development, infrastructure investment must be given high priority in order for such development corridors to remain viable in the years ahead. As part of this plan development, public utility service areas, both existing and proposed, were considered critical to growth in the County. These are presented on Map 13 and, along with Maps 11 and 12, serve as the foundation for much of the Master Land Use Plan Map.

This County Master Land Use Plan is intended to bridge the gap between implementation of plans and programs at the Federal and State level with those efforts to regulate and support development at the local level (Cities, Villages and Townships). Coordinated planning is at the heart of this effort and this plan seeks to build on efforts directed at program areas that connect these communities.

MASTER LAND USE PLAN MAP

Because the County Master Plan serves as a general guideline and guidebook for local units of government, it is not presented in a manner where lines are drawn precisely or designations of land use are specific to such units. The narrative within the plan seeks to support this by generally identifying characteristics of land use. The initial focus was to establish or identify areas where preservation should occur, whether as open space or in terms of agricultural land use. The second focus was to consider the natural pattern of development within the county, focused on development corridors. These development corridors are where road or other public infrastructure improvements may support more intensive development, usually of a commercial or industrial nature. Residential development of greater density is also supported within close proximity to these areas.

Since some local plans did not exist or were not based upon more intensive investigation, this plan has identified areas throughout the county where the characteristics of that land use are consistent to those highlighted above for each designation. For these units of government, the County Master Plan may be substantially different from those adopted plans, primarily reflecting these recommended open space preservation areas.

It should also be emphasized that while local units may designate areas for commercial and industrial development, the County seeks to promote such development in areas where public infrastructure (suitable roads and public utilities) is planned or in place. Smaller areas may be shown on the map in order to be consistent or to serve adjoining residential development areas based upon the need for local services.

As presented on Map 14, the Master Land Use Plan Map combines the land use designations into an overall plan for future development of the County. Concentrations of open space are found in those areas where soil conditions or topography limit more intensive development or exist outside of the development corridors. Agricultural land use remains the dominant designation, providing benefits to the economy and rural character of the County in these areas. Residential designations are concentrated within the more urban areas or where the historic pattern of development has established community identity. Commercial and industrial designations are clearly along these important development corridors or are in support of land planning efforts to create new corridor development. The sum total is a Master Plan balanced between preservation of open space and agricultural areas and sufficient capacity for growth to occur over the next twenty years and beyond.

SECTION VII: IMPLEMENTATION

The Future Land Use Plan, and the elements of this Master Plan leading up to it, provides the foundation for a coordinated planning approach for Calhoun County. In addition, this planning process can lead to specific tasks associated with the program areas which have been the focus of this Plan. In many respects, this Plan is directed at connecting the County and the local units of government that it serves, with regional and statewide initiatives and funding opportunities. Input from local officials and directives from the State of Michigan have been blended into this process, with specific goals and objectives based upon the *five program areas* that have been the focus of this Plan.

Initially, this Plan serves as the basis for the development of the County's *Farmland Preservation* Program and the specific ordinance regulating the process for Purchase of Development Rights (PDR's). This is a county-wide effort in support of state and national efforts to preserve prime farmland and reduce the impact of urban sprawl on the agricultural economy. Because the County Master Plan is even more generalized in nature than plans for local units of government, this initiative will be directed at coordination with those Townships interested in designating lands for preservation on a more parcel-specific basis. They may then solicit interest on the part of residents to make application based upon the criteria for preservation

Secondly, this Plan builds on the findings and direction within the County's *5-Year Parks and Recreation* Plan. Together with the Farmland Preservation Program, this program seeks to preserve open space and the County's rural character, with a specific focus on passive and active recreational opportunities for residents within close proximity to the urban environment. Connecting the urban areas, historically developed along the Kalamazoo River, through a county-wide linear park system creates the opportunity for residents to actively enjoy both the rural and urban landscape. This builds upon ongoing investment to improve access and educate the public on the importance of this watershed area, while connecting to existing facilities within Albion, Marshall and Battle Creek. In addition, this non-motorized transportation alternative provides access to community facilities and commercial services, with an ultimate connection to statewide facilities and Lake Michigan to the west.

Thirdly, this Plan meets the County Planning Act requirements and new objectives for coordinated *Land Use Planning*. The Master Plans and Zoning Ordinances for all local units of government within the County were reviewed, and to a large extent, incorporated into this planning process. Existing land use associated with the surrounding counties (along the boundaries of Calhoun County) was also reviewed. In most instances, these boundaries are rural in nature or include resources in support of this effort, including the Ft. Custer Recreation Area, just inside Kalamazoo County to the west. The Future Land Use Plan text and the Master Land Use Plan Map will serve as a general guideline for determining consistency and compatibility with local plans and those of surrounding communities.

Fourthly, *Economic Development* is a broad-based effort aimed at establishing a diversified and coordinated local economy that is closely linked to benefits from the other four program areas. A viable agricultural economy, a healthy lifestyle, a strong housing market, accessible community facilities and commercial services, and a solid mix of available employment are all elements of a quality community.

Lastly, ongoing maintenance and improvements to *Transportation & Infrastructure* systems are critical to retaining and attracting the type of development that is preferred within a community. The efficient and safe movement of people and goods through our network of roads, the ability to monitor and enhance the quality of our water and air, the protection of our environment while disposing solid waste or treating wastewater, and the generation of power sufficient to support our energy needs are all critical components within our overall quality of life.

Development Corridors

These corridors, previously introduced on Map11, are typically those areas of the county where transportation and infrastructure improvements are in place in support of more intensive commercial and industrial use, as well as higher density residential development. The efficient movement of goods or services (utilities) and the accessibility for commercial services or employment are the two primary objectives, with residential use at higher densities a standard outgrowth from this pattern of development.

From a classification approach, two interstate highways intersect the County just northwest of the City of Marshall, with I-94 connecting the Battle Creek, Marshall and Albion communities with regional services in larger metropolitan areas, including Chicago and Detroit. Access to air transportation and rail service makes this an attractive location from a regional economic development perspective as well. The I-69 corridor is experiencing increased focus and utilization based upon its role as an international connection between Mexico and Canada. These two interstate highways provide a more regional linkage to Coldwater and Lansing (I-69) and Kalamazoo and Jackson (I-94), providing for natural commuting distances in the 30-45 minute range. I-194 provides a connection between I-94 and downtown Battle Creek, further enhancing accessibility to this employment and commercial destination.

The State of Michigan also provides for a system of state trunklines running throughout the County, with M-37 and M-89 providing connections to the north and northwest and M-66 south from Battle Creek, M-60 connecting the southern corridor and M-99 providing connections to the north and south of Albion. Often, these state trunklines provide the local and regional transportation network that supports the location for commercial and industrial development opportunities. In addition to state transportation facilities, the County Road Commission oversees a network of county roads that further these connections to commercial and industrial facilities by residents of the County.

Within Calhoun County, there has always existed a strong agricultural economy and preservation of farmland is considered a primary goal within this Plan. Yet, soil conditions that generally define prime farmland are also soils that support more intensive

development. Prime farmland, identified on Map 7, includes areas that are a part of these development corridors and are in the path of future proposed development. These include a large area in Pennfield Township, along Capital Avenue NE (M-66), and a large area at the interchange of I-94 and 11 Mile Road. While preservation of these lands for farming may be difficult in the long-term, other land, just outside the path of development, may be preserved through potential transfer or purchase of development rights.

Coordinated Site Development

In addition to implementation of the Plan through county programs and further public investment along development corridors, the final element of this Plan is support for improved site development through private initiatives. This Plan has attempted to support more intensive development in areas where public infrastructure investment can continue while preserving open space and farmland in those areas with unique natural features and resources. Where development is encouraged, techniques can be utilized to enhance both the appearance of the development as well as protect the environment.

Protection of Groundwater and Surface Water: From a site development perspective, this includes proper storm water management through low-impact development techniques to maintain the pre-development hydrology of a site by limiting impervious surfaces and increased storm water runoff. Calhoun County provides a range of assistance through the County Drain Commission and County Road Commission in terms of drainage, surface water discharge, and techniques associated with proper infiltration to protect groundwater supplies. Utilization of innovative approaches, such as rain gardens or similar best management techniques, should be encouraged as part of improved site development practices.

Access Management/Corridor Preservation: Connection from a public road to any site is coordinated through a permit process with the intent of minimizing traffic conflict through proper site distances between access points. In addition, increased setbacks are encouraged in order to improve the aesthetics of the roadway and to allow for roadway improvements and expansion that is in the best interest of all parties. This preserved right-of-way also allows for improved non-motorized access (pedestrian or bicycle), which supports energy efficiency, health, and recreational goals within this planning process.

Open Space Preservation: Increased focus on preservation of open space within any site development is encouraged, whether it is a part of a residential, commercial or industrial, or mixed use development. Planned unit development often provides flexibility in layout and design where open space is preserved and most communities within the County support this through their individual plans and ordinances. Such ordinances also may require greenbelt buffers between incompatible land uses and this can be an opportunity to generally establish open space perimeters that benefit all land owners within a given area.

Landscaping: The natural environment is enhanced by preserving existing trees and plant life where possible. In those instances where large buildings and/or expansive

parking areas require grading of the natural topography and/or removal of the natural landscape, replacement of such features is strongly encouraged. These developments often create large impervious surfaces and drainage becomes a primary concern. The use of perimeter landscaping around retention areas and interior landscaping within the parking areas can return some of the natural environment to the site and serve to ensure that development and the natural environment can co-exist to everyone's benefit.

