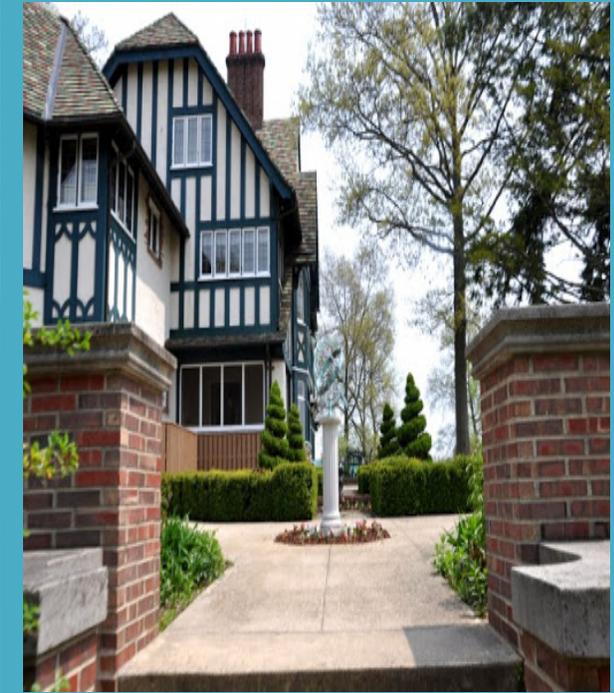


2020 Master Plan



ROSS TOWNSHIP
KALAMAZOO COUNTY, MICHIGAN

2020 MASTER PLAN

PLANNING COMMISSION PUBLIC HEARING – _____, 2021
ADOPTED BY THE TOWNSHIP BOARD – _____, 2021

ACKNOWLEDGEMENTS

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Mission Statement

The mission of the Ross Township Board of Trustees is to preserve and enhance the quality of life in Ross Township by:

- ◆ Providing a safe environment in which to live
- ◆ Maintaining the rural character and quietude of our community
- ◆ Protecting the natural resources of our community
- ◆ Responding to the needs of the Township with respect and concern
- ◆ Upholding and enforcing the Local, State, and Federal laws

INTRODUCTION

What Is Community Planning?

Community planning is planning by municipal (Township) government. It is concerned with the solving of existing physical, social and economic problems as well as providing for the optimum environment for those components of the community over time. Community planning operates under the general objectives established by state enabling legislation. The **Michigan Planning Enabling Act (Act 33 of 2008)** provides for the creation of Township planning commissions, the development of comprehensive plans and the regulation of land. Under this Act, a Township may create a planning commission to make plans for the unincorporated areas of the Township. Such plans are intended to provide the framework for public capital improvements, zoning and other land use controls administered through the Township, County and State governments over the life of the plan. The aim of community planning is to achieve optimum compatibility and efficiency among the various elements that make up the community. Community planning can prevent duplication of effort among the various levels of government and avoid unnecessary competition for limited financial resources. Just as important, community planning can influence the stabilization, conservation and improvement of private property and natural resources.

What Is the **Master Plan**?

The **Master Plan** is a product of the planning process. Through text, maps and other graphic aids, it explains the philosophy and desires of the Township about its future. The Plan seeks to express an ideal community in terms of existing conditions, growth potential and accepted planning standards. Yet it is flexible enough so that changing conditions will allow Ross Township to adapt as necessary to accomplish the general precepts of the plan. To be most effective, the plan must reflect the joint participation of citizens, businesses and public officials in the orderly development of the Township.

Ross Township's proximity to Kalamazoo and Battle Creek, its rural atmosphere, and its institutional resources make it an ideal place for people to live. ~~The need to balance development demands with the desire to retain the Township's rural atmosphere prompted the Township's Planning Commission to update its Master Plan.~~ While land use issues are the central focus of the Plan, it also identifies issues related to public services, roads, community facilities, recreation, agriculture, institutional land holdings, and the area's natural environment. **A good master plan should consider these factors and use the right planning tools to guide land use decisions so as to take advantage of the Township's strengths while still preserving its assets.**

~~Most of the issues identified in the Plan are a direct result of the types of public participation used during the planning process. Methods of public participation included a community survey, issue identification workshops, interviews, open meetings and public hearings. The Planning Commission used all of these forms of local input to identify issues, develop goals and create policies to guide the Township towards those goals.~~

The **Master Plan** represents the efforts of the community to set goals and an overall vision for the Township. This Plan will guide Ross Township's development through the year **2040**, when the Plan will require updating. The Township should frequently review the Plan (at a minimum, once every five years by law) to ensure the goals still match the community's desires and to ensure the responsible parties are following the established policies.

The Master Plan's Relationship to Zoning

The Michigan Zoning Enabling Act states that the 'zoning ordinance shall be based upon a plan designed to promote the public health, safety, and general welfare, (and) to encourage the use of land in accordance with their character and adaptability . . .'

The Master Plan is a policy document and serves as the basis for the Zoning Ordinance and Zoning Map. Zoning decisions found to be inconsistent with the Plan may be found to be invalid by the courts.

In other words, the Master Plan sets forth the vision for the Township, while the Zoning Ordinance establishes the land use regulations designed to implement that vision. The areas delineated on the Future Land Use Map are called 'land use classifications' and are not the same as zoning districts on the Zoning Map. The land use classification sets forth the desired land use, whereas the zoning district establishes what can happen under current conditions.

To that end, the Future Land Use Map will not directly match the Zoning Map or align with existing land uses. However, the Plan reflects the long-range desires for land development, and it is expected that future rezonings and land use decisions will conform to the Master Plan.

The Zoning Plan contained within the Master Plan describes how the land use classifications on the Future Land Use Map correlate to the zoning districts on the Zoning Map. The Zoning Plan will help determine how the Zoning Ordinance should be amended to implement the Master Plan.

Creating the Master Plan

The original Township Master Plan was adopted in 2002. Following receipt of significant public input and a comprehensive review of goal statements related to residential, commercial, industrial, agricultural, institutional, and open space land use, specific goals and policies were developed for the period of 2000 through 2020. The goals and policies set forth in the 2002 Master Plan were based on population projections, development trends, and anticipated land preservation activities.

Consistent with the Michigan Planning Enabling Act of 2008, the Planning Commission conducted a review of the Master Plan in 2010. It was determined that the Plan remained generally relevant on land use policies but received minor updates to incorporate goals and objectives specific to the quality of the Gull Lake watershed; strengthen and clarify established future land use classifications; and, incorporate a zoning plan.

In 2018, the Ross Township Master Plan Review Committee conducted a review of the 2011 updated Master Plan. A minor update of the document was considered to be desirable so as to incorporate current demographic data; respond to new planning law and land use regulatory options; and, recognize recent development activity and changes in 'existing conditions'.

The 2011 Master Plan update was accomplished in three basic steps:

First, updated information about the Township was gathered related to demographics, land use, and public facilities and services. This information is presented in Sections I through IV. The updated information was then used to confirm/update the Goals and Objectives set forth in Section VI that serve as the foundation of the Plan. Lastly, using the confirmed Goals and

Objectives as a guide, the Future Land Use Plan and Implementation Plan were updated for accuracy and relevance.

The Planning Commission then initiated the adoption process required by the Michigan Planning Enabling Act. The draft updated Plan was reviewed by the Township Board and then released for review by the surrounding communities and the Kalamazoo County Planning Commission. Following the mandated review/comment period, the Planning Commission held a public hearing on xxxxxxx, 2021 and the Plan was adopted by the Township Board on xxxxxxx, 2021. The resolution of adoption is copied on the inside back cover of this document, in accordance with the Act.

Pursuant to the recommendation of the Master Plan Review Committee, a full rewrite of the Master Plan will be considered following the release of the 2020 census information and will include a broad-based and meaningful public engagement element in the planning process.

How to Use This Plan

The Master Plan will have an impact on the future of your property. It is important that you become familiar with the Plan and what it may mean to you and your community.

What land use is proposed for your property or the area surrounding your property? This information is set forth on the Future Land Use Map and described in Section VII. Find the land use classification in which your property is located and then read the description of the classification applied to your property. If you have a specific proposal that is inconsistent with the expectations of the Plan, you will want to review the Plan in more detail.

How does the Plan affect your property? The future land use designation of your property indicates the planned use of your property. This does not mean that you cannot continue the use that you currently have. Land use within the Township is dictated by zoning. See the Zoning Ordinance for zoning standards specific to your property.

How does the Township view development in your area? The Future Land Use Plan/Map indicate the type of development planned for your area; it may be specific or somewhat general. The Future Land Use Classifications set forth in Section VII and the goals/objectives for land use within the Township set forth in Section VI provide details on the direction of future land use within your general area.

Plan Summary

Ross Township is a community of rich and diverse natural resources. It is also home to ~~over 4,000~~ **almost 5,000** people who strongly value those resources and desire to protect and preserve them. At the same time, it is inevitable that change (physical, social and economic) will occur. With its close proximity to both Kalamazoo and Battle Creek, the Township is in a geographic location that is undergoing development pressures. The Township's population is substantially older than other townships in Kalamazoo County, has a higher level of income and in general is employed outside of the Township, making Ross Township a "bedroom" community – one where residents live, and commute elsewhere to work.

Historically, row crop and orchard farming have played an important role in defining the Township's character, as a number of large landholders engaged in farming as a full-time occupation. Over time, as the economics of agriculture have changed, farmers have retired, and transportation improvements have made people more mobile, the amount of land in agriculture production has been declining. Concurrently, the larger lakes in the Township, primarily Gull Lake, have traditionally been a summer vacation spot for people who lived in other communities. Within the past 20 years, as those summer residents became older and retired, many turned their summer home into a year-round residence.

A number of other related factors have contributed to the changing character of the Township. Those factors are allied to the "push-pull" model of community change. There has been a long-term trend among households to move out of urban areas for a variety of reasons (traffic congestion; small, older homes; crime; taxes) to more rural areas that appear more attractive because those conditions either don't exist or are substantially less pervasive in those areas. The negative conditions create a "push" factor. The attractive conditions create a "pull" factor. Ross Township's rural character, relatively low density of development, variety of natural resources (especially lakes, wetlands and woodlands) and overall natural beauty combine to attract new residents. At the same time, Township representatives and residents understand that the very environment that makes the area an attractive place to live is always in danger of being diminished unless the resources that make up that environment are protected. Ross Township is in an envious position in one sense because about 20 percent of its land area is owned and managed by institutions and nonprofit organizations, the great majority whose focus is the preservation of open space, forests, wetlands and agricultural lands for research, education and recreation. On the other hand, such a large amount of land in tax-exempt status substantially limits local property tax revenues.

That is the focus of this Plan – to prepare for changes that are likely to occur in the man-made environment while providing the means to protect, and even enhance, the natural environment. The Plan is essentially divided into two major parts. Sections I through V pertain to existing conditions and the public's perceptions of those conditions, as well as their preferences about the future of the Township. Sections VI through VIII contain the Township's aspirations for the future, as reflected in its adopted goals and objectives, the description of how land uses are proposed to be distributed within the future, and recommended policies and activities that are intended to enable the Township and its residents to implement this Plan.

The Ross Township Master Plan is intended to provide a framework for managing change within the Township to the year **2040**. That consists of providing for development while preserving and protecting the environment that could otherwise be easily diminished through uncontrolled development.

The following goals were adopted as part of this Plan:

Overriding Goal – Ross Township will preserve its rural character.

Supplementary Goals – Ross Township will:

- Conserve the Township's Farmland
- Preserve the Township's Open Space
- Protect the Township's Natural Resources
- Protect the Quality of the Township's Ground and Surface Waters
- Facilitate Residential Development That Will Maintain the Rural Character of the Township
- Develop and Apply Innovative Development Standards and Techniques
- Assure a Safe and Efficient Network of Streets and Roads
- Provide Adequate Public Services and Facilities
- Assure a Planned, Concentrated Approach to Commercial and Industrial Development

The following are highlights of the elements of the Plan that are contained in Section VII Future Land Use.

- The Township **estimates** a population of 5,800-6,000 by the year **2040**.
- Based upon that **estimated** population, **it is anticipated that** an additional **500** households will be living within the Township by the year **2040**.
- Those households will require **approximately 500** additional housing units, of which 92% will be single family, 4% will be duplex and 4% will be multiple-family, similar to the distribution existing in the year 2000.
- Seventy percent of the new single-family residential development will be within cluster/open space configurations, encompassing **546** acres.
- Thirty percent of new single-family development will occur in traditional single lot or plat configurations along, or within close proximity to, County roads. These will encompass **147** acres at an average density of **one unit per acre**.
- **New** duplex and multiple-family housing will **occupy** about **14** acres.
- In total, approximately **707** acres should be set aside for new residential development.
- New single-family residential development (particularly cluster/open space development) will be focused on currently undeveloped areas within the eastern and southern portions of the Township. Duplex and multiple-family housing will be concentrated around the Village of Augusta.
- New commercial activity will be focused around the M-89/38th Street area on the south side of the lake. A "village center" concept with mixed use/pedestrian oriented commercial uses is called for.
- Industrial development will be limited to an area north of Custer Road in sections 35 and 36. It is not the intention of the Township to actively promote industrial development.
- Residential, commercial and industrial development will be encouraged, through land use control standards in local ordinances, to adopt site design elements that minimize impacts upon the natural and scenic environment.

These components are in keeping with the overriding goal of preserving the Township's rural character. That is to be accomplished through the preservation of its natural resources (lakes, wetlands, woodlands, and viewsheds), the conservation of its agricultural lands, and the retention of as much of open space as possible while accommodating new development within a managed growth framework.

LOCATION

Ross Township is located in northeastern Kalamazoo County, in the southwestern region of Michigan's Lower Peninsula. The Township's northern border is adjacent to Barry County, and its eastern border is the gateway from between Kalamazoo County to and Calhoun County. Ross Township is surrounded by four townships, including Barry Township to the north, Bedford Township to the east, Charleston Township to the south and Richland Township to the west.

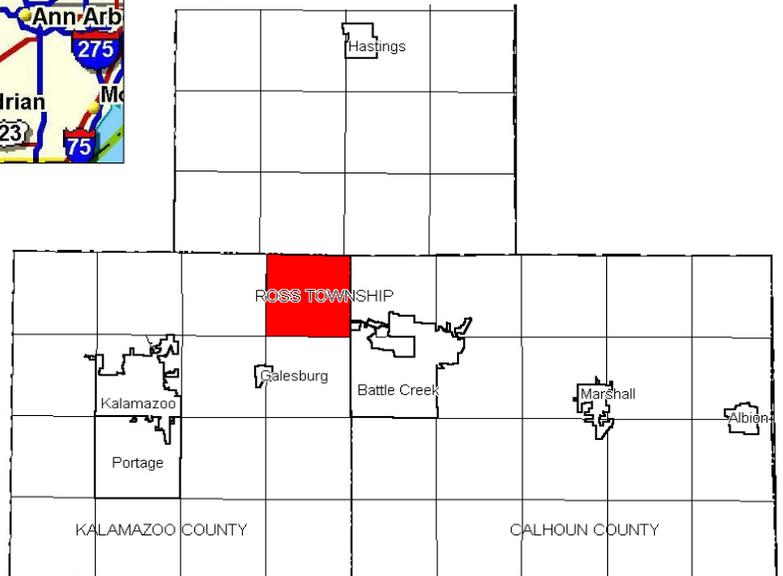
The Township encompasses 36 contiguous land survey sections, or slightly less than 36 square miles, located at Township 1 South, Range 9 West, situated at the point of intersection of Kalamazoo, Calhoun and Barry Counties. There are over 433,000 people living within a 20 mile radius. The City of Battle Creek is nine miles east of the Township. The county seat, in the City of Kalamazoo, is located approximately 11 miles southwest of Ross Township.

MAP 1-1- LOCATION

A. General Location



B. Regional Location



NATURAL FEATURES

Natural features are an essential part of a community's attraction. An understanding of Ross Township's air, land and water resources can help further define what best land use activities should occur within its borders. The composition of local soils, the natural topography of the area, the Township's general vegetation, and the quality and quantity of water all help determine the ability of the Township to locate, support and sustain certain types of land development. Natural features can also help the Township justify the denial of some development.

For the most part, natural features can be preserved or they can be modified to accommodate and sustain man-made development, preferably through integration into such development.

Preservation is warranted when natural features are so sensitive or valued that any alteration of those features will likely have substantive negative impacts on the functional quality and/or aesthetics of the general environment, or the immediate property. In general, development should be prohibited in preservation areas; but if it is to occur, it should take place only within those projects which have, at the most, a substantially limited negative effect on those natural features. Wetlands are an example of areas requiring the application of preservation techniques. In some instances, minor changes to natural features can be integrated into a development with only slight impacts on the character of the environment.

Integration may provide adequate protection by allowing natural features to remain undisturbed, yet exist in concert with the development. Integration requires more creative planning and programming than preservation, and requirements for integration should be incorporated into the Township's land development standards.

Local Soils

Soils are the building blocks that define the types of activities that can be sustained on the land. For example, the type of vegetation and drainage that occurs naturally in an area is determined by the soil in that area. Soils also help

determine where buildings, roads and other man-made structures can best be located. Classification of Ross Township's soils have been identified and mapped by the ~~Soil Conservation Service~~ **USDA Natural Resources Conservation Service (NRCS)** in the Soil Survey of Kalamazoo County, Michigan.

There are 12 different soil types within Ross Township. Each of these types has their own unique characteristics, including limitations for development, recreation and agriculture. The majority of these soil types are a part of the Kalamazoo-Oshtemo association, which are classified as nearly level to rolling, well drained soils that have a loamy and sandy subsoil. However, in Ross Township, the topography is characterized by numerous rolling slopes and predominantly more rugged than level terrain.

Prime farmland soils are defined as those best suited to produce food, feed, forage, fiber and oilseed crops. These soils have properties that are favorable for production of sustained high yields of crops, and are designated based upon soil type and topography only.

Map I-2 shows areas in Ross Township where soil and topography may have an impact upon development. This impact comes from a variety of sources, such as the presence of wetlands, poor permeability of soils, and improper engineering **of** properties for building development. This map and the classifications noted are intended for general planning purposes only.

MAP I-2 – SOILS MAP

Draft

Topography

One of the more notable features of Ross Township is its hilly terrain in various locations, particularly south of M-89. The Township's topography ranges from a low elevation of 790 ft. above sea level within the floodplains of the Kalamazoo River to a high elevation of 980 ft. above sea level in Sections 22 and 23 south of M-89 near the center of the Township. The steepest slopes are around eight percent. Map 1-3 is a depiction of the USGS topographic map of the Township. Map 1-4 provides a 3-dimensional depiction of topography for most of the Township. The terrain makes the Township an attractive location for residential development, but also makes those areas susceptible to erosion, surface water contamination, and other environmental impacts resulting from development.

Vegetation

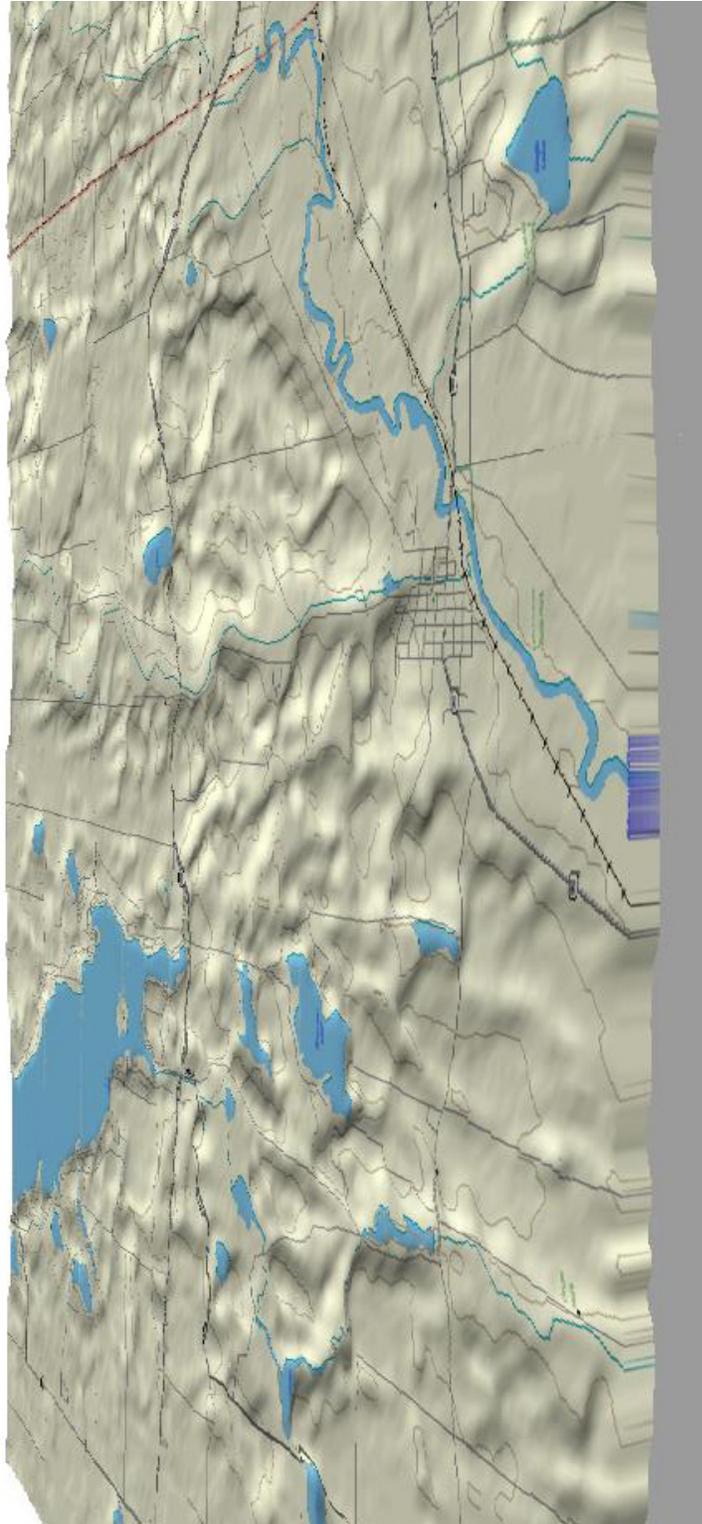
Ross Township was originally covered by a mixture of yellow oak savanna and forest, as well as scattered prairies. Forested areas are comprised of White Oak and Yellow Oak along with small numbers of Black Oak, Pignut and Shagbark Hickory. River areas and floodplains also may include types of Elm, Maple, Ash and Basswood. Non-forest vegetation consists of brush and shrub species, including autumn olive, red osier, silky dogwood, thornapple, dog bane and briar. Grasses include orchard grass, quack-grass, timothy, blue stem and fescue. These brush and grass species are found in various clustered locations throughout the Township and encompass over 3,000 acres. In some instances, they exist naturally on land that has never been modified or developed and in other cases they can be found on land that was formerly actively farmed.

Tree species are typically found in larger concentrations, or woodlands. These woodland (forested) areas cover almost 4,900 acres within the Township. Woodlands are important contributors to the "quality of life" in the Township, as they act as scenic buffers and moderate the effects of wind, flooding, noise, and airborne particles. In addition, woodlands provide a varied and rich environment for plants and animals. Forest layers, which include canopy cover, branches, trunks, shrubs and plants on the forest floor, provide areas for breeding, feeding and refuge for insects, birds and mammals.

MAP 1-3 – USGS MAP



MAP 1-4 – 3 DIMENSIONAL TOPOGRAPHY



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Woodlands protect water resources and soils by creating forest vegetation that moderates the effects of winds and storms, stabilizes and enriches the soil, and slowing runoff of rain and snow, allowing the forest floor to infiltrate water. In addition, extensive areas of woodlands have a moderating effect on the local climate. The microclimate of a forest, which is partially the result of the shade of the trees and the transpiration of water from leaves, keeps surrounding air at a relatively more constant (cooler) temperature during the day and warmer temperature at night than unforested areas.

Development can have a profound impact on woodlands. Typically, construction of homes and businesses in wooded areas will require the removal of some or a majority of the trees in the area that is to be developed. Historically, clearing land for agricultural production has resulted in substantial reduction of woodlands. The construction of roads and utility easements typically require removal of large sections of woodlands.