Concept Plans

As part of this planning process, county programs have been identified in support of land use decisions. Development corridors have been identified where more intensive use of the land can be supported through infrastructure improvements. Site development assistance and coordination is available to improve the development process. This leads to presentation of some conceptual designs that may graphically present how all of this may work within a given area of the county. Identified as Map 14, these are intended to be conceptual only, showing traditional build-out followed by a preferred alternative. These have been designed based upon recommendations within this Plan to encourage such development, with the intent of public-private partnerships to bring about the desired outcome.

Concept A is based upon potential development along a highway interchange. This concept utilizes the underlying zoning, as what exists at the intersection of I-69 and I-94 just northwest of the City of Marshall, as the basis for proposed density. In this concept, the traditional pattern of large lot residential development has been shifted to the southeast quadrant of the interchange through a transfer of development rights. This higher density of residential use is then complemented through a neighborhood center, with a mixture of uses, supported by public utilities and accessible to automobile oriented retail at the two interchange areas.

Concept B is oriented toward residential development based upon the attraction of a large water resource, in this case an inland lake. The natural pattern is for the residential site development to occur around the lake perimeter, often encroaching upon natural areas that are often unsuitable for such development. In this instance, a higher density of development is permitted in the location that can best support development while preserving areas of the lake in their natural state. This provides the opportunity to limit and improve fewer areas for discharge and reduce the number of roads and other impervious surfaces that influence drainage of the area. This "new village" concept is based upon historic attraction of a water resource as the focus of a development area.

These two concepts are focused on the benefits derived from coordinated planning and integration of all of the elements of this planning process. While large scale development projects are often difficult to manage, they represent the type of projects where the County can direct its resources to the benefit of the largest concentration of residents while seeking to preserve areas in close proximity for open space and recreational opportunities.

Process for Review of Local Plans/Coordination with County Master Plan

The new planning act requirements provide for expanded review of plans and amendments, with the county serving in a coordinating role on behalf of the other units of government. Thus, the County Master Plan has been based upon a compilation of these local plans with changes where necessary to establish an overall coordinated plan. Much as townships, cities, and villages present their plans and amendments to contiguous units, the County submits their plan to all units of government within Calhoun County as well as adjoining county and regional planning commissions. Upon adoption, the County Master Plan will serve as a guidebook that can be utilized as the basis for review during development of local plans in coordination with those units of government.

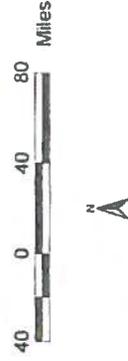
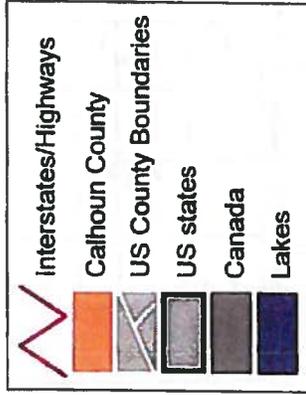
The following outline integrates steps involved with local plan review, following the adoption of this new Master Plan, and how this will then lead to possible amendment of the Calhoun County Master Plan in the future:

- ✓ Submission of local plan (new or amendment) to County for review
- ✓ County reviews local plan within 75 to 95 days
- ✓ Comments by County received by local unit of government
- ✓ Adoption of local plan (or amendment) with confirmation to County
- ✓ County conducts annual review of recommended amendments to local plans
- ✓ County prepares draft Future Land Use Plan Map reflecting amendments
- ✓ County conducts required 5-Year Review and prepares draft amendments to County Master Plan-incorporating previously recommended local amendments and any additional changes to text or Master Land Use Plan Map.

This 20-year Master Plan, completed approximately 20 years after the last comprehensive plan for the County, will remain viable as long as it remains a work in progress. As conditions change, as new information becomes available, or as objectives are achieved, this Master Plan can be amended and continue to serve as a guide for future planning decisions.

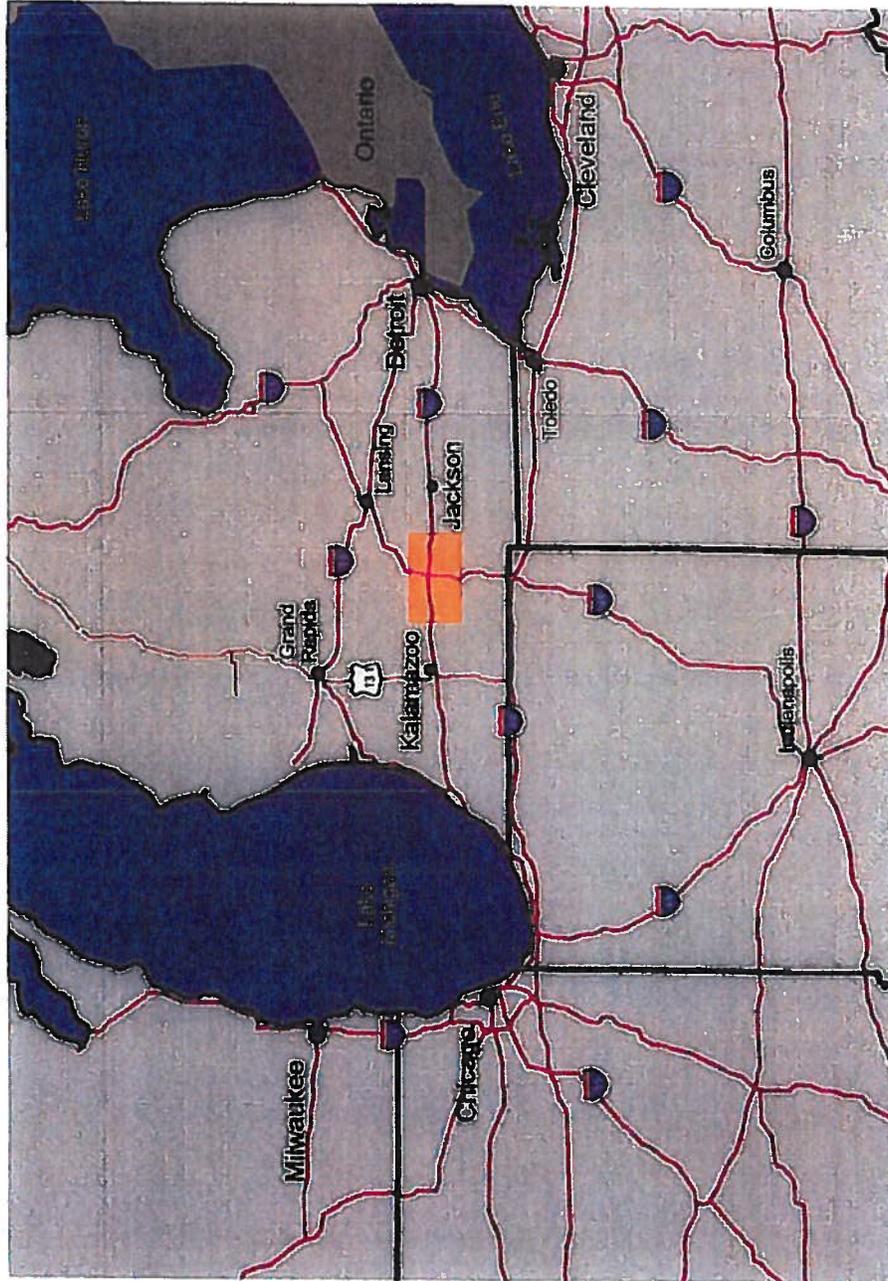
The primary responsibility for implementing the Plan rests with the Calhoun County Board of Commissioners, the County Planning Commission, and County staff. Presentation of this Plan to the local units of government within Calhoun County as well as partnering to achieve common goals will be instrumental in the implementation of this Plan. Efforts to educate the general public regarding the benefits of future planning and the planning process will only make the task of implementation more successful.

Calhoun County, MI and surrounding region

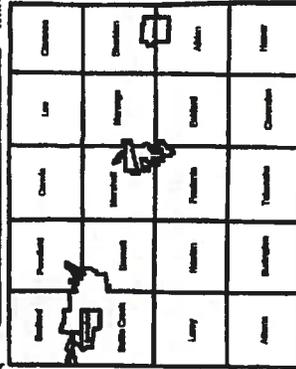
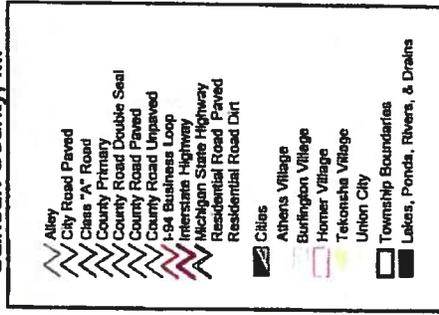


Maps produced for the County Master Plan series by Cardinal Geographic Consulting using original data and data from the Michigan Center for Geographic Information, the Calhoun County Equalization Department, and the participating townships, villages, and cities of Calhoun County.

Maps produced April 2004



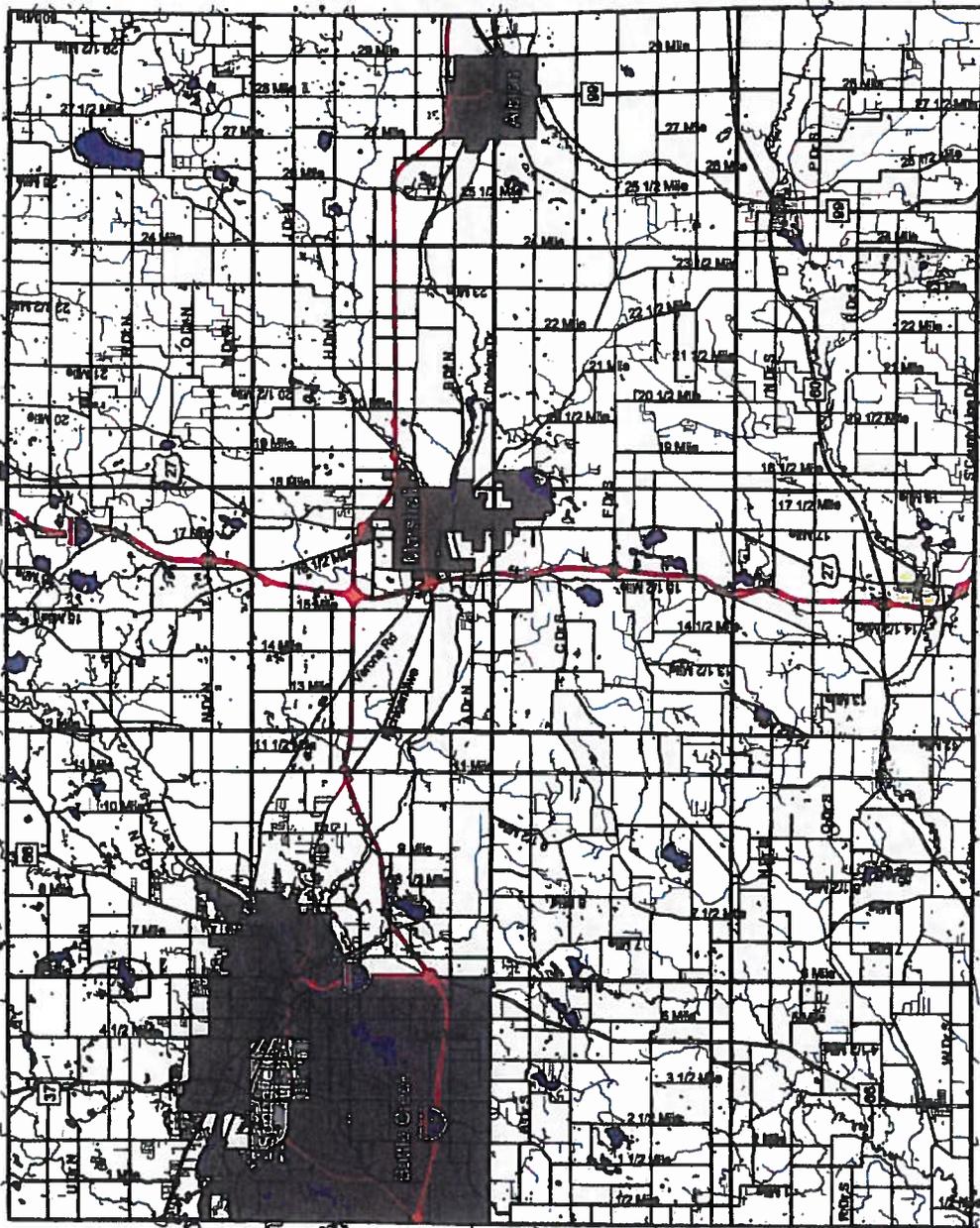
County Basemap Calhoun County, MI



Maps produced for the County Master Plan series by Cardinal Geographic Consulting using original data and data from the Michigan Center for Geographic Information, the Calhoun County Equalization Department, and the participating townships, villages, and cities of Calhoun County.

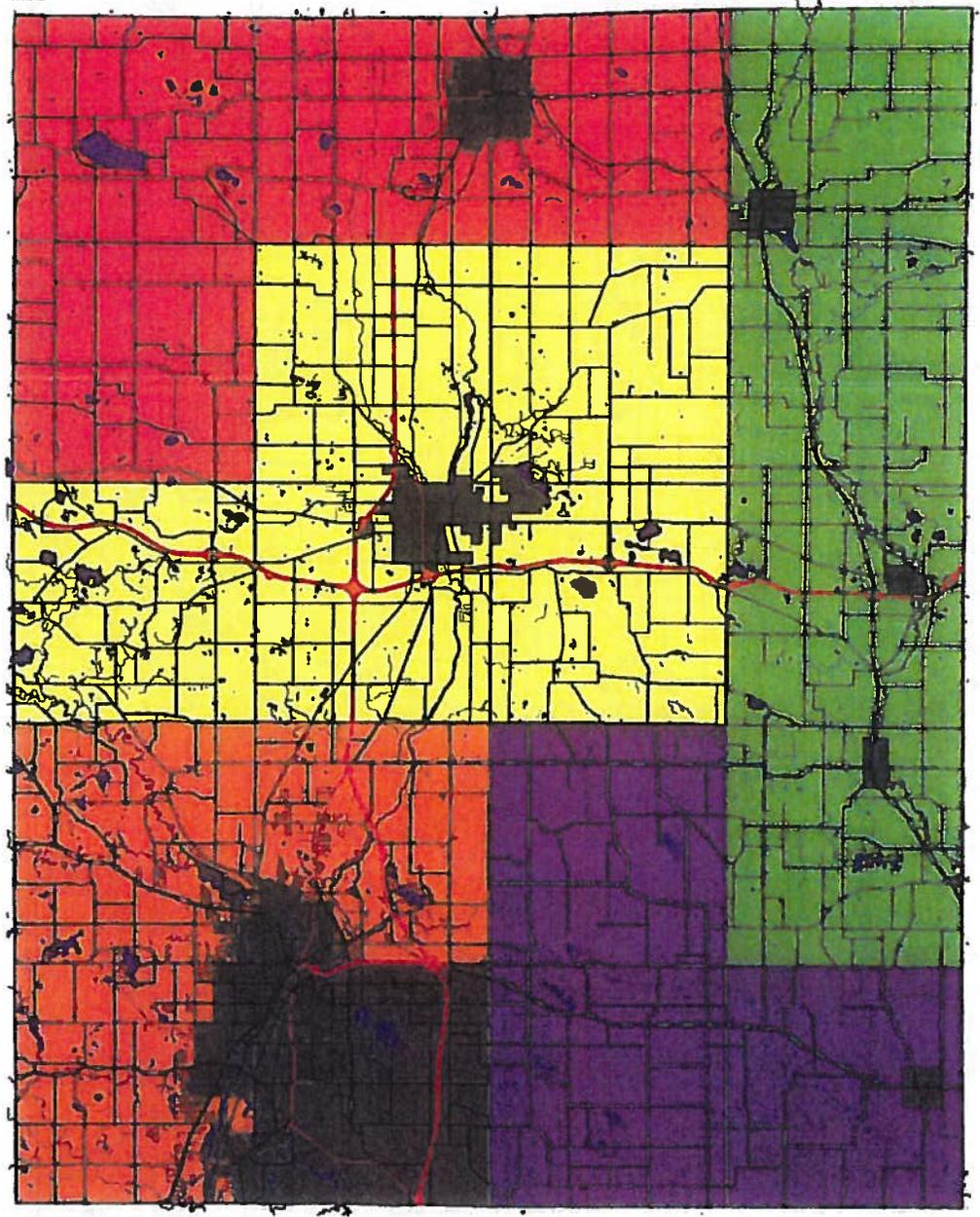
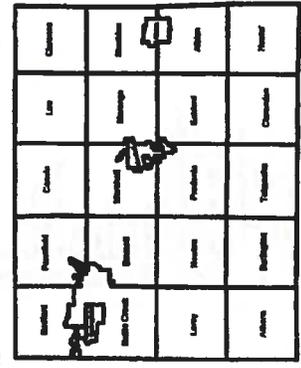


Maps produced April 2004



Planning Neighborhoods Calhoun County, MI

- Alley
- City Road Paved
- Class "A" Road
- County Primary
- County Road Double Seal
- County Road Paved
- County Road Unpaved
- I-94 Business Loop
- Interstate Highway
- Michigan State Highway
- Residential Road Paved
- Residential Road Dirt
- Marshall Area neighborhood
- East/Northeast neighborhood
- Southern neighborhood
- Southeast Rural neighborhood
- Urban neighborhood
- Cities/Villages
- Township Boundaries
- Lakes, Ponds, and Rivers



Maps produced for the County Master Plan series by Cardinal Geographic Consulting using original data and data from the Michigan Center for Geographic Information, the Calhoun County Equalization Department, and the participating townships, villages, and cities of Calhoun County.