It is unlikely that woodlots will be removed or modified to any great extent in the future for agricultural purposes. It is more likely that construction of new residential and commercial land uses, as well as new or expanded County roads and utility easements will have the greatest impact upon woodlands and tree cover in general. Good site design for residential and commercial developments will include the placement of buildings and site amenities, such as parking lots, in locations that minimize the removal of larger trees. This essentially requires integration of improvements into the natural features of the site to the greatest possible extent. Likewise, in the construction of new roads or the widening of existing roads, and the placement of new utilities, existing mature trees should be maintained and protected to the maximum extent possible to preserve the character of the Township.

Without tree cutting regulations, the Township risks losing its forest and tree resources. Damage to other natural and man-made resources may result from the unregulated removal of woodlands and create additional financial burdens to the general public as well as individual property owners. Designed to prevent these losses and expenses, woodland regulations can identify the specific benefits

woodlands provide to the Township. Implementing regulations assures that woodland development preserves the health of the forest resources. Enforcement of a tree preservation ordinance can be difficult, but including an evaluation of trees and other vegetative resources as part of a site plan review process is appropriate **an option** for the Township.

Water Resources

Ross Township is in the Kalamazoo River Watershed and has over 1,809 acres of lakes, rivers and streams within its boundaries. Lakes represent 8.2 percent of Ross Township's geographic area. The largest body of water is Gull Lake, which is located in the northwestern part of the Township. Other lakes include Wintergreen Lake in Section 8, Duck Lake in Section 5, Hamilton Lake in the northeastern corner of Ross Township, Stony Lake in central Ross Township, Pond Lily Lake in Section 32 and Sherman Lake in southwestern Ross Township. **(see Map 1-2)** The Kalamazoo River flows through the southeastern corner of the Township, entering from the east and exiting southwest in Section 34. Three major streams flow through the Township: Augusta Creek, Sevenmile Creek and Gull Lake Outlet.

Ross Township's water resources are a valuable community asset. *Surface waters* provide fishing, boating, swimming, and other recreational opportunities while *groundwater* is the only source of domestic drinking water. Protecting water resources is essential to preserving the health and welfare of those who live in the Township, as well as sustaining the overall quality of life for both residents and visitors.

Surface and groundwater resources are directly impacted by land use activities. They are closely associated with the natural functions performed by vegetation, as forests and brushlands absorb and promote the natural infiltration of storm water, which in turn protects surface and subsurface water resources. Improper or poorly planned development can increase the quantity and decrease the quality of surface water runoff.

A critical aspect of proper planning for the protection of surface and groundwater resources is the acknowledgement that the natural flow of water is associated with watersheds, rather than political boundaries. Ross Township is part of the Four

Township Water Resources Council comprised of Ross, Richland, Barry, and Prairieville Townships, all **which adjoin** each other. It should be noted that Gull Lake and its primary watershed lies within each of those four jurisdictions. The mission of the Water Resources Council is “the development and implementation of land use strategies that retain the rural environment currently enjoyed by township residents, protecting lakes, streams, drinking water, agriculture, and open space.” Within the Council project area (the four townships), there are 12 watersheds that impact, to one degree or another, the overall character of the topography, soils, vegetation, surface and groundwater resources of the area. Five of those watersheds are in Ross Township and only one (the Sherman Lake watershed) is entirely within the Township (see Map I-5). In effect, four of the watersheds that impact the natural features of Ross Township are influenced by land use activities and decisions in the other three townships. That’s why close coordination among the various townships is important in maintaining the common objective of protecting water resources.



These resources are part of a fragile system that is potentially at risk. An increased amount of rural development, particularly within the past several years and the prospect of significant residential development in the near future, coupled with the substantial areas of steep slopes and wetlands, may begin to threaten the quality of the Township’s water resources.

Surface water features, such as lakes and streams, are directly affected by runoff from man-made land uses. Soil erosion, increased impermeable surfaces (primarily parking lots and roofs), soil contamination, and additional pressures from recreation activities (such as boating), can negatively impact surface water quality. Preserving water quality can help protect fish and wildlife resources, outdoor recreation opportunities, community aesthetics, the local economy and property values.

Overcrowding or overuse of lakes for recreational purposes is also a potential environmental, as well as social, problem. Each lake has its own “carrying capacity” (the maximum number of watercraft that the lake can accommodate at one time without compromising public safety and environmental quality, including noise). A lake carrying capacity study, titled “Four Township Recreational Carrying Capacity Study” was completed for the Four Township Water Resources Council in 2001. A second study, the “Four Township Environmental Carrying Capacity Study,” was completed in 2002 and examines the impact of development on water quality. This study indicates that: “Groundwater resources may be directly affected by man-made facilities and activities, such as increasing levels of septic system use, industrial spills, underground storage tanks, and other activities that contribute water to underground aquifers. The fact that the vast majority of households within the Township use individual wells as their source of domestic potable water underscores the importance of maintaining high quality groundwater.”

Threats to retaining quality water resources can come from a variety of sources, including:

- Non-Point Source Pollution - Rather than being generated from a single source, such as a leaking pipe at a sewage treatment plant, non-point source pollution results from rainfall or snowmelt moving over and through the ground from various locations. As water runoff moves, it picks up and transports natural and man-made pollutants to lakes, rivers, wetlands, or through the ground to aquifers.
- Stormwater Runoff – As urbanization occurs, natural vegetative cover is removed and partially replaced with roofs, parking lots, roads, and other impermeable surfaces. As a result, the rate and volume of stormwater runoff will greatly increase and the amount of water that would normally infiltrate into the ground will decrease. Consequently, the volume of water that would be stored underground decreases and the amount of clean water that would be deposited into streams and lakes as a result of natural filtration processes would also decrease.

- Septic Systems - The majority of the Township's land area is outside of the Gull Lake sewer service area, and consequently the residences in the balance of the Township are served by individual septic systems. When properly located in soils with good drainage above the water table and in lower density residential areas, septic systems generally pose little or no health or environmental hazard. The potential exists, however, for septic system failure even in well-drained soils, resulting in contamination of groundwater, which could impact the quality of individual wells.
- Other potential threats that could impact the quality of the Township's groundwater because of past or current conditions include:
 - Sites that have been identified, or may in the future be identified, as being contaminated due to industrial or commercial activities. Leaking Underground Storage Tank (LUST) sites that have been identified by the Michigan ~~DEQ~~ Department of Environment, Great Lakes, and Energy (EGLE) are also threats to groundwater viability. There are two classifications for LUST sites: "open" and "closed". An "open" LUST site is a location where a release from an underground storage tank has occurred and where corrective actions have not been completed to meet the appropriate land use criteria. A "closed" LUST site is a site where a release has occurred but corrective actions have been completed. The Michigan ~~Department of Environmental Quality~~ EGLE maintains a database of LUST sites, and the status of individual sites on that list are periodically changed and updated. There are currently several sites within the Township that are listed in the ~~MDEQ~~ EGLE database. The list, however, does not always reflect the most recent changes in status.
 - Industrially used or zoned sites.
 - Existing houses that do not allow for a proper isolation between septic systems and individual water wells (typically at least 50 feet) or between the house and surface water (100 feet).
 - Residential developments that are of such a high density that septic system contamination of individual wells is possible.

- Existing agricultural activities covering 500 acres or more.

The Village of Augusta has its own municipal well, located within the Village limits. It ~~has recently~~ **successfully** completed the deliniation of its wellhead protection area, based upon the aquifer flow of water that comprises the source for the well. The Village's wellhead protection area runs in a southeast direction , beginning near the south end of Gull Lake (see Map I-6). The purpose of wellhead protection is to implement policies and programs that will ensure that the Village's municipal water supply is protected from potential contamination. Zoning is typically a primary tool for groundwater protection, including restricting or prohibiting industrial land uses and other activities that have a significant potential for polluting the groundwater.

Wetlands are found throughout the Township, but are particularly concentrated around the area's rivers and lakes. Ross Township is located within the large Kalamazoo River Watershed. According to the Township's September, 1998 Strategic Water Resource Management Report, 13.9 percent of Ross Township's land is classified as wetlands. The Kalamazoo River has many wetland areas along its meandering channel, and the many lakes in the Township make up an extensive wetland complex, except where shoreline development has encroached.

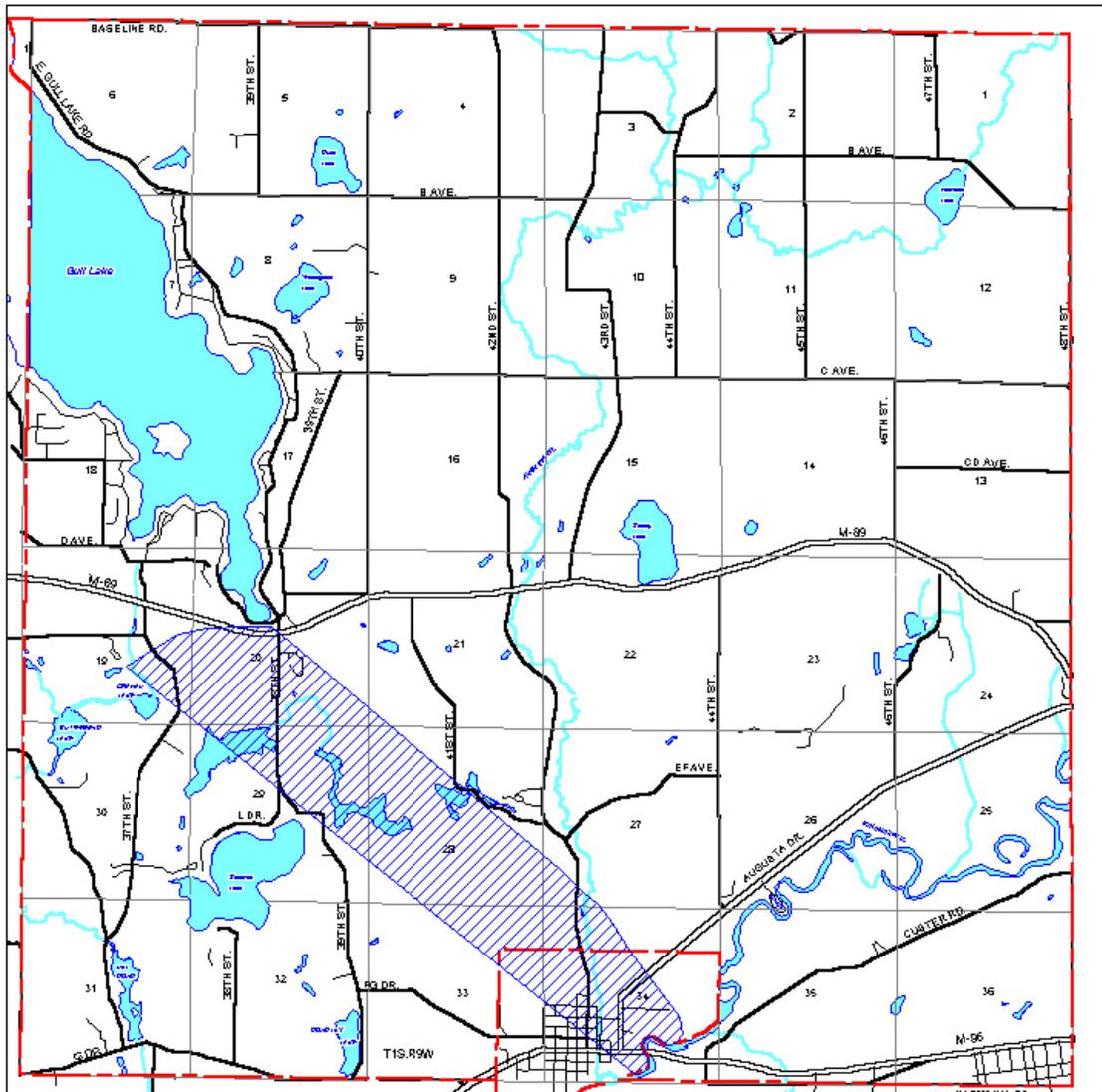
"Wetland" is generally used as a collective term for marshes, swamps, bogs and similar areas that are located between open waters and upland areas. The Michigan Natural Resource and Environmental Protection Act defines a wetland as *"land characterized by the presence of water and frequency and duration sufficient to support, and that under normal circumstances does support, wetland vegetation or aquatic life and is commonly referred to as a bog, swamp or marsh."*

Wetlands are a valuable natural resource that provides substantial benefits to the environment. They help improve water quality and reduce flood and storm damage. They also provide important fish and wildlife habitat and support hunting and fishing activities. They also add diversity to the landscape. In other words, wetlands are critical to the preservation and re-creation of numerous plant and animal species and the natural purification of surface and groundwater.



Map I-6
Augusta Well Head Protection Area

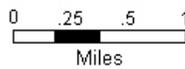
Ross Township,
Kalamazoo, County



Legend

-  Village of Augusta Wellhead Protection Area

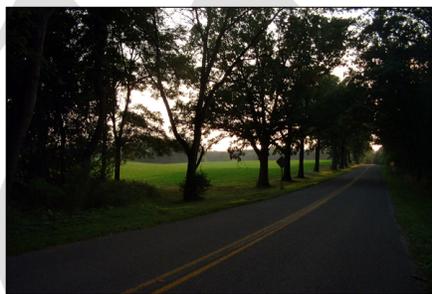
 Gove Associates Inc.
1044 PORTAGE STREET
KALAMAZOO, MI 49001-1116
616-275-6611
FEBRUARY 25, 2002



The Michigan Natural Resources and Environmental Protection Act regulates land which meets the statutory definition of a wetland based on vegetation, the existence of water, and soil type. Modification of a wetland requires a permit from Michigan Department of Environmental Quality **EGLE**. Permits are required for filling or placing material in a wetland, draining water from a wetland, constructing or maintaining a use or development in a wetland, or dredging or removing soil from a wetland. Recreational activities in wetlands, such as fishing, trapping, hunting, or hiking, as well as established farming and forestry activities, do not require a wetlands permit.

~~The Michigan Department of Environmental Quality~~ Michigan **EGLE** regulates wetlands that are five acres or larger in size, or within 500 feet of the ordinary high-water mark of a lake stream or pond, or which are considered to be essential to preserving natural resources. Ross Township may regulate wetlands that do not fall within the jurisdiction of the state, if the state definition of a wetland is used and the Township conducts a complete wetlands inventory. If the Township wants to regulate a wetland that is less than two acres, it must provide a formal finding that the wetland is essential to preserving the Township's natural resources.

Scenic Views are also a resource within the Township that contributes to the overall quality and character of the area and which should be preserved when and where



possible. Viewsheds are broad areas of view, often encompassing one or more views of man-made elements (such as houses in a valley or on a hillside) and/or physical features, such as Gull Lake. Viewsheds can be further classified as *critical* or *scenic*. A critical viewshed includes sites that are so unique to the area that they are an integral

and important component of the tourist economy. They encompass all that is within sight from specific public vantage points and uniquely identify the character of the area. Consequently, they should be protected from the negative visual impacts of development. That can be achieved through not permitting development to occur or regulating it through voluntary measures or local ordinances. Cluster development, site design, setback requirements, and other similar techniques can be applied to minimize the effects of development on critical views.

Scenic viewsheds typify the aesthetic qualities of the area, such as views of rolling hills, open spaces or lakes. While development within these viewsheds may be allowed, they should be regulated by zoning standards, such as height and size of buildings, lot widths, building setbacks along lakefronts and



roadways, and sign regulations. By encouraging the retention of natural vegetation between the residence and the lakefront or roadway, negative impacts on the viewshed can be mitigated. Building height restrictions and requirements for horizontal “lines of sight” through appropriate building setbacks will help to preserve views for lakefront property owners.

Summary

Ross Township is blessed with one of the more varied natural environments in Kalamazoo County. The major features of the Township that contribute to its attractiveness include the relatively steep topography in the south-central portion of the Township, substantial areas of mature tree cover, and open lands that have never been developed. Other major features include parcels in active agriculture, numerous wetlands, the Kalamazoo River, Augusta Creek, and several lakes, with Gull Lake being the largest lake within the County as well as a major economic and social resource.

With such a varied and relatively undeveloped landscape (outside of Gull Lake), a priority among residents is the protection and retention of the Township’s natural resources. That includes the more visible resources, such as viewsheds, woodlots and open spaces, lakes and wetlands as well as those less visible, including groundwater and productive soils. To accomplish that, in light of continuing development, new and creative site design methods as well common-sense conservation applications have to be applied by the Township, the development community, and individual residents.

Section II

INTRODUCTION

People are a community's most valuable asset. They are the key element that allows the Township to function as a complete unit. This section of the Master Plan provides information about the population, housing, social and employment characteristics of Ross Township. By examining these factors, a clear picture of the Township's demographic conditions will emerge. Understanding these conditions provides both a valuable insight into the potential future state of affairs as well as a basis for projecting future needs in housing and land development.

POPULATION

Population Trends

The historic population trends for Ross Township from 1970 to 2010, as well as population estimates for 2017, are presented in Table II-1. These population figures exclude the Village of Augusta which, while primarily within the geographic boundaries of the Township, is not incorporated into this Plan. Table II-1 shows that the Township's population increased by almost 40 percent between 1970 and 2017, (Augusta, which had a 2010 population of 885, had an estimated 871 residents in the portion of the Village that is within Ross Township). About 35 percent of the Township's population growth over the past 47 years occurred between 2000 and 2010. With the exception of the time period between 1980 and 1990, the Township's rate of population growth since 1970 has exceeded that of the County by about 11 percent, but by the year 2000, that differential in the rate of growth decreased to six percent. In effect, the Township grew at a slightly higher rate than the County between 1990 and 2000. However, it is estimated that the Township and County have been growing at comparable rates since 2010. That is depicted in Table II-2, which uses the data presented in Table II-1 to determine rates of growth in 10-year increments.

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TABLE II-1 - HISTORIC POPULATION TRENDS

	1970	1980	1990	2000	2010	2017	% Change 1970-2017
Ross Township	3,485	3,863	3,832	4,176	4,664	4,837	38.8
Kalamazoo County	201,550	212,378	223,411	238,603	250,331	259,830	28.9

SOURCE: 1970-2010 U.S. Census, 2013-2017 American Community Survey

Table II-2 also shows that the County’s rate of growth has been more consistent than the Township’s over the past 50 years.

TABLE II-2 - HISTORIC POPULATION TRENDS PERCENT CHANGES

	% Change 1970-1980	% Change 1980-1990	% Change 1990-2000	% Change 2000-2010	% Change 2010-2017
Ross Township	10.8	-0.8	8.9	11.7	3.7
Kalamazoo County	5.4	5.2	6.8	4.9	4.0

SOURCE: 1970-2010 U.S. Census, 2013-2017 American Community Survey

The Michigan Department of Management and Budget has generated population projections for all counties within the State, including Kalamazoo County. Those projections for Kalamazoo County, which were published in 2018, have been calibrated in this Plan to conform to the 2010 Census and then adjusted for each of the projected five-year increments to the year 2030. Ross Township’s population forecast to the year 2030, based upon its average annual growth rate over the past 47 years (between 1970–2017) of 0.8 percent, is just over 5,300.

Table II-3 presents these projections.

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It must be noted that the Township’s projections are based upon past trends and reflect the potential population counts that could occur if no specific policies are put into place that would either accelerate or slow the historic growth rate. The Township has determined that it desires a relatively slow rate of population increase over the next 20 years, with an ~~target~~ **estimated** population of 6,000 or fewer residents. ~~While this “target” exceeds the projected 2020 population depicted in Table II-3,~~ **A 2040** population of 6,000 ~~is determined~~ **appears** to be more realistic ~~This is due to~~ **in light of** the ~~accelerated~~ level of development **that has occurred in the last 10 years** and is likely to occur over the next 20 years. The population forecasts used in this Plan to define the land use needs of the Township over the next 20 years are identified in Section VII.

TABLE II-3 - POPULATION PROJECTIONS 2020 – 2030 BASED UPON HISTORIC TRENDS

	2010	2015	2020	2025	2030	%Change 2010-2030
Ross Township	4,664	4,784	4,974	5,174	5,379	15.3
Kalamazoo County	250,331	259,830	267,738	278,172	290,090	15.9

SOURCE: Population Projections, Michigan Dept. of Management and Budget, 2018 (Township Projections)

Migration

~~Migration is the rate that the population moved into and out of the Township and further substantiates the rate of population increase.~~ **Geographic mobility is the measure of how populations move over time, commonly measuring migration within a population.** Table II-4 shows ~~migration in Ross Township between 1985 and 1990, the latest time periods for which Census information is available.~~ **the estimated migration pattern in Ross Township in 2017.** During this period, **Notably, in 2017 86** percent of the population remained in the same location. Of the **14** percent that did move, **7.6** percent moved within the County, with the remaining **6.4** percent moving from outside the County. Of these new residents, **4.4** percent came from a different county in Michigan, **1.9** percent came from a different state, and **0.06** percent resided previously outside the United States.

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TABLE II-4 – GEOGRAPHIC MOBILITY IN THE PAST YEAR FOR CURRENT RESIDENCE

Residence in 2017	Ross Township	
	Size	% of Total
Persons 1 Year and Older	4,770	100
Lived in Same House	4,104	86.0
Lived in Different House		
In Kalamazoo County	364	7.6
Different County in Michigan	209	4.4
Different State	90	1.9
Outside of United States in 1985	3	0.06

SOURCE: 2013-2017 American Community Survey

Overall, the residential migration pattern indicates a stable residential base for Ross Township. Such stability is beneficial for long-term planning and investment by Township officials and residents.

Although 2020 Census data on mover ship is not yet available, the increase in residential development activity within the Township during the past several years would indicate a substantial suggest a healthy continuation of increase in new residents moving into the Township from other areas within and outside of Kalamazoo County.

Age Composition

The needs and lifestyles of individuals differ among age groups, and the demands for retail goods and services, as well as public or institutional programs, change with each age group. Table II-5 shows the composition of the Township's population by age group for 2000, 2010 and 2017 relative to Kalamazoo County. The Township's age distribution includes the Village of Augusta, hence the total population in Table II-5 is different than Tables II-1 and II-3.

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TABLE II-5 - AGE DISTRIBUTION (ROSS TOWNSHIP AND KALAMAZOO COUNTY)

Age Group	Ross Township			Kalamazoo County		
	2000	2010	2017	2000	2010	2017
Under 5 Years	250	180	184	15,447	15,646	15,735
% of Total	5.0	3.9	3.8	6.5	6.2	6.1
5-9 Years	352	243	142	16,254	15,689	15,383
% of Total	7.0	5.2	2.9	6.8	6.3	5.9
10-14 Years	417	308	363	16,453	15,918	16,224
% of Total	8.3	6.6	7.5	6.9	6.4	6.2
15-19 Years	333	341	349	20,263	19,456	19,034
% of Total	6.6	7.3	7.2	8.5	7.8	7.3
20-24 Years	148	174	245	25,197	27,752	32,180
% of Total	2.9	3.7	5.1	10.6	11.1	12.4
25-34 Years	453	353	567	32,311	33,196	34,176
% of Total	9.0	7.6	11.7	13.5	13.2	13.2
35-54 Years	1,837	1,436	1,036	66,604	63,262	60,095
% of Total	36.4	30.7	21.4	27.9	25.3	23.1
55-64 Years	599	855	1,011	18,826	28,632	31,080
% of Total	11.9	18.3	20.9	7.9	11.4	12.0
65 + Years	658	774	940	27,148	30,780	35,923
% of Total	13.0	16.7	19.5	11.4	12.3	13.8
Total	4,176	4,664	4,837	238,603	250,331	259,830
Median Age	41.7	47.7	47.9	32.7	34.1	34.1

SOURCE: 2000, 2010 U.S. Census, 2013-2017 American Community Survey

According to Table II-5, Ross Township has experienced consistent changes in the proportion of some age groups and variations in the proportional composition of other age groups. Over the past 20 years there has been a ~~consistent increase~~ **significant decrease** in the number of residents under the age of 9, ~~although the proportion of the total population under the age of 5 has varied.~~ **Conversely,** the

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number of residents between the ages of 10 and 19 ~~decreased between 1980 and 1990 and increased between 1990 and 2000~~ **has remained relatively stable since 2000.** ~~The number of~~ residents between the ages of 20 and 34 declined in Ross Township between 1980 and 2000 **but has shown to be very stable since 2000.** ~~have been declining over the past two decades, both in actual numbers and proportionally.~~ This age group made up ~~over 21~~ **only 12** percent of the Township's population in ~~1980~~ **2000** and ~~by the year 2000 comprised only 12 percent~~ **yet by 2017 is estimated to have comprised nearly 17 percent** of those living in Ross Township. All age groups over ~~35~~ **55** have consistently increased in number and proportion over the past 20 years. While there is a general similarity in the proportional distribution of age groups between the County and Township, it is significant to note that there is a substantial disparity between the two jurisdictions among those in the ~~20-24~~ **under 9 and 55 and older age groups.** ~~That disparity is also becoming more significant in the 25-34 age group.~~

Overall, the Township's residents are getting older. This increase in older residents as a percentage of total Township residents is reflected in the consistently higher median age over each decade between **1990 and 2010.** Every 10 years, the Township's median age increases by about four **or five** years. During that period, it has been substantially higher than the median age of the County's population in general, by an average of about six years in 1990, **and an average of nine years in 2000.** In **2010,** that disparity increased **to almost 14 years.** This pattern of an aging population represents the on-going nation-wide trend of older populations, as the members of the "baby boom" generation are beginning to reach retirement age and their off-spring, the "echo generation" are fewer in number. ~~There is, however, the beginning of a second "baby boom" generation occurring. These are the children of the "echo generation." This trend will likely result in a lowering of the median age in most communities after the next several decades.~~

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TABLE II-6 -- PROJECTED AGE DISTRIBUTION ROSS TOWNSHIP 2000-2020

Age Group	Ross Township			
	1990	2000	2010	2020
Under 5 Years	284	252	297	336
% of Total	6.4	5.0	5.7	6.0
5-9 Years	267	353	307	336
% of Total	6.9	7.0	5.9	6.0
10-14 Years	244	419	417	391
% of Total	6.5	8.3	8.0	7.0
15-19 Years	325	333	328	464
% of Total	5.5	6.6	6.3	8.3
20-24 Years	415	146	182	207
% of Total	5.1	2.9	3.5	3.7
25-34 Years	649	454	469	615
% of Total	15.3	9.0	9.0	11.0
35-54 Years	952	1,837	1,927	1,761
% of Total	31.8	36.4	37.0	31.5
55-64 Years	291	601	594	699
% of Total	10.7	11.9	11.4	12.5
65 + Years	406	656	688	783
% of Total	11.8	13.0	13.2	14.0
Total	3,832	4,176	4,617	5,105
Median Age	37.5	41.7	42.6	43.2

SOURCES: Michigan Department of Management and Budget, 1996
 Using Michigan Department of Management and Budget population age projection for Kalamazoo County and applying them to the 2000-2020 population projections, a generalized picture of future population age distribution for the Township can be obtained. Table II-6 presents the estimated age distribution projections, and indicates a continuing aging of Ross Township's population. The median age increases from 47.7 in 2010 to an estimated in 2030.

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Summary

The population of Ross Township has grown over the past 50 years with the population count fluctuating over each 10-year period. As households continue to be attracted to suburban and rural areas, it is anticipated that the growth of the Township's population will continue. While there have been relatively substantial variations among 10-year growth increments, a more accurate predictor of future population growth is the long-term trends of the past 50 years. Those trends reflect an annual growth rate of a little less than one percent. Projecting that long-term rate over the next 20 years, the Township could expect a 2040 population of 5,800 to 6,000. Current residents and Township leaders have indicated a desire for a "slow growth" approach to future development, which includes a population "target" for the year 2040 that would generally conform to the projected long-term trends.

The Township's residents continue to get older, following a national trend. This aging of the population is manifested to a greater degree in the Township than in Kalamazoo County in general, with the disparity in median age between the two jurisdictions increasing significantly since 1990, to the point where the average resident in the Township is 14 years older than the average resident in the County.

HOUSING

Household Composition

The number and type of households within the Township influence the social and economic dynamics of the Township and consequently impact the quantity and character of land development. Households are the standard unit of measurement for evaluating and projecting the number of housing units, retail sales and community

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facilities and services. Table II-6 shows the growth trends in the number of households in Ross Township between 2000 and 2017.

Between 2000 and 2017, households in the Township increased at an annual rate of 1.5 percent, which was slightly greater than the average annual population growth during this time period of just under one percent. This differentiation between household and population growth is a trend seen in many communities across Michigan and the nation, and is caused by a decrease in the number of individuals living in each household (average household size). Therefore, even while the population of a community increases slowly, stabilizes or declines, the number of households will increase.

The composition of a household is reflected in the number of people living within a residence as well as the relationship between them. A household may consist of a married couple with or without children, a single parent with children, two or more unrelated people living in a dwelling and sharing household responsibilities, or a person living alone.

Table II-6 depicts the composition of households in the Township in 2000, 2010 and 2017, reflecting a number of characteristics and trends that should be considered in planning for the future. Although the number of households has increased between over the three periods, traditional two-parent family households (households comprised of a family with a husband and wife), have decreased in actual numbers, as well as having proportionally decreased from 88 percent in 2000 to 80 percent in 2017. That is a result of an increase in the number of single persons and one-parent households, which reflects a national trend that has been occurring since the 1960s.

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TABLE II-6 - HOUSEHOLD COMPOSITION

	Ross Township		
	2000	2010	2017
Number of Households	1,680	1,946	2,055
Family Households	1,249	1,382	1,381
% of Total Households	74.3	71.0	67.2
Married Couple Families	1,094	1,161	1,108
% of Families	87.6	84.0	80.2
With Children Under 18	398	369	478
% of Married Couple Families	36.3	31.8	43.1
Female Head of Household	103	145	210
% of Families	9.8	10.5	15.2
With Children Under 18	71	74	N/A
% of Female Household Families	68.9	51.0	N/A
Nonfamily Households	431	564	674
One Person	448	464	490
65 and Older	155	161	250
% of One Person Household	34.6	34.7	51.0

SOURCE: 2000, 2010 U.S. Census, 2013-2017 American Community Survey

The number of married couple families with children under 18 **has remained relatively similar in** number and percentage to the married couple families over the past **17** years, indicating a stabilizing effect on households. ~~and reflecting an~~

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increased propensity of married couples to have children (related to the second “baby boom” phenomenon mentioned earlier). Though steady between 2000 and 2010, there has been a marked increase in the number of female-headed households since 2010, the result of a continuing high rate of divorce and out-of-wedlock births. This segment of the population can be vulnerable to financial instability and the need for social services. Nonfamily households also continued to increase during the last 20 years, though at about half the pace than the trend that occurred between 1980 and 2000. The majority of those households (73%) were comprised of single persons, with the proportion of those who are over the age of 65 increasing between 2000 and 2017. During the same period, as identified in Table II-5, there was an increase in the number of residents in that age group. This would indicate that the one-person households of 65 and Older will likely continue to increase in number and proportion in the Township.

Housing Occupancy

Between 2000 and 2017, there was an estimated net increase of only 10 housing units, or 0.5 percent, within the housing stock in Ross Township, slightly less than the 1.2 percent increase in households (24) during that same period. Typically, most communities experience a greater increase in the number of housing units than the number of households over a defined period of time. In Ross Township’s case, the reverse implies that during that 20-year period, This trend would be supported by the substantial number of seasonal homes (primarily around the major lakes) that continue to be converted to year-round units. This generally serves to increase the overall quality of the Township’s housing stock, as well as the average value of a home.

Table II-7 presents Ross Township’s total occupied- and renter-occupied housing between 2000 and 2017. The Township experienced little movement in the owner-occupied and renter-occupied housing picture between 2000 and 2017, with a

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steady 84 percent of the occupied housing stock remaining owner-occupied. This is a positive trend for Ross Township, as residents who own their own homes create a more stable environment, one where they have a vested interest in their community's future.

TABLE II-7 – ROSS TOWNSHIP HOUSING UNITS 2000 - 2017

	2000	2010	2017
Total Units	2,334	2,378	2,344
Occupied Units (Year-round)	2,031	1,946	2,055
% of Total	87.0	81.8	87.7
Owner-Occupied Units	1,721	1,663	1,730
% of Occupied	84.7	85.5	84.2
Renter-Occupied Units	310	283	325
% of Occupied	15.3	14.5	15.8

SOURCE: 2000, 2010 U.S. Census, 2013-2017 American Community Survey

Almost nine out of 10 housing units were occupied year-round between 2000 and 2017. The balance was either used for seasonal occupancy or were vacant and for rent or for sale. This reflects the character and geographic location of Ross Township. Located between Kalamazoo and Battle Creek, the Township is considered more of a “bedroom” community than a summer or winter resort area. Although the Township’s lakes, particularly Gull Lake, are recreation resources, the majority of those who use the lakes are year-round residents and those who live in nearby communities within easy commute distance to the Township. Consequently, seasonal residents comprise only a small portion of the Township’s population.

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Age and Value of Housing

The quality and cultural significance of a community's housing stock is reflected in the age of that stock. The period during which much, if not most, of the housing units were built often reflect a popular architecture for that time. The types of materials that were standard in home construction during a particular period affect the structural quality of housing. For example, houses that were built up through the first part of the 20th Century used full-dimension lumber or timbers, giving greater strength to the structural integrity of the building. Some older houses typically used mass dimensions of various types of hardwood for interior finishes that is difficult or cost-prohibitive to obtain today. The distribution of the age of Ross Township's housing stock can be seen in Table II-8.

TABLE II-8 - AGE OF HOUSING STOCK BY YEAR BUILT

Year Built	# of Housing	% of Total
1939 or earlier	445	19.0
1940-1949	166	7.1
1950-1959	435	18.6
1960-1969	346	14.8
1970-1979	378	16.1
1980-1989	153	6.5
1990-1999	236	10.1
2000-2009	177	7.6
2010-2017	8	0.3

SOURCE: 2013-2017 American Community Survey

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According to Table II-8, approximately 55 percent of the Township's housing stock has been constructed since 1960. This is the general time frame during which residential building permits were first required. The remaining 45 percent were built in 1959 or earlier, with nearly 20 percent built before 1940. An estimated 0.5 percent, or 8 houses, were built between 2010 and 2017.

Table II-9 presents the median market value of owner-occupied housing in both Ross Township and Kalamazoo County for 2010 and 2017. 2000 Census data for detailed housing characteristics, including value, has not yet been released. The median market value of owner-occupied homes is another a good indicator of both housing quality and demand. In 2010, the median housing value of a home in Ross Township was 43.7 percent higher than the overall median housing value in the County. By 2017, this proportion decreased, but was still significantly different, at 32.4 percent higher. This reflects, to some degree, an increased demand for housing and the construction of more upper scale priced homes in the County overall relative to the Township. On the other hand, the Township's homeowner vacancy rate in 2017 was less than one percent compared to 1.2 percent in the County. An important consideration is the fact that the housing value data in the Census is derived from asking a random sample of Census survey respondents what they believe the value of their home to be. That information, which is subjective, can significantly skew the true value of housing within a jurisdiction.

TABLE II-9- ROSS TOWNSHIP MEDIAN OWNER-OCCUPIED HOUSING VALUE

	2010	2017	% Change
Ross Township	\$209,700	\$193,500	-8.4
Kalamazoo County	\$145,900	\$146,100	0.14

SOURCE: 2010 U.S. Census, 2013-2017 American Community Survey

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Rental housing can be a significant contributor to the perception of housing quality in a community. Table II-10 highlights the median monthly contract rent paid to landlords in the Township and County in 2010 and 2017. By reviewing contract rent, an indicator of housing quality, as well as the availability of supply and demand for rental units can be implied.

TABLE II-10 – MEDIAN MONTHLY CONTRACT RENT

	2010	2017	% Change
Ross Township	\$858 (\$964*)	\$730	-24.3
Kalamazoo County	\$675 (\$759)	\$762	0.4
*Number represents rent amount in 2017 dollars, based upon Consumers Price Index			

SOURCE: 2010 U.S. Census, 2013-2017 American Community Survey

According to Table II-10, in 2017, the median monthly contract rent rate in the Township was generally the same as found within the County as a whole. However, the percent change in rent between 2010 and 2017 may indicate that Ross Township's supply of rental/seasonal housing has not kept up with exceeded demand during the 2008 economic recession (hence a 24 percent decrease in median monthly contract rent rates). Kalamazoo County, during the same period, had a minimal median monthly contract rent change of 0.4 percent, indicating rental housing was more in line with overall demand.

Summary

Housing in Ross Township grew at a slightly slower annual rate than the average annual rate of population growth. This is estimated to be predicated on the slowing of the economy from 2008 to 2013 and the recent increase in construction focus in the Township on the conversion of seasonal housing units.

The median market value of owner-occupied housing in Ross Township dipped slightly between 2010 and 2017, which was not consistent with Kalamazoo

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County's stability over the same period. However, the Township's overall median housing value remained significantly higher in 2017 than the County as a whole (\$193,500 vs. \$146,100), indicating that while the value of the housing stock in the Township has not been experiencing strong growth, values remain higher than in the County overall. This could be due to a higher proportion of upper-scale housing being built in the rest of the County, a relatively lower demand for housing in the Township, or the inherent anomaly associated with the Census survey.

EDUCATION AND ECONOMICS

Education and Occupation

The level of formal education and occupational status are among the factors that define the ability of an individual or a household to be financially productive and contribute to the quality of life in their community. Typically, a person's occupation is related to the amount and type of education he or she achieved. Table II-11 lists the educational attainment of Ross Township and Kalamazoo County residents in 2000 and 2010. This information is not yet available for the year 2000.

Educational levels increased in Ross Township between 2000 and 2010, with a significant increase in the population earning additional knowledge via post-high school education, be it a four-year college or an Associate Degree. In 2000, almost 43 percent of the Township's population had a Bachelor's Degree or better, substantially higher than the County's average of 33.4 percent.

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TABLE II-11 – EDUCATIONAL ATTAINMENT - PERSONS 25 YEARS AND OLDER

Highest Educational Level Attained	Ross Township		Kalamazoo County	
	2000	2010	2000	2010
Less than 9th Grade	49	48	4,307	3,652
% of Total	1.4	1.3	2.9	2.4
9 – 12 Grade/No Diploma	189	106	11,967	8,976
% of Total	5.3	2.9	8.3	5.9
High School Graduate	906	999	37,615	39,404
% of Total	25.5	27.5	25.9	25.9
Some College or Associate Degree	1,278	926	45,917	49,141
% of Total	35.9	25.5	31.7	32.3
Bachelors Degree	767	963	27,586	31,493
% of Total	21.6	26.5	19.1	20.7
Graduate/Professional Degree	362	589	17,603	19,322
% of Total	10.3	16.2	12.1	12.7

SOURCE: 2000, 2010 U.S. Census

The higher a person's educational attainment, the more likely he or she is employed in higher paying professional or executive/managerial occupations. Table II-12 compares the occupational characteristics of Ross Township and the County for 2017. This information is not yet available for the year 2000.

Section II

TABLE II-12 – OCCUPATIONS

	Ross Township	Kalamazoo County
	2017	2017
Management, Business, Financial	468	19,259
% of Total	18.7	14.9
Computer, Engineering, Science	121	8,090
% of Total	4.8	6.3
Education, Legal, Community Service, Arts, Media	267	14,844
% of Total	10.7	11.5
Healthcare Practitioner	147	8,498
% of Total	5.9	6.6
Healthcare Support	51	4,216
% of Total	2.1	3.3
Protectives Services	54	1,710
% of Total	2.2	1.3
Food Preparation, Serving	139	9,029
% of Total	5.5	7.1
Building/Grounds Maintenance	105	4,469
% of Total	4.2	3.5
Personal Care/Service	22	5,053
% of Total	0.9	3.8
Sales	526	29,100
% of Total	20.9	22.6
Natural Resources, Construction, Maintenance/Repair	260	7,883
% of Total	10.3	6.1
Production	190	10,379
% of Total	7.5	8.1
Transportation, Material Moving	157	6,408
% of Total	6.3	4.9

SOURCE: 2013-2017 American Community Survey

Section II

In 2017, occupations in the Sales and Office field made up nearly 21 percent of all residents surveyed in the Township. That is similar to the County as a whole, and represents a more financially healthy and well-educated community population base than the County in the general. At almost 19 percent, the second largest occupational category among Ross Township residents is Management, Business and Financial, another well-paying occupational category, defined as white collar workers who are employed in special, technical fields (such as an environmental engineer). Both the Education, Legal, Community Service and Construction occupations rank third among Township residents, with 10 percent of the total surveyed. For Kalamazoo County, Sales is the highest occupation at 23 percent, with the Management, Business, and Financial category second highest at 15 percent.

Farming accounted for only 1.9 percent of occupations for Ross Township, just slightly higher than the County at less than 0.5 percent. This is reflective of a decrease in full-time farming in the Township and the increased urbanization of the Township and the County as a whole.

Significant local employers include ~~Fort James Corporation in Parchment~~, Pharmacia Corporation in Kalamazoo/Portage, the Federal Center and Kellogg Corporation in Battle Creek, Imagyn Medical Technologies in Richland, Eaton Corporation in Galesburg, and the Target Distribution Center in Charleston Township, all outside of Ross Township. The Kellogg Biological Station and Michigan State University Cooperative Extension Service are major institutional entities within the Township, employing people in the teaching and environmental research communities.

Location of Employment

Beyond the type of work residents do, the location of employment also contributes to the character of the Township. Table II-13 shows the number and proportion of employed residents who work either within Ross Township, or outside the Township borders. In 1990, over 73 percent of Ross Township residents were employed

Section II

outside the Township, with approximately 26.6 percent working somewhere within the Township. Though estimates for location of employment for the year 2017 are not available, 'travel time to work' estimates suggest that about 26% of the work force is still employed within the Township, while the percent employed within the region decreased to around 36%, causing the percent employed outside of the region to increase to around the 36%.

TABLE II-13 – GENERAL LOCATIONS OF EMPLOYMENT FOR ROSS TOWNSHIP RESIDENTS - 1990

	#	% of Total
Employed in Township	553	26.9
Employed in Remainder of Region	963	46.9
Worked Outside of Region	537	26.2

SOURCE: 1990 U.S. Census of Population and Housing - STF3A

Travel time to work is important for anyone looking to locate within a community. It also can help be a measure about where most of the jobs are located in relationship to the Township. Table II-14 lists the travel times to work for Ross Township residents.

TABLE II-14 – TRAVEL TIMES TO WORK - 2017

Minutes	#	% of Total
Less than 10	362	15.0
10 – 14	272	11.3
15 – 19	296	12.3
20 – 24	388	16.1
25 – 29	222	9.2
30 – 34	424	17.6
35 – 44	99	4.1
45 – 59	82	3.4
60 or more	265	11.0
Work at Home		

SOURCE: 2013-2017 American Community Survey

Section II

According to Table II-14, approximately 55 percent of Ross Township residents commute to work in 24 minutes or less. This likely indicates that most of the jobs outside of the Township are located in neighboring cities and townships, including the cities of Battle Creek and Kalamazoo.

Income

Household income is an important measure of the economic wellbeing of Ross Township, helping to determine the quality and quantity of retail goods and services purchased both within the Township and surrounding areas. Table II-15 lists recent median household incomes for the Township and Kalamazoo County, and indicates that household income in the Township in both 2000 and 2010 was significantly higher than the County as a whole. When adjusted for inflation, Kalamazoo County shows a 6.6 percent change in median household income between 2000 and 2010, while Ross Township's median household income grew by 18.5 percent over the same period. Household income data through the 2000 Census has yet to be released.

TABLE II-15 – MEDIAN HOUSEHOLD INCOME – 2000/2010

	2000	2010	% Change
Ross Township	\$58,446	\$69,265	18.5
Kalamazoo County	\$42,022	\$44,794	6.6

SOURCE: 2000, 2010 U.S. Census

Table II-16 reflects the estimated median household incomes for Ross Township and Kalamazoo County in 2017. American Community Survey (U.S. Census) estimates that Ross Township continued to out-perform the County as a whole. Though Kalamazoo County saw an increase in the median household income of nearly 16% percent during 2010 to 2017, Ross Township's median household income remained almost \$20,000 higher than that of the County.

Section II

TABLE II-16 – ESTIMATED MEDIAN HOUSEHOLD INCOME - 2017

	2010	2017	% Change
Ross Township	\$69,265	\$71,190	2.8
Kalamazoo County	\$44,794	\$51,945	15.9

SOURCE: 2010 U.S. Census, 2013-2017 American Community Survey

Summary

Ross Township has a healthy educational and income base. Educational attainment for the Township is generally higher than the County as a whole. Occupations for Ross Township residents indicate a higher percentage of Executive, Administrative and Managerial professionals than in the overall County, indicating an equally higher income level due to these better paying professions. Indeed, median household income in Ross Township was significantly higher than Kalamazoo County during the 2000 - 2010 period, and it is estimated that this trend continued on through 2017.

INTRODUCTION

Ross Township is a General Law Township with a Supervisor, Clerk, Treasurer and four Trustees. The Township Hall is located on M-89 near the southeastern corner of Gull Lake. As a General Law Township, Ross Township has only those powers granted to them by state statute. Those include the ability to hire a manager, assessor, police or fire chief, superintendent and other necessary personnel. Townships are mandated to administer assessments, hold elections, and collect taxes. They are also required to be responsible for financial administration, including budgets, accounting, investments and deposits. In addition, townships may **adopt plans and** enact and enforce ordinances, including zoning. The Township manages the use of land **through the Ross Township Master Plan and implementation of** ~~under the Ross Township Zoning Ordinance. which is administered by the Township's Supervisor.~~ Therefore, The Township Board is ~~the sole~~ responsible for the development **adoption** of its **master plan and** zoning ordinance/map, **with recommendation from the Township Planning Commission.**

COMMUNITY FACILITIES**Police and Fire Protection**

~~The Ross Township Police Department, the Kalamazoo County Sheriff's Department and the Michigan State Police provide police protection of the Township. The Township currently has one full time and two part time police officers~~ **contracts with the County for one car/40 hours of coverage per week. State Police involvement is largely dependent upon the nature of the complaint/violation.** ~~The Police Department is located in the south end of the Township Hall/Fire Department and has two patrol vehicles. The number of annual calls fluctuates, increasing in some years and decreasing in others. In 2000, there were 549 complaints, of which 142 were criminal, 70 were vehicle crashes and 337 were for miscellaneous services. In 2001 the number of complaints decreased to 469, including 198 criminal, 67 vehicle crashes and 294 miscellaneous services. The Township Police Department works closely with the Sheriff's Department and also coordinates with the Michigan State Police. In 1999, the Kalamazoo County Sheriff's Department responded to 372 calls in Ross Township. In the year 2019, the Sheriff's Department responded to 366 service calls plus 129 traffic accidents in Ross Township.~~ **there were a total of 2441 dispatched law enforcement events;**

with 816 of them being Citizen Initiated and 1625 of them being Officer Initiated. ~~Car/deer~~ Traffic stops and property damage accidents, for a total of 636 calls, were the most frequent vehicle-related events. False Alarms comprised almost a 15% (111) of the Citizen Initiated service calls in 2019. ~~for Sheriff's Department.~~ Other predominant reasons types of events included ~~malicious destruction of property,~~ property checks, general non-criminal activity and suspicious occurrences.



Ross Township maintains a 20-member paid volunteer Fire Department. All Department volunteers are licensed as Medical First Responders (MFR). The Fire Department was combined with the Village of Augusta's Fire Department in 1982. There are two

fire stations serviced by the Fire Department: Ross Township Hall is the location of the northern station and Augusta Village Hall is the location of the southern station. The Department has seven primary fire vehicles and a rescue boat. ~~At the Ross Township station there is One tanker, two~~ pumpers, ~~one brush truck and one rescue vehicle~~ are housed at the Ross Township station. The Village of Augusta station houses one pumper, one brush truck, one rescue vehicle and the rescue boat. The Augusta-Ross Township Fire Department is funded by a 1 mill fire levy that must be renewed by voters every five years.

Schools

Ross Township is served by two school districts: Gull Lake Community Schools and Galesburg/Augusta Community Schools. Three buildings of the Gull Lake Community Schools are located in Ross Township: Kellogg Elementary (318 student enrollment in February, 2001) and the Gull Lake Middle School (664 student enrollment in April, 2020), both on 40th Street, and the Gull Lake Community Schools Administration Building/Gateway Academy (13 alternative education student enrollment) located on East D Avenue. ~~The Hazel Wildermuth Building also houses the school district's administrative offices.~~ The Galesburg/ Augusta School District maintains two school buildings in the Village of Augusta: Galesburg-

Augusta Intermediate School (approximate 2020 student enrollment of 170) and Galesburg-Augusta Middle School (approximate 2020 student enrollment of 360).