Maps produced April 2004

FEMA Floodplain

Areas Calhoun County, MI

- Alley Road Paved
- Class "A" Road
- County Primary
- County Road Double Seal
- County Road Paved
- County Road Unpaved
- I-94 Business Loop
- Interstate Highway
- Michigan State Highway
- Residential Road Paved
- Residential Road D/T
- FEMA Floodplain
- Township Boundaries
- Lakes, Ponds, and Rivers

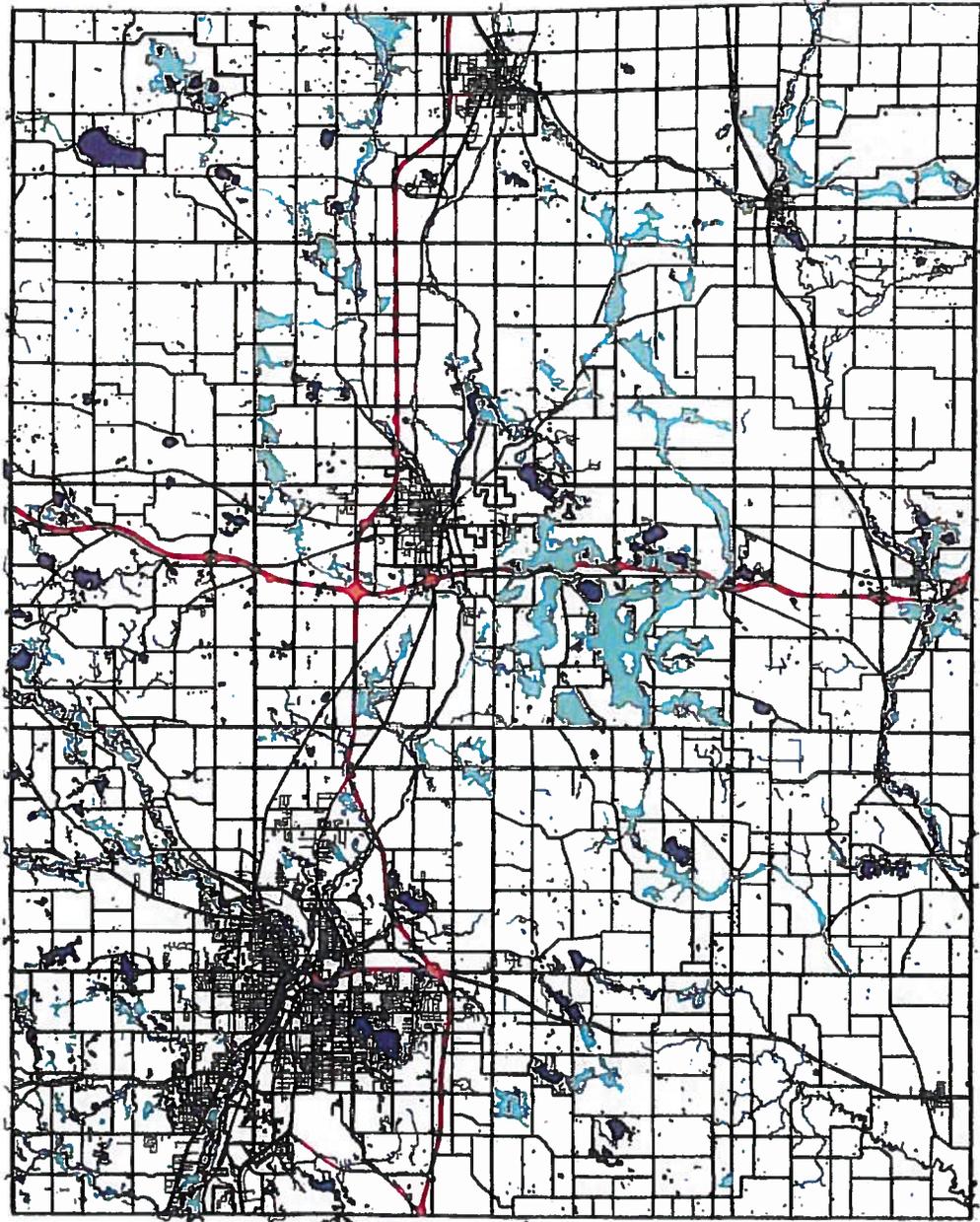
Note: Athens, Lee, and Claremont Townships do not participate in the FEMA Q3 program



Alcona	Alcona	Alcona	Alcona	Alcona	Alcona
Alcona	Alcona	Alcona	Alcona	Alcona	Alcona
Alcona	Alcona	Alcona	Alcona	Alcona	Alcona
Alcona	Alcona	Alcona	Alcona	Alcona	Alcona
Alcona	Alcona	Alcona	Alcona	Alcona	Alcona
Alcona	Alcona	Alcona	Alcona	Alcona	Alcona

Maps produced for the County Master Plan series by Cardinal Geographic Consulting using original data and data from the Michigan Center for Geographic Information, the Calhoun County Equalization Department, and the participating townships, villages, and cities of Calhoun County.

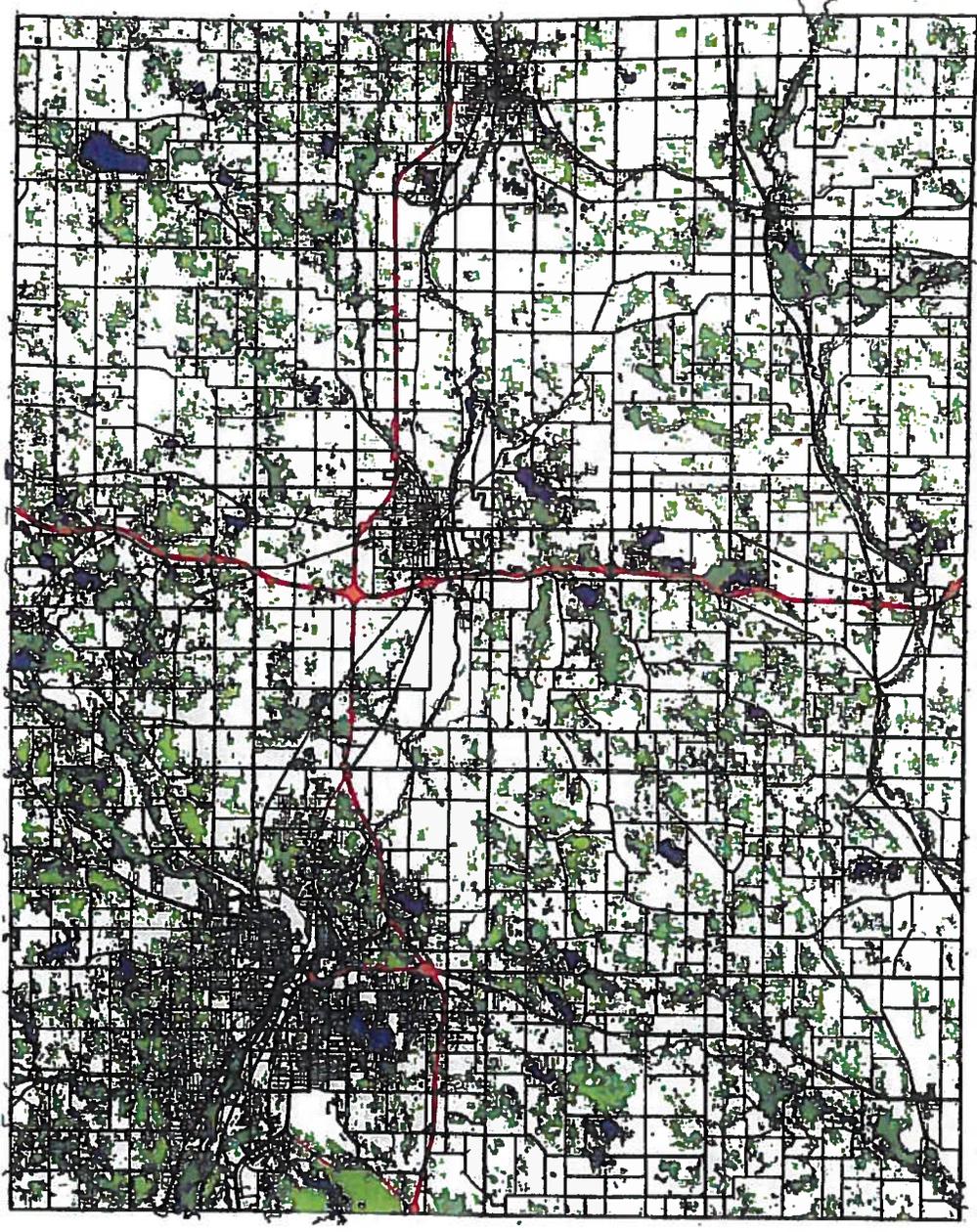
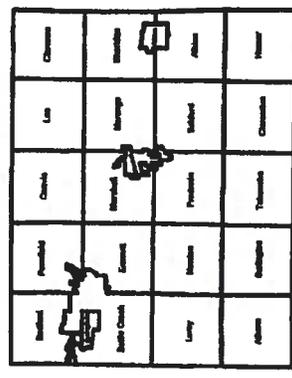
Maps produced April 2004



Woodland Areas

Calhoun County, MI

- Alley
 - City Road Paved
 - Class "A" Road
 - County Primary
 - County Road Double Seal
 - County Road Paved
 - County Road Unpaved
 - I-94 Business Loop
 - Instate Highway
 - Michigan State Highway
 - Residential Road, Paved
 - Residential Road Dkt
- Woodland Areas
- Deciduous
 - Evergreen
 - Mixed
 - Wooded Wetland
- Township Boundaries
- Lakes, Ponds, and Rivers

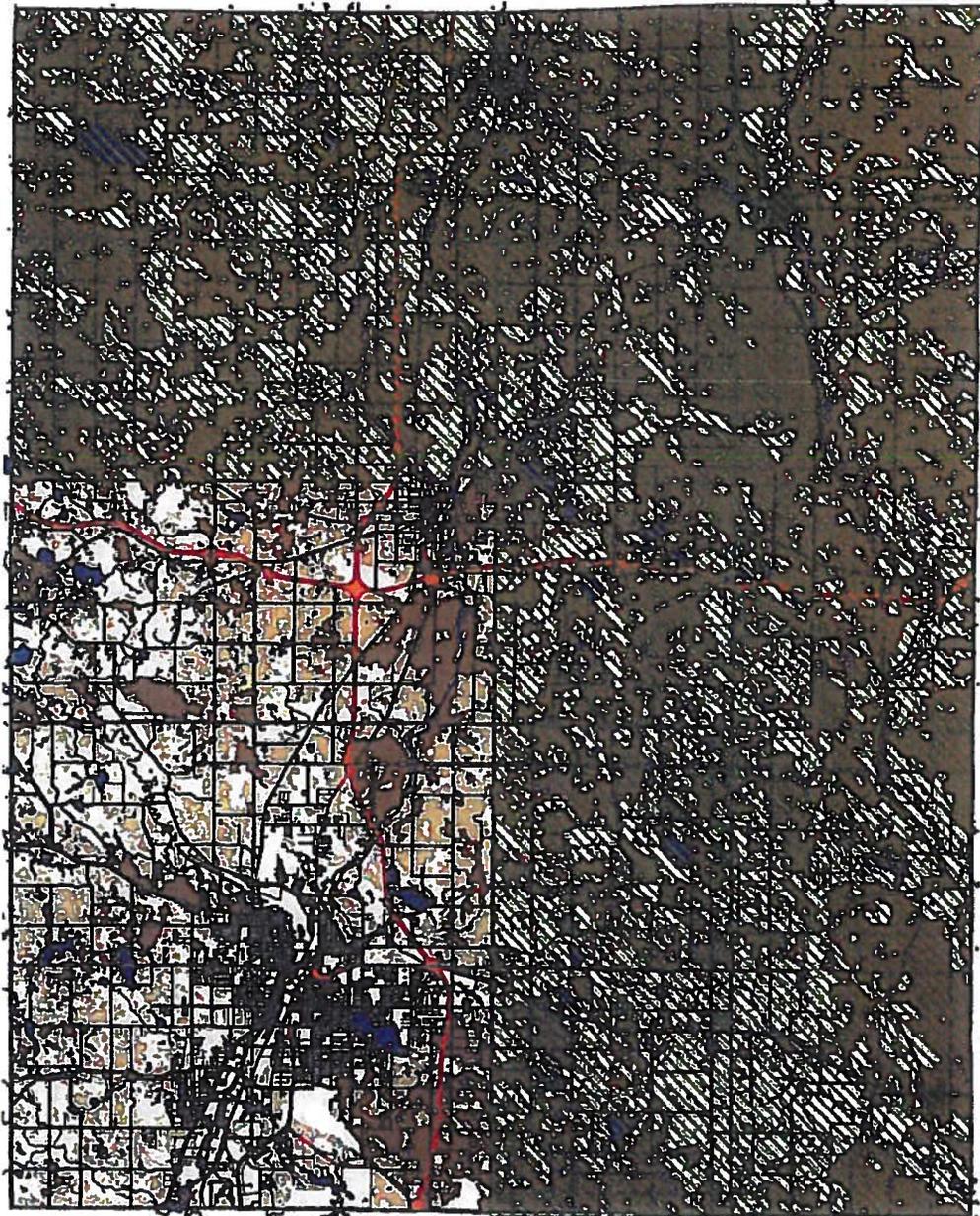


Maps produced for the County Master Plan series by Cardinal Geographic Consulting using original data and data from the Michigan Center for Geographic Information, the Calhoun County Equalization Department, and the participating townships, villages, and cities of Calhoun County.

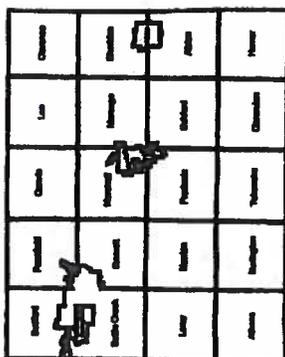
Maps produced April 2004

Prime Farmland

Calhoun County, MI



	City Road Paved
	Class "A" Road
	County Primary
	County Road Double Steel
	County Road Paved
	County Road Unpaved
	104 Business Loop
	Interstate Highway
	Michigan State Highway
	Residential Road Paved
	Residential Road D/T
Farmland Areas	
	Land Capability Class I (Highest Quality)
	Land Capability Class II
	Land Capability Class III
	Farmland Preservation Area
	Township Boundaries
	Lakes, Ponds, and Rivers



Maps produced for the County Master Plan series by Cardinal Geographic Consulting using original data and data from the Michigan Center for Geographic Information, the Calhoun County Equalization Department, and the participating townships, villages, and cities of Calhoun County.

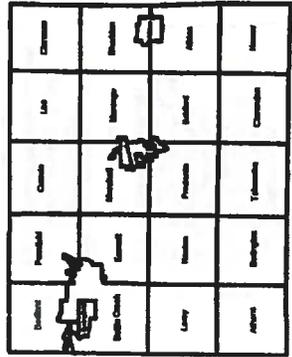
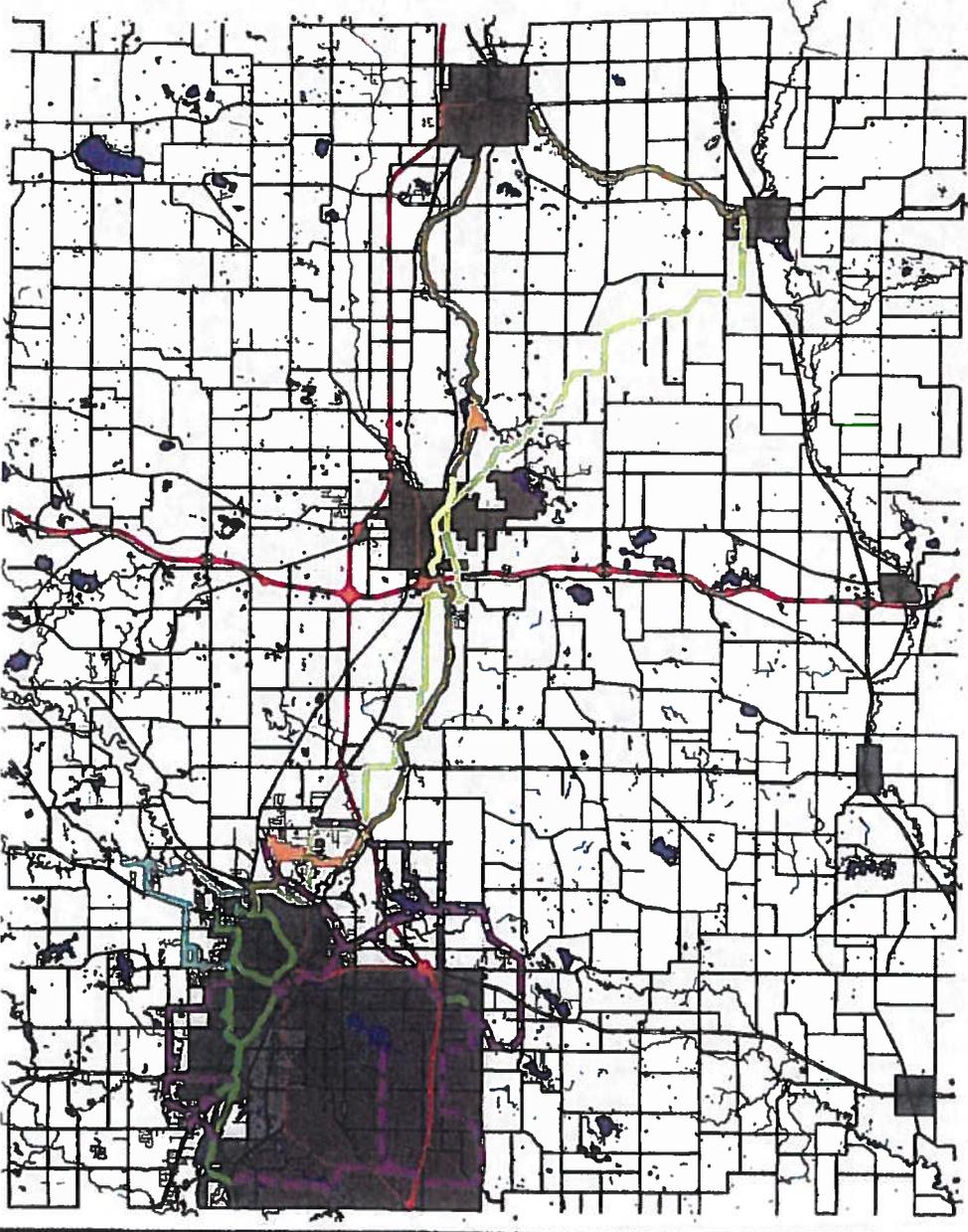


Maps produced April 2004

Non-Motorized Trails Calhoun County, MI

	Alley		City Road Paved
	Battle Creek Bike Path		Class "A" Road
	Battle Creek Linear Trailway		County Primary
	Proposed County Trail		County Road Double Seal
	Emmett Twp Bike Path		County Road Paved
	Merrettall River Walk		County Road Unpaved
	North Country Trail		I-94 Business Loop
	Proposed Penntfield Twp Trail		Interstate Highway
			Michigan State Highway
			Residential Road Paved
			Residential Road Dirt

	County Parks
	Cities & Villages
	Township Boundaries
	Lakes, Ponds, Rivers, & Drains



Maps produced for the County Master Plan series by Cardinal Geographic Consulting using original data and data from the Michigan Center for Geographic Information, the Calhoun County Equalization Department, and the participating townships, villages, and cities of Calhoun County.