Parks and Recreation/Natural Areas

Parks and Recreation facilities and programs within Ross Township are administered through various jurisdictions. A portion of the Fort Custer Recreation Area is located within Ross Township, along the southern side of the Kalamazoo River (see Map IV-1). This facility 3,033-acre park, which is under the jurisdiction of the Michigan Department of Natural Resources (MDNR), features three lakes, the Kalamazoo River, a campground, a swimming beach, boat rentals, paddling and fishing opportunities, and more than 25 miles of multi-use trails popular with mountain bikers, equestrians, hikers and dog sledders.



The Kellogg Biological Station, under the jurisdiction of Michigan State University, encompasses 4,065 acres and includes the Kellogg Bird Sanctuary, Kellogg Farm, Kellogg Biological Laboratories, and the KBS Conference Center. Over 1,400 acres of the Biological Station are located in Ross Township in sections 4, 5, 6, 7, 8 and 9. The W.K. Kellogg Experimental Forest, which encompasses 716 acres in the southcentral portion of the Township in sections 21, 23, 27, and 28, is also



associated with the Biological Station. The Bird Sanctuary is located east of Gull Lake, providing an open space environment for nature lovers.

These holdings provide multiple use recreation functions as well as ecological and environmental research functions. The Kellogg Forest is open to the public and provides for such activities as bow hunting, fishing, biking,

hiking, horseback riding, cross-country skiing and interpretive trails. The Bird Sanctuary provides guided tours and non-formal workshops for school groups and the public. The undeveloped portion of the former Brook Lodge site, which is also owned and operated by Michigan State University, also encompasses a substantial amount of natural forest area (483 acres in sections 28 and 29).

A portion of the North Country National Scenic Trail that is scheduled to run from New York to North Dakota (for a distance of 4,600 miles) is located in Ross Township. In Michigan, the trail is proposed to run more than 600 miles between Hillsdale County at the Ohio border and Gogebic County in the Upper Peninsula. The segment of the trail in Ross Township runs for approximately 11.5 miles between the eastern Township boundary on Dickman Road (B.L. 96) in Section 36 to the intersection of 39th Street and Baseline Road in Section 5 (see Map IV-1). The portion of the trail between Augusta and Baseline Road is in place and users currently have to use the bike path on Dickman Road east to Battle Creek. Eventually, the trail will run through the National Cemetery property parallel to Dickman Road. The trail runs through both private and institutional properties and consists of a combination of two-track roads, mowed hayfields and dirt paths, as well as road shoulders. The basic parameters of the trail consist of an 18-inch-wide dirt path with a four-foot horizontal and eight-foot vertical vegetation clearance. Signs include a kiosk on the Kellogg Biological Station property and one currently being installed at the trailhead in Augusta. Volunteer members of the North Country Trail Club maintain the trail, with equipment donations by the National Park Service. There are no motorized vehicles allowed on the trail, which is used primarily for hiking in the summer and cross-country skiing in the winter.

Ross Township owns and maintains Ross Township Park, a 3.5-acre facility on the east shore of Gull Lake, north of B Avenue in Section 6. The park is open to the public using an entrance fee and contains a picnic pavilion with restrooms, a playground, benches, a library kiosk, a paved parking area and lake access for swimming. The majority of annual passes sold in 2019 were for users that lived outside of Ross Township.

Library

The McKay-Dole Library is located in the Village of Augusta. The library serves both Augusta and Ross Township, which supports the library through an annual half-mill payment agreement. The library is housed in a 2,300 square foot building and offers 23,000 books, magazines, audio materials, and CDs, as well as access to a statewide library resource sharing system, the Michigan e-Library, computer terminals and a copy machine available for public use. It is operated by two full time and one part time librarians and is currently open six days a week with plans to expand to six days. The library is part of the S.W. Michigan Library Cooperative. and has issued 825 cards to patrons. The total number of patrons likely exceeds 825, as one card may be used for a family or an individual. In 2019, 33,800 pieces of material were circulated. Currently, there are no plans for expanding the library building.

Medical Services

There are four major regional medical centers available for Township residents, located in Kalamazoo and Battle Creek: the Borgess Medical Center of Kalamazoo, Bronson Methodist Hospital of Kalamazoo, Bronson Battle Creek Hospital and Fieldstone Center of Battle Creek Health System in Downtown Battle Creek. All four are within 15 to 30 minutes driving time.

The Township's rescue vehicle (ambulance) is housed at the Township Fire Station on M-89.

Utilities

Currently, there is no public water service within the Township. The Gull Lake Sewer and Water Authority provides sanitary sewer service to the area surrounding Gull Lake and Richland Township. The system generates about 150 million gallons of waste per year, which is transported to the City of Kalamazoo waste treatment plant in the northeast section of the city via a 12" main within the M-89 right-of-way. All of the system's effluent is run through a main pump station on 37th Street, south of



DE Ave, to the treatment plant. The station's capacity is 600 gallons per minute, with an average flow of 285 gallons per minute, indicating a substantial capacity remaining at the station. Within Ross Township, the system essentially runs west of Gull Lake Drive East (between Gull Lake Drive East and the lake), along Gull Lake Drive West on the west side of the lake, along D Avenue and Gull Lake Drive South on the south end of the lake. Also, a line runs parallel to M-89 from 38th Street to 37th Street (see Map III-1). These are all gravity sewer lines. There is also a force main sewer line which runs in a north/south direction along 37th Street between Graham Lake and G Avenue. A gravity sewer line runs south for about one mile along 42nd Street from Brook Lodge in Augusta to the Village of Augusta border (see Map III-2). This is part of the Village of Augusta sewer system, which is also tied into the city of Kalamazoo waste treatment plant.

~~Current potential expansion plans for the system include extending the line to serve 20 new homes in an area between Moon Avenue and C Avenue (Half Moon Park) in Section 17. Another possible area for expansion in the near future is a 30 unit residential development under consideration near 37th Street and G Avenue.~~ As the Township develops in accordance with this Plan, there may be demands for additional sewer system expansion. This is particularly applicable if **dense residential cluster/open space** developments are constructed within the Township.

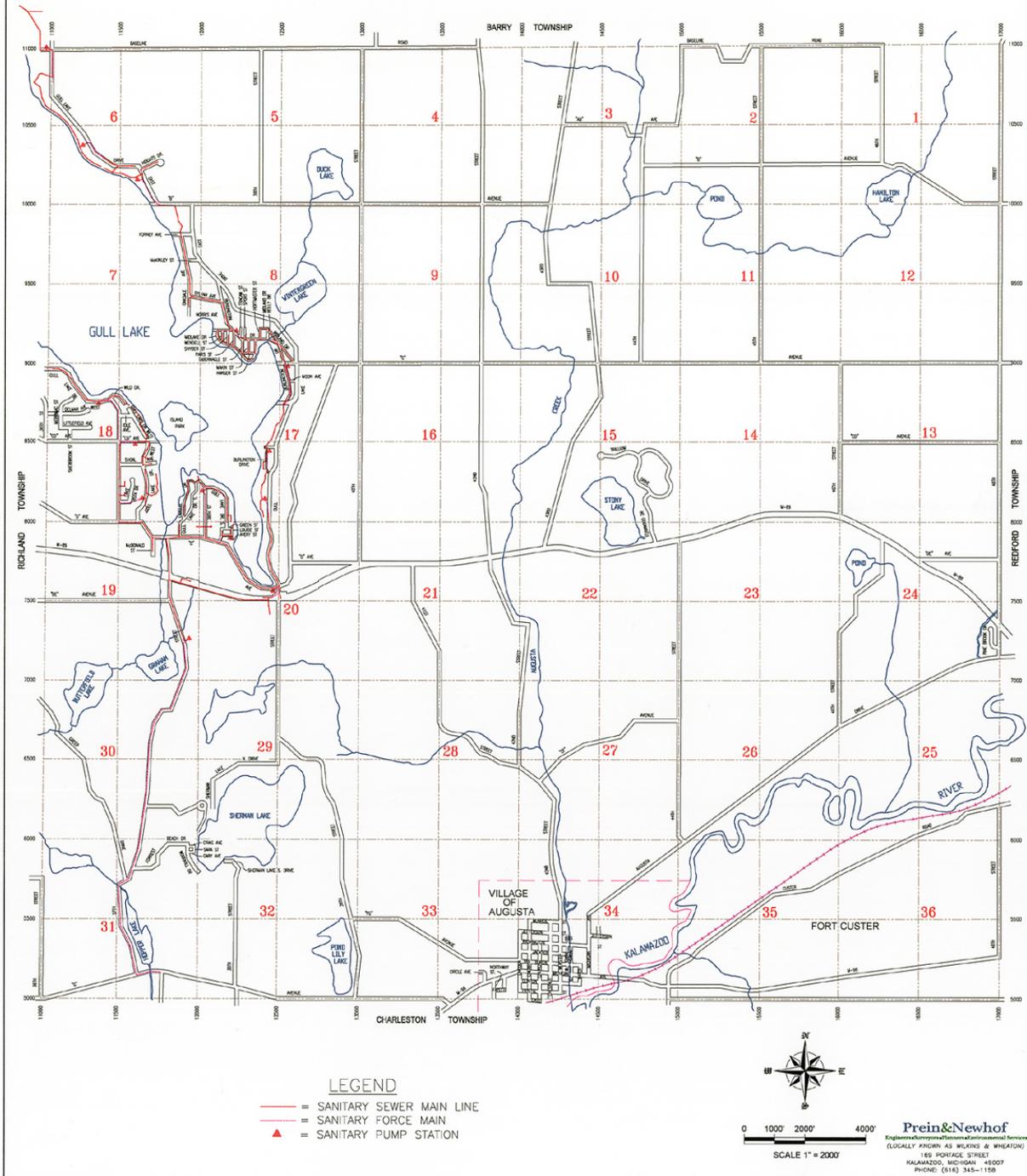
Public sewer and water systems can serve to generate additional development in designated sections of a community or they can serve to protect the environment in areas that are currently developed. In Ross Township, the Gull Lake sewer service area was established to protect the lake and its shoreline from contamination due to the intensity of development around the lake. It was not constructed to promote additional development around the lake and that is still the Township's policy. This policy will be retained for all lakefront development within the Township; that is, sewers will not be promoted in lake areas to facilitate additional lakefront development, but rather be constructed as necessary to protect lakes from contamination that may result from such development.

Ross Township is **located entirely within the joint electric and gas service area of Consumers Energy.** The primary cable TV provider in the Township is Comcast. In

addition to the option for internet delivery through the cable provider, wireless broadband or Wi-Fi (connection to the internet using radio signals instead of cables), satellite internet (internet access provided by geostationary communication satellites), and DSL (internet connection over standard telephone lines), are available in the Township through a number of providers.

Draft

MAP III-1
 SANITARY SEWER MAP OF
 ROSS TOWNSHIP
 KALAMAZOO COUNTY, MICHIGAN



TRANSPORTATION**Roads**

M-89 is the major corridor that runs east/west across the central section of Ross Township, just south of Gull Lake, connecting Richland to Battle Creek and the Kalamazoo/Calhoun County border. 42nd Street (State Road 601) is a north/south roadway, which connects the Village of Augusta to the Kalamazoo/Barry County border. M-96 runs east/west through the southeast corner of the Township connecting Augusta with Battle Creek. According to MDOT, in 2018 M-89 had an average daily trip count of 9,900 at its western entry into the Township and an average daily trip count of 5,300 as it extends through the Township. ~~9,300 in 1997 and 1998, and 9,500 in 1999.~~



Minor collectors include Augusta Drive, which runs southwest from the eastern border of Ross Township to the Village of Augusta and M-96. G Avenue is an east/west roadway between the Village of Augusta and Comstock Township, and is connected to the north/south Ross Township roads of 37th, 38th and 39th streets. Baseline Road, an east/west road, defines the northern border of Ross Township to Barry and Johnstown Townships in Barry County. East and West Gull Lake Drive is a minor collector which circles Gull Lake, providing lake residents access to M-89, Richland Township and Barry Township.

Rail

Running along the southeastern corner of Ross Township is the Conrail Line, connecting Kalamazoo and Battle Creek. This line is used for both freight and limited Amtrak passenger service between Detroit and Chicago. There are no points within the Township where either freight or passenger trains stop and it is not likely that there will be any in the future.

Air

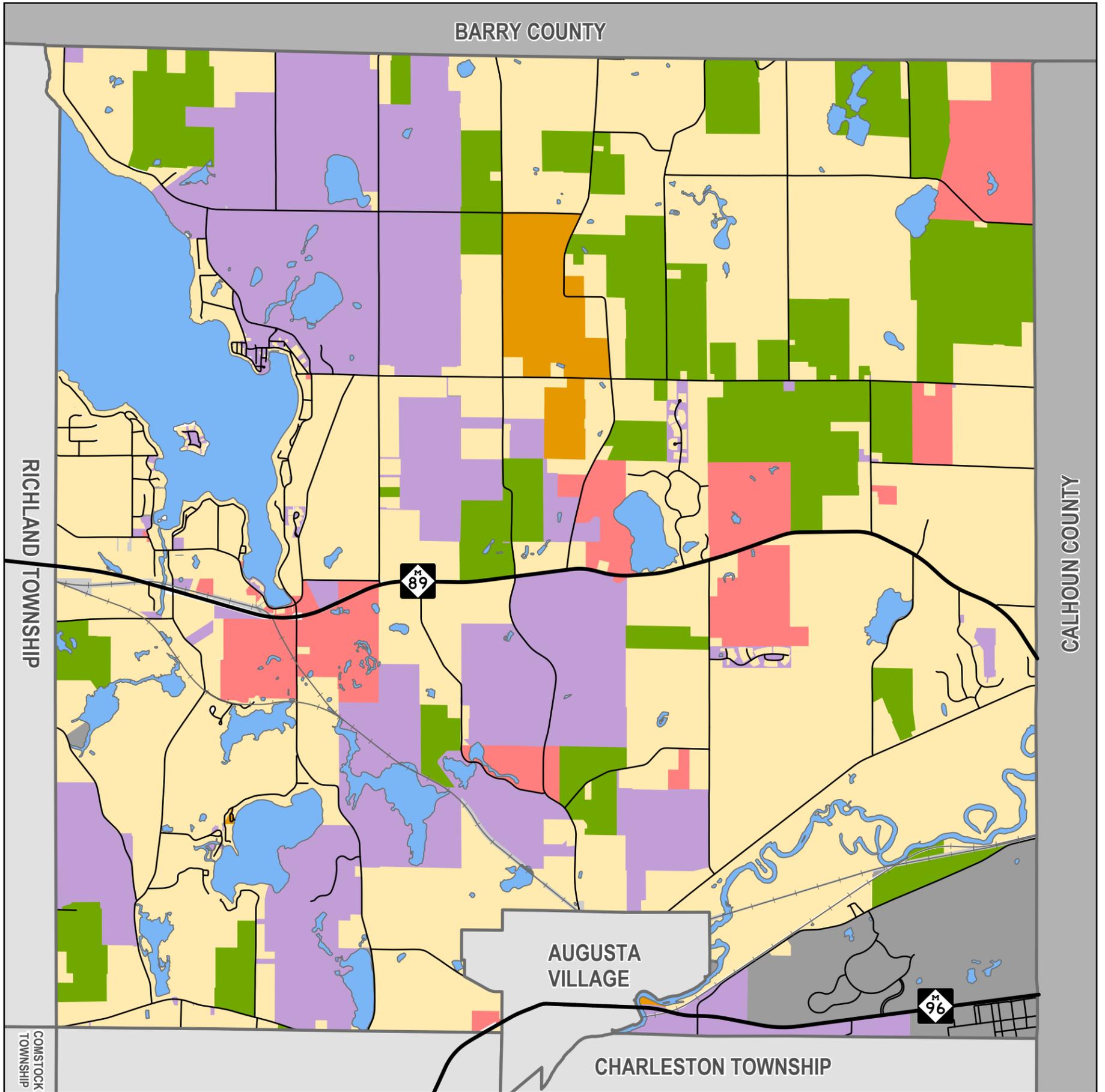
The Kalamazoo-Battle Creek International Airport is the closest commercial passenger air-carrier airport to the Township. It is located approximately 15 miles from the center of the Township in the southeast corner of Kalamazoo. The airport is served by ~~five commuter~~ two major airlines with ~~non-stop~~ flights to major

hubs with worldwide connections. Chicago, Cincinnati, Detroit, Minneapolis and Pittsburgh as well as direct flights to 20 other cities. The airport is self-sufficient and has a significant economic impact on Southwest Michigan. There are over 75 20 daily arrivals and departures, enplaning and deplaning over an average of 512,000 265,000 passengers in the year 2000 every year.

Draft

Existing Land Use

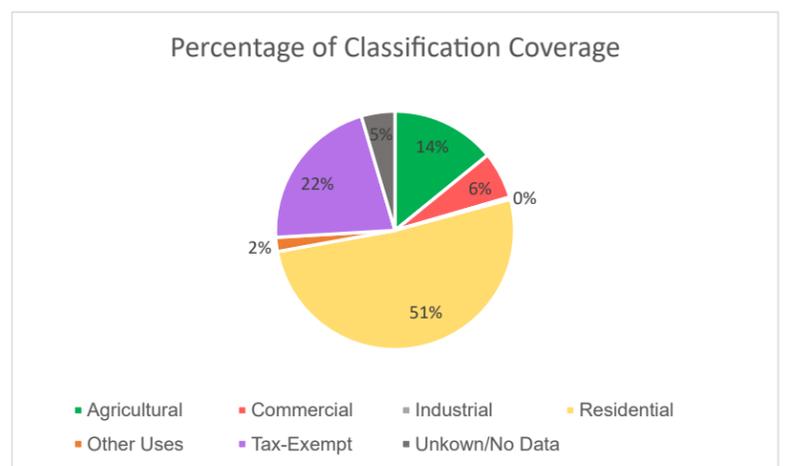
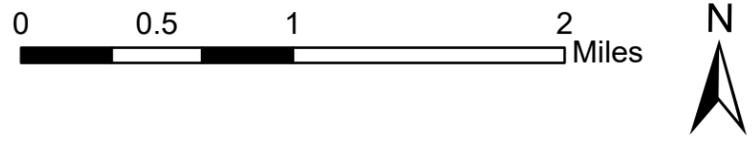
Ross Township, Kalamazoo County



Legend

- Railroads
- State Highways
- Local Roads
- Township Boundaries
- County Boundaries
- Lakes

- ### Land Use by Property Class
- Agricultural - 2902.99 Acres
 - Commercial - 1309.99 Acres
 - Industrial - 64.29 Acres
 - Residential - 10559.16 Acres
 - Other Uses - 393.49 Acres
 - Tax-Exempt - 4394.37 Acres
 - Unknown/No Data - 938.17



INTRODUCTION

An existing land use inventory is a necessary first step in planning for the future of a community. The inventory depicts the existing distribution and location of land uses within the Township. ~~The 2002 Existing Land Use Map (see Map IV-3) was developed based upon the interpretation of aerial photographs taken in 1996 and a windshield survey of the Township completed in August 2000. The 2020 Existing Land Use Map (see Map IV-3) was developed through Kalamazoo County's GIS mapping system using township tax maps.~~

~~COMMUNITY WINDSHIELD SURVEY~~

~~The members of the Ross Township Planning Commission were used as a planning tool, early in the Master Plan update process, to identify and analyze problems associated with finding "missing" parcels not identified on the community's current land use map. The survey also assessed patterns of past, present and future development, and provided a comprehensive overview of the activities occurring within the Township at a point in time.~~

~~The survey involved dividing the Township into four quadrants or "sectors" and each surveyor (or survey team) was assigned a sector. Each individual or team covered their assigned sector, and were provided with instructions for identifying and recording land uses.~~

METHODOLOGY

The 2020 Existing Land Use Map was created using 2020 Township assessment data provided by the Kalamazoo County Equalization Department. Specifically, the set of land use codes assigned by the County for tax purposes was used as a template for creating the land use classifications represented on the Existing Land Use Map. For example, recreational uses such as the golf courses are shown on the map as commercial since they are taxed as businesses. The following describes each of the land use classifications present in more detail.

LAND USE CLASSIFICATIONS

The following land use classifications were used in the land use inventory.

Agricultural - This category may Areas that are croplands, permanent pasture or orchards.

Residential - An area in which residential dwellings with their accessory buildings occupy the major portion of the land. This includes the most dominant housing type in the Township, **Single-Family Residential**. Single-Family Residential refers to one detached or attached (duplex) dwelling unit on a single parcel. Most dwelling units considered single-family are built on foundations or basements using traditional building methods. However, **Manufactured Housing/Mobile Homes** are also within this land use classification, ~~Manufactured Housing/Mobile Homes and~~ can include Mobile Home Parks, which are a designated area developments for the placement of mobile homes for occupancy that meet the design and building code requirements of Ross Township. design and construction standards of the State of Michigan.

Commercial - An area where goods are distributed or services are provided. This category includes structures, adjacent land and parking areas dedicated for the use of employees and customers. Commercial also includes land uses often deemed:

Commercial Recreational, Golf Course - An area or facility used for commercial recreational activities, including water parks, golf courses and ski areas. This category includes structures, adjacent land and parking areas dedicated for the use of employees and customers.

Industrial - An area where raw or unfinished materials or commodities are used to produce a product or service. This can also include wholesale business activities.

Tax Exempt -

Institutional - An area or facility used by a township, city, county, school district or state agency to meet the needs of the community. This includes

city and township offices, schools, ~~and~~ public meeting spaces, public parking lots and other public uses, **such as cemeteries**. ~~Institutional also includes land uses often deemed:~~

Quasi-Public - An area or facility used by a limited number of persons with particular interests and nonprofit organizations, such as churches, day care centers, private schools, private clubs and related activities.

Public Utility - An area or facility not generally accessible to the public but used to provide services to the community, such as water towers, wastewater treatment areas and water pumping stations.

~~**Cemetery** - An area used for the burial and memorial of the deceased. Facilities for memorial services may also exist on the site.~~

~~**Wetlands** - Areas that are wetlands include marshes, swamps and related land, which are transitional areas between water masses and upland areas.~~

Lakes - Larger open areas of water that are contained in a depression of the earth's surface and supplied from the drainage of a more or less extended area.

~~**Undeveloped Other Uses** - Areas that are open space/forested land, which can be covered with deciduous and coniferous species of trees or shrubs. This category also includes abandoned fallow agricultural fields, and flood plains, and wetlands. Lands in this category consist of both suitable and unsuitable areas for development.~~

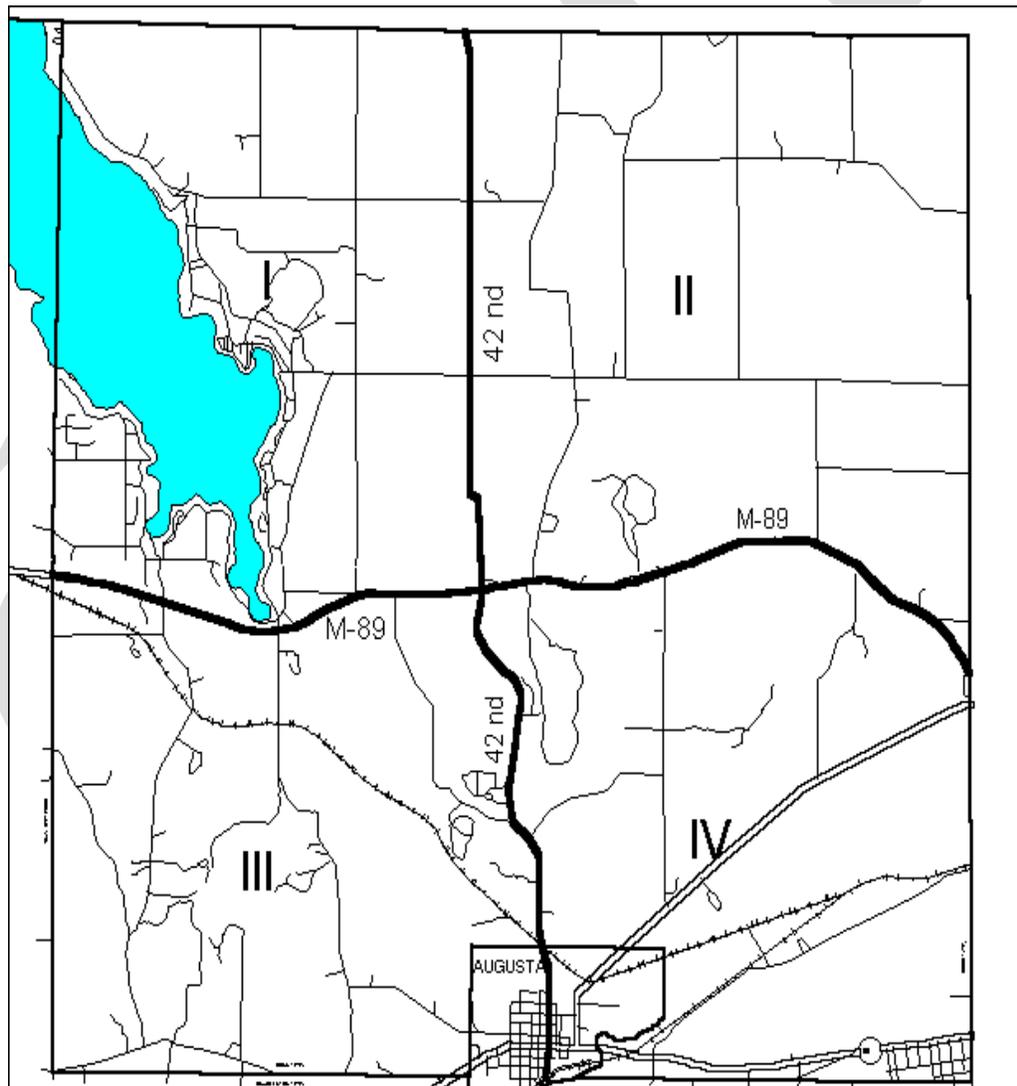
Vacant Land, and areas that cannot be placed in the other categories noted above, are also included in this category. Basically, undeveloped and/or vacant land is land that may or may not be suitable for development, as well as land that is not likely to be developed as it is owned and managed by public and nonprofit institutions, or larger commercial holdings. ~~such as the three golf courses in the Township, as well as the Yarrow Executive Conference and Training Center. Portions of MSU's land holdings within Ross Township, including Brook Lodge as~~

well as lands owned by the Cheff Therapeutic Riding Center, are placed within this classification due to their restricted development potential.

LAND USE DISTRIBUTION OVERVIEW

To provide an overview of the existing land use pattern in Ross Township, the Township has been divided into four quadrants. General quadrant descriptions are provided below.

MAP IV-1 - QUADRANTS



Quadrant 1 – is defined as the area consisting of the northwest quarter of Ross Township ~~and was divided into subsections for easier surveying.~~ Gull Lake is located within Quadrant 1, and, as a popular residential and recreational destination for the greater Kalamazoo/Battle Creek area, contains a great deal of development. The more predominant land uses in this sector include the Kellogg Biological Station and its holdings (research farm, dairy, and bird sanctuary), and Gull Lake **Ministries Bible Conference**.

Quadrant 2 – is defined as the area north of M-89 and east of 42nd Street. Stony Lake and Hamilton Lake are located within Quadrant 2, as is Augusta Creek, which flows east/west and north/south within this **profile** area. Wetlands and wooded land are located throughout this quadrant. The Michigan Department of Natural Resources (MDNR), Maple Hills Golf Course, **Skywood Recovery (former Yarrow Golf and Conference Center)**, the Cheff Therapeutic Center, and the Battle Creek Hunt Club are all large landholders within Quadrant 2, as are farmers with larger agricultural holdings.

Quadrant 3 – is defined as the area south of M-89 and west of 42nd Street. The Village of Augusta was not included in the ~~windshield survey area~~ **land use mapping exercise**. Sherman Lake, Graham Lake, Pond Lily Lake and Butterfield Lake are located within this quadrant.

The former Brook Lodge, Gull Lake View Golf Course **& Resort**, portions of the Kellogg Forest, and the **Sherman Lake** YMCA Outdoor Center are among the most predominant land uses in this area.

Quadrant 4 – is defined as the area south of M-89 and east of 42nd Street. Wetlands are present in this study area, especially along the Kalamazoo River. A portion of the Fort Custer Military Reservation occupies the southeast corner of Quadrant 4. A stretch of Augusta Creek, which continues through the Village of Augusta and into the Kalamazoo River, flows parallel to, and east of, 42nd Street. Stonehedge Golf Course, **Stoatin Brae Golf Course**, Fort Custer Military Reservation, Fort Custer National Cemetery, Fort Custer Recreation Area, W.K. Kellogg Forest, and **agriculture** are major land uses within this quadrant.

LAND USE DISTRIBUTION

The following text describes the existing land use distribution in Ross Township. Table IV-1 and the accompanying Ross Township Existing Land Use Map (Map IV-4) supplement this text and provide land use distribution data and graphic representation of that distribution.

GENERAL EXISTING LAND USE DESCRIPTION

In 2020, the character of Ross Township's land use is defined by open space, woodlands, agricultural activity, rural country roads, wetlands, valuable water resources, and urbanizing low density residential development. Protected institutional lands consisting of farmland, open space and wooded areas make up 22 percent (4,394 acres) of the Township's existing land use area, with agriculture following at 14 percent (2,903 acres), and undeveloped and vacant lands at 2 percent (394 acres), wetlands at 16 percent (3,499 acres), with lakes representing an additional 1,776 acres not reflected in the land use total acreage. Combined, these natural resource areas account for over 45 percent of the Township's total geographic area. This does not include the abundant open space acreage contained within the residential category (10,559 acres), which is defined by an average density 1 dwelling unit/5 acres.

TABLE IV-1 - EXISTING LAND USE (YEAR 2020)

Land Use Type	Existing Acreage	% of Total Acreage
Residential	10,559	51.0
Tax Exempt (Institutional)	4394	22.0
Agricultural	2903	14.0
Commercial (inc. commercial recreational)	1310	6.0
Other Uses (inc. wooded areas, open space)	394	2.0
Industrial	64	0.30
Unknown (no data)	938	5.0
Total Acreage	20,562	100.0

*Excludes roads/lakes in acreage total

SOURCE: KGIS, 2020

Agricultural

Agricultural land use accounts for 2,902 acres in the Township. ~~The remaining 4,039 acres (78.6%)~~ This acreage is largely associated with independent and often smaller farms facilitating crop, orchard, and/or livestock activities. Michigan State University ~~currently~~ also holds approximately 1,100 acres (21.4 percent) of



~~the existing~~ agricultural farmland in Ross Township (categorized as Tax Exempt). The majority of that farmland, which is used for experimental/research purposes, is located in the western portion of the Township, east of Gull Lake and west of 43rd Street. As noted on the Existing Land Use Map, agricultural land use is currently

active throughout the Township. However, land north of M-89 in Ross Township is the most dominant area for this activity.

As is common in most rural communities, family farms, particularly those operated as full-time farms, are declining within the Township. Overall, land devoted to active agriculture has steadily decreased over the past several decades, although institutional farmlands, under the ownership and operation of Michigan State University, have “stabilized” this decline. As development pressures increase, the capacity to sustain large areas of agriculture becomes more difficult.



Residential

Residential uses account for 10,559 acres in Ross Township, for an average gross density of 0.2 units per acre (or an average of 5 acres for each unit). According to 2019 data, approximately 90 percent of residential housing is single-family. Applying the percentage of 2019 single-family residential housing to the total 2019 Township residential acreage of 10,559, approximately 9,539 acres of Township land is suggested to be dedicated to single-family housing. While this is not the most accurate measure of specific existing residential land use, it does provide a reasonable estimate of the probable amount of land being utilized for single-family homesteads.

The Existing Land Use Map graphically displays the distribution of residential land within Ross Township. Heavy concentrations of residential development can be found along the shores and immediate surrounding areas of Gull Lake and Sherman Lake. Additional higher density single-family development is located near Stony Lake and Crane's Pond. The balance of residential development is located in linear configurations along the major roads in the Township.



Such perimeter development, while common in many rural areas, is not considered the most efficient approach to land utilization. While splitting larger parcels into smaller lots along roadways was facilitated by the Subdivision Control Act, which was subsequently amended by the Land Division Act, there are negative impacts that result from these corridor developments. Because lots are developed along county roads, which are in effect perimeter roads surrounding full sections, the interior portions of the sections are typically not used, or if they are actively farmed, the potential for residential/agricultural conflicts is enhanced. That is more likely to occur as the number of houses along the perimeter roadways increase. As perimeter lots develop, the preservation of the rural landscape becomes more difficult, in effect changing the visual character of the Township. In addition, each developed lot requires at least one driveway. As the number of lots and houses increase, so does the number of driveways. Over time, the propensity

for vehicular accidents will increase. Alternative, more efficient residential land use patterns will be considered in Section VII.

Commercial

Commercial uses cover 1310 acres of the Township. This represents only 0.3 percent of the Township's buildable land area (non-wetland/lake areas). Commercial land uses are located in Sections 8, 17, 19, 20, 25, 26 and 33. ~~on the Existing Land Use Map.~~ Commercial uses **and** consist primarily of small convenience retail and restaurants concentrated in Section 20, on the south shore of Gull Lake. A motel is located in this area at the intersection of M-89 and 38th Street.



Township residents do their convenience shopping in Richland or Augusta. Since many residents commute to work in Kalamazoo/Portage or Battle Creek, it is likely that a substantial amount of shopping for convenience goods is **also** done in those communities. Comparison shopping (appliances, clothing, sporting goods, etc.) is available in the Kalamazoo/Portage and Battle Creek areas, ~~Most of the stores in these larger commercial centers~~ **both of which are only** a 15 to 30-minute drive from Ross Township.

Skywood Recovery Center (formerly Yarrow Executive Conference and Training Center) is located on 300 acres west of 48th Street in Section 1. A state-of-the-art residential treatment facility, the Skywood facility and operations have been designed to take advantage of the woodlands, fields and ponds present on the property, harnessing the restorative effects of the natural environment. ~~This is a training/conference center and bed and breakfast with dining, meeting, and sleeping facilities, as well as experimental "team" training and recreation activities, including eight one-half miles of hiking trail, access to Hamilton Lake, horseshoes, canoeing and cross-country skiing.~~ While the conference center is itself a commercial activity, the majority of the land ~~owned by Yarrow~~ **on which it** sits is open space ~~and recreational in nature.~~ Consequently, the total 300-acre site is not designated as commercial land use, **and instead,** the majority is included in the open space, wetland and water categories.

Commercial Recreational

Existing land uses which are classified as Recreational are primarily privately-owned, and cover 644 acres, or 2.9 percent of the Township, and institutional.

Commercial recreational land uses in the Township are predominantly golf courses, consisting of namely Gull Lake View Golf Club & Resort (283 acres in Section 20), Stonehedge Golf Course (164 acres in Section 23), and Stoa-in Brae Golf Club in Section 26). Maple Hills Golf Course, (80 acres in Section 13), a 9-hole course located on C Avenue, closed in 2020. Gull Lake View Golf Club & Resort contains a West and East Course, each with 18 holes. Stonehedge contains two 18-hole courses, Stonehedge North and Stonehedge South, located on each side of M-89. Stoa-in Brae, established in 2016, is a sweeping links-style course and sits at one of the highest points in Kalamazoo County. It was named both Michigan Golf Course of the Year and National Golf Course of the Year in 2020.

Shady Bend Campground on Augusta Drive, east of the Village of Augusta, is adjacent to the Kalamazoo River. It is the only private, commercial campground in the Township, encompassing approximately eight acres. Midland Park, a private swimming and picnic area, is located on the eastern shore of Gull Lake.

While much of the institutional land in the Township is designated primarily for research and education, it is also open to the public for recreation purposes. Additional recreational land uses are associated with the Kellogg Biological Station, MSU's W.K. Kellogg Forest, Michigan State Game Area, the Cheff Center, the Fort Custer State Recreation Area, and the North Country Trail. These largely undeveloped land holdings are described in more detail on page III-3.

Industrial

Skamp Industries, Inc. located on M-89 east of 38th Street, is the only industrial land use within the Township. This is primarily due to the close proximity of the Township to the Fort Custer Industrial Park west of Springfield, which offers a more comprehensive package for industrial development.

Institutional

Areas defined as institutional, which include natural and agricultural areas as well as buildings and structures that are under the ownership and jurisdiction of public



and quasi-public entities, occupy over 4,599 acres (see Table IV-2) and Map IV-1), or almost 22 percent of the Township's geographic area land use acreage.

Those portions of institutional holdings that are actually improved (with administrative, research, conference, and ancillary buildings) encompass a

very small portion of the institutional land area within the Township. These improved portions of Institutional lands are located in Sections 5, 6, 8, 9, 13, 20, 21, 23, 27, 28, 33 and 36 (see Map IV-2). For the most part these institutional properties are tax exempt properties. These are buildings and structures predominantly belonging to Michigan State University, and include the various components of the W.K. Kellogg Biological Station, including the Manor House, Conference Center and Walter F. Morofsky Library at the intersection of B Avenue and East Gull Lake Drive in Section 6; the Dairy Center west of 40th Street in Section 5, the Kellogg Bird Sanctuary in Section 8, east of East Gull Lake Drive, and the Learning Center in Section 8 west of 40th Street. Michigan State University owns and operates sold Brook Lodge Hotel and Conference Resort located in Section 28 north of Augusta in 2018. The 63-acre portion of the property occupied by the facility's historic buildings is currently under contract for future use.

MSU's W.K. Kellogg Experimental Forest, located on 42nd Street, is known worldwide for research on tree breeding, planting techniques, and plantation management. The 716-acre property contains a visitor building and restrooms, along with a picnic area, an interpretive walking trail and numerous footpaths. end trails.

The Cheff Therapeutic Center is located on 43rd Street between M-89 and C Avenue. It is a nonprofit organization devoted to providing therapeutic services to the physically disadvantaged through equestrian activities. The Center is currently rebuilding its facilities which include offices, bathrooms, classrooms, and an indoor arena, totaling 25,000 square feet. The Center has several riding trails within the 307 acres it owns in Sections 15 and 16.

The Battle Creek Hunt Club, a private equestrian club, is located on 43rd Street, three miles north of Augusta, west of Stony Lake. The club maintains a club house and dining room, barn and an indoor and two outdoor riding arenas, space for boarding, as well as kennels, and has riding trails within the 109 acres it encompasses.

The Bible Conference Gull Lake Ministries (Gull Lake Bible Conference) is a non-denominational religious retreat and conference center located within the Midland Park plat in Section 8 on the east shore of Gull Lake. The Center is used for week-long group retreats and conferences family vacations during the summer and for organization faith-based events and conferences during other times of the year. The Ministries-owned property encompasses approximately 30 acres, with another 8.5 acres leased from MSU. There are currently 50 individual single-family



residential structures. Lodging on the grounds consists of waterfront and inland condos and lodge-style units, as well as cottages, in addition to a conference center, church (tabernacle) and recreation facilities (basketball, tennis, pickleball, volleyball, frisbee golf, zip line, miniature golf, snow tubing, splash pad, swimming

and boating). The Conference is in the process of increasing open space within its holdings, removing older deteriorating single-family structures and replacing them with newer units over time. A number of the newer units are designed to accommodate two families at a time. Except for residences occupied year-round by Conference staff, most residential units are occupied only on a weekly or daily basis. The Conference center contains administrative offices, 18,500 square feet

of waterfront dining and space to accommodate groups of up to 500 people, and a dining room and 32 sleeping rooms. The Conference can sleep a maximum of 650 people, including staff.

TABLE IV-2 – PUBLIC/INSTITUTIONAL LANDS IN ROSS TOWNSHIP

Institution	Section Location	Approximate Acres
MSU Kellogg Biological Station	4,5,6,7,8,9	1,419
Fort Custer Military Reservation, National Cemetery, State Recreation Area	35,36	1,020
W.K. Kellogg Forest	21,22,27,28	716
Brook Lodge	21,28,29	483
Cheff Therapeutic Center	15,16	307
YMCA Outdoor Center	29,32	113
Battle Creek Hunt Club	15	82
Gull Lake Ministries	8	40
Kalamazoo County Landfill (closed)	27,28	40
Miscellaneous (Township office, cemeteries, park, schools, churches)	8,12,14, 20, 21,31	25
MDNR State Game Area	9,10	330
City of Kalamazoo	30	24
Total		4,599

SOURCE: Gove Associates, Inc.

In addition to the Bible Conference Gull Lake Ministries facility, there are three churches within close proximity to Gull Lake and one church on 46th Street north of M-89. These include St. Anne's Catholic Church on D Avenue, west of 39th Street near the southeast corner of Gull Lake; Yorkville Community Church at the corner of D Avenue and 37th Street near the southwest corner of Gull Lake; Gull Lake Bible Church on Midland Drive, within close proximity to, but not associated with, the Bible Conference Gull Lake Ministries in Midland Park; and Day Bible Church

on the corner of 46th Street and CD Avenue, near the site of the former Maple Hills Golf course in Section 13.

In addition, The Michigan Department of Natural Resources State Game Area encompasses approximately 330 acres and is located east of 42nd St. and north of C Ave.

Township lands/facilities include Ross Township Hall and Fire Station and Police Department are located in one building on the south side of M-89 between 37th and 38th streets in Section 19, on 6.7 acres of land. The Township also owns and maintains four cemeteries: Yorkville Cemetery established near the Yorkville Community Church (2 acres); Howlandsburg Cemetery covering one acre south of G Avenue between 37th and 38th Streets; Day Cemetery encompassing 2.25 acres situated near the intersection of C Avenue and 45th Street; and the one-half acre Ross Cemetery located north of the intersection of M-89 and 42nd Street. The Howlandsburg Cemetery is at capacity, but the remaining three cemeteries have a total of 1,850 plots available. The Township limits burials to residents and property owners with an average sale of 23 plots per year. The remaining cemeteries should be able to accommodate needed burial sites well past the 20-year planning period. In addition, the Fort Custer National Cemetery, located in the southeast corner of the Township in Section 36, encompasses 770 acres, of which 250 acres are developed with gravesites, leaving a substantial capacity for expansion. There are almost 14,000 interments in the current developed portion of the cemetery.

The Ross Township Park, located on the east shoreline of Gull Lake, represents the Township's only publicly-owned recreational facility. The Park is provided over 300 feet of beach frontage on Gull Lake and is a popular destination for passive recreation (picnic, swim).

Overall, the improved (developed) portions of institutional lands comprise only a small proportion of the total land holdings by public, quasi-public and nonprofit organizations.

MAP IV-2 – TAX EXEMPT PROPERTY

Draft

Wetlands/~~Lakes~~ Water Areas

In 2002, wetlands occupied approximately 3,499 acres, or 15.9 percent of the total Ross Township land area. Water areas, including lakes, rivers and streams, account for another 1,809 acres, or 8.2 percent of the Township's total existing land area.

Gull Lake is the largest surface water body in the Township, encompassing 2,050 acres, of which 1,121 acres are within the Township boundaries, accounting for 62 percent of the Township's total water area and 5.1 percent of Ross Township as a whole. Gull Lake has a maximum depth of 110 feet with a lake bottom consisting of a combination of sand, gravel, peat, marl, and muck. The perimeter of this lake is essentially developed, with portions developed as relatively high density residential.

Sherman Lake, located in the southwest quadrant of the Township, is the second largest lake, covering 120 acres with a depth of up to 35 feet. Sherman Lake also contains residential land uses along its western, northern and eastern shorelines. A public access site with a boat ramp, parking and toilets is located on North Sherman Lake Drive. The YMCA Center is situated on the east shore of the lake.

Stony Lake is located in the center of the Township immediately adjacent to M-89 and encompasses approximately 60 acres. Stony Lake Hills, a residential subdivision covering about 150 acres, borders Stony Lake on the east. **Crane's Pond**, located in Section 29 just west of 38th Street, is 54-acres in size and situated just north of Sherman Lake. Cranes Pond, a 140-acre open space community, occupies the northwestern shoreline of the lake.

Duck Lake and **Wintergreen Lake**, both located in the northwest quadrant of the Township, cover 29 acres and 39 acres, respectively. Both of these lakes are within the Kellogg Biological Station boundaries and surrounded by woodland and cropland. Duck Lake has a maximum depth of 14 feet with an organic soil and sand bottom. Wintergreen Lake has access to a wildlife viewing area as part of the Kellogg Bird Sanctuary visitor's program, and is a natural lake with a man-

made dam. It has a maximum depth of 21 feet with a bottom consisting of marl, organic soils and sand.

Hamilton Lake is located in Sections 1 and 12 in the northeast quadrant of the Township. This lake encompasses 40 acres with no public access and is surrounded by woodland. It has an inlet and outlet on Augusta Creek.

Graham Lake is located in Section 19 and covers approximately 10 acres. An outlet feeds it from Gull Lake to the north and the lake's water flows into the Gull Lake Outlet into **Butterfield Lake**. Butterfield Lake is located in Sections 19 and 30 and encompasses 27 acres. The lake's water flows into the Gull Lake Outlet, which eventually flows into the Kalamazoo River. Both Butterfield Lake and Graham Lake are in wetland areas and therefore are not likely to be developed.

Douglas Lake, located in Section 28, covers 9 acres, with Old Mill brook serving as an inlet and outlet for this body of water. **Craven Lake**, west of Douglas Lake, has a surface area of 32 acres in Sections 28 and 29. Both Craven Lake and Douglas Lake are surrounded by wetlands. **Mill Pond**, located in Section 31, east of 37th Street and north of G Drive, is a man-made pond covering 29 acres that was created during the logging era within the Gull Lake Outlet. There are some residential parcels along the west side of the lake. **Pond Lily Lake** is in Section 32, covering 20 acres west of 39th Street and bordered by wetlands on the north. **Goslins Lake** is a small body of water in Section 11 covering 1.8 acres, with Augusta Creek serving as the lake's inlet and outlet.



There are also 68 small unnamed lakes within the Township, ranging in size from 0.1 acre to 15 acres. All, except for two which are man-made, are natural lakes or ponds, with many surrounded by wetlands.

The **Kalamazoo River** runs through the southeast quadrant of the Township for

a distance of about three and a half miles. Because of the substantial amount of wetlands on both sides of the river, most of its shoreline is undeveloped. **Augusta Creek**, with headwaters in Barry County, runs north and south through the middle of the Township, emptying into the Kalamazoo River in the Village of Augusta. The **Creek** also runs east-west through Hamilton Lake in the northeast portion of the Township. Augusta Creek is a major natural asset to the Township, creating a watershed basin of steep slopes and wetlands and contributes to the scenic beauty of the area.

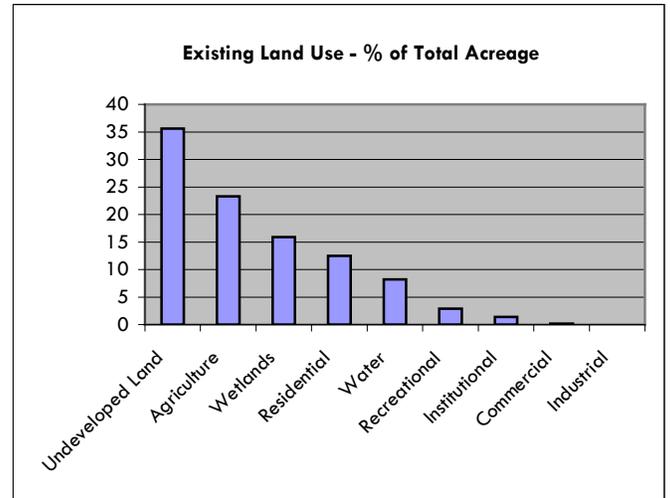
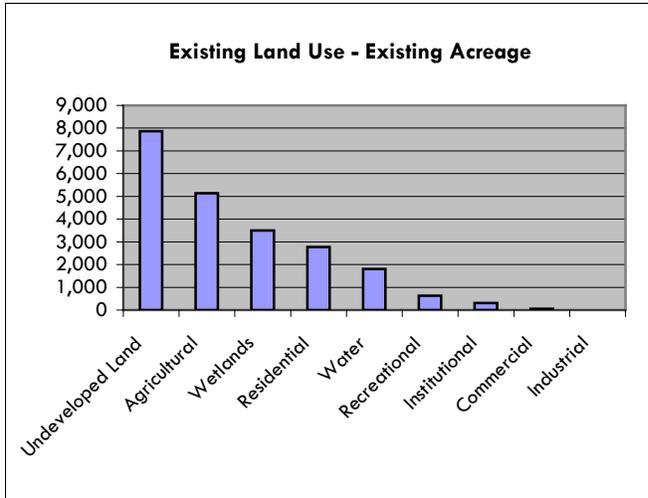
The expanse of wetlands within Ross Township are clearly illustrated on the Existing Land Use **Map** (Map IV-4). Wetlands of various sizes can be found within every section of Ross Township (see Existing Land Use Map). Large Township wetland areas are located along the Kalamazoo River, Augusta Creek, and all Township lakes. The largest concentration of wetlands is in the north central portion of the Township, along both sides of Augusta Creek and around Hamilton Lake, in **Sections 1, 2, 3, 10, 11, and 12**. Much of this area contains forest vegetation conducive to wet soils and standing water.