Designated Wellhead Protection Areas Calhoun County, MI

Calhoun County, MI

- Alley Road Paved
- Class "A" Road
- County Primary
- County Road Double Seal
- County Road Paved
- County Road Unpaved
- I-94 Business Loop
- Interstate Highway
- Michigan State Highway
- Residential Road Paved
- Residential Road Dlt
- Cities / Villages
- Wellhead Protection Areas
- Rivers, Streams, Lakes, & Ponds
- Township Boundaries

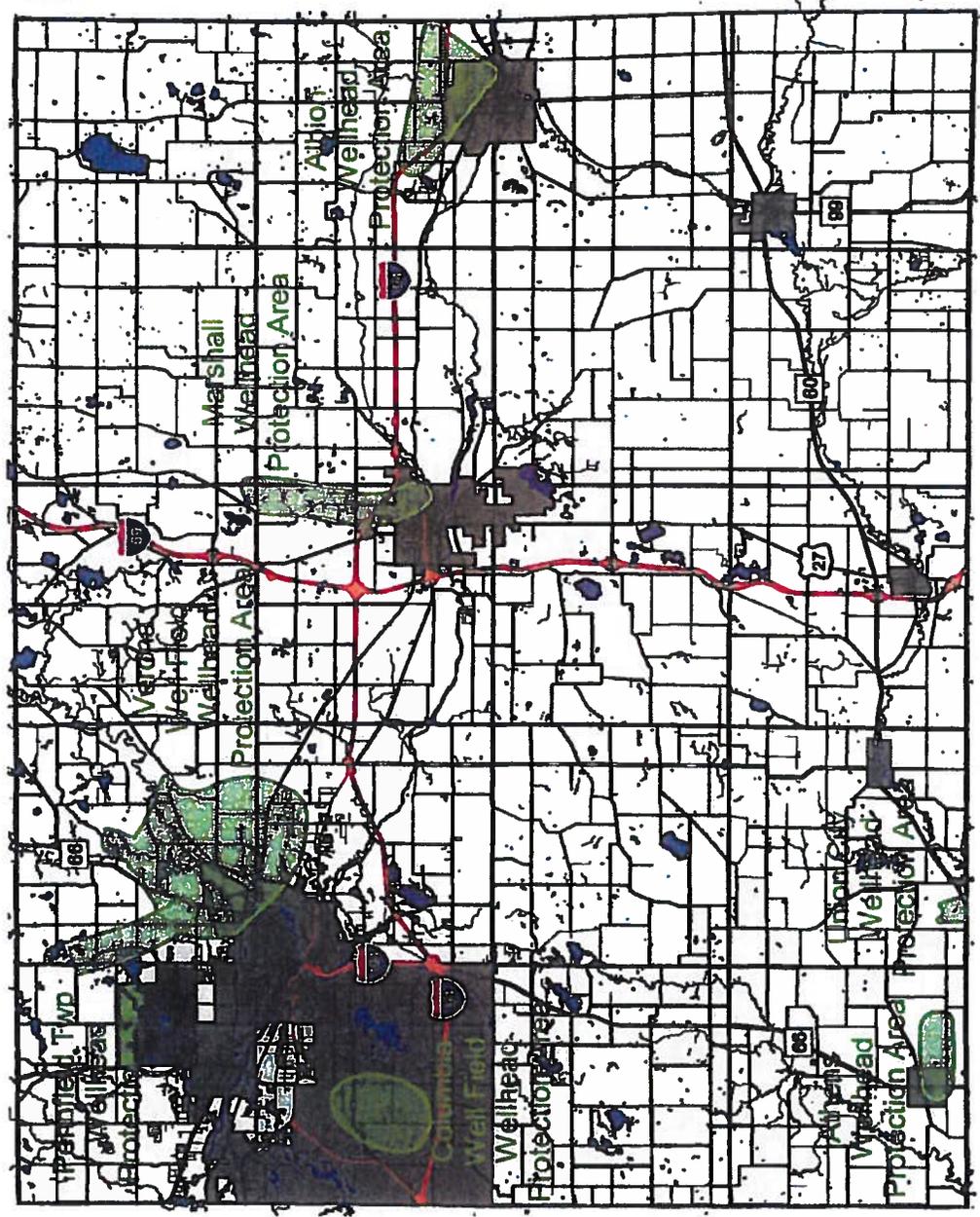


Albion	Albion	Albion	Albion	Albion	Albion
Albion	Albion	Albion	Albion	Albion	Albion
Albion	Albion	Albion	Albion	Albion	Albion
Albion	Albion	Albion	Albion	Albion	Albion
Albion	Albion	Albion	Albion	Albion	Albion
Albion	Albion	Albion	Albion	Albion	Albion

Map produced for the County Master Plan series by Cardinal Geographic Consulting using original data and data from the Michigan Center for Geographic Information, the Calhoun County Equalization Department, and the participating townships, villages, and cities of Calhoun County.

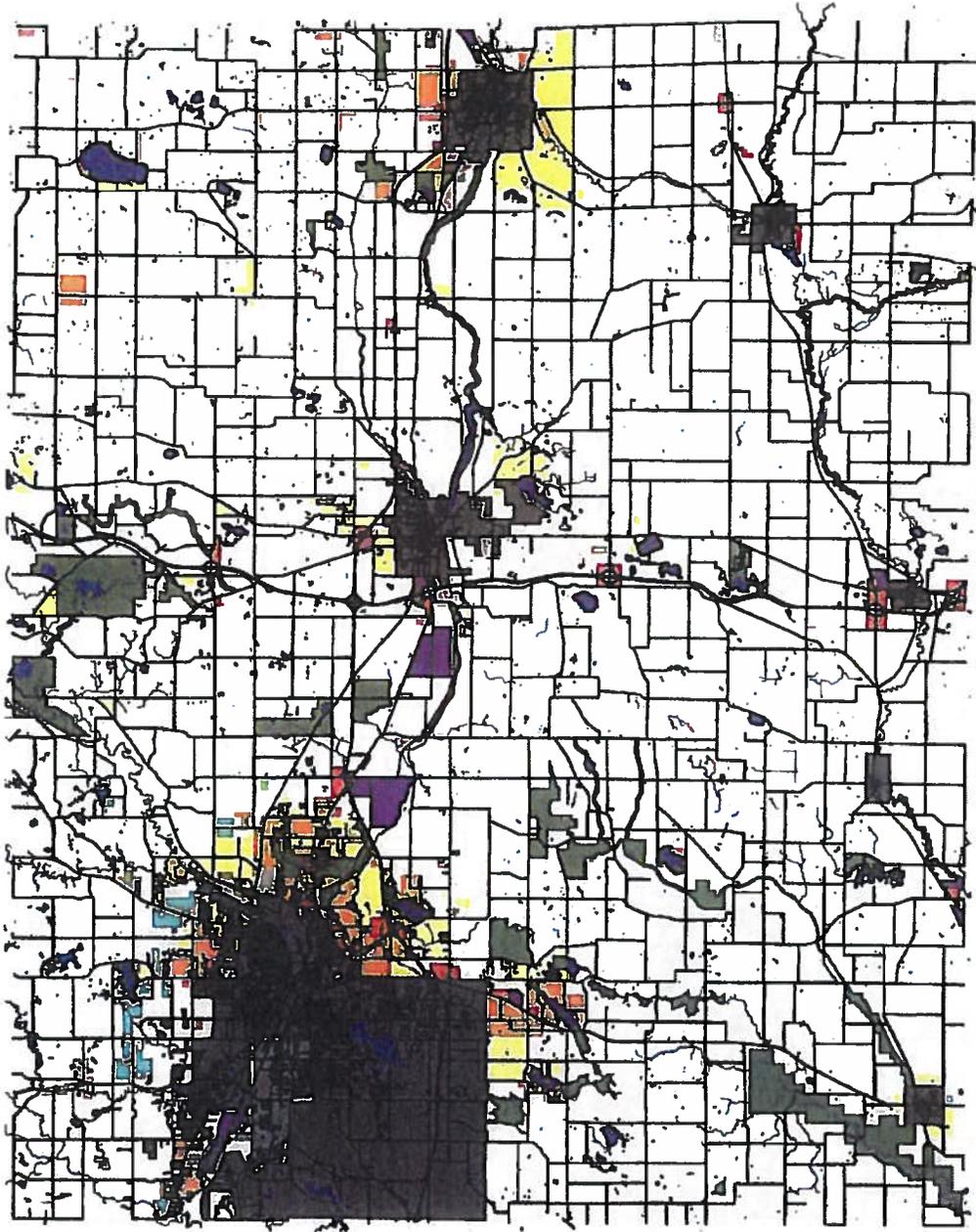
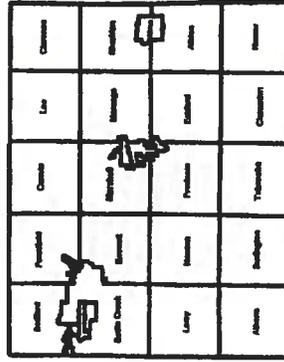
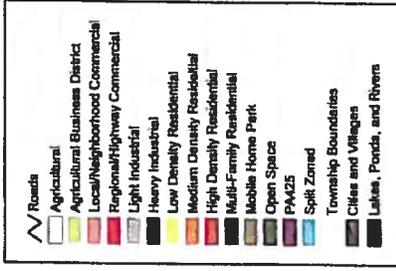


Map produced April 2004



Local Zoning

Calhoun County, MI



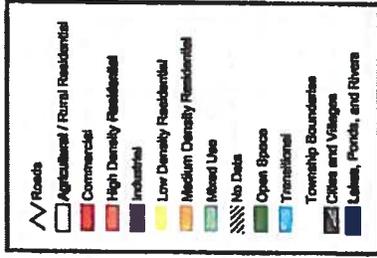
Maps produced for the County Master Plan series by Cardinal Geographic Consulting using original data and data from the Michigan Center for Geographic Information, the Calhoun County Equalization Department, and the participating townships, villages, and cities of Calhoun County.