Other large areas of wetlands include forested areas along both sides of the Kalamazoo River in the southeast section of the Township, the areas around Butterfield and Graham **Lakes** and an area east of Sherman Lake in **Sections 28 and 29**. Land along both sides of Augusta Creek, particularly east of 42nd Street in **Sections 16, 15 and 27**, also contain significant wetlands. The overwhelming majority of wetlands are located in larger parcels of approximately 20 acres or more. Because of these wet areas, these parcels, for the most part, have limited development potential.

SUMMARY

~~Ross Township has an area of approximately 22,068 acres, of which approximately 36 percent is classified as Undeveloped Land (Woodlands and Open Space), Agricultural lands and Wetlands. The following graph highlights the distribution of the major existing land uses by acreage and percentage (see Table IV-1, page IV-6), and as identified on the Ross Township Existing Land Use Map.~~

(remove graphs)



Given the ongoing concern within Ross Township and the northeastern region of Kalamazoo County concerning the preservation of open space and conservation of water resources, Table IV-1 further demonstrates that there is a large inventory of Township land (especially open space and water resources) that could be negatively impacted by development without an appropriate comprehensive future land use master plan. Such impacts could include soil erosion and sedimentation problems, especially in waterfront areas, from runoff due to construction development, loss of vegetation, potential groundwater contamination from high intensity development using on-site septic systems, and the detrimental loss of scenic features and viewsheds. The Future Land Use section of this Plan will designate the most appropriate locations for future development and recommend development patterns and strategies that will help to mitigate those negative impacts.

MAP IV-3 – EXISTING LAND USE - 2002

Draft

MAP IV-4 – EXISTING LAND USE - 2020

Draft

INTRODUCTION

Public participation takes many forms. Surveys, phone interviews, monthly public meetings and community issue forums are all effective means to get a better unified and representative community vision from residents, business owners and community activists.

A successful planning effort requires community participation. Community reports and surveys were prepared specifically for the Township in previous planning efforts. Those include the Strategic Water Resource Management Planning Committee Final Report (1998), "Convening Our Community" – a random survey of Kalamazoo County residents, including Ross Township (1999), and previous Ross Township community surveys conducted in 1992, 1995 and 1996. Information and recommendations from the "Four Township Recreation Carrying Capacity Study" and the "Four Township Environmental Carrying Capacity Study" are also included in this Plan. In addition, the Four Township Water Resources Council Water Resources Paper was published in 2001. The findings and recommendations of these efforts are in Appendix A.

Community input efforts were also specifically completed for this in the development of the 2002 Plan and consisted of a Community Leader's Questionnaire, a Household Survey/Questionnaire and a Brook Lodge Community Vision Charrette. These are The results of these extensive and varied public engagement activities are described below and remain the foundation of the current Plan.

ROSS TOWNSHIP COMMUNITY LEADERS' QUESTIONNAIRE

The following information is a compiled summary of the important contact persons the Ross Township Planning Commission recommended Gove Associates interview to garner insight from known community leaders and activists. Of the 20 mailed out, 12 were returned. Additional follow-up on non-returned questionnaires provided further answers. The following reflects the responses to each open-ended question and the associated ranking (1,2,3) given for each response:

Q1: "What do you feel are the top three community strengths that currently exist in Ross Township?"

1. School System
Open space

Honest, approachable government
Gull Lake
Natural beauty

2. Sherman Lake
Scenic terrain
Rural quality of area
Country environment
Recreational amenities
Rural character
3. Good economics mix and good mix of rural and populated areas
Plentiful water
Wetlands and lake quality
Relative flexibility in direction of future development/good schools

Q2: "What do you feel are the top three community weaknesses that currently exist in Ross Township?"

1. Roads in bad repair (some)
Public access to lake is way too busy
Low tax base, high amount of non-taxable land
Too much building
Lack of trash and recycling services
Township management
2. Lack of sewers around Sherman Lake
Taxpayer reluctance to support millages for schools and other services
Tax base declining due to all non-taxable properties in Ross Township
Roads need work
Too many golf courses
3. Township office should be open 5 days a week, not 4 days a week.
Too many loopholes in the zoning code
Inability to control watercraft on Gull Lake
Poor infrastructure
Suspicion that inhabitants of Kalamazoo and Battle Creek are trying to "take advantage of us"
Zoning laws can be too restrictive on commercial sites

Q3: "What do you believe will be the top three opportunities that will influence Ross Township in the next 10 years?"

1. Land use management
 - Writing and enforcing building and zoning codes
 - Increased land values
 - Development will occur. Ross Township has the opportunity to direct this in a positive manner
2. Use of informed, strategic planning
 - Population growth for increased property tax revenue
 - Purchase of development rights of farmland by Ross Township
3. Writing and enforcing regulations protecting wetlands and water quality
 - Having specific land use requirements

Q4: "What do you believe will be the top three problems that will influence/effect Ross Township in the next 10 years?"

1. Land use management
 - Land use requirements, land use regulations and the competition for land
 - Declining tax base
 - Too many people
 - Lack of sewage infrastructure, and water supply for fire protection
2. Cheap houses crowded together
 - Increased traffic, both auto and boat. (especially when Township roads increase in "thru traffic" and cannot be fixed with County funds)
 - Police and Fire protection
 - Overcrowding causing environmental problems around and in Gull Lake
3. Inflated land values
 - Lake congestion and enforcement of boating rules
 - Housing expansion taking advantage of weak zoning ordinances/flexible variances
 - Loss of rural character and environmental concerns

Q5: "Are there any other comments or concerns that you think the Ross Township Planning Commission should be aware of and/or address concerning the current Master Plan project?" These additional responses are noted below.

- I feel our present Township officials are doing a good job
- Enforce zoning and don't make exceptions
- Suggest the DNR be asked to re-study public access sites in terms of use, congestion, violation of fast boat rules, and fish quality and quantity

Summary Review of the Ross Township Community Leaders' Questionnaire

Overall, there appeared to be an agreement that Ross Township's natural resources (open space, lakes, scenic terrain and rural quality of life) were valued community strengths. Land use management was seen as an important component in efforts to ensure the Township will develop appropriately. That can be interpreted to include accommodating any new development that will occur within the context of preserving the Township's resources. Common concerns, also shared in the 1992, 1995 and 1996 community surveys, included road quality, controlling development, (including overcrowding of lakes) and tax revenue concerns, especially the loss of revenue due to non-taxable properties. Furthermore, the need for "fair" land use regulation, the problems associated with higher land value and the desire of consistent enforcement of the Township's zoning ordinance were concerns expressed by many of the community leaders who responded to the questionnaire.

ROSS TOWNSHIP COMMUNITY SURVEY OVERVIEW

In order to create a plan that reflects the desires of the area's residents, it ~~is~~ **was** necessary to determine how people feel about a variety of topics. One of the mechanisms used to identify community issues and preferences ~~is~~ **was** a household survey. This was accomplished through the distribution, tabulation and analysis of a community-wide questionnaire.

Ross Township Questionnaire Results

During June and July of 2000, a planning survey questionnaire was developed, distributed, collected, tabulated and analyzed. The questionnaire was mailed using the Ross Township Property Appraiser's property list of homeowners. 808

surveys were mailed, and 235 were returned - a strong return rate of 29%. Detailed survey responses can be found in Appendix B.

Summary of Findings

Responses were well received from throughout the Township. However, over 61% (144 surveys) of respondents came from Quadrant I (see page IV-2). The lowest percent of total respondents came from Quadrant IV, with only 6% (14 surveys) representing the 235 total surveys.

Responses by Years of Residency indicated a strong representation of respondents calling Ross Township home for 10 or more years. Specifically, 165 respondents (or 70% of 235 total respondents) have lived in Ross Township for 10 or more years. Eighteen respondents, or about 7%, also worked in Ross Township, with 84 respondents (approximately 36%) indicating they were retired or not employed.

Responses to annual household income indicated a diversity of income levels. Of the total 235 respondents, 200 (around 85%) answered this question. Almost 10% of respondents had an annual household income of \$24,999 or less, 22.5% had an annual household income between \$25,000 and \$50,999, and approximately 53% had an annual household income of \$51,000 or more.

Questions were asked regarding current **key** issues/conditions and whether or not they were problems. The following depicts the responses:

	NP	PP	SP	MP	SP	NO
Pollution of surface water	18%	22%	15%	16%	16%	8%
Division of farmland for residential development	12%	12%	8%	18%	38%	9%
Loss of open space	12%	13%	11%	19%	37%	6%
Loss of wetlands	14%	15%	11%	15%	35%	8%
Soil erosion	17%	15%	18%	13%	14%	19%
Traffic congestion on Township roads	27%	13%	15%	18%	18%	6%
Cost of single-family homes	9%	11%	16%	23%	34%	4%
Density of water uses on lakes	26%	8%	12%	17%	15%	19%

NP = Not a problem; PP = Possible Problem; SP = Slight Problem; MP = Moderate Problem; SP = Serious Problem; NO = No Opinion

In general, residents who responded to the questionnaire do not believe pollution of lakes is an imminent threat. They are, however, concerned about breaking up farmland for residential development. Similarly, the loss of wetlands and open space are also a concern. Soil erosion is not perceived to be a major concern while respondents appear to be split over whether or not traffic congestion is an issue to be concerned about. The cost of single-family homes is also considered to be a significant problem while there is a wide distribution of opinion on the importance of the density of recreational use on the lakes.

General quality of life in Ross Township was rated as Good by almost 70% of respondents. A concern within Ross Township appears to be zoning code enforcement (61 Poor or Very Poor responses, or 26%), building code enforcement (53 Poor or Very Poor responses, or 22%), communication facilities (91 Poor or Very Poor responses, or 38%) and road maintenance (107 Poor or Very Poor responses, or 45%).

Respondents ranked future issues and concerns on a scale from 1 to 6; 1 being most important, 6 being least important. The following represents the order of importance of those issues:

1. Population growth
2. Loss of open fields, pastures, farms
3. Commercial, Industrial development
4. Quality of lakes, wetlands
5. Loss of woodlands
6. The selection labeled "Other" weighed heavily towards minimizing properties that are non-taxable (9 responses), road maintenance (6 responses) and zoning ordinance enforcement (4 responses).

When asked to address future development options, respondents provided the following. Of note, the following issues appear to be important to questionnaire respondents:

- 64% AGREED or STRONGLY AGREED about having more single-family housing in Ross Township. Another 18% were NEUTRAL, and 12% DISAGREED or STRONGLY DISAGREED with this policy.
- Encouraging apartment housing in the Township drew a DISAGREED or STRONGLY DISAGREED response by 62% of respondents, while 52% DISAGREED or STRONGLY DISAGREED that new retail or other services business development should be encouraged.
- 67% of those responding were against encouraging industrial development. Accordingly, 75% were also against the use of public funding to attract new businesses.
- A majority (62%) is **were** in favor of biking/hiking trails, also agreeing that trails should be designed along roads in the Township. Slightly fewer respondents, but still a majority (52%), **believed** that separate hiking/biking trails should be located in Ross Township.
- There ~~ere~~ **were** mixed opinions regarding development of more parks and recreation facilities with less than half (41%) AGREEING or STRONGLY AGREEING to that policy.
- Preservation of natural areas in Ross Township earned a strong 82% AGREED or STRONGLY AGREED response.
- Farmland preservation **was** supported by 74% of those who responded while the desire for open space preservation was affirmed by 78%.
- Strict sign regulations in the Township **were** not considered an important issue, as evidenced by a combined Agree/Strongly Agree response of 45%.
- Over 65% do not believe that public funds should be used to attract new business.
- Slightly more than half (52%) **felt** that there should be a limit on the number of domestic animals permitted at a non-farm residence.

- A plurality (40%) had **no** preference about placing street lighting in all existing subdivisions. Similarly, residents appeared to be ambivalent about placing street lighting in all new subdivisions.
- A strong majority (72%) desired **better** road maintenance in the Township.
- A plurality of respondents (46%) **did** not believe there is a need of more police protection.
- A slightly higher proportion (51%) **did** not believe there is a need of more fire protection.
- Similarly, 51% **did** not perceive there is a need for faster/better ambulance service.
- A majority (57%) **were** in favor of better yard waste pickup.
- Slightly less than half of all respondents (49%) support recycling services.
- Only a little more than 1/3 of respondents believed the Township should promote expanded water and sewer facilities. Over half were either neutral or disagreed.
- ~~A plurality, but less than a majority, (43%) did not believe wireless communication towers should be constructed in the Township~~.
- A plurality (47%) was ambivalent about keeping public access on cable TV.
- Almost 2/3 or those responding **did** not believe more traffic lights or stop signs were needed within the Township.
- Among the minority who felt additional traffic lights or stop signs were needed, many identified traffic lights at M-89 and 37th Street, and the M-89/M-43 Intersection. ~~was noted~~.
- A majority **were** ambivalent about improving illumination at major street intersections.
- Among those who favored increased intersection illumination, M-89 and 40th Street was the preferred intersection.

When asked to identify the 5 most important items that should be dealt with in the Township, respondents established the following priority:

1. Road maintenance
2. Loss of open space/natural areas
3. Loss of farmland
4. Groundwater protection
5. Loss of wetlands

Slightly less than half (49%) indicated they would be willing to pay additional taxes to address one or all of the five issues.

When presented with a proposed assessed property tax payment program to support the setting aside of agricultural or open space land for preservation, respondents gave the following answers:

- 9% would pay \$125.00 per year for 10 years for a \$100,000 market value home.
- 27% would pay \$83.00 per year for 15 years for a \$100,000 market value home.
- 53% would not pay an assessment at all and not agree to purchase the land.
- 11% did not respond to this question.

A number of population **growth** targets for Ross Township for the year 2020 (excluding the Village of Augusta) were defined and respondents were requested to select a preferred target.

The choices noted were as follows:

- Less than 6,000.....49%
- 6,001 - 8,000.....22%
- 8,001 - 10,000.....11%
- 10,001 - 12,000.....2%
- over 12,000.....0%
- did not respond to this question.....16%

ROSS TOWNSHIP LAND USE PLANNING CHARRETTE, BROOK LODGE, OCTOBER 25TH, 2000

Approximately 60 people attended this important October community forum. The key objective was to assess concerns related to the Township's existing land uses and develop (using five smaller work groups) a map to address desired future land use development.

The term "charrette" is derived from the French term for "little cart" and refers to the final intense work effort expended by architects to meet a project deadline. In Paris, during the 19th Century, professors at the Ecole de Beaux Arts circulated with little carts to collect final drawings from their students. Students would jump on the "charrette" to put finishing touches on their minutes before the deadline.

Ultimately, the purpose of the Ross Township Land Use Planning Charrette was to give those concerned with their community the opportunity to provide insight and ideas which will aid in developing appropriate goals, objectives and proposals for the Ross Township Master Plan.

Members of the Ross Township Planning Commission, Township staff and planners from Gove Associates helped lead the public forum and five work groups.

BROOK LODGE CHARRETTE FORMAT**Introduction to the Community Charrette**

The meeting began at 7:30 p.m. An introductory presentation provided a summary of the efforts completed up to the Charrette meeting concerning the Ross Township Master Plan; provided an explanation of the work groups' responsibilities and objectives; answered questions from the audience; and, finally, divided those participating into five work groups.

Work Groups Get to Work

The five work groups consisted of 10-11 people each. Planning Commission members were in each of the groups and provided valuable group leadership. Work groups first discussed concerns regarding specific community issues, such as the environment, transportation/roads, public utilities, as well as residential, commercial and industrial land use development. The work groups were active for

approximately two hours, reviewing existing land use maps, discussing land use concerns and creating future land use maps for Ross Township.

Results from the Five Work Groups

One member from each work group presented the findings of their work group. Their findings were as follows:

Group One, after a long discussion regarding land use concerns, decided future land use development should be concentrated around the Village of Augusta. Specifically, future residential development should occur in medium- to high-density around Augusta, with a recreational area to the east of the Village in Fort Custer (located in southeastern Ross Township). Group One also supported the existing location of industrial land use along Custer Road. Future expansion of commercial development should be located along M-89, from just west of 37th Street to 40th Street, with a concentration at 38th Street. Group One supported the preservation of existing agricultural land use, and identified specific agricultural areas on their future land use map.

Group Two was active in their discussion of existing and future land use concerns. The preservation of agricultural land, open space and wetlands were key concerns of Group Two. Their map identified areas where development should not take place, especially along wetlands and Augusta Creek. Future residential development was supported north of Augusta Drive in the 44th Street area. Their future land use map also included a small area along M-89 at 40th Street for commercial development. However, Group Two preferred that future commercial development be located in the Village of Augusta. They felt commercial development in the Ross Township area should first take advantage of the Village's existing empty storefronts and available commercial parcels. Future industrial development should be located in the currently designated area along Custer Road in the southeastern portion of the Township.

Group Three expressed concern about the impact of future development upon the area's wetlands. The southwestern quarter of Ross Township was specifically identified as an area where wetlands should be preserved and future residential development should be low in density to minimize environmental impact. The location of future low-density housing was also promoted in the northeastern area of the Township. Cluster residential development using a medium density designation was proposed along C Avenue, between 44th Street and 45th Street. Additional land for medium density residential development was identified in an area defined by C Avenue on the north, M-89 on the south, 42nd Street on the east and Gull Lake Drive on the west. A Planned Unit Development (PUD) area with a golf course was proposed north of Augusta Drive, west of 46th Street. Future industrial development was promoted in the Fort Custer area in southeastern Ross Township. Commercial development was also encouraged in this industrial area, along M-96 just east of the Village of Augusta. Additional future commercial development was identified along M-89, between 37th Street and 38th Street, complementing existing commercial uses in the area.

Group Four identified general areas for future residential, commercial and industrial development. Future residential development was encouraged along 43rd Street, north of C Avenue. Additional areas for future residential development were located off 41st Street and west of 46th Street (just north of Augusta Drive). New commercial development should be located in the M-89/38th Street area, as well as the D Avenue/37th Street intersection. Industrial development should remain as it currently is, located along Custer Road in southeastern Ross Township.

Group Five did not encourage any new commercial development, desiring instead to keep commercial land use "as is." Future residential development was located along the southern side of M-89, from the western border of Ross Township to 41st Street. An additional site for future residential development was identified north of Augusta Drive, between 44th Street and 46th Street. Additional land for future industrial development was placed in the Fort Custer complex, south of Custer Road.

Summary of Ross Township's Brook Lodge Charrette

The meeting ended around 11 p.m. Many people from the five work groups stayed to hear a summary review of each group's efforts. What was discovered was a common concern to preserve open space, wetlands and the rural environment of Ross Township. The charrette groups uniformly placed industrial development adjacent to, or in, the Fort Custer Complex in the southeast portion of the Township. Work groups encouraged future commercial development around the existing commercial enterprises at M-89 and 38th Street. New residential development included some work groups supporting higher density, clustered development to preserve open space, and the placement of residential development directly adjacent to the Village of Augusta.

The Brook Lodge Charrette was a successful community forum which facilitated public dialog and direction for Ross Township officials. It was a positive exercise in helping to formulate future land use, **natural resource protection, recreation and infrastructure strategies**. ~~elements, including Township goals and objectives, that would be applied to this 20-year Township Master Plan.~~

The findings of all three public engagement efforts informed the framework and emphasis of the 2002 Master Plan. The strength of that framework realized continued support in both the 2011 and 2020 updates of the Master Plan.

ROSS TOWNSHIP 2018 COMMUNITY SURVEY

In 2018, the Township Board engaged community residents again seeking feedback/direction on key issues facing the Township. An on-line survey was made available to all residents for a 2-week period with nine 'forced-choice' questions, but also allowing for open-ended general comments. With a 21 percent response to the survey (863 valid submissions), the survey provided the following direction on two emerging land use issues:

- **A slight majority of respondents (59%) were in favor of allowing solar energy facilities (solar farms) in the Township.**
- **The majority of respondents (74%) opposed locating commercial marihuana facilities in the Township.**

It was noted that the majority of respondents were in the 60-69 age group (27%); married (78%); and had no children at home (75%).

ROSS TOWNSHIP 2020 MASTER PLAN UPDATE

The 2020 Master Plan Update was guided by the planning issues identified through the 2002 public input process; the 2011 public review process; the 2018 community survey analysis; and, the public feedback received during the 2020 update process.

Public Participation

The Ross Township Planning Commission welcomed the residents and property owners of Ross Township in the process of updating the Master Plan. From the informal group settings of Planning Commission work sessions to the publicized and structured setting of the public hearing, community members were afforded the opportunity to provide input and participate at a meaningful level in the planning process.

Planning Commission Work Sessions - The Planning Commission hosted occasional Master Plan Update Work Sessions during the course of the update process. These work sessions were open to all community members and were publicized on the Township's web site agenda postings. Through the work sessions the Planning Commission received additional public comment and direction on the Plan.

Public Hearing - The public hearing held on the draft Master Plan Update by the Planning Commission offered an additional opportunity for public input in the planning process. The public hearing was held on xxxxxx, 2021 at the Township Hall. The positive comments received on the Plan are a testimony to the value of public participation throughout the process and the importance of having a Master Plan that reflects the priorities and planning values of the community.

Collaboration

An important theme in this Master Plan Update is the desire for collaboration, at both the local and regional levels. Ross Township understands that collaboration with the Villages of Richland and Augusta, and Richland Township, on important local issues is essential in driving economic prosperity and resource protection in the community. Further, an expanded partnership with Kalamazoo County and the

Southwest Michigan Prosperity Region 8 will allow for an alignment of shared assets and movement forward on projects that are important to the prosperity of the region.

This Master Plan embraces the notion of local and regional collaboration as a means of ensuring that available resources are targeted where they will have the greatest impact possible for residents.

Draft

INTRODUCTION

The goals and objectives contained in this Plan establish the overall guidelines for future public and private decisions relating to the development of Ross Township. Issues, and their resolution, are the platform for formulating community goals and associated objectives. The **Issues** described below were identified **in 2002** by analyzing data collected in the process of putting **the** Plan together, coupled with the results of the Leadership and Community surveys, the Brook Lodge charrette, and input from the Township Planning Commission. **Those same Issues have since been validated and refined, both through the Master Plan review and update process that occurred in 2011, as well as through the current update effort. The Issues are detailed in this Section and continue to provide the basis for the strategies of the Master Plan.**

PLANNING FRAMEWORK

Knowledgeable planning decisions about balancing development and preservation of the environment in rural bedroom communities such as Ross Township are based upon understanding interrelationships among the various social, economic, man-made and environmental components that make up the community.

Fully understanding the complexity of this system requires an understanding of each of its individual components and how actions that are taken relative to one component can impact one or more



of the other elements of the community. In addition, local leaders and decision-makers have to be sensitive to the perceptions that residents have of the Township. Often, the popular perceptions associated with an issue do not necessarily reflect the reality of the situation. But in a political sense, perception is reality, and individuals and organizations will often pursue solutions to perceived issues which will ultimately have little or no positive impact and which could potentially make the situation worse. That is why the rational planning process, which incorporates objective analysis of the data collected, clarification of the issues through public discussion, and formation of significant goals, achievable objectives and realistic actions, is needed to guide the Township in its decision-making.

Issues

In the development, **update and use** of the Ross Township Master Plan, certain planning issues have emerged that will chart the future direction of Ross Township. These issues have been defined through analysis of **1) “hard” data and information; 2) local and regional patterns of use/activity; 3) public input; and 4) new laws and funding parameters.** ~~through surveys and discussions.~~ They are presented within the categories of Social/Economic Issues, Land Use Issues, Natural Resource Issues and Public Facilities and Services Issues and are not listed in any particular order of importance.