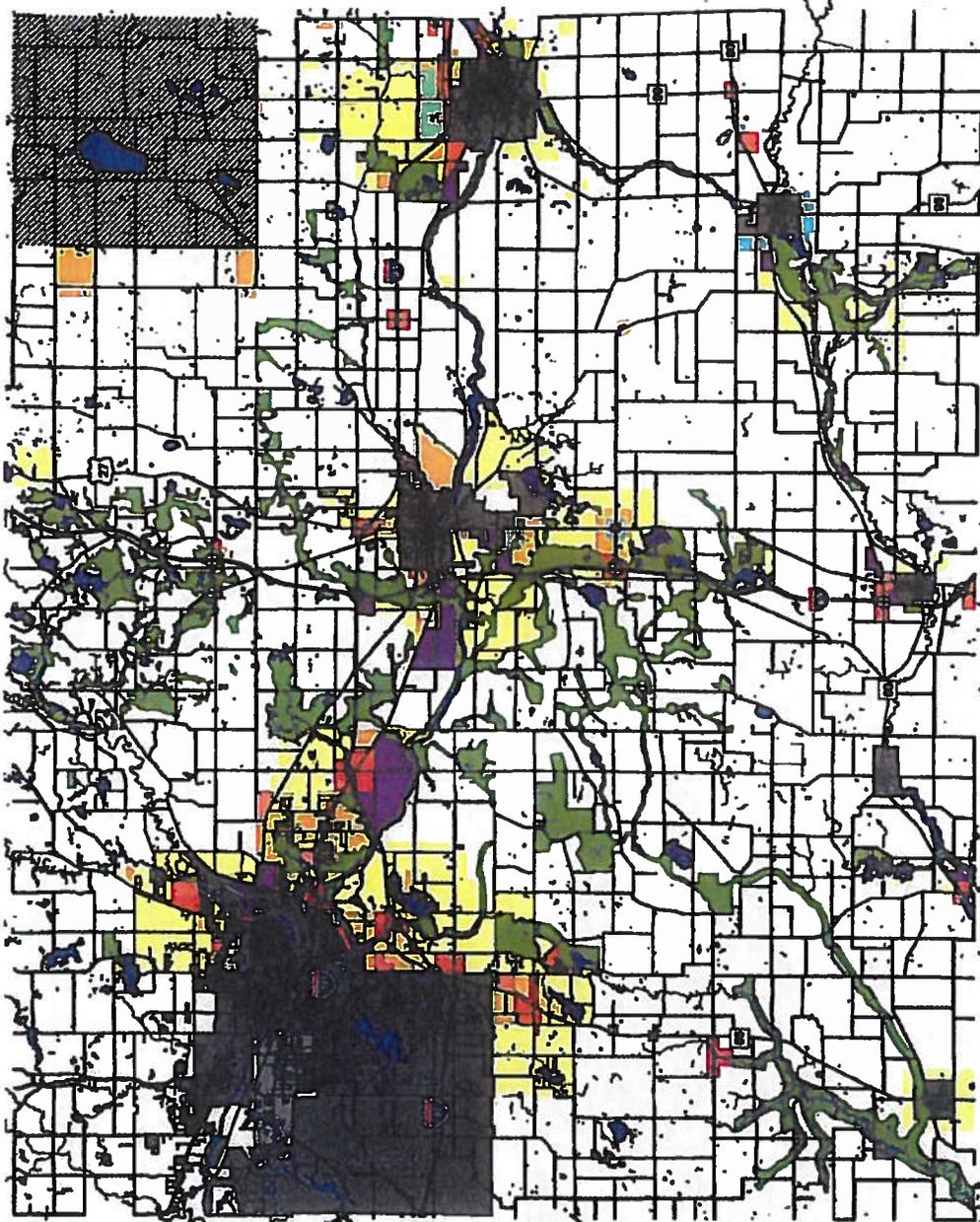
Maps produced April 2004

Local Land Use

Calhoun County, MI



Alcona	Alpena	Alpena	Alpena	Alpena
Alcona	Alpena	Alpena	Alpena	Alpena
Alcona	Alpena	Alpena	Alpena	Alpena
Alcona	Alpena	Alpena	Alpena	Alpena
Alcona	Alpena	Alpena	Alpena	Alpena



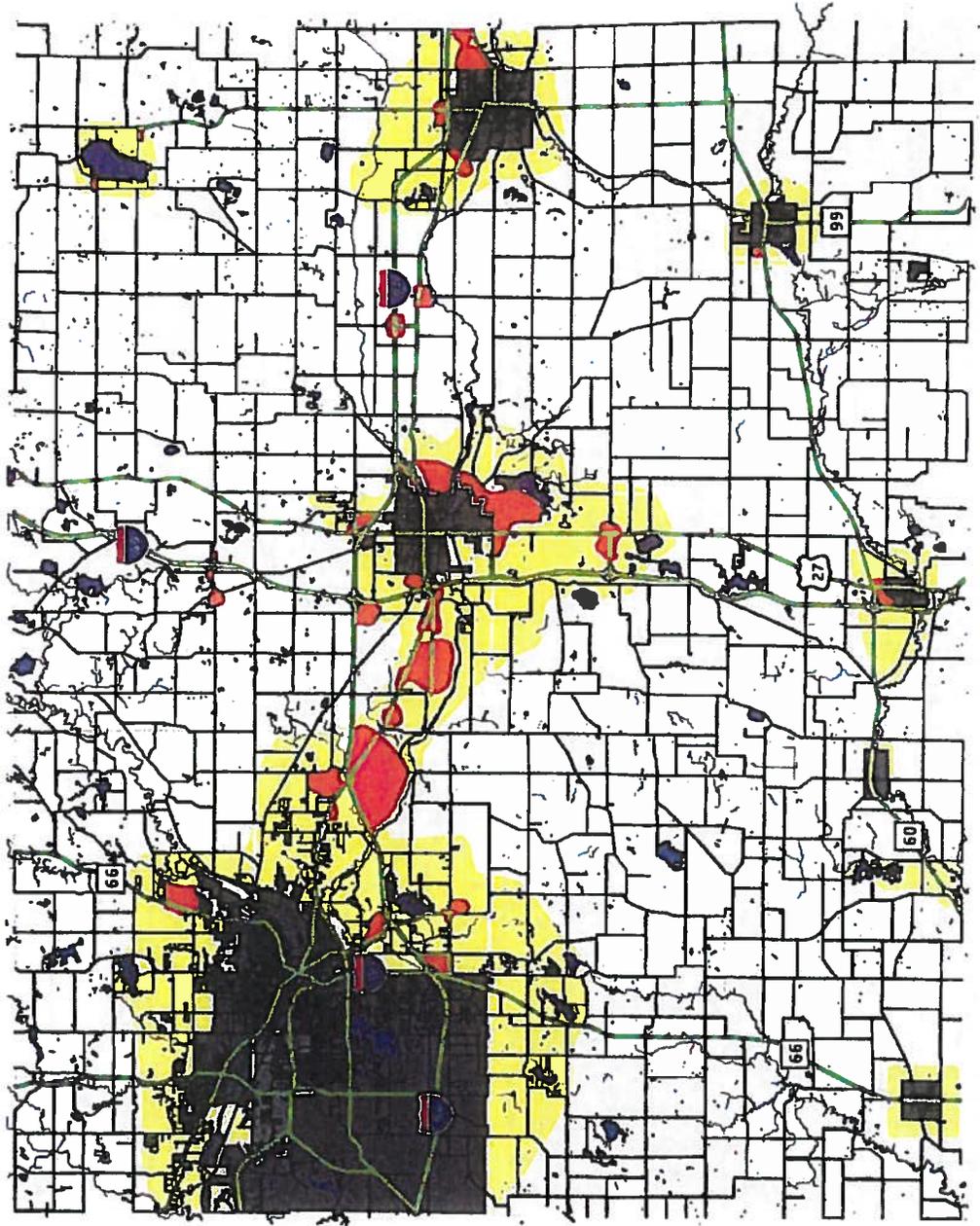
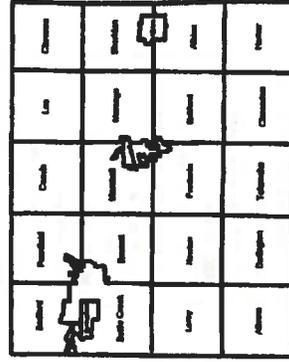
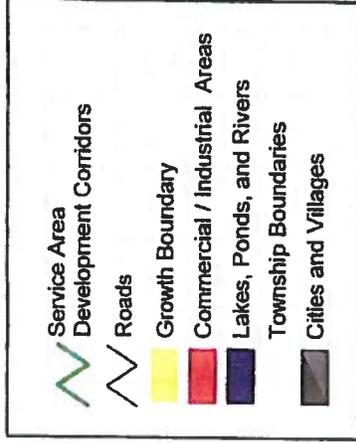
Maps produced for the County Master Plan series by Cardinal Geographic Consulting using original data and data from the Michigan Center for Geographic Information, the Calhoun County Equalization Department, and the participating townships, villages, and cities of Calhoun County.