Social/Economic

- The median age of the Township’s residents is substantially higher than the County in general (by an average of ~~9~~ **14** years), and is projected to continue to go higher. Part of that trend has been a consistent decline in the number of ~~20-34-year-old residents.~~ **residents under the age of 9 and steady increases of all age groups over 55 over the past 20 years.**
- Typical of other communities, the Township is experiencing a decline in its proportion of married couple households and an increase in **one-parent (female-headed) households,** which tends to ~~generally have an adverse effect on family stability and increase the need of social service assistance~~ **shape the role that local organizations and school programs play in the community.**
- **The number of one-person households in the Township continues to increase, introducing the potential for elevated interest in varying housing types and densities not characteristic of the Township.**
- **While the average value of a home in the Township is higher than the County in general, such higher values often preclude those who desire to move into the Township from doing so. A number of residents expressed concern over the high cost of housing or high (inflated) property values. At the same time, housing value is directly related to property tax assessment. This is a problem that is implied by the reluctance of a majority of community survey respondents to pay additional property taxes for specified Township facilities or services.** **Increasing home values may also**

limit relocation options within the Township for those one-person households that desire to downsize.

- Future population growth continues to be ~~is the most important~~ an issue of primary importance to Township residents. There are a number of implications – social, economic, and environmental – associated with new residents moving into the area.

Land Use

- The fact that approximately 25 percent of the Township’s land area is non-taxable is of concern to residents. This has had a substantial impact on the Township’s potential revenue. While such land uses do not produce property tax revenue, they do help to maintain an open space environment, a highly valued asset in the Township.
- ~~There is a perception that~~ Land use management is a priority within the Township, is a concern. That is tied to a number of factors identified in the community survey, including the division of farmland for residential development, specifically as it relates to the loss of farmland and open space, and land division and density implications of residential growth.
- The high density of housing around Gull Lake is of concern to residents. Some feel the intensity of development around lakes is creating “overload,” exceeding the capacity of Township lakes to reasonably accommodate watercraft. The “Recreation Carrying Capacity Study” supports that perception.
- ~~There is a concern among some residents that there are too many golf courses within the Township. While such land uses may not produce as much property tax revenue as other, more intense uses, they do help to maintain an open space environment. On the other hand, the chemicals and fertilizers used on golf courses create a greater potential for groundwater contamination.~~



- Overall, a substantial majority of residents desire to retain the rural character of the Township. While it is not possible to unreasonably preclude new residents from moving into the Township, rural character can be sustained through appropriate land use management techniques.

Natural Resources

- The rural character of the Township is dependent upon the character and quality of its natural resources, and there is a general concern that, as a result of new residential development (existing and future), those resources will be altered or lost forever.
- While the **loss of farmland and open space** are land use issues, they are also natural resource issues, as development typically depletes at least a portion of the development area's natural vegetation, increases the amount of impermeable surface area (parking lots, roofs, sidewalks, streets, etc.), and changes the natural topography of an area with the potential of increasing soil erosion and surface water contamination.
- The **loss of wetlands** is a concern among residents. While the potential for losing large wetlands is diminished by the Michigan Natural Resources and Environmental Protection Act (PA 451 Of 1994), there is the potential of eliminating smaller wetlands (under 5 acres) without a local wetlands protection ordinance.
- With the Township's relatively hilly topography, numerous streams, wetlands and lakes, excavation related to construction can create conditions leading to **soil erosion** if such excavation is not regulated to minimize erosion, as well as visual "scarring" of the landscape. Soil erosion can negatively impact surface waters as sediment, resulting from erosion, can build up in lakes and change the natural balance between water, nutrients and inorganic materials.
- There are larger expanses of woodlands within the Township, with the Kellogg Forest being the most predominant, and also the most managed.



However, there is a concern that additional development will contribute to the **loss of some of the Township's existing woodlands.**



- Because there is no community water system within the Township, residents are sensitive to the need to prevent **contamination of groundwater.** As described in Section II, the natural cycle of groundwater recharge is aided by natural vegetation and wetlands acting as filters.
- The potential for runoff of fertilizers and chemicals from residential yards around lakes, as well as substantial use of motor driven watercraft, have created a concern about **surface water contamination.** This is also addressed in the Four Townships “Environmental Carrying Capacity” Study.
- Outside of Gull Lake, there are no lakes within the Township that are served by a community sewer system (although portions of Sherman Lake may be in the future). As lakes develop with additional residential units, each with its own private septic system, the potential for **surface water pollution** increases. Overuse of the shoreline, particularly with lawn fertilizers and lake access lots, can also contribute to lake contamination or eutrophication. Increased shoreline density will also contribute to lake degradation through increased stormwater runoff resulting from an increase in impermeable surface areas.

Public Facilities/Services

- The ability of the Township to manage land use changes is closely tied to the requirements and standards established within its adopted zoning ordinance, as well as the ability of Township officials and staff to administer that ordinance, as well as other land use regulations. One of the concerns expressed in the community input section, in light of the land use changes that have more recently occurred in the Township, is the perceived **weakness in the enforcement of the zoning ordinance to effectively regulate land use.**
- **Road maintenance** is a **continuing** issue among residents. Since public roads within the Township are under the jurisdiction of the Kalamazoo

County Road Commission, that agency ~~has the primary~~ shares in the responsibility for resolving this concern.

- In 2017, the Township Board worked with the Kalamazoo County Road Commission in defining the road system's needs and developing a comprehensive improvement plan. The Township



then created a special assessment district known as the Ross Township Road Improvements Special Assessment District No. 1 for a recovery of part of the costs for the improvement of nearly all of the public roads within the Township. Of special note was the extent to which the Township and Road Commission involved the public in plans. The Township was subsequently recognized with the Transportation Asset Management Council (TAMC) Organization Award for 2019 acknowledging the collaborative partnership between Ross Township and the Kalamazoo County Road Commission for their efforts and leadership in responding to the needs of the transportation network. Ross Township was also awarded the 2018 Road Warrior Award from the Kalamazoo County Road Commission for the 'largest improvement in average pavement surface evaluation and rating', with a recognized rating increase from 4.31 to 6.02.

- **Hiking and biking lanes along roadways as well as separate trails,** while not necessarily considered an issue of concern, are clearly desired by residents and consequently should be addressed as part of this Plan.
- **Most residents desire better yard waste pickup.**
- **Overuse of lakes** in the Township was cited as a concern by a number of residents (presumably those living on lakes). Previous studies have indicated that the Township's lakes have exceeded their maximum recreation carrying capacity. Associated with that concern is perception that there is too much public access to lakes. Management of public access and recreational use of lakes needs to be addressed.

GOALS AND OBJECTIVES

The preceding description of current and future issues outlines the concerns and possibilities that the public, local leaders, and analysis of data have clarified. The next stage of the planning process is to establish guidelines to resolve those issues that are a concern and capitalize on the potentials for positive change. Those guidelines are reflected in defined **goals** (end-points) toward which this Plan will attempt to strive. In order to advance the potential to achieve these end-points, each goal contains a series of **objectives**, which are more detailed descriptions of the components of the goal and clarify the methods that will be used to achieve that goal.

OVERRIDING GOAL

Ross Township will preserve its rural character. Rural character is a quality that reflects a predominance of natural vegetation, open space (larger aggregations of undeveloped areas) or farmland, water resources and viewsheds, relatively undisturbed by man-made changes to the landscape.

Objectives:

- ~~A. Designate areas for residential development growth near close to existing "built-up" areas within close proximity to utilities and adjacent to main roadways.~~
- ~~B. Identify areas for residential development in non-prime farmland areas; avoiding developmental impact upon existing wetlands, woodlands, prime farmlands and other rural open space areas.~~
- ~~C. Conserve large parcels in prime farmland areas.~~
- ~~D. Enhance existing commercial development in the 38th Street/M-89/Gull Lake Drive area, work with the Village of Augusta to promote compatible commercial development, and discourage scattered, sprawling strip development throughout the Township.~~
- ~~E. Protect residential districts from urban sprawl by reducing conventional plat and land division development to an absolute minimum through the~~

~~use of land use management techniques that will encourage creative design and concentrated (clustered) development, maximum preservation of natural areas and use of open space.~~

~~F. Integrate commercial and industrial land uses into their surrounding environment through appropriate and attractive architecture and signage, road setbacks, site design, and sensitivity to the natural environment, minimizing typical strip development layout.~~

~~G. Enhance the awareness of residents about the benefits of conservation-oriented design.~~

~~H. Apply development standards to protect the Township's natural resources, including lakes, rivers, streams, wetlands, groundwater, woodlands, and steeper slopes.~~

SUPPLEMENTARY GOALS

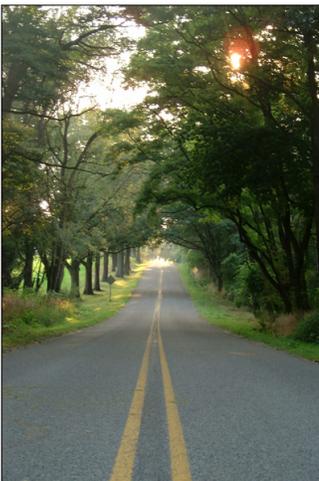
Ross Township will:

1. Conserve the Township's Farmland

Supporting Statement: *The Township understands that its land use patterns and economy are in a transition and that agriculture is no longer as predominant in the Township as it once was. At the same time, every effort will be made to accommodate those individual property owners and businesses that desire to continue to use their land for agricultural purposes.*

Objectives:

- a. **Support the active** conservation of large parcels within areas of prime farmland.
- b. **Establish the 'purchase of development rights' as a viable option in the Zoning Ordinance.**
- c. ~~Establish an inventory of inactive farmlands for potential preservation as open space.~~



- d. Provide zoning incentives for active farms to retain large parcels for agricultural production.
- e. Adopt zoning standards that support viable agri-business land use opportunities.
- f. Market the agricultural base of the Township as part of the local tourism trade.
- g. Provide for natural vegetation buffers separating active farmland from encroaching development on adjacent parcels.
- ~~h. Initiate programs to address potential concerns regarding the impact of agricultural land use practices on adjacent non-agricultural land uses.~~

2. Preserve the Township's Open Space

Supporting Statement: *Open space (including agriculture) is still the predominant feature of the Township and thus defines the character of the Township that makes it attractive to those who live here.*

Objectives:

- a. Establish both land use regulations and development incentives that facilitate open space preservation. These should range from open space standards for individual developments to the use of open space zoning in areas of sensitive natural features.
- b. Establish the site plan review process as an effective mechanism through which to achieve open space preservation and enhancement.
- c. Educate property owners and developers on the value of open space enhancement and how to achieve quality open space preservation through site design and construction.
- d. Promote the establishment of conservation easements in the Township through education.

- e. Establish the 'purchase of development rights' as an option in the Zoning Ordinance.

3. Protect the Township's Natural Resources

Supporting Statement: *The natural features of the Township are held in high regard by local residents and officials and are major attributes that comprise the Township's "quality of life." These features cannot be sacrificed for development.*

Objectives:

- a. Incorporate measures to protect the Township's natural resources, including viewsheds, woodlands, steeper slopes, surface water and groundwater, through Township development standards.
- b. Establish the site plan review process as an effective mechanism through which to achieve natural feature preservation.
- c. Encourage and support innovative site design measures that will optimize protection and enhancement of natural resources.
- d. Facilitate access to local resources for technical assistance in natural resource protection techniques and practices.

4. Protect the Quality of the Township's Surface and Ground Waters

Supporting Statement: *The highest intensity of land uses within the Township occurs around its major bodies of water. At the same time, individual wells provide the source of water for residents and businesses. The quality of both of these resources must be protected to sustain the viability of the Township for living, working, and recreation.*

Objectives:

- a. Identify environmentally sensitive areas along the Kalamazoo River, Augusta Creek and Township lakes, ponds, tributaries and wetlands to ~~preserve for plant, wildlife and fish habitat.~~ **for protection efforts.**
 - b. Preserve surface water quality by establishing **waterfront** zones and buffer regulations along rivers, streams, lakes and wetlands.
 - c. ~~Work with private watershed groups and community organizations to establish a comprehensive approach to water resource protection.~~
 - d. **Engage in training on storm water management and groundwater protection best practices. Use the site plan review process and community outreach to educate property owners on acceptable storm water management, drainage, and secondary containment designs.**
 - e. Continue to be an active member in the Four Township Water Resources Council, and support its mission of Farmland, Open Space and Water Quality Protection.
 - f. When demand requires, consider a wellhead protection program for potential municipal wells.
 - g. **Develop a watershed protection strategy that will create the big picture framework for water quality protection through land use management.**
- 5. Protect the quality of the Gull Lake watershed to preserve the health of Gull Lake as a natural resource and to sustain the viability of the surrounding area for living, working and recreation.**

Supporting Statement: *Wetlands and drainage systems within the Gull Lake watershed will be protected in recognition of their role in preserving the health of the watershed. Care will be taken to not exceed the carrying capacity of the watershed, both ecologically and recreationally. With each site plan review or other land use decision within the watershed, natural feature and water quality*

protection will be a consideration while recognizing and honoring the importance of the watershed in the local economy and in its impact on property values.

Objectives:

- a. Coordinate watershed protection efforts among Barry, Prairieville, Richland and Ross Townships through local zoning ordinances and master plans.
- b. Establish the site plan review process as an effective mechanism to implement watershed protection techniques.
- c. Engage in joint, advanced site plan review training that incorporates natural features and water quality protection. This training should be ongoing, as watershed technology advances and new members are appointed to applicable boards and commissions.
- d. Employ water quality protection techniques at the watershed level through planning and zoning, especially through the site plan review process. For larger scale projects, the planners in the affected townships are encouraged to communicate with planners in other watershed communities to provide additional professional resources to the Planning Commission.
- e. Incorporate groundwater protection provisions in the zoning ordinance or other applicable regulations.
- f. Incorporate best management practices for storm water management design in the zoning ordinance or other applicable regulations.
- g. Employ watershed protection techniques through zoning, including but not limited to:

- Use of an overlay zone, planned unit development or open space development approach to sensitive properties.
- Use of conservation easements in open space and planned unit developments to protect open space areas in perpetuity.
- Use of noncontiguous planned unit developments to place a higher density development away from sensitive natural features.
- Use of natural buffers near the lake, drainage ways and wetlands in new developments.
- Where appropriate, allow developers to restrict the use of property through conditional rezoning to protect natural features.

6. Facilitate Residential Development That Will Maintain the Rural Character of the Township

Supporting Statement: *Residential development is the predominant man-made development pattern in the Township. While construction of new residences will naturally reduce the amount of open space, the design and character of residential land use can impact positively or negatively upon the character of the remaining open space. The Township desires to integrate open spaces and residential development within a compatible framework that enhances both.*

Objectives:

- a. Institute incentives for providing and sustaining open spaces within residential development, including ~~ample road setbacks~~. **innovative approaches such as the use of residential street designs with reduced rights-of-way.**
- b. Adopt flexible development metrics that allow ~~encourage planned residential~~ **overall development and individual site designs** including ~~road setbacks that incorporate~~ **to respond to** the natural environment and topography ~~into the design of building of the~~ **property.**
- c. **Allow** cluster-/open space-/conservation-based residential development concepts in all residential districts in the Township.

- d. Enhance the awareness of residents about the benefits of conservation-oriented design.
- e. Protect the Township from residential ‘sprawl’ and reduce conventional plat and land division development ~~to an absolute minimum~~ through the use of flexible land management techniques that will encourage creative design, concentrated (clustered) development, maximum preservation of natural areas and use of open space.
- f. Concentrate ~~multiple-family~~ high density residential development in designated locations and promote ~~multiple-family~~ site designs that fit into the rural character of the Township. Investigate land use mechanisms for introducing desired housing types currently lacking in the Township, such as accessory dwelling units (ADUs) or cottage developments.
- g. Identify areas for residential development in non-prime farmland areas; avoiding developmental impact upon existing wetlands, woodlands, prime farmlands and other rural open space areas.

7. Develop and Apply Innovative Development Standards and Techniques

Supporting Statement: *An important aspect of achieving compatibility between the built environment and the Township’s natural environment is the application of innovative and creative site design and building techniques that fit well with the Township’s desire to retain its rural character.*

Objectives:

- a. Provide continuous opportunities for the Planning Commission, Zoning Board of Appeals and Township Board to be informed and educated about “state-of-the-art” planning and zoning techniques.
- b. Establish a pro-active approach to implementing the programs and recommendations set forth in this Plan.

- c. Encourage creative development patterns that accommodate and enhance natural features while providing for efficient circulation and aesthetic design within site plan review standards.

8. Assure a Safe and Efficient Network of Streets and Roads

Supporting Statement: *Transportation patterns and land use are interdependent. The Township desires to ensure that its network of streets and roads is established in conjunction with the placement of residential, commercial, industrial and recreational activities in a cost-effective and environmentally sensitive manner. Additionally, the Township does not want to establish a standard or process whereby the construction or enhancement of new streets and roads will lead to unforeseen or unwanted development.*

Objectives:

- a. Work with the Kalamazoo County Road Commission to identify existing and anticipated future transportation needs on County-maintained facilities. **Work together** to ensure that adequate funding is available for proper maintenance of roads **within the Township**.
- b. **Maintain the natural beauty and rural character of roads within the Township - - visually narrow corridor, tight hills, overhead tree canopy, etc. - - as they are improved. Work with the Kalamazoo County Road Commission to establish Natural Beauty Roads on designated County roads within the Township.**
- c. Develop regulations for private roads **that ensure desired land use patterns result** and roads meet appropriate construction and maintenance standards.
- d. Establish setback **and natural buffer standards along County roads in the agricultural and rural residential districts** to enhance and preserve the Township's rural character.

- e. ~~Correct poorly marked intersections and blind spots in Ross Township using appropriate signage.~~
- f. **In recognition of Michigan's Complete Streets policies**, actively support the establishment of bike lanes along Township roads that connect community activity centers.
- g. Promote a coordinated hiking/ biking/cross-country skiing trail system, including enhancement of the North Country Trail, and coordination with large institutional property owners, as well as County and State transportation agencies.

9. Provide Adequate Public Services and Facilities

Supporting Statement: "Adequate" public services are those that will meet or exceed the expectations of the Township's residents and businesses within the financial resources of the Township's government. That includes public safety, recreation, building and zoning administration and clerical operations and other services and facilities that will add to the satisfaction of living or working within the Township.

Objectives:

- a. Adopt levels of service standards that best fit the needs of the Township and continue to monitor and amend those levels of service as development occurs (avoid providing enhanced levels of service that will promote undesirable development).
- b. Require the provision of utilities on the basis of "concurrency" where public utilities are necessary for any particular development within the Township.

(Concurrency is an approach that ensures that public facilities and services are provided at the same time development occurs. These services are planned well in the future within a phased approach and are constructed on a "pay as you go" basis. If public utilities are not scheduled for an area

proposed for development, the development cannot occur, unless the development pays for the extension of utilities.)

- c. Require electric, ~~telephone,~~ **communications**, and cable utilities for all new residential and nonresidential developments to be placed underground.
- d. Increase the use of technology in the day-to-day operations of the Township.
- e. Encourage underground utilities where practical to enhance rural character. (~~e.g. electrical and phone lines~~)
- f. Acquire “state-of-the-art” equipment when determined to be cost-effective to facilitate improved operations.
- g. Retain high skill levels among Township staff and committees through adequate and appropriate continuing education efforts.

10. Assure a Planned, Concentrated Approach to Commercial and Industrial Development

Supporting Statement: *Because of the overriding goal of sustaining the rural character of the Township, it is important to ensure that commercial and industrial development fit within that goal. It is logical, then, to establish standards that will ensure that commercial and industrial land uses do not fall into a “sprawl” pattern but rather respect the natural, open space character of the Township through efficient and aesthetic concentrated development.*

Objectives:

- ~~a. Identify and address the impact of commercial and industrial development upon the environment and overall rural character. The intent will be to ensure that the impact of commercial and industrial development will not be at the expense of Ross Township's residents, environment and tax base.~~

- b. Identify specific areas suitable for commercial and industrial development, and restrict development to such areas.
- c. Restrict commercial development to planned, concentrated clusters and discourage strip “sprawl” commercial development.
- d. Integrate commercial and industrial land uses into their surrounding environment through appropriate and attractive architecture and signage, ~~road~~ setbacks, site design, and sensitivity to the natural environment. ~~minimizing typical strip development layout~~
- e. Incorporate site design standards into the Township Zoning Ordinance that will facilitate aesthetic and functional commercial and industrial developments.
- ~~f. Enhance existing commercial development in the 38th Street/M-89/Gull Lake Drive area, work with the Village of Augusta to promote compatible commercial development, and discourage scattered, sprawling strip development throughout the Township.~~
- g. **Maintain up-to-date** and appropriate signage requirements.

OVERRIDING CONCEPT

The future distribution of land use in Ross Township will be based upon the overriding concept of the preservation of the Township's natural resources. This concept will be demonstrated through the conservation of the agricultural landscape; the preservation of open space and rural character **through appropriately located and designed** residential development; and concentrated, well-managed commercial and service centers.

Future residential development is projected to consist of an estimated additional **500** housing units (**25%** increase) by the year **2040**. The Township proposes to accommodate this projected growth within desirable and efficient land use patterns. Specifically, residential clustering and open space patterns, designed to take advantage of (and preserve) the natural environment of the Township, will be encouraged. This method of development is a diversion from the linear pattern of residential development that ~~was typical during the~~ **has occurred in** preceding decades. That pattern created medium and large size lots that ~~were inefficient,~~ depleted usable agricultural resources, increased access conflicts, and detracted from the sense of 'openness' that defines rural character.

A more effective approach to attaining the Township's land use vision is to go beyond the standard types of residential subdivisions and concentrate development in 'pockets' or 'clusters,' separated by expansive open space areas. These development pockets should be located to minimize ~~consumption of open space~~ **impacts on sensitive natural resources** and agricultural land while being easily accessible to public facilities and utilities.

The proposed future distribution of land set forth in this Plan was developed using previous community **studies and** reports ~~and surveys~~, the June, 2000 Ross Township Community Survey, the results of the Land Use Planning Charrette held at Brook Lodge in October, 2000, and Township Planning Commission direction **provided during the 2011 and 2020 Master Plan Update processes**. The land use vision derived from that input is set forth-in detail in the Goals and Objectives contained in Section VI. Overall, the future land use patterns proposed in this Plan consist of the following:

- the existing concentrations of residential development around the Township's lakes, specifically Gull Lake, Stony Lake and Sherman Lake, will remain; however, further concentrated residential growth in these areas will not be encouraged;
- future concentrated residential growth will be focused around the Village of Augusta and in defined clustered/open space patterns off 44th, 46th and 48th Streets and in portions along "G" Avenue;
- high density residential growth will be directed to areas in close proximity to established service centers and existing planned infrastructure;
- the balance of the Township will remain primarily in open space and agriculture; ~~as well as a continuation of~~ the existing institutional uses (primarily MSU) and linear residential use patterns along County roads **are recognized as existing land use patterns;**
- commercial development will be directed to the Township's commercial core located at the southern end of Gull Lake;
- industrial land use will be limited to the area located between Custer Road and the Conrail line.

TABLE VII-1 – ROSS TOWNSHIP POPULATION – LAND AREA PROJECTIONS

Estimated Population 2017		4,837				
Total Target Population 2040		6,000				
Total Additional Population 2017-2040		1,163				
Year Increments	2017-2020	2021-2025	2026-2030	2031-2040	2017-2040	
Additional Population	137	200	205	621	1,163	
New Total Population	4,974	5,174	5,379	6,000	6,000	
Median Household Density	2.35	2.35	2.35	2.35	2.35	
New Housing Units from In-Migration	58	85	87	264	494	
New Housing Units from Existing Population	2	3	3	10	18	
Sub-Total New Housing Units	60	88	90	274	512	
Total (X 4% vacancy factor)	62	91	93	285	531	
92% Single-Family Units	58	84	86	262	490	
4 % Duplex Units	2	4	4	11	21	
4% Multiple Family Units	2	4	4	11	21	
New Single-Family Units						
70% Clustered Units	41	59	60	183	343	
Acres Needed @ 1.5 Units/Acre plus streets	32	47	48	146	273	
Additional Open Space (50%)	32	47	48	146	273	
Total Additional Acres	64	94	96	292	546	
30% Un-Clustered Units	17	25	26	79	147	
Acres Needed @ 1 Unit/Acre	17	25	26	79	147	
Total Additional Acres (Single-Family)	81	119	122	371	693	
New Duplex Units						
Total Acres Needed @ 2.5 Units/Acre	1	2	2	4	9	
New Multiple Family Housing Units						
Acres Needed @ 8 Units/Acre	1	1	1	2	5	
TOTAL NEW RESIDENTIAL ACRES NEEDED	83	122	125	377	707	

SOURCE: Ross Township, 2020

LAND USE PLAN CLASSIFICATIONS

The Future Land Use Map is an important component of the Ross Township Master Plan because it illustrates the vision and recommendations for the physical development of the Township through the creation of land use plan classifications. The Master Plan is also designed to serve as the basis of the Zoning Ordinance, a key implementation tool of the Plan. As a result, an understanding of the relationship between the land use plan classifications and the districts in the Zoning Ordinance is crucial.