Maps produced April 2004



Development Corridors

Calhoun County, MI



Maps produced for the County Master Plan series by Cardinal Geographic Consulting using original data and data from the Michigan Center for Geographic Information, the Calhoun County Equalization Department, and the participating townships, villages, and cities of Calhoun County.

Map produced October 2004

Utility Service Areas

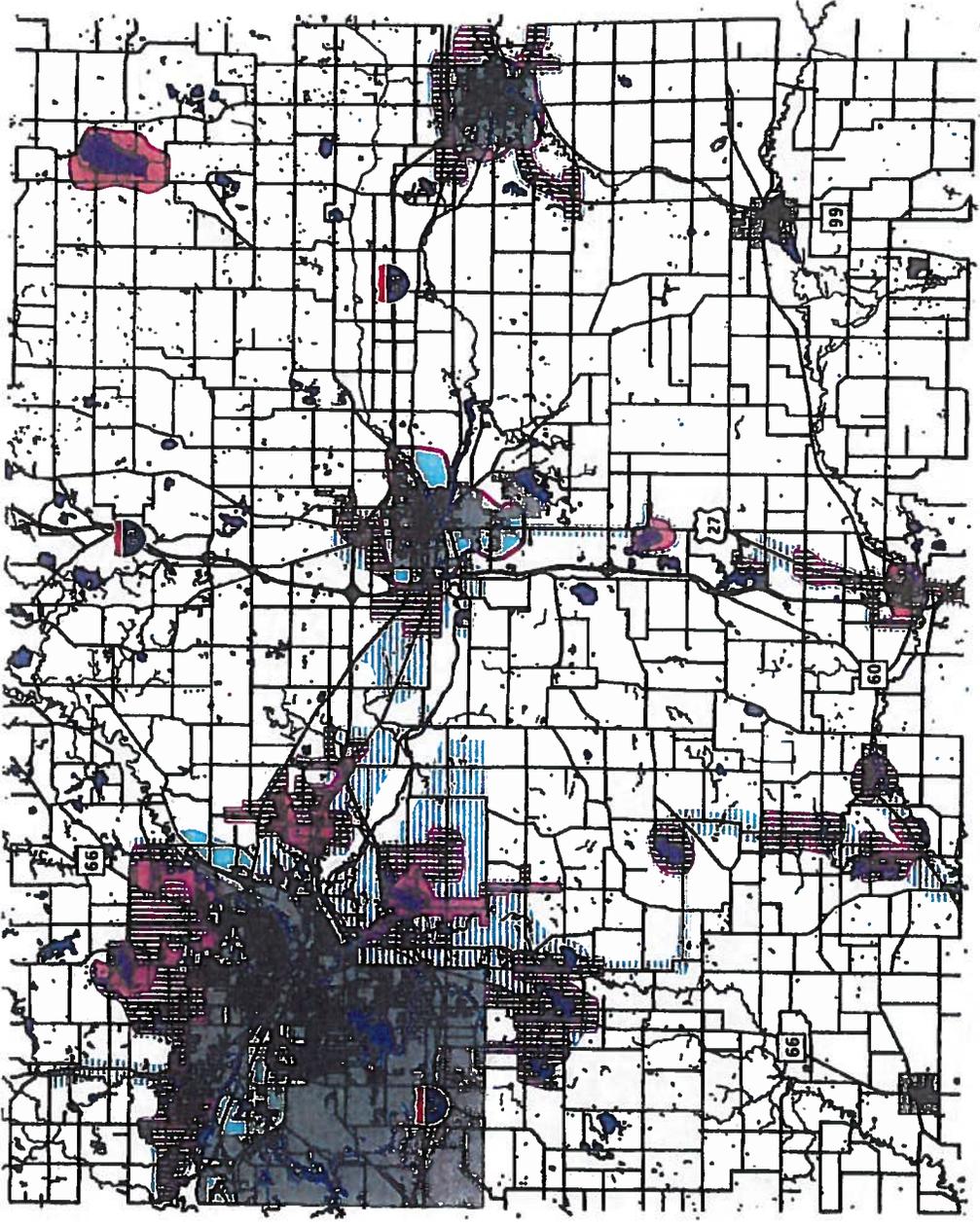
1995 Infrastructure Master Plan

Calhoun County, MI

-  Existing Water Service Areas
-  Existing Sewer Service Areas
-  Proposed Sewer Service Areas
-  Proposed Water Service Areas
-  Lakes, Ponds, and Rivers
-  Township Boundaries
-  Cities and Villages
-  Roads



							
Alcona							
Alcona							
Alcona							
Alcona							
Alcona							
Alcona							
Alcona							



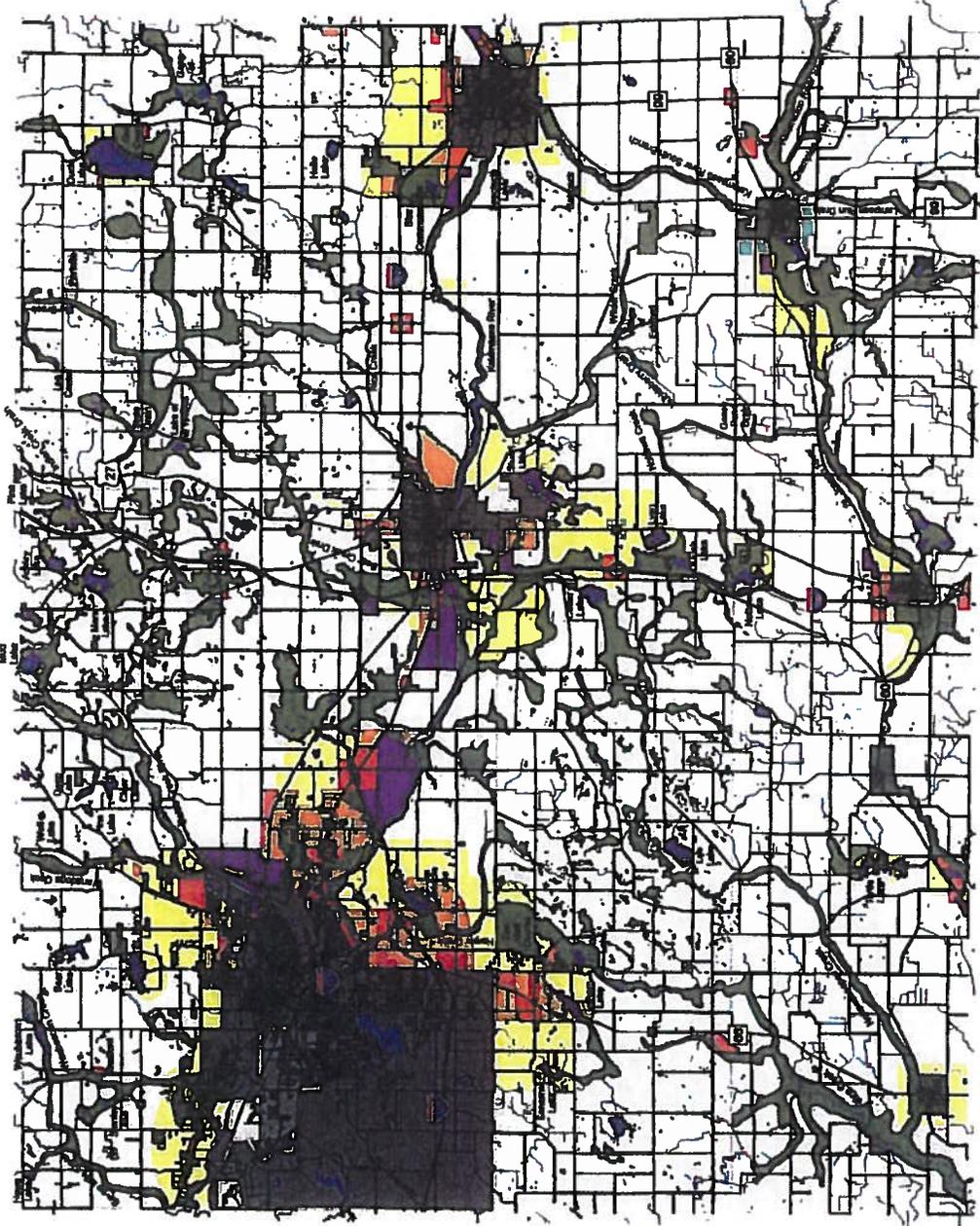
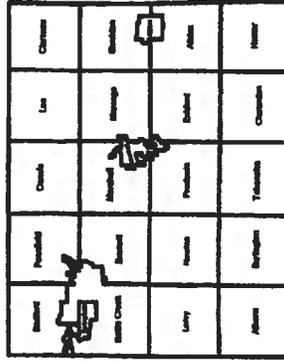
Maps produced for the County Master Plan series by Cardinal Geographic Consulting using original data and data from the Michigan Center for Geographic Information, the Calhoun County Equalization Department, and the participating townships, villages, and cities of Calhoun County.



Maps produced April 2004

County Master Land Use Plan

Calhoun County, MI



Maps produced for the County Master Plan series by Cardinal Geographic Consulting using original data and data from the Michigan Center for Geographic Information, the Calhoun County Equalization Department, and the participating townships, villages, and cities of Calhoun County.



Map produced October 2004

**Interchange
Development
Build-out**



**Interchange
Development
Alternative**

Lake/Village
Build-out



Lake/Village
Alternative

16 a + b