The following list of land use plan classifications and zoning plan is intended to describe what land uses are desired in different parts of Ross Township, and explain how those land use plan classifications translate into zoning districts.

Agricultural

The lands within this Plan classification are primarily those associated with the MSU W.K. Kellogg Biological Station located on the east side of Gull Lake in Sections 4, 5, 6, 7, 8 and 9; MDNR property located in Sections 9 and 10; the Kellogg Experimental Forest in Sections 22 and 27; the former Brook Lodge property in Sections 21 and 28, and Fort Custer State Park Land in the southeast corner of the Township (Map VII-1). Individually, these



properties represent large areas of agricultural activity and open space that play a primary role in creating the rural character of the Township. Collectively, these same properties combine to establish natural resource and wildlife corridors important in the preservation of that rural experience unique to Ross Township.

Beyond the outright purchase of these lands for the purposes of preserving them as agriculture or open space, options for controlling the location and pace of development and preservation are limited to public or nonprofit land use controls. Within the set of land use controls currently available, the most widely used is zoning. The Township has embraced a zoning concept intended to preserve large

agricultural or conservation areas through the use of sliding scale density standards. These are designed to limit the number of non-farm residences and manage the arrangement of non-agricultural land within identified areas. The 'AG' Agricultural Preservation District has been created in the Ross Township Zoning Ordinance to facilitate the implementation of this concept. Ross Township remains committed to promoting the retention or preservation of its agricultural lands and conservation areas.

A 'Purchase of Development Rights' (PDR) program is another available zoning concept designed to promote the preservation of agricultural land. The Michigan Zoning Enabling Act allows for the purchase of development rights for special agricultural lands and land that can be used for open space, historic preservation or other public uses that are contiguous to special existing agriculture. The concept of purchasing development rights is intended to preserve these lands from development while enabling the landowner to be paid or compensated for the development value. The result is the perpetual retention of the property for agriculture and other uses in the public good. Implementation of a PDR program within the Township would require the adoption of a development rights ordinance, which may be adopted as part of the Zoning Ordinance.

Residential-Rural

The history and the character of Ross Township is defined by its natural resources, particularly Gull Lake, Augusta Creek, and the area's extensive wetlands. Agricultural activity, especially row crop production, is also characteristic of the Township's landscape. Both long-time and recently settled residents of the Township want the area's natural resources, as well as the historic and rural elements of its character, preserved. Consequently, this Plan promotes the preservation of open space (forests, shrub and grasslands), wetlands, and agricultural land within the framework of existing residential land use and the residential growth that is projected to occur.

Lands within this classification include open space, namely forested areas, shrub and grasslands, wetlands, and rural residential land use currently in existence along County roads. Further, 30 percent of the total increase in single-family

residential units in the Township (147 units) is projected to develop within these rural areas, outside of areas identified for concentrated residential growth (ie. Residential-Low Density).

Consistent with the overriding goal to conserve the Township's natural resources and rural character, existing open areas of forest, shrub, and/or grassland, as well as agricultural lands, are identified for conservation. Residential development is proposed to be limited to single-family use at densities and in patterns designed to stabilize and protect the essential rural characteristics of the area. Specifically, development will consist of either larger lots along County roads or smaller lots within or near existing residentially developed areas. Additional concentrations of residential growth around the Township's lakes will not be encouraged.

The "R-R" Rural Residential District established by the Ross Township Zoning Ordinance has been designed to implement the objectives of the Residential-Rural Plan Classification. This district will encompass land in rural areas of the Township where land use consists primarily of single-family residential dwellings, farms, and other compatible rural activities. Although it is recognized that much of the land area within this district may eventually be converted from farm and vacant fields to residential use, it is intended to allow low density residential development while encouraging the preservation of large tracts of land for agriculture or conservation.

Residential-Low Density

The increase in residential development within the Township, as well as the substantial acquisition and development of land for golf courses, has had the greatest single impact upon the Township's rural and agricultural landscape. The need to accommodate the number of households forecast to be created within the Township while retaining agricultural land and preserving open space remains as the Township's primary land use issue.

To provide for rational, efficient residential development and facilitate the retention of agricultural lands and extensive open space in the outlying rural areas, this Plan calls for the majority of new residential growth to occur in concentrated patterns within defined development areas within the Township.

Specifically, a target of 70 percent of new single-family housing (343 units) will be encouraged to be accommodated through the cluster/open space form of development. The 'R-1' Low Density Residential District established by the Ross Township Zoning Ordinance has been designed to implement the objectives of the Residential-Low Density Plan Classification.

Residential-Cluster/Open Space Development

Within cluster/open space developments, residential land use will be characterized by concentrations of housing in clusters separated by large, contiguous open spaces that are allocated to recreation, trails, the protection of unique environmental features, or other natural areas. The same number of units can be built in a cluster development as a traditional subdivision, because the developer is allowed to decrease the lot size as defined in the Zoning Ordinance, thereby increasing the density of the developed portion of the project and creating open/natural/recreation space in the balance of the project. The cluster/open space approach is more efficient, aesthetic, and environmentally sensitive than traditional forms of residential development.

The following figures depict traditional samples of subdivision design and cluster/open space development. Figure 1 show a traditional subdivision where the entire parcel is developed with single-family lots. Figure 2 show the same parcel as a residential cluster development with each lot area reduced in size and the balance of the parcel allocated to natural open space. Figure 3 is another depiction of a sample cluster/open space development similar to the type that could potentially be established within Ross Township.

The proposed geographic distribution of clustered developments in the Township takes into consideration these location factors: the area is currently being or could be considered for large scale residential development on larger parcels that have been assembled or can be assembled; the area will have the least impact on the depletion of prime agricultural lands; the area's soils are not conducive to wetness or flooding; the area offers protection of surface water and groundwater; the availability of public utilities; and the area's existing primary street network.

The Clustered Land Development and the Open Space Preservation Development zoning provisions have been established to facilitate the cluster/open space development approach. These development options are intended to allow for innovation and flexibility in both the scope and design of residential developments, while allowing for the management of residential growth consistent with the overriding concept for future land use distribution in the Township, as well as the goals and objectives of both the Residential-Rural and Residential-Low Density Plan Classifications.



Figure 1

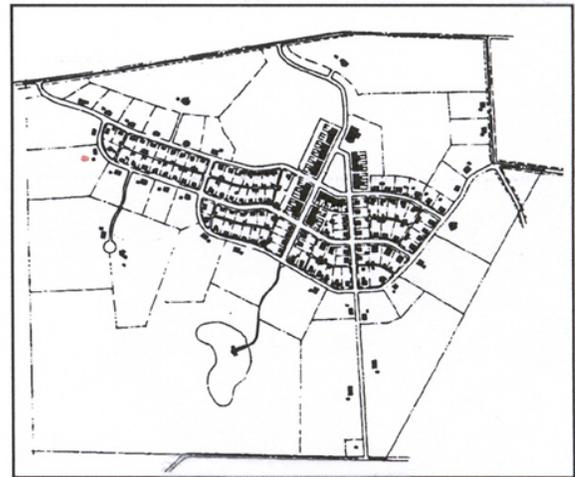


Figure 2

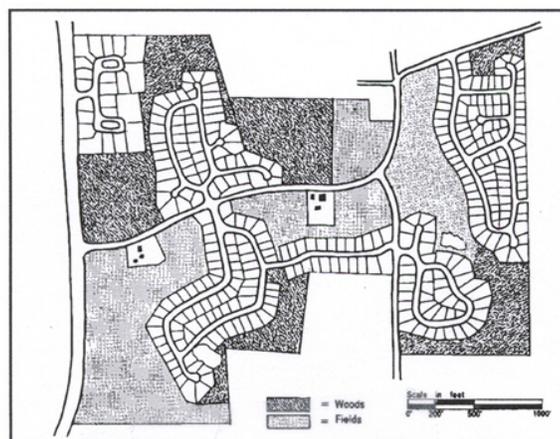


Figure 3

SOURCE: Rural by Design by Randall Arendt; American Planning Association 1994

Residential-Medium Density

The Residential-Medium Density Classification is designed to allow the Township to plan for projected housing needs and an efficient system of providing services by concentrating development. The Classification will provide opportunities for a higher density of single- and two-family residential land use where adequate facilities and services can be provided. Using an average net density of 2.5 units per acre, land area projections suggest a need for the Township to provide an additional **nine** acres of land for medium density single-family and two-family housing development over the course of the next 20 years. (Table VII-1)

Medium density residential development is designated for areas north of the Village of Augusta (on Augusta Drive) and on the south end of Gull Lake (on “D” Avenue) in close proximity to the commercial core. These are intended to be general locations for descriptive purposes and should not preclude the consideration of expanding medium density residential development into areas in close proximity (1/4 mile) to the Village and the Village ‘Center’ on the south end of Gull Lake. The ‘R-2’ Medium Density Residential District established by the Ross Township Zoning Ordinance will be used to identify specific sites planned for medium density single-family and two-family residential development within these general areas.

Residential-High Density

The Residential-High Density Plan Classification is intended to provide opportunities for a wider variety of housing types, as well as variations in density and housing arrangements. Using an average net density of 8 units per acre, land area projections suggest a need for the Township to provide an additional **five** acres of land for high density residential development over the next 20 years. (Table VII-1)

High density residential development should be restricted to areas where adequate roads and utilities are provided and has been designated for areas north of the Village of Augusta (on Augusta Drive) and on the south end of Gull Lake in close proximity to the commercial core. The ‘R-3’ High Density Residential and ‘R-4’ Mobile Home Park Districts established by the Ross Township Zoning

Ordinance will be used to direct high density residential development within these areas.

Commercial

An additional 110 acres of retail/service commercial development is estimated to be added to the Township's land use inventory. This expanded commercial development will be directed to the southern end of Gull Lake (38th Street/"D" Avenue/M-89 area) and serve as the commercial core of the Township, outside of the Village of Augusta.

This commercial core is envisioned to be developed within a 'village center' concept, with a relatively high-density mix of retail stores, marina operations and residential units. The 'C-1' Bay Commercial District established by the Ross Township Zoning Ordinance will be used to implement these objectives of the Commercial Plan Classification. Mixed land use, neotraditional design concepts, pedestrian-friendly architectural requirements, and site and corridor design and safety considerations, including access, landscaping, and parking, will be achieved through the application of the planned unit development concept and/or the 'bay-commercial' zoning approach.

Limited commercial development will also be provided through small neighborhood commercial centers designed to provide convenient services to surrounding residential areas. An overlay zoning approach will be used to establish standards of design and ensure compatibility with nearby residential properties.

With a proposed additional 110 acres of commercial land use area, the total commercial land area within the Township will encompass less than one percent of the Township's geographic area by the year 2040.

Industrial

Industrial development will be limited primarily to a 111-acre area located between Custer Road and the Conrail line in Sections 25, 35, and 36. The area identified for industrial development is in close proximity to the Fort Custer

Industrial Park west of Springfield, which offers a comprehensive package for industrial development.

The industrial area is intended to provide land for industries of a manufacturing or service nature where all work is carried on within an enclosed building and produces little external effect of an objectional nature to surrounding properties. The 'I-R' Restricted Industrial District established by the Ross Township Zoning Ordinance has been designed to implement the objectives of the Industrial Plan Classification and will be used to direct industrial development to this area of the Township. Appropriate site planning that provides for building design, setback, landscaping, signage, parking, and environmental impacts will be achieved through the application of the planned unit development concept and/or an 'industrial park' or 'planned industrial' approach.

Any proposed industrial expansion within the Township should consider the proximity of convenient transportation systems, availability of adequate and reliable utilities, impacts on adjacent non-industrial users, and the threat of encroachment of non-industrial users.

Institutional

This Plan presumes that Township public facilities will remain essentially in the same locations, as they currently exist. That includes the Township's cemeteries, the Township Hall, Police Department, and Fire Station on M-89, as well as the Fire Station and Library located in the Village of Augusta. While there may be modifications and expansions to these facilities over the next 20 years, it is not anticipated that new facilities of any significant size will be constructed on additional parcels.

Public and quasi-public institutional properties within the Township are also expected to remain essentially as they are today (see Table IV-2). Any modifications or expansions to existing facilities will likely occur within existing boundaries.

The school districts serving Ross Township (Gull Lake and Galesburg/Augusta) do not currently propose the expansion of existing facilities or the establishment of new facilities within the Township in the near future. Any plans for facility expansion should be proposed consistent with a District-wide facility improvement plan developed and implemented in coordination with the Township's overall planning efforts.

The Institutional Plan Classification is not intended to relate to a specific zoning district in the Ross Township Zoning Ordinance but instead serves to identify the boundaries of existing public and quasi-public facilities and properties.

Recreational

Aside from the existing Township Park on Gull Lake, no new public park sites are proposed to be set aside for recreational use.

In January, 2020, the Township adopted the 2020-2025 Ross Township Recreation Plan. Informed by a township survey and public involvement in the planning process, the Plan sets forth an Action Program focused on both the use and conservation of the Township's natural attractions; recreational opportunities in the Ross Township Park; non-motorized recreational connectivity; and education.

Since many of the recreational facilities within the Township are under institutional ownership, the Township will concentrate its recreation efforts on improvements to the Ross Township Park and the development of a scenic trail that provides connections between the Township activity centers and recreation areas. ~~providing bike lanes within the Township.~~

The development of a master bike system or linear park plan should be accomplished as a foundation for guiding any expansion of the bike path system within the Township. Both the development and the implementation of such a plan should be done in conjunction with the Kalamazoo County Road Commission, MDOT, Kalamazoo River Valley Trail (KRVT), Gull Lake Area Trail (GLAT), and surrounding jurisdictions to facilitate coordination, financial assistance, and a region-wide bike path/trail system.

New bike lanes could be placed along County Roads and a linear hiking/biking trail could potentially be developed along Augusta Creek, running the entire north/south length of the Township. The portion of the North Country National Scenic Trail, (a trail network from the New York State/Vermont border to central North Dakota), within Ross Township is currently open and will continue to be improved. The North Country National Scenic Trail enters Ross Township along B.L. 94, at the Kalamazoo County line winding west to Augusta and then north through the Kellogg Forest Area and Cheff Center area to the Barry County line.

The Recreational Plan Classification is not intended to relate to a specific zoning district in the Ross Township Zoning Ordinance but instead serves to identify the Township's existing recreational facilities.

FUTURE LAND USE MAP

Draft

ZONING PLAN

The Michigan Planning Enabling Act (Act 33 of 2008) requires the Master Plan to include a Zoning Plan, which ‘includes an explanation of how the land use classifications on the land use map relate to the districts on the zoning map.’ Table 12 summarizes the land use classifications and identifies related zoning districts as outlined in the Ross Township Zoning Ordinance, as well as providing recommendations for implementing the Master Plan through the regulations of the Zoning Ordinance.

TABLE VII-2 ZONING PLAN

Future Land Use Classifications	Corresponding Zoning Districts
Agricultural	<ul style="list-style-type: none"> • AG Agricultural District • This district is intended to apply to large tracts used for farming or conservation and to allow primarily agricultural and specialized rural uses with limited non-farm residential use. • A sliding scale density approach is envisioned.
Residential-Rural	<ul style="list-style-type: none"> • R-R Rural Residential District • The primary purpose of this district is to allow low density, rural residential development while encouraging the preservation of agriculture or conservation. • Residential densities of 1 unit/acre are allowed.
Residential-Low Density	<ul style="list-style-type: none"> • R-1 Low Density Residential District • This district is intended to provide for single-family residential development that is clustered so as to retain the rural character and preserve open space. • Residential densities of 2 units/acre are allowed.
Residential-Medium Density	<ul style="list-style-type: none"> • R-2 Medium Density Residential District • This district is designed to provide opportunities for a higher density of single- and two-family residential use where adequate facilities are provided; specifically, near the Village of Augusta and the south end of Gull Lake near the commercial core. • Residential densities of 3-4 units/acre are envisioned.
Residential-High Density	<ul style="list-style-type: none"> • R-3 High Density Residential District & R-4 Mobile Home Park District

	<ul style="list-style-type: none"> • These districts together provide for a wider variety of housing type, as well as variations in density and building arrangement. • This district will allow the most intensive residential development, including two family and multi-family uses at densities not to exceed 8 units/acre.
Commercial	<ul style="list-style-type: none"> • C-1 Bay Commercial District • This is a unique district designed to promote development within a ‘village commercial’ concept that allows a small-scale mix of commercial and residential land use. • Neo-traditional design promoted through site development standards specific to the district.
Commercial	<ul style="list-style-type: none"> • C-2 Neighborhood Commercial Overlay District • This district is intended to allow the limited establishment of small neighborhood commercial centers convenient to nearby residential areas. • The overlay approach is used to apply standards of design.
Industrial	<ul style="list-style-type: none"> • I-R Restricted Industrial District • This district was developed to allow planned industrial development or an ‘industrial park’. • This district is intended to apply to the area between Fort Custer Drive and the Conrail Line. (Section 25, 35, & 36)
Institutional	<ul style="list-style-type: none"> • There is no corresponding district to this classification. • The classification largely identifies the boundaries of existing facilities/properties.
Recreational	<ul style="list-style-type: none"> • There is no corresponding district to this classification. • The classification largely identifies the boundaries of existing recreational facilities/properties.

MAKING THE MASTER PLAN WORK

Implementation of the Ross Township Master Plan is the most challenging part of this important community land use planning effort. Following through on addressing the issues, goals and objectives noted in the previous sections will require a ~~atmosphere of cooperation~~ **coordinated effort** between individuals, **local boards/commissions**, community organizations, business owners and governmental agencies. ~~Areas where cooperation can occur include:~~ **General implementation strategies for Ross Township include:**

Active Planning

- Review and update the Master Plan every five years, at a minimum.
- Periodic adjustment to the Master Plan will be required. Supplemental plans for specific issues or areas may be prepared as amendments to the Master Plan, such as a corridor plan or a character area plan.
- Establish/update the Planning Commission Annual Report/Work Plan every year and develop work items based in part on the implementation elements of the Master Plan.
- Pursue and support cooperative regional and sub-regional planning efforts with neighboring communities, Kalamazoo, Barry and Calhoun Counties, and the Region.

Strategic Zoning

- Periodically conduct a technical review the Zoning Ordinance to ensure that it effectively translates into the implementation of the goals and objectives of the Master Plan.
- Routinely review and update the Zoning Map to ensure consistency with recent zoning amendments or changes to the Master Plan or Zoning Ordinance.

- Use the Zoning Plan set forth in the Master Plan to periodically evaluate the relationship between the Master Plan and the Zoning Ordinance and the planning/zoning decisions of the Township.
- Periodically review the dimensional, subdivision, land division, site condominium, and planned unit development regulations of the Township to confirm that they are designed to achieve the vision/intent of the Plan.
- Continue to build site plan review skills to take advantage of the opportunity to impact site design and fully realize the objectives of the Township's zoning standards, especially those designed specifically to address key land use issues.
- Remain familiar with the zoning methods available to Integrate land uses into their surrounding environment, such as building design standards, sensitivity to building mass and architecture, lighting techniques, or signage metrics.
- Continue to investigate best management practices and successful approaches to the protection of the area's water resources, soils and natural vegetation, the overriding objective of the Master Plan.
- Master the conversation regarding cluster/open space development as a mutually cost-effective approach to residential land development, saving taxpayer dollars on infrastructure and development costs on large-area parcel acquisition, to better advance this development option preferred by the Master Plan.

Communication/Education/Advocacy

- Continuously strive to inform and educate the public on the overall planning goals of the Township and the regulatory measures developed to achieve those goals.

- Pursue community outreach whenever possible to get public input on Ross Township land use issues.
- Respect individual citizen interests and community interests equally. The voice of the minority and majority should be weighed in a fair and even-handed manner concerning any land use planning effort.
- Engage in continuing educational development regarding land use planning techniques, practices and policies.
- Participate and/or continually monitor active area advocacy and service organizations. Invite representatives of these organizations to Ross Township Board of Trustees and/or Planning Commission meetings to share ongoing projects, programs and new land use concepts and proposals.

ACTION PLAN

The Action Plan outlines and prioritizes specific actions identified to successfully implement the Plan. Each implementation action is listed with a 'priority number' and assigned a general time frame for completion. The body primarily responsible for moving the action forward is also identified.

The 'prioritization scheme' applied within the Action Plan is as follows:

Priority 1: These projects should be given immediate and concentrated effort. They are the first projects that should be started after the Master Plan has been adopted.

Priority 2: These projects are those necessary to implement the Plan, but either depend on the completion of Priority 1 projects or require more complex or coordinated effort.

Priority 3: These projects implement elements of the Plan but are not urgent and can be delayed for a longer period of time. Further, these projects may be limited by budgetary constraints.

ACTION PLAN

PLANS, POLICIES AND ORDINANCES

Action	Responsibility	Action Period	Priority
<p>1. Conduct a technical review of the Zoning Ordinance:</p> <ul style="list-style-type: none"> - Identify provisions that inhibit or prohibit implementation of the Plan. - Identify zoning standards needed to implement the Plan. <p>Create a Z.O. Amendment Work Plan & Schedule.</p>	PC	6 months	1
2. Proceed with the Z.O. Amendment Work Plan	PC TB	1-5 Years	1
3. Review and initiate Amendments to the Zoning Map that will implement the Plan.	PC TB	As Needed	2
4. Develop a Capital Improvement Plan w/ TB that coordinates Township funding with implementation priorities.	PC TB	1 Year annually	1
5. Work with adjacent Gull Lake communities to develop common waterfront/shoreline protection approaches that incentivize low-impact development, waterfront setbacks and vegetative buffers.	PC	2-3 years	2

- | | | | |
|--|--------------------------|-----------|---|
| 6. Work with adjacent communities to develop/adopt a joint recreation Plan to create funding opportunities for area-wide non-motorized improvements. | PC
TB
Richland PCs | 2-3 Years | 2 |
| 7. Incorporate a 'pathways plan' in the Recreation Plan that coordinates planned bike lanes and non-motorized paths with area-wide trail systems and provides connectivity between community activity centers. | PC
TB
Kal Co | 2-4 Years | 2 |
| 8. Engage in a review or rewrite of the Master Plan to respond to changing conditions and priorities. | PC
TB | 5 years | 3 |

TRANSPORTATION

Action	Responsibility	Action Period	Priority
1. Adopt a Resolution of Support as a Complete Streets Community	TB	1 year	1
2. Work with KCRC to incorporate 'complete streets' elements on M-89 and M-43.	Staff PC	1-2 Years	1
3. Develop, fund and implement a wayfinding sign program.	TB	2-4 Years	3

ECONOMIC DEVELOPMENT

Action	Responsibility	Action Period	Priority
1. Work with State of MI in Pure Michigan campaign to establish recreational/ tourism marketing initiatives.	TB	1 year	2

EDUCATION - ADVOCACY

Action	Responsibility	Action Period	Priority
<p>1. Host education sessions on topics related to identified Work Plan Items – obtain information; promote public education; encourage partnerships.</p> <p>: cost-benefit analysis of OSPDs; how to advocate as preferred approach : PDR as a zoning tool; use feedback to determine next steps : conservation easements to protect open space : identifying prime farmland : working w/ KCRC for bike lanes; Natural Beauty Road designations : 4TWRC – joint watershed protection options</p>	PC	1 year	1
2. Receive training to build site plan review skills to effectively apply site design and take advantage of the opportunity to realize the objectives of the standards.	PC ZBA	1 year	